

BOARD MEETING DATE: November 3, 2017

AGENDA NO. 30

PROPOSAL: Certify Final Environmental Assessment and Adopt Rule 415 – Odors from Rendering Facilities

SYNOPSIS: PR 415 is designed to reduce odors from facilities conducting inedible rendering operations. PR 415 is the result of a long-standing issue that was identified by the Working Group for the Clean Communities Plan in the pilot study area of Boyle Heights, a community near the city of Vernon rendering facilities. PR 415 includes implementation of Best Management Practices, use of either permanent total enclosures or a closed system for process areas that have high potential for odors, as well as other measures to control odors from rendering operations.

COMMITTEE: Stationary Source, February 20, 2015 and September 15, 2017

RECOMMENDED ACTIONS:

Adopt the attached Resolution:

1. Certifying the Final Environmental Assessment for Proposed Rule 415 - Odors from Rendering Facilities; and
2. Adopting Rule 415 – Odors from Rendering Facilities.

Wayne Natri
Executive Officer

PF:SN:TG:BG

Background

Proposed Rule 415 – Odors from Rendering Facilities (PR 415) is designed to reduce odors from rendering operations that can impact nearby communities. Rendering is a process that converts waste animal tissue into a variety of fat and protein commodities that are used for animal feed, fertilizer, biofuels, cosmetics, and other industries. One of the biggest challenges to the rendering industry is controlling odors from their operations.

Through the SCAQMD Clean Communities Plan pilot study in Boyle Heights, community representatives identified odors from rendering facilities as one of the top air quality issues that affects their community. Within the South Coast Air Basin, there

are five rendering facilities. Baker Commodities, Farmer John/Smithfield Foods, D & D Disposal/West Coast Rendering, and Coast Packing are located within the city of Vernon, and Darling Ingredients is located in the city of Los Angeles on the border of Vernon. Boyle Heights, Commerce, Vernon, Maywood and Bell are communities impacted by rendering odors.

Public Process

PR 415 was developed with input from a variety of stakeholders which included the affected facilities, other industry representatives, environmental and community representatives and other agencies. The SCAQMD staff held four Working Group Meetings beginning in July 2014 and an Informational Meeting in September 2017 on PR 415. Although work on PR 415 was suspended in September 2015, staff had already completed the Public Workshop, circulation of the Draft Environmental Assessment (EA), and three iterations of the proposed rule. When the Board directed staff to return with a proposal for PR 415 in November 2017, the rulemaking process continued from the point of suspension and staff immediately began working with stakeholders to address remaining issues.

Proposed Rule 415 Proposal

During rule development, staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find any examples of rendering facilities in an urban area operating an open-air rendering process such as those within the city of Vernon. Many of the provisions in PR 415 are based on measures currently required in other jurisdictions throughout the nation and measures that are currently being implemented at existing rendering facilities within the South Coast Air Basin. Throughout the rulemaking, staff visited the five rendering facilities in our Basin 17 times to understand each facility's operation and to appropriately tailor provisions to address issues that were unique to various operations and to ensure the proposed rule will control off-site odors from the rendering operation.

PR 415 requires facilities to either enclose key odorous operations within a closed system or within a permanent enclosure, and requires the enclosure to be kept under negative pressure and vented to odor control equipment. For enclosures where raw rendering materials are delivered, the enclosure does not need to be vented to odor control equipment, provided there is secondary odor containment at each truck or equipment opening, such as an air curtain or vestibule. PR 415 allows the affected facilities 2½ years to design, construct and commission an enclosure for wastewater treatment operations and for raw material receiving operations that are not vented to an odor control system, and 3½ years if an enclosure is required to be vented to an odor

control system. PR 415 recognizes that, during the construction phase, there may be unforeseen issues that are beyond the control of the operator and provides a one-time extension of up to 12 months provided the operator appropriately demonstrates the need for such a time extension.

Under PR 415, all facilities are required to comply with best management practices that are designed to reduce the potential for odors such as time limits that materials can be left in the open, covers for trucks, and repair of cracks and holes that accumulate liquid. PR 415 also requires signage with both the facility and SCAQMD contact information, and establishes recordkeeping requirements. PR 415 includes a contingency for an odor mitigation plan for any rendering facility that continues to have ongoing odor issues.

Key Remaining Issue

Through the rulemaking process, staff worked with affected facilities to address a variety of issues. As a result, PR 415 incorporates compliance options, a provision for a time extension for installation of building enclosures with pollution controls, and allowance for additional holding times for materials received when another rendering facility is inoperable. However, the cost of compliance remains an issue, particularly for two of the rendering facilities that will need to make substantial upgrades to meet the provisions for either installation of building enclosures with appropriate odor controls, or use of one or more closed systems. Both facilities have raw material receiving and wastewater treatment operations that are not currently enclosed. The annualized cost estimated for these two facilities combined is \$394,000 to \$513,000 per year. Of the remaining three affected facilities, one facility already has building enclosures that are expected to meet the requirements of PR 415; a second facility should be able to meet the requirements with an annualized cost of \$4,000 to \$7,000 per year; and the third facility is exempt from building enclosure provisions based on the limited throughput of materials processed at that facility. Staff conducted multiple site visits at these facilities and met with representatives to understand their processes and odor generating sources to ensure PR 415 incorporates reasonable provisions. As a result, PR 415 provides options to minimize both capital and annual operating costs for affected facilities, while still retaining the necessary odor reduction potential in the proposal, such as: allowing repair of holes and cracks in the receiving area instead of more extensive repaving; allowing a closed system in lieu of an enclosure for certain operations; allowing alternative enclosure provisions for raw material receiving operations that do not require venting to an odor control system; and providing further clarity in the rule proposal regarding the requirements for a closed system and acceptable building materials for an enclosure.

AQMP and Legal Mandates

There are no specific legal requirements for SCAQMD to propose Rule 415, and it will not be submitted into the State Implementation Plan (SIP). PR 415 is not the result of an AQMP control measure.

California Environmental Quality Act

Pursuant to CEQA Guidelines Sections 15252 and 15070 and SCAQMD Rule 110, the SCAQMD has prepared an EA for PR 415. The environmental analysis in the Draft EA concluded that PR 415 would not generate any significant adverse environmental impacts and therefore, no alternatives or mitigation measures are required. The Draft EA was released for a 30-day public review and comment period from July 14, 2015 to August 12, 2015. Three comment letters were received from the public relative to the Draft EA and responses to the comments have been prepared. The comment letters and the responses to the comments have been included in Appendix D of the Final EA.

Subsequent to release of the Draft EA, modifications were made to the proposed project. Staff has reviewed the modifications to the proposed project and concluded that none of the modifications constitute significant new information or a substantial increase in the severity of an environmental impact, nor do they provide new information of substantial importance relative to the Draft EA. As a result, these revisions do not require recirculation of the EA pursuant to CEQA Guidelines Sections 15073.5. Modifications to the Draft EA are included in the Final EA, which is included as an attachment to the Board package. The Board must review the adequacy of the Final EA, including responses to comments, prior to certification of the Final EA and adoption of PR 415.

Socioeconomic Assessment

PR 415 would potentially affect five facilities with rendering operations, all classified under the industry of Rendering and Meat Byproduct Processing (NAICS 311613). All five facilities are clustered in close proximity in the urban portion of Los Angeles County, with four located in the heavily industrialized city of Vernon and one in the city of Los Angeles bordering the city of Vernon. Although the city of Vernon has just over 100 inhabitants, it is surrounded by many socioeconomically disadvantaged communities with high unemployment rates and disproportionately more children living in poverty than the county average.

The total annualized costs for the five affected facilities to comply with PR 415 were estimated to range from \$405,000 to \$527,000 per year. One facility operated by a large company is expected to incur about two-thirds of the total estimated costs (annualized at \$256,000 to \$353,000), followed by a facility that is a small business, which would incur the remaining one-third (annualized at \$138,000 to \$160,000). The other three

facilities, including another small business, together would incur less than three percent of the total estimated compliance costs. The estimated total compliance costs would result in a minimal jobs impact in the regional economy.

Implementation and Resource Impacts

Upon adoption of PR 415, staff will begin implementation, including processing permits for new enclosures and odor control equipment required under the rule proposal. In addition to permitting activities, staff will also evaluate alternatives allowed under the proposal and communicate with the facilities as necessary to discuss and approve or disapprove several areas in the proposal where flexibility is allowed. Existing SCAQMD resources will be used to implement PR 415.

Attachments

- A. Summary of Proposed Rule
- B. Key Issues and Responses
- C. Rule Development Process
- D. Key Contacts List
- E. Resolution
- F. Proposed Rule Language for Rule 415
- G. Final Staff Report
- H. Final Environmental Assessment
- I. Staff Presentation

ATTACHMENT A
SUMMARY OF PROPOSED RULE

Proposed Rule (PR) 415 – Odors from Rendering Facilities

- **Best Management Practices to reduce or minimize odors**

All new and existing facilities are required to implement Best Management Practices (BMP) for odor control. This requirement is applicable to new facilities upon startup, and to existing facilities within 90 days after rule adoption, or the schedule required in the BMP. PR 415 also provides for alternative BMPs, with EO approval, provided they meet the same objective as the BMP(s) they will replace. There are 11 required odor BMP which require such activities as: covering of incoming trucks; limiting the time that raw materials can remain outside an enclosure; washing of outgoing vehicles, open drums/containers, and the raw material receiving area; limited holding times for raw and cooked materials before downstream processing; asphalt/concrete repair in the receiving area; and cleaning of floor drains.

- **Operations required to be conducted within a Permanent Total Enclosure (PTE) or within a closed system**

All facilities are required to operate certain odorous processes within a Permanent Total Enclosure (PTE) or within a closed system. This requirement is applicable to new facilities upon startup and to existing facilities within 2 to 4 years after rule adoption. An alternative standard for a PTE is allowed for raw materials receiving areas that do not require venting to odor control equipment, provided other conditions are met. A one-time extension of up to one year may be allowed to complete construction of a PTE and ventilation and odor control systems for specific circumstances beyond the control of the rendering facility.

- **Signage**

Rendering facilities must display a contact sign for odor complaints, with the facility name, the SCAQMD's 1-800-CUT-SMOG number and the option to list a contact at the facility. A sign at each truck entrance also informs all incoming trucks of the requirement that the truck be enclosed or fully covered.

- **Odor Mitigation Plan and Specific Cause Analysis**

A rendering facility that continues to have odor issues must submit an Odor Mitigation Plan. Also, a rendering facility must initiate a Specific Cause Analysis and submit a report within 30 days after notification to prepare the analysis. The report must include a description of corrective measures taken to prevent recurrence of another odor event.

- **Provision to allow additional holding time of raw materials outside an enclosure**

The proposal allows additional time for holding raw rendering materials outside of an enclosure for situations when the facility receives materials from another rendering facility that is inoperable. This provision only allows additional time for holding raw rendering material prior to entering a permanent total enclosure, covered container or a cooking process that is a closed system.

- **Exemptions**

Exemptions are provided for certain facilities, operations or from the enclosure and ventilation standards for certain rendering processes. These include: enclosure of wastewater treatment operations for situations of low-odor potential wastewater; rendering operations at facilities that have low throughput or operate infrequently; and exemptions for certain low-odor operations.

ATTACHMENT B
KEY ISSUES AND RESPONSES

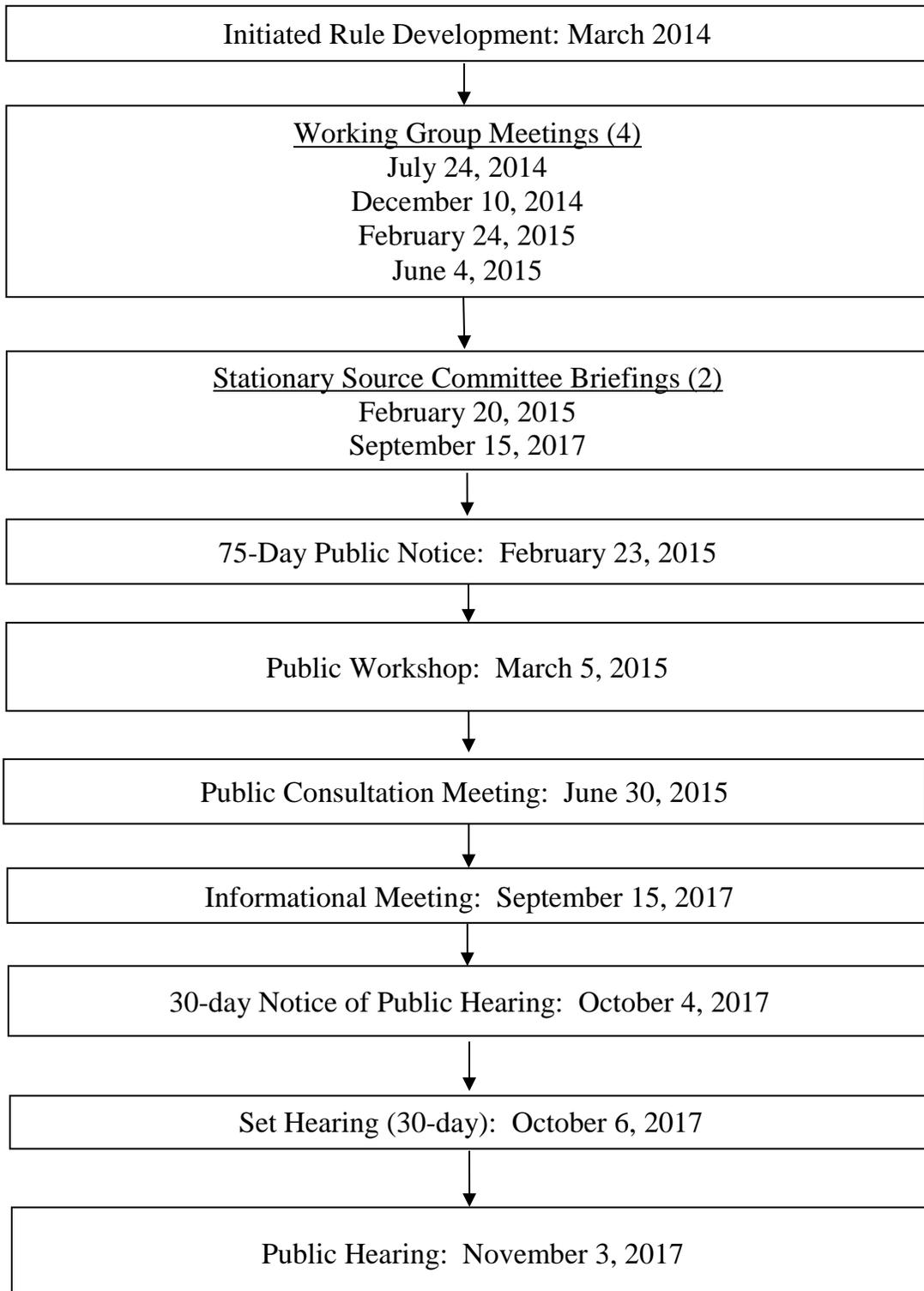
Proposed Rule (PR) 415 – Odors from Rendering Facilities

Cost of Controls and Best Management Practices: The cost of compliance remains an issue for two facilities that will need to make substantial upgrades to meet the provisions for either installing building enclosures with appropriate odor controls, or using one or more closed systems.

- Staff conducted multiple site visits to each of these facilities and met with rendering facility representatives to understand their processes and odor generating sources.
- One facility has two rendering plants on site where raw material receiving and wastewater treatment operations are not currently enclosed.
- A second facility has an open raw material receiving operation, an open wastewater treatment operation, and a room housing a batch cooking operation that will be required to meet the enclosure standards under the proposal.
- Staff estimates that the annualized cost for these two facilities combined is \$394,000 to \$513,000 per year.
- Staff has worked with the facilities to allow options in the proposed rule that minimize both capital cost and annual operating costs, while still retaining the necessary odor reduction requirement in the proposal. These include:
 - Allowing repair of holes and cracks in the receiving area instead of more extensive repaving;
 - Allowing a closed system in lieu of an enclosure for certain operations;
 - Allowing alternative enclosure provisions for raw material receiving operations that do not require venting to an odor control system; and
 - Providing further clarity in the rule proposal regarding the requirements for a closed system and acceptable building materials for an enclosure.

ATTACHMENT C
RULE DEVELOPMENT PROCESS

Proposed Rule 415 – Odors from Rendering Facilities



Forty-four (44) months spent in rule development.
One (1) Public Workshop.
Four (4) Working Group Meetings.

**ATTACHMENT D
KEY CONTACTS LIST**

Proposed Rule: 415 – Odors from Rendering Facilities

- Andrea Hricko, USC
- Baker Commodities
- Barrio Planners
- City of Vernon
- Coast Packing
- Communities for a Better Environment
- Co-West Commodities
- D & D Disposal/West Coast Rendering
- Darling Ingredients
- East Los Angeles Chamber of Commerce
- East Yard Communities for Environmental Justice
- Farmer John/Smithfield Foods
- Hunton & Williams, LLC
- Jackson, DeMarco, Tidus, Peckenpaugh
- McKenna Long & Aldridge LLP
- Montrose Air Quality Services/SCEC
- Mothers of East Los Angeles
- Resurrection Church
- Resurrection School
- Sanitation Districts of Los Angeles County
- St Marcellinus Church
- Teamsters Local 63
- Teamsters Southern California 42
- Teamsters 986
- Union de Vecinos de Boyle Heights
- Urban Legend
- University of Southern California
- Vernon Chamber of Commerce

ATTACHMENT E

RESOLUTION NO. 17-_____

A Resolution of the Governing Board of the South Coast Air Quality Management District (SCAQMD) certifying the Final Environmental Assessment (EA) for Proposed Rule 415 – Odors from Rendering Facilities.

A Resolution of the SCAQMD Governing Board adopting Rule 415 – Odors from Rendering Facilities.

WHEREAS, the SCAQMD Governing Board finds and determines that Proposed Rule 415 is considered a “project” pursuant to the California Environmental Quality Act (CEQA) per CEQA Guidelines Section 15002(k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA; and

WHEREAS, the SCAQMD has had its regulatory program certified pursuant to Public Resources Code Section 21080.5 and CEQA Guidelines Section 15251(1), and has conducted a CEQA review and analysis of Proposed Rule 415 pursuant to such program (SCAQMD Rule 110); and

WHEREAS, the SCAQMD staff has prepared a Draft EA pursuant to its certified regulatory program and CEQA Guidelines Sections 15251, 15252, and 15070, setting forth the potential environmental consequences of Proposed Rule 415 and determined that the proposed project would not have a significant adverse effect on the environment; and

WHEREAS, the Draft EA was circulated for 30-day public review and comment period, from July 14, 2015 to August 12, 2015, and three comment letters were received; and

WHEREAS, the Draft EA has been revised to include comments received on the Draft EA and the responses, so that it is now a Final EA; and

WHEREAS, it is necessary that the adequacy of the Final EA, including responses to comments relative to the Draft EA, be determined by the SCAQMD Governing Board prior to its certification; and

WHEREAS, pursuant to CEQA Guidelines Section 15252 (a)(2)(B), since no significant adverse impacts were identified, no alternatives or mitigation measures are required and thus, a Mitigation Monitoring and Reporting Plan pursuant to Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097, has not been prepared; and

WHEREAS, Findings pursuant to Public Resources Code Section 21081.6 and CEQA Guidelines Section 15091 and a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093 were not prepared because the analysis shows that Proposed Rule 415 would not have a significant adverse effect on the environment, and thus are not required; and

WHEREAS, the SCAQMD Governing Board voting to adopt Proposed Rule 415 has reviewed and considered the information contained in the Final EA and other supporting documentation, prior to its certification, and has determined that the document, including responses to comments, has been completed in compliance with CEQA; and

WHEREAS, the Final EA reflects the independent judgment of the SCAQMD;

WHEREAS, the SCAQMD Governing Board finds and determines, taking into consideration the factors in Section (d)(4)(D) of the Governing Board Procedures (codified as Section 30.5(4)(D) of the Administrative Code), that the modifications which have been made to Proposed Rule 415 since the notice of public hearing was published do not significantly change the meaning of the proposed project within the meaning of Health and Safety Code Section 40726 and would not constitute significant new information requiring recirculation of the Draft EA pursuant to CEQA Guidelines Sections 15073.5 and 15088.5; and

WHEREAS, Proposed Rule 415 and supporting documentation, including but not limited to, the Final Staff Report, the Final EA, the Socioeconomic Assessment, and this November 3, 2017 Board letter were presented to the SCAQMD Governing Board and the SCAQMD Governing Board has reviewed and considered the entirety of this information, as well as has taken and considered staff testimony and public comment prior to approving the project;

WHEREAS, Health and Safety Code Section 40727 requires that prior to adopting, amending or repealing a rule or regulation, the SCAQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the Final Staff Report; and

WHEREAS, a need exists to adopt Proposed Rule 415 to reduce public exposure to rendering odors that have the potential to create odors in the surrounding community, especially when the odors from nearby rendering plants are combined, and Proposed Rule 415 is intended to reduce the potential for nuisance-level odors in the commercial and residential areas surrounding the rendering plants; and

WHEREAS, the SCAQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from Sections 39002, 40000, 40001, 40440, 40441, 40702, 40725 through 40728, 41508, and 41700 of the Health and Safety Code; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415, as proposed, is written or displayed so that its meaning can be easily understood by the persons directly affected by it; and

WHEREAS, the need exists to adopt Proposed Rule 415 to reduce odors from facilities conducting inedible rendering operations; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415, as proposed, is in harmony with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415, as proposed, does not impose the same requirements as any existing state or federal regulation and the proposed rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the District; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415, as proposed, references the following statutes which the SCAQMD hereby implements, interprets or makes specific: Health and Safety Code Sections 40001(a) (air quality standards and enforcement of federal standards); 41508 (stricter standards than state law); 40440(b)(1) (BARCT); 40702 (adopt regulation to carry out duties); and 41700 (nuisance); and

WHEREAS, the SCAQMD Governing Board determines that there is a need that Proposed Rule 415 will address (i.e. the reduction of nuisance odors and potential nuisance odors emitted from affected rendering facilities) and the proposed rule adoption will promote the attainment of or maintenance with SCAQMD Rule 402 – Nuisance; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Impact Assessment, as contained in the Final Staff Report of Proposed Rule 415 is consistent with the March 17, 1989 Governing Board Socioeconomic Resolution for rule adoption; and

WHEREAS, the SCAQMD Governing Board has determined that the Socioeconomic Impact Assessment, as contained in the Final Staff Report, is consistent with the provisions of Health and Safety Code Sections 40440.8, 40728.5, and 40920.6; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415 will result in increased costs to the affected industries, yet considered to be reasonable, with a total annualized cost as specified in the Socioeconomic Impact Assessment, as contained in the Final Staff Report; and

WHEREAS, the SCAQMD Governing Board has actively considered the Socioeconomic Impact Assessment, as contained in the Final Staff Report, and has made a good faith effort to minimize such impacts; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415 will not result in quantifiable emission reductions, rather, it will assist with containment and control of odors; and therefore no incremental cost analysis is possible or required under Health and Safety Code Section 40920.6; and

WHEREAS, the SCAQMD staff conducted a public workshop regarding Proposed Rule 415 on March 5, 2015; and

WHEREAS, a public hearing has been properly noticed in accordance with the provisions of Health and Safety Code Section 40725; and

WHEREAS, the SCAQMD Governing Board has held a public hearing in accordance with all provisions of law; and

WHEREAS, the SCAQMD Governing Board specifies the Manager of Proposed Rule 415 as the custodian of the documents or other materials which constitute the record of proceedings upon which the adoption of this proposed rule is based, which are located at the South Coast Air Quality Management District, 21865 Copley Drive, Diamond Bar, California; and

WHEREAS, the SCAQMD Governing Board has determined that Proposed Rule 415 should be adopted for the reasons contained in the Final Staff Report; and

WHEREAS, Proposed Rule 415 will not be submitted for inclusion into the State Implementation Plan; and

NOW, THEREFORE, BE IT RESOLVED, that the SCAQMD Governing Board does hereby certify the Final EA for Proposed Rule 415, including responses to comments, was completed in compliance with CEQA and the SCAQMD Rule 110 provisions and finds that the Final EA was presented to the Governing Board, whose members reviewed, considered and approved the information therein prior to acting on Proposed Rule 415; and

BE IT FURTHER RESOLVED, that because no significant adverse environmental impacts were identified as a result of implementing Proposed Rule 415, Findings pursuant to Public Resources Code Section 21081.6 and CEQA Guidelines Section 15091, a Statement of Overriding Considerations pursuant to CEQA Guidelines Section 15093, and a Mitigation Monitoring and Reporting Plan pursuant to Public Resources Code Section 21081.6 and CEQA Guidelines Section 15097 are not required; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board hereby directs staff to work with stakeholders to conduct outreach and help guide facilities subject to Rule 415 through the applicable rule requirements; and

BE IT FURTHER RESOLVED, that the SCAQMD Governing Board does hereby adopt, pursuant to the authority granted by law, Proposed Rule 415, as set forth in the attached, and incorporated herein by reference.

Dated: _____

Clerk of the Boards

ATTACHMENT F

(November 3, 2017)

PR 415

PROPOSED RULE 415 ODORS FROM RENDERING FACILITIES

- (a) Purpose
The purpose of this rule is to reduce odors from facilities rendering animals and animal parts.
- (b) Applicability
This rule applies to new and existing rendering facilities that process raw rendering materials; and wastewater associated with rendering.
- (c) Definitions
- (1) BATCH COOKER means a cooking vessel used for rendering into which raw rendering material is loaded in discrete batches, cooked and unloaded at the end of the cooking cycle.
 - (2) CLOSED SYSTEM means a system handling any combination of solids, liquids, vapors, and air at a rendering facility, in which odors are contained within the system. A system that meets the requirements of paragraph (f)(3) is a closed system. A batch cooker is not a closed system.
 - (3) COLLECTION CENTER means a receiving area not located at a rendering facility or an integrated rendering facility, for the temporary storage of animal carcasses, packinghouse waste, or other products, prior to their transportation to a licensed rendering plant or pet food processor.
 - (4) CONFIRMED ODOR EVENT means the occurrence of a rendering-related odor resulting in three or more complaints by different individuals from different addresses, and the source of the odor is verified by District personnel trained in odor inspection techniques.
 - (5) CONTROL EFFICIENCY means the percentage value representing the reduction of odorous compounds in an odor control system. Control efficiency is calculated as the uncontrolled rate minus the controlled rate, divided by the uncontrolled rate, multiplied by 100.
 - (6) EDIBLE RENDERING means an operation that produces edible fats and protein commodities for human consumption.
 - (7) ENCLOSURE ENVELOPE means the total surface area of a building directly enclosing rendering operations and includes the enclosure's exterior walls, floor and horizontal projection of the roof on the ground.
 - (8) EXISTING FACILITY means a facility subject to the requirements of this rule that began operation prior to (*date of adoption*).

- (9) FAT COMMODITY means a finished fat product from rendering and derived from animal fat or plant sources.
- (10) INTEGRATED FACILITY or INTEGRATED RENDERING FACILITY means for the purpose of this rule a rendering facility operated at the same physical location as a slaughterhouse or meat-packing plant.
- (11) NEW FACILITY means a facility subject to the requirements of this rule that begins operation on or after (*date of adoption*)
- (12) ODOR means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves.
- (13) ODOR CONTROL SYSTEM means equipment serving a permanent total enclosure that is designed to reduce odorous emissions captured in the permanent total enclosure. Odor control equipment does not mean a closed system.
- (14) ODOR GENERATING SOURCE means a process at a rendering facility from which odors may be emitted, including raw material receiving, size reduction, cooking, separating and processing of cooked materials into fat commodities and protein commodities, and wastewater treatment.
- (15) PERMANENT TOTAL ENCLOSURE means for the purpose of this rule an enclosure having a permanently installed roof and exterior walls which are constructed of solid material, and completely surround one or more odor-generating sources such that all odors from processes conducted within the enclosure are contained therein.
- (16) PROTEIN COMMODITY means a finished protein produced from rendering and derived from raw rendering materials of either animal or plant origin.
- (17) RAW RENDERING MATERIALS means materials introduced into the receiving area at a rendering facility, and may include animal carcasses and parts, packing house or grocery store cuttings, out-of-date products from grocery stores, blood, viscera, offal, feces and other organic matter generated by food processors. Raw rendering materials does not include used cooking oil.
- (18) RECEIVING AREA means the area, tank or pit within a rendering facility where raw rendering materials are unloaded from a vehicle or container, or transferred from another portion of the facility for the purpose of rendering these materials.

- (19) RENDERING means operations and processes that convert raw rendering materials into fat commodities and protein commodities by heat and mechanical separation.
- (20) RENDERING FACILITY means a facility engaged in rendering operations.
- (21) ROUTINE ENCLOSURE OPENING means any of the following areas that may be open during normal operations at facilities subject to this rule, and through which odors have the potential to escape from a permanent total enclosure:
 - (A) Vents for natural or forced-air ventilation, including but not limited to gable vents, eave vents, wall vents and rooftop vents;
 - (B) Windows, doors and doorways; and
 - (C) Spaces below metal sheathing that do not reach the foundation.
- (22) SPECIFIC CAUSE ANALYSIS means a process used by a facility subject to this rule to investigate the cause of a confirmed odor event, identify corrective measures needed and measures taken or that will be taken to prevent recurrence of a similar event.
- (23) TRAP GREASE means cooking grease, food waste, and wastewater from a restaurant grease trap or interceptor.
- (24) USED COOKING OIL means oils and fats that have been used for cooking or frying in the food processing industry, restaurants or fast food establishments.
- (25) VENTILATION SYSTEM means an air-handling system serving odor control equipment that is designed and operated to: (a) draw air from within a permanent total enclosure and deliver it to approved odor control equipment; and (b) maintain negative air pressure through each routine enclosure opening. Ventilation system does not mean a system for heating, ventilation, or air conditioning (HVAC) used for comfort heating or cooling.
- (26) WASTEWATER TREATMENT means, for the purpose of this rule, any chemical, biological, or mechanical procedure used to remove, reduce, or neutralize contaminants in water at a rendering facility from rendering- and trap grease-related operations.

(d) Requirements for New and Existing Facilities

(1) Core Requirements for all Facilities

(A) Odor Best Management Practices (BMP)

The owner or operator of a rendering facility shall implement all applicable odor BMP identified in subdivision (e) upon startup of a new facility, or within 90 days after (*date of adoption*) or other schedule as required in the BMP for an existing facility.

(B) Permanent Total Enclosure or Operation in Closed System

(i) The owner or operator of a new rendering facility shall not conduct rendering operations unless the requirements for enclosure, ventilation and odor control system standards in subdivision (f) are met.

(ii) The owner or operator of an existing rendering facility shall submit a permit application for each permanent total enclosure required under this rule within 12 months after (*date of adoption*).

(iii) The owner or operator of an existing rendering facility shall meet the requirements for either a permanent total enclosure and applicable requirements for ventilation of a permanent total enclosure to odor control equipment, or a closed system pursuant to subdivision (f) no later than 24 months after the date a Permit to Construct is issued.

(C) Wastewater Treatment

(i) The owner or operator of a new rendering facility shall not conduct rendering operations unless the requirements for wastewater treatment in subdivision (g) are met.

(ii) The owner or operator of an existing rendering facility shall submit a permit application for each permanent total enclosure for wastewater operations required under this rule within 12 months after (*date of adoption*).

(iii) The owner or operator of an existing rendering facility shall meet the requirements for permanent total enclosure or closed system, and the requirements for ventilation of permanent total enclosures to odor control equipment pursuant to subdivision (f) no later than 12 months after the date a Permit to Construct is issued.

- (D) Notification of Intent to Enclose or Operate in a Closed System
The owner or operator of an existing rendering facility shall submit a letter of intent to the Executive Officer within 6 months after (*date of adoption*) stating an intent to either enclose odor-emitting operations and processes within a permanent total enclosure or operate them in one or more closed systems, for all equipment and processes subject to paragraph (f)(1) or subdivision (g) that are not located within a permanent total enclosure or operated in a closed system as of (*date of adoption*).
- (E) Increments of Construction Progress
Within 6 months after the date a Permit to Construct is issued for a permanent total enclosure required by this rule, the owner or operator of a rendering facility shall initiate construction of the enclosure; such activity shall include at a minimum breaking ground for the foundation of a new enclosure or for the odor control equipment.
- (F) Request for Time Extension of Completing a Permanent Total Enclosure
An owner or operator of a rendering facility may submit a request to the Executive Officer for a one-time extension for up to one year from the date specified under clauses (d)(1)(B)(iii) or (d)(1)(C)(iii), or subparagraph (f)(5)(B) to complete construction of a permanent total enclosure and applicable ventilation and odor control system required under subdivision (f).
- (i) An owner or operator of a rendering facility that submits a request for a time extension shall submit the request at least 180 days before the permanent total enclosure and ventilation system deadline in subparagraph (d)(1)(B) or (d)(1)(C), or paragraph (f)(5) as appropriate.
- (ii) A request for a time extension shall provide the following information to the Executive Officer:
- (I) A description of the enclosure for which a time extension is needed;
- (II) The reason(s) a time extension is needed;
- (III) Progress to date in planning, design and construction of the enclosure; and

(IV) The length of time requested for the extension.

(iii) Approval of Time Extensions

The Executive Officer will review the request for the time extension and will approve, modify or reject the time extension based on whether the owner or operator provides sufficient details identifying the reason(s) a time extension is needed that demonstrates to the Executive Officer that there are specific circumstances beyond the control of the owner or operator that necessitate additional time to complete construction of the ~~total~~-permanent total enclosure and applicable ventilation and odor control system. Such demonstration may include, but is not limited to, providing detailed schedules, engineering designs, construction plans, permit applications, and purchase orders.

(2) Submittal of Odor Mitigation Plan (OMP).

The owner or operator of a rendering facility shall submit an Odor Mitigation Plan (OMP) to the Executive Officer within 90 days after notification by the Executive Officer, pursuant to the requirements of subdivision (h), if:

- (A) The owner or operator of a facility subject to this rule receives a Notice of Violation for Public Nuisance related to rendering odors pursuant to Rule 402; or
- (B) Three or more confirmed odor events related to rendering odors for a facility are received during any consecutive 180-day period.

The owner or operator shall comply with all terms and conditions of their approved Odor Mitigation Plan. A violation of any term of an approved Odor Mitigation Plan is a violation of this rule. Submittal of an Odor Mitigation Plan shall be in addition to any settlement of the Notice of Violation triggering such submittal.

(3) Specific Cause Analysis

Within 1 business day after notification by the Executive Officer of a confirmed odor event for a facility subject to this rule, the owner or operator of a rendering facility shall initiate a specific cause analysis and submit a report in the format specified by the Executive Officer within 30 days. The report shall include a description of activities during the time of the odor event, any upset or breakdown conditions at the facility, including potential

sources of odors and emission points for all equipment required to be enclosed under or subdivisions (f) and (g). In addition, the report must identify any corrective measures taken or that will be taken to prevent recurrence of a similar event.

(e) Requirements for Odor Best Management Practices (BMP)

The owner or operator of a rendering facility shall implement all applicable odor BMP listed in paragraphs (e)(1) through (e)(11):

(1) Covering of Incoming Transport Vehicles

Transport vehicles delivering raw rendering materials to a rendering facility from offsite locations shall not be permitted past the first point of contact at a rendering facility for incoming trucks, such as a guard shack or weigh station, unless the cargo area of the vehicle is completely enclosed or fully tarped.

(2) Delivery of Raw Rendering Materials

After the date a permanent total enclosure is required under clause (d)(1)(B)(iii) or upon completion of a permanent total enclosure, whichever is sooner, the owner or operator shall ensure incoming raw rendering materials are transferred into the permanent total enclosure pursuant to subdivision (f) or into covered containers within 60 minutes after the end of material delivery.

(3) Washing of Outgoing Transport Vehicles

Where raw rendering materials come directly into contact with a transport vehicle and the cargo area is exposed to the air, the cargo area shall be washed before exiting the facility.

(4) Washing of Drums and Containers

Open drums or containers holding raw rendering materials shall be washed prior to leaving a rendering facility.

(5) Holding Time of Incoming Raw Rendering Materials

Before the date a permanent total enclosure is required under clause (d)(1)(B)(iii), incoming raw rendering materials shall enter the cooking process, be staged in a permanent total enclosure or stored in a covered container within 4 hours after delivery for material delivered at ambient temperature, or within 6 hours after delivery for material delivered below ambient temperature.

- (6) **Repair of Outside Raw Material Receiving Area**
Notwithstanding the time limit of subparagraph (d)(1)(A), within 180 days after (*date of adoption*), all areas of broken concrete or asphalt, including but not limited to divots, cracks, potholes and spalling of concrete or asphalt in the raw material receiving area of a rendering facility, or the rendering portion of a facility integrated with a slaughterhouse or meat-packing plant where raw rendering materials are unloaded and touch the ground outside of an enclosure shall be patched, repaired, or repaved as necessary to prevent standing water or puddles with a surface area greater than one square foot from accumulating.
- (7) **Holding Time of Raw Materials after Size-reduction**
Within one hour after size-reduction or grinding activities, raw rendering materials at a facility utilizing a batch cooking process shall enter the cooking process, or be staged in a permanent total enclosure or stored in a covered container.
- (8) **Holding Time of Cooked Materials**
Within one hour after being removed from a batch cooker at a rendering facility subject to this rule, cooked materials shall be placed in downstream processing equipment to be separated into protein and fat commodities or placed in a covered container for temporary storage.
- (9) **Transfer of Raw or Cooked Rendering Materials between Enclosures**
Raw rendering materials at all rendering facilities and cooked rendering materials at facilities with a batch cooker shall be transported between permanent total enclosures only through a closed system of conveyance, or by covered containers.
- (10) **Washdown of Receiving Area**
Walls, floors, and other surfaces of the receiving area of a rendering facility and any equipment operated in the receiving area, including screw conveyors, pumps, shovels, hoses, etc., shall be thoroughly washed to remove animal matter at least once each working day.
- (11) **Cleaning Floor Drains**
Accessible interior and exterior floor drains shall be inspected and cleaned not less frequently than once per month to remove accumulation of rendering materials.
- (12) **The owner or operator of a rendering facility may use an Alternative Odor BMP provided:**

- (A) The Alternative Odor BMP meets the same objective the Odor BMP that it is replacing, where the objective of the each Odor BMP specified in paragraphs (e)(1) through (e)(11), as defined in Table I of Appendix I;
 - (B) 60 days prior to requested start date to use the Alternative Odor BMP, the owner or operator of a rendering facility submits a written request to the Executive Officer stating how the Alternative Odor BMP meets the same objective as the Odor BMP it is replacing; and
 - (C) The Executive Officer approves the Alternative Odor BMP.
- (f) Permanent Total Enclosure and Odor Control Standards
- (1) No later than 24 months after the date a Permit to Construct is issued pursuant to subparagraph (d)(1)(B), the owner or operator of a rendering facility shall not operate the following equipment and processes at a rendering facility unless such operations are conducted within a permanent total enclosure with ventilation pursuant to paragraph (f)(2) and an odor control system pursuant to paragraph (f)(4); or in a closed system pursuant to paragraph (f)(3):
 - (A) Conveyors associated with raw material transfer operations.
 - (B) Size reduction and conveying equipment, including but not limited to:
 - (i) Screw conveyors;
 - (ii) Breakers;
 - (iii) Crushers;
 - (iv) Hoggers;
 - (v) Grinders; and
 - (vi) Conveyors associated with raw rendering material sizing.
 - (C) Raw rendering material cookers.
 - (D) Process equipment for separating rendered fat from protein materials, including but not limited to:
 - (i) Centrifuges;
 - (ii) Presses;
 - (iii) Separators;
 - (iv) Pumps;
 - (v) Screens;
 - (vi) Tanks that are not completely enclosed;

- (vii) Bins and hoppers; and
- (viii) Conveyors used to transport materials between process equipment.

In addition to meeting the requirements of either a permanent total enclosure with ventilation and an odor control system pursuant to paragraph (f)(2) or a closed system pursuant to paragraph (f)(3), an owner or operator may elect to meet the alternative standards for a permanent total enclosure for the raw materials receiving area specified in paragraph (f)(5).

(2) Permanent Total Enclosure and Ventilation Standards

(A) The combined area of all routine enclosure openings through which odors can escape from a permanent total enclosure shall not exceed 5% of the enclosure envelope.

(B) Ventilation System Standard

A minimum inward face velocity of not less than 200 feet per minute shall be maintained at all times through each routine enclosure opening of a permanent total enclosure, except that a minimum inward face velocity of not less than 100 feet per minute shall be maintained when truck access doors are open. Truck access doors shall not be open except during ingress and egress of a truck.

(C) Minimum inward face velocities for each permanent total enclosure shall be determined by placing an anemometer, or an equivalent device approved by the Executive Officer, at the center of the plane of any opening of the permanent total enclosure.

(D) Exterior walls of a permanent total enclosure shall be constructed of solid material sufficient to withstand the pressure drop created by the inward face velocity of subparagraph (f)(2)(B). Construction shall be of material such as masonry, sheet metal, sheet plastic, wood, metal or aluminum siding, industrial overlapping plastic flap curtains, or other material as approved by the Executive Officer.

(E) Alternative Ventilation System Standard

In lieu of meeting the minimum inward face velocity through each routine enclosure opening required under subparagraph (f)(2)(B), the ventilation system serving a permanent total enclosure shall be designed and operated such that a minimum of not less than 15 air changes per hour is maintained through the enclosure. The alternative standard shall be used subject to the following:

- (i) Not less than 60 days prior to the final enclosure compliance date required under clause (d)(1)(B)(iii) or (d)(1)(C)(iii), as appropriate, the owner or operator shall notify the Executive Officer of the intent to meet the alternative standard under this paragraph and shall submit engineering calculations to demonstrate that the ventilation system serving a permanent total enclosure is designed to meet the alternative ventilation system standard;
 - (ii) The Executive Officer will approve or disapprove the request within 60 days; and
 - (iii) If the Executive Officer disapproves the request to use the alternative standard, the owner or operator shall meet the ventilation system standard under subparagraph (f)(2)(B) upon startup of the enclosure.
- (3) Closed System Standards
 - (A) Each component of a closed system shall be maintained in a manner that minimizes leaks from occurring and prevents odors from escaping from the system, to the maximum extent possible.
 - (B) Material conveyors and troughs that are components of a closed system shall be completely enclosed on all sides, except for doors or panels for maintenance and personnel access.
 - (C) Bins and hoppers that are components of a closed system shall be completely enclosed on all sides, except for doors or panels, and maintenance and personnel access.
 - (D) Mating metal surfaces on doors or access panels under this paragraph shall be sealed with gasket material.
 - (E) Air gaps in components of a closed system shall be sealed with gasket material or with caulk or sealant.
 - (F) Each section of ductwork containing vapor within a closed system shall be sealed at every connection to mating components of the closed system using best industry practices and materials.
 - (G) Any alternative to a closed system, as defined under subparagraphs (f)(3)(A) through (f)(3)(F) that is proposed by the owner or operator of a facility subject to this rule must be approved by the Executive Officer.

- (H) A batch cooker shall not be considered a component of a closed system.
- (4) Odor Control System Standards and Testing
- An odor control system, designed and operated to control fugitive odors from a permanent total enclosure subject to paragraph (f)(2) shall meet the following requirements:
- (A) The control efficiency of an odor control device or system serving a permanent total enclosure for wastewater operations or processing equipment shall not be less than:
- (i) 70% for nitrogen compounds; and.
 - (ii) 70% for sulfur compounds.
- ~~(B)~~ The control efficiency of an odor control device or system serving a permanent total enclosure for raw material receiving shall not be less than either:
- (i) 70% for nitrogen compounds; or
 - (ii) 70% for sulfur compounds.
- ~~(BC)~~ Nitrogen compounds shall be represented by the marker compound ammonia (NH₃), or other alternative marker compound proposed by the owner or operator and subsequently approved by the Executive Officer.
- ~~(CD)~~ Sulfur compounds shall be represented by the marker compound hydrogen sulfide (H₂S), or other alternative marker compound proposed by the owner or operator and subsequently approved by the Executive Officer.
- ~~(DE)~~ Within 180 days after the date a permanent total enclosure is required under subparagraph (d)(1)(B), an odor control device or system serving a permanent total enclosure shall be tested by an independent third-party to determine control efficiency. Testing and analytical methods shall be as follows:
- (i) SCAQMD Method 207.1 for ammonia, and
 - (ii) SCAQMD Method 307 for hydrogen sulfide.
- ~~(EF)~~ The requirements of this paragraph shall not apply to operating standards or testing of odor control equipment designed and operated to control high intensity odors addressed under Rule 472.
- (5) Alternative Standards for a Permanent Total Enclosure for Raw Material Receiving Area

An owner or operator may elect to either install a permanent total enclosure with ventilation pursuant to paragraph (f)(2); or shall meet the following alternative permanent total enclosure requirements for any raw materials receiving area ~~no later than 12 months after the date a Permit to Construct is issued pursuant to subparagraph (d)(1)(B):~~

(A) Submit a permit application for each permanent total enclosure required under this rule within 12 months after (date of adoption).

(B) Meet the requirements for either a permanent total enclosure and applicable requirements for ventilation of a permanent total enclosure to odor control equipment, or a closed system pursuant to subdivision (f) no later than 12 months after the date a Permit to Construct is issued.

~~(A)~~(C) Meet routine enclosure opening requirements specified in subparagraph (f)(2)(A) and exterior wall requirements specified in subparagraph (f)(2)(D).

~~(B)~~(D) All access doors shall not be open except during ingress and egress of vehicles, equipment or people.

~~(C)~~(E) Openings on opposite ends of a building where air movement can pass through both openings shall not be simultaneously open for more than 5 minutes.

~~(D)~~(F) All routine enclosure openings for vehicles or equipment ingress and egress shall use one of the following:

(ix) ~~Automatic~~Automated doors with an air curtain mounted on the interior of the opening with a design velocity of 3,000 feet per minute, that is operated continuously when the door is open,

(x) Vestibule;

(xi) Air lock system; or

(xii) An alternative method to minimize release of odors from each enclosure opening of the building enclosure may be used if the owner or operator can demonstrate to the Executive Officer (an) equivalent or more effective method(s) to those specified in this subparagraph.

~~(E)~~(G) If a building enclosure meeting the requirements of this paragraph is ventilated, the ventilation system shall meet the requirements of

paragraph (f)(2) and shall be ventilated to an odor control system that meets the requirements of paragraph (f)(4).

(g) Wastewater Treatment

After the date a permanent total enclosure is required under subparagraph (d)(1)(C), the owner or operator of a rendering facility shall not operate the following wastewater treatment equipment and processes handling wastewater at a rendering facility, including water used in rendering operations, equipment and area washdown water related to rendering, and water from control equipment related to rendering except in a closed system or located within a permanent total enclosure subject to paragraph (f)(2):

- (1) Screens;
- (2) Skimmers;
- (3) Clarifiers, including dissolved air flotation;
- (4) Settling tanks;
- (5) Sludge dewatering equipment;
- (6) Sludge drying equipment; and
- (7) The rendering facility treated wastewater outlet to city sewer.

(h) Odor Mitigation Plan (OMP)

- (1) An OMP submitted prior to the date a permanent total enclosure is required under subparagraph (d)(1)(B) shall address the following:
 - (A) All facility-specific information below:
 - (i) Facility name;
 - (ii) Location address;
 - (iii) Days and hours of operation;
 - (iv) Facility ID number;
 - (v) Mailing address; and
 - (vi) Title and phone number of person responsible for addressing community complaints received by the facility.
 - (B) Description of rendering-related odor-emitting areas within the facility;
 - (C) Configuration of all odor control equipment that exists at the time of OMP submittal, and the equipment, processes and buildings or rooms it serves;

- (D) Description of work practices that exist at the time of OMP submittal designed to minimize odors from migrating off the facility property;
 - (E) Prioritization of rendering-related odor-emitting areas within the facility, in order of highest-to-lowest odor intensity;
 - (F) For each rendering-related odor-emitting area designated in subparagraph (h)(1)(B):
 - (i) Description of odor mitigation activities proposed to address odor within the odor-emitting area;
 - (ii) Intent to either enclose an odor-emitting area within a permanent total enclosure or operate processes located within the odor-emitting area in one or more closed systems, for all equipment and processes subject to paragraph (f)(1) or subdivision (g) that are not located within a permanent total enclosure or operated in a closed system; and
 - (iii) A detailed construction schedule for each proposed permanent total enclosure.
 - (G) Explanation of why construction and commissioning of proposed permanent total enclosures cannot be expedited prior to the date a permanent total enclosure is required under subparagraphs (d)(1)(B) or (d)(1)(C), as applicable.
- (2) An OMP submitted after the date a permanent total enclosure is required under subdivision (d) shall address all information required under subparagraphs (h)(1)(A) through (h)(1)(E) and clause (h)(1)(F)(i).
- (3) Approval and Disapproval of an OMP
- (A) Within 90 days after submittal of ~~an~~ a complete OMP to the District, the Executive Officer will approve or disapprove the OMP.
 - (B) The Executive Officer will notify the owner or operator in writing if an OMP is disapproved. If an OMP is disapproved, the owner or operator shall resubmit the OMP to the Executive Officer within 90 days after notification of disapproval. The resubmitted OMP shall include any information necessary to address deficiencies identified.
 - (C) The Executive Officer will approve the OMP if it is complete and the Executive Officer concurs that all odor mitigation activities proposed to address odors within the odor-emitting areas at the

facility are sufficient to resolve the odor problem that triggered submittal of the OMP.

- (D) Failure to submit an OMP within 90 days after notification by the Executive Officer, or failure to have an approved OMP by the date allowed under subparagraph (h)(3)(B) for an OMP that was denied by the Executive Officer and subsequently resubmitted is a violation of this rule.

(4) OMP Plan Fees

An OMP submitted or resubmitted under this subdivision shall constitute a plan for the purpose of fees assessed under Rule 306 – Plan Fees.

(i) Signage and Tracking of Odor Complaints at Rendering Facilities

- (1) Upon startup for a new facility, or within 6 months after (*date of adoption*) for an existing facility, an owner or operator of a rendering facility shall post a sign that specifies 1-800-CUT-SMOG as the SCAQMD contact number for odor complaints. The sign shall include the name of the rendering facility. The sign may also include the name of a contact person at the rendering facility to call for questions or to whom odor complaints may be reported. The sign shall meet all of the following requirements, unless otherwise approved by the Executive Officer:
 - (A) The sign shall be installed within 50 feet of the main entrance to the facility;
 - (B) The dimensions of the sign shall be at least 48 inches wide by 48 inches tall;
 - (C) Lettering on the sign shall be at least 4 inches tall;
 - (D) Lettering color shall contrast with the sign background;
 - (E) The lower edge of the sign shall be located between 6 and 8 feet above grade; and
 - (F) The sign shall be unobstructed and clearly visible to a person outside the facility property.
- (2) Notify the SCAQMD by telephone at 1-800-CUT-SMOG no more than three hours after receiving an odor complaint, after facility personnel became aware of the complaint, or after facility personnel should reasonably have become aware of the complaint.
- (3) Upon startup for a new facility, or within 6 months after (*date of adoption*) for an existing facility, a sign shall be posted at each truck entrance at a

facility subject to this rule requiring all incoming trucks to be enclosed or fully covered. The sign shall meet all of the requirements of subparagraphs (i)(1)(A) through (i)(1)(F), unless otherwise approved by the Executive Officer.

(j) Recordkeeping Requirements

Upon startup for a new facility, or within 30 days for an existing facility, the owner or operator of a rendering facility shall collect and maintain the following records:

- (1) Records of all readings taken by anemometer to demonstrate compliance with the inward face velocity requirement of subparagraph (f)(2)(b);
- (2) A legible written or electronic log of all odor complaints received by the rendering facility contact person pursuant to paragraph (i)(1). The odor complaint log shall contain, at a minimum, the following information:
 - (A) Date and time complaint was received;
 - (B) Date and time of alleged odors;
 - (C) Outdoor ambient temperature at time of complaint;
 - (D) Odor description and intensity (i.e., weak, moderate, strong);
 - (E) Weather conditions;
 - (F) Wind speed and direction;
 - (G) Name and contact phone number of complainant, if provided; and
 - (H) Determination of cause for odor emissions that generated the complaint, if found.
- (3) Weekly records of the weight of inedible raw rendering materials, for rendering operations located at integrated rendering facilities, to demonstrate compliance with the exemption for batch cookers under paragraph (l)(3).
- (4) Records of each day of operation shall be kept for low-use rendering facilities exempt under subparagraph (l)(4) shall be kept and made available to SCAQMD personnel upon request.
- (5) The owner or operator of a rendering facility shall maintain records required under this subdivision on the premises of the rendering facility for at least three years and make records available upon request by the Executive Officer.

(k) Equipment Breakdowns and Emergency Rendering Services

On and after (*date of adoption*) an owner or operator of a rendering facility shall be allowed additional time to move raw rendering materials into a permanent total enclosure, provided the additional time is necessary due to the inability of another rendering facility to conduct rendering operations, and the owner or operator complies with the following requirements:

- (1) Within 24 hours after the facility operator becomes aware that additional raw rendering materials will be received and processed, the owner or operator of said facility shall provide evidence to the Executive Officer via written communication from the rendering facility from which additional raw rendering materials will be sent that:
 - (A) The facility sending raw rendering materials cannot conduct rendering operations; and
 - (B) The reason(s) for the inability to process raw rendering materials.
- (2) The length of time in which additional raw rendering materials will be received and processed does not exceed 7 days.
- (3) The owner or operator of the facility receiving and processing additional raw rendering materials notifies the Executive Officer within 24 hours after the facility operator becomes aware that additional raw rendering materials will be received by calling 1-800-CUT-SMOG, where such notification shall include:
 - (A) The name of the facility, address, and a contact for the rendering facility that cannot conduct rendering operations;
 - (B) The length of time, not to exceed 7 days, that additional rendering materials will be received and processed, and;
 - (C) An estimate of the amount of materials that will be processed.
- (4) The owner or operator of the rendering facility that will be receiving and processing additional raw rendering materials has not received a Notice of Violation relating to odors or implementation of provisions of this rule within the past 12 months;
- (5) The owner or operator of the rendering facility that will be receiving and processing additional raw rendering materials complies with all the provisions of this rule with the following allowances:
 - (A) If a permanent total enclosure is constructed pursuant to subdivision (f), incoming raw rendering materials shall be transferred into the permanent total enclosure or into covered containers within 4 hours after the end of material delivery;

- (B) If the permanent total enclosure is not constructed pursuant to subdivision (f), incoming raw rendering materials shall be stored in a covered container within 6 hours after delivery of material delivered at ambient temperature, or within 8 hours after delivery for materials delivered below ambient temperature.
- (l) Exemptions
- (1) The following facilities are not subject to Rule 415:
 - (A) Facilities conducting only edible rendering operations that do not conduct inedible rendering or handle or process trap grease;
 - (B) Collection centers that do not conduct inedible rendering or handle or process trap grease; and
 - (C) Facilities that process trap grease but do not conduct inedible animal rendering operations.
 - (2) Wastewater treatment operations at a rendering facility shall not be subject to the enclosure requirement of subdivision (g), provided that:
 - (A) Each volume of rendering wastewater at a rendering facility integrated with a slaughterhouse or meat packing plant is diluted with more than 30 volumes of wastewater from other sources within the facility, based on a ratio of the most recent three-year average of rendering wastewater to non-rendering wastewater processed in the wastewater treatment plant; or,
 - (B) Each volume of rendering wastewater at a rendering facility not integrated with a slaughterhouse or meat packing plant is diluted with wastewater from other sources within the facility, provided that:
 - (i) The owner or operator demonstrates to the Executive Officer that an appropriate dilution volume of non-rendering wastewater to rendering wastewater is processed in the wastewater treatment plant;
 - (ii) The ratio of non-rendering wastewater to rendering wastewater is not less than 30:1; and
 - (iii) Process water and not clean water is used for dilution; or
 - (C) After mixing of rendering wastewater with non-rendering wastewater, any wastewater exposed to the atmosphere has an average chemical oxygen demand (COD) lower than 3000 mg/L,

based on the most recent three year average sampling data, which shall be made available to the Executive Officer upon request.

- (3) Batch cookers at integrated rendering facilities that process less than 130,000 pounds of inedible raw rendering materials per week shall not be subject to the enclosure requirements of subparagraph (d)(1)(B), provided the cargo area of the vehicle that is used to store and haul materials after rendering is completely covered or fully tarped in accordance with the requirements of paragraph (e)(1).
- (4) Rendering operations that are conducted not more than 25 days in any calendar year shall not be subject to the enclosure requirements of subparagraph (d)(1)(B).
- (5) Blood meal processing operations at a facility integrated with a slaughterhouse or meat-packing plant shall not be subject to ~~this rule~~the standards for enclosure and ventilation, provided the operation is conducted in a closed system as defined in paragraph (c)(2) and is vented to an odor control system meeting the control efficiency requirements under subparagraph (f)(4)(A).
- (6) ~~Meat and bone~~Protein meal operations after completion of the press fat processing operation, after oil and fat have been removed from the ~~meat and bone~~protein meal. This exemption does not apply to press fat processing.
- (7) Transport vehicles, as used in paragraphs (e)(1) and (e)(3) shall not include forklifts.
- (8) Trap grease unloading operations shall not be subject to the requirement for permanent total enclosure under subdivision (f) provided the trap grease is unloaded only through a hose into a wastewater tank or separator with an access or viewing hatch that is not open except during unloading operations or for maintenance.
- (9) Processing of used cooking oil.

Appendix A

Table 1

| | Odor BMP | Odor Reduction Objective |
|---------|--|--|
| (e)(1) | Cover Incoming Trucks | To reduce odors from incoming raw materials during transport on freeways and streets |
| (e)(2) | Delivery of Raw Rendering Materials | Limit the amount of time raw materials sitting in the sun (after enclosure standard is effective) |
| (e)(3) | Washing of Outgoing Transport Vehicles | Prevent raw materials remaining on exiting trucks |
| (e)(4) | Washing of Drums and Containers | Prevent raw materials remaining in drums and containers exiting the facility |
| (e)(5) | Holding Time of Incoming Raw Rendering Materials | Limit the amount of time raw materials sitting in the sun (before enclosure standard is effective) |
| (e)(6) | Repair of Raw Material Receiving Area | Remove accumulation to prevent bacteria growth from standing water resulting in odors |
| (e)(7) | Holding Time of Raw Materials after Size-reduction | Prevent raw materials sitting in totes at batch cooking facilities for an extended period of time |
| (e)(8) | Holding Time of Cooked Materials | Prevent cooked materials sitting in totes or trailers at batch cooking facilities for a extended period of time |
| (e)(9) | Transfer of Raw or Cooked Rendering Materials between Enclosures | Ensure materials being transferred between operations are covered |
| (e)(10) | Washdown of Receiving Area | Remove accumulation of animal parts in and around receiving pit and floor where incoming raw material is deposited |
| (e)(11) | Cleaning Floor Drains | Remove accumulation of animal matter in drains |

ATTACHMENT G

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Staff Report Proposed Rule 415 – Odors from Rendering Facilities

November 2017

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TABLE OF CONTENTS

| | |
|---|-------------|
| TABLE OF CONTENTS | i |
| LIST OF TABLES, FIGURES AND IMAGES | ii |
| EXECUTIVE SUMMARY | ES-1 |
| CHAPTER 1: BACKGROUND | |
| INTRODUCTION | 1-1 |
| RENDERING OPERATIONS..... | 1-4 |
| REGULATORY HISTORY | 1-9 |
| PUBLIC PROCESS | 1-22 |
| CHAPTER 2: CONTROL TECHNOLOGIES | |
| CONTROL OF ODORS FROM RENDERING FACILITIES | 2-1 |
| CHAPTER 3: SUMMARY OF PROPOSED RULE 415 | |
| AFFECTED FACILITIES | 3-1 |
| PROPOSED RULE 415 REQUIREMENTS..... | 3-6 |
| CHAPTER 4: IMPACT ASSESSMENT | |
| REDUCTIONS IN ODORS | 4-1 |
| CALIFORNIA ENVIRONMENTAL QUALITY ASSESSMENT (CEQA)..... | 4-1 |
| SOCIOECONOMIC ANALYSIS | 4-1 |
| AQMP AND LEGAL MANDATES | 4-2 |
| DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE 40727 | 4-2 |
| COMPARATIVE ANALYSIS | 4-3 |
| ALTERNATIVE ANALYSIS | 4-5 |
| COMMENTS AND RESPONSES | 4-7 |
| CONCLUSIONS AND RECOMMENDATIONS | 4-7 |
| CHAPTER 5: SOCIOECONOMIC IMPACT ASSESSMENT | |
| AFFECTED INDUSTRIES AND FACILITIES | 5-1 |
| COMPLIANCE COSTS | 5-2 |
| SMALL BUSINESS’ SHARE OF COMPLIANCE COSTS | 5-18 |
| MACROECONOMIC IMPACTS ON REGIONAL ECONOMY..... | 5-19 |
| REFERENCES | R-1 |
| APPENDIX A – COMMENTS AND RESPONSES | A-1 |
| APPENDIX B – SUMMARY OF RENDERING FACILITY REGULATIONS IN OTHER STATES | B-1 |

LIST OF TABLES, FIGURES AND IMAGES

TABLES

| | |
|-------------------|--|
| Table 1-1 | Character of Odors from Rendering Operations |
| Table 1-2 | Summary of State Rendering Requirements |
| Table 5-1 | Incremental Capital Costs for Permanent Total Enclosure/Closed System for PR 415 Facilities |
| Table 5-2 | Incremental Capital Costs for Ventilation |
| Table 5-3 | Incremental Capital Costs for Odor Control Equipment |
| Table 5-4 | Incremental Capital Costs for Secondary Odor Containment System |
| Table 5-5 | Incremental O&M Costs for Electrical Power Usage |
| Table 5-6 | Incremental O&M Costs for Scrubber Chemicals |
| Table 5-7 | Incremental O&M Costs for Scrubber Makeup Water |
| Table 5-8 | Incremental O&M Costs for Carbon System |
| Table 5-9 | Other Incremental O&M Costs |
| Table 5-10 | Annualized Incremental Costs for BMP Implementation |
| Table 5-11 | Incremental Costs Associated with PR 415 by Facility |

FIGURES

| | |
|-------------------|---|
| Figure 1-1 | Products and By-products Produced During Rendering |
| Figure 1-2 | Schematic of Typical Continuous Dry Rendering Process |
| Figure 1-3 | Typical Restaurant Grease Interceptor |
| Figure 1-4 | Odor Complaint Locations during 5-year Period: 2006 - 2011 |
| Figure 1-5 | Windrose for Central Los Angeles Meteorological Station |
| Figure 1-6 | Wind Roses From Resurrection School Monitoring Study |
| Figure 1-7 | Odor Footprints of Rendering Facilities Identified During Field Odor Survey for South Regional High School No. 8 |
| Figure 2-1 | Typical Restaurant Grease Interceptor |
| Figure 3-1 | Location of Vernon Area Rendering Facilities |
| Figure 5-1 | Locations of Affected Facilities |
| Figure 5-2 | Incremental Capital and Other Related Upfront Costs |
| Figure 5-3 | Incremental O&M Costs |

IMAGES

| | |
|------------------|--|
| Image 2-1 | Resurfaced Concrete Floors |
| Image 2-2 | Floor Drains |
| Image 2-3 | Cooker Room |
| Image 2-4 | Leaking Raw Material Trough |
| Image 2-5 | Stainless Steel Trough |
| Image 3-1 | Uncovered Tote used for Material Transfer |
| Image 3-2 | Clogged Wastewater Channel |
| Image 3-3 | Enclosed Raw Material Receiving Area |

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Proposed Rule 415 – Odors from Rendering Facilities (PR 415) is designed to reduce impacts from odors from rendering operations. Rendering is a process that converts waste animal tissue into a variety of fat and protein commodities that are used for animal feed, fertilizer, biofuels, cosmetics, and other industries. One of the biggest challenges to the rendering industry is controlling odors from their operations. Within the South Coast Air Basin, there are five rendering facilities. Baker Commodities, Farmer John/Smithfield Foods, D & D Disposal/West Coast Rendering, and Coast Packing are located within the City of Vernon, and Darling Ingredients, is located in the City of Los Angeles on the border of Vernon. Although Coast Packing does conduct rendering operations, this facility is only subject to the Best Management Practices of the proposed rule as their operations are substantially smaller than the other facilities.

Vernon is an industrial city with approximately 1,800 businesses such as manufacturing, food processors, rendering, fashion apparel manufacturers, paper product producers, and business logistics companies (City of Vernon Website) and based on the U.S. Census Bureau's latest population estimates, Vernon has a residential population of less than 115 people.¹ The residential areas most impacted by odors from the rendering facilities are Boyle Heights, Huntington Park, Maywood, Commerce, and Bell. These communities are densely populated and are predominantly Hispanic.² All of them are designated as Environmental Justice communities by SCAQMD, indicating that these areas have lower average income and worse air quality within the South Coast Air Basin, as measured by the percentage of people below the federal poverty line, their PM 2.5 exposure, and air toxic cancer risks.³

PR 415 is needed to address odors from rendering facilities that are impacting surrounding communities. The only regulatory tool that is currently available to address odors from fugitive sources at rendering facilities is SCAQMD Rule 402 – Nuisance. Implementation of Rule 402 can be challenging as it requires individuals to notify the SCAQMD of an odor issue and the staff must verify the odor with a considerable number of complaints. Verification of odors is more challenging for the rendering facilities because of the distance of neighborhoods impacted by the odors and the difficulty deciphering which facility is generating the odors due to clustering of the rendering facilities within Vernon. PR 415 takes a more prescriptive and proactive approach by establishing specific requirements to contain the odors within physical structures or closed systems and requiring a series of best management practices to minimize off-site odors from rendering facilities.

¹ The U.S. Census Bureau estimated Vernon's population at 113 as of July 1, 2016, based on its Annual Population Estimates.

² Based on the U.S. Census Bureau and ArcGIS data, population density in these communities are approximately 7,500 people per square mile, compared to the Los Angeles County average of approximately 2500 people per square mile. Moreover, 94 percent of their population are Hispanic, compared to the Los Angeles County average of 48 percent.

³ SCAQMD currently defines an Environmental Justice community as an area with at least 10% of the population below the federal poverty line and a PM2.5 concentration greater than 11.1 µg/m³ per year or a toxic cancer risk of greater than 894 in a million. This definition captures locations with high percentages of poverty that are also within the top 15 percent of SCAB areas in terms of mean PM2.5 concentrations and estimated toxic cancer risk.

Under PR 415, facilities are required to construct enclosures around certain odorous operations. These operations include raw material receiving, cooking, cooked material processing and wastewater treatment. If odors from cooking and processing operations are completely contained within the equipment, these operations are considered a closed system under the proposal and an enclosure is not required. An enclosure is required for raw material receiving and wastewater treatment operations. There is an alternative standard for raw material receiving enclosures where the building itself does not need to be vented to odor control equipment, provided the enclosure has a secondary odor containment system, such as an air curtain, vestibule or air lock at each doorway for truck or equipment access.

Enclosures are generally required within 2½ to 3½ years after rule adoption. Under PR 415, rendering facilities will be required to file for a permit application within 12 months after rule adoption for the enclosure and associated odor control equipment. Operation of equipment is required within 12 to 24 months.

PR 415 will also require best management practices to minimize odors. Most of these practices will be required within 90 days after adoption of PR 415. Examples of best management practices include washing of outgoing trucks, drums and containers, regular washing of the raw material receiving area and floor drains, covering of incoming trucks, limited outdoor holding times for raw materials prior to entering an enclosure, and limited holding times for raw and cooked materials prior to downstream processing. The best management practices are designed to minimize odors during material handling and are practices that can be implemented quickly.

As discussed in Chapter 1, the SCAQMD is not the first agency to regulate odors from rendering facilities. The states of Utah, South Carolina, and Mississippi have rules to address odors from rendering facilities. Other jurisdictions such as Texas Commission on Environmental Quality and New York State Department of Environmental Conservation impose conditions on rendering facilities to address odors. The odor control provisions of these other jurisdictions are similar to the type of rendering odor controls under PR 415, such as building enclosures ~~with vented ventilation~~ to odor control systems for odorous operations and best management practices such as covers for trucks and trailers and time limits for moving materials during the receiving and rendering process. Although some jurisdictions have requirements to control odors from rendering operations, some rendering facilities have implemented odor control measures in the absence of rules or regulations. During the initial rule development for PR 415, Darling Ingredients in Los Angeles filed permit applications for plant modernization that included a newly constructed building that is ~~vented/ventilated~~ to a room air scrubber, sized to ~~handle/ventilate~~ 100,000 cubic feet per minute of airflow. Construction and commissioning of the building enclosure and odor control equipment are nearly completed and operation is expected to commence in January 2018.

Baker Commodities in Penfield, New York near Rochester has implemented odor control measures similar to those required under PR 415 such as a permanent total enclosure ventilated to odor control equipment and some of the best management practices required under the proposed rule. Implementation of PR 415 would require Baker Commodities' Vernon facility, which is the headquarters for the company, to implement many of the odor control measures as its Penfield New York facility.

PR 415 was developed with input from a variety of stakeholders which included the affected facilities, other industry representatives, environmental and community representatives and other agencies. The SCAQMD staff held four Working Group Meetings beginning in July 2014 and an Informational Meeting in September 2017 on PR 415. Although work on PR 415 was suspended in September 2015, staff had completed the Public Workshop, circulation of the Draft Environmental Assessment, and three iterations of the proposed rule. When the Governing Board directed staff to return with a proposal for PR 415 in November 2017, staff picked up the rulemaking at the point of suspension and immediately began working with stakeholders to address remaining issues.

The provisions and cost of compliance under PR 415 are reasonable and the proposed rule includes a number of compliance options. Throughout the rulemaking, staff visited the five affected rendering facilities 15 times to understand each facility's operation. Many of the provisions in PR 415 are based on measures implemented in other jurisdictions, at rendering facilities within the South Coast Air Basin, and based on information gathered through the rulemaking process such as site visits. PR 415 allows facilities the option to implement a closed system or to install a building enclosure vented to an odor control system. PR 415 provides an adequate implementation period of 2½ to 3½ years to design, construct and commission building enclosures and odor control systems. In addition, PR 415 recognizes that, during the construction phase, there may be unforeseen issues that are out of the control of the operator and provides a one-time extension of up to 12 months provided the operator can appropriately demonstrate the need for a time extension. Provisions have also been incorporated for facilities that process small amounts of materials, alternative provisions for building enclosures, best management practices, and wastewater treatment options. To provide an additional safeguard, the proposed rule has a contingency measure for an odor mitigation plan for facilities that have on-going odor issues.

CHAPTER 1: BACKGROUND

INTRODUCTION

RENDERING OPERATIONS

REGULATORY HISTORY

PUBLIC PROCESS

INTRODUCTION

The SCAQMD is the regional air pollution control agency charged with the primary responsibility to plan for and attain the national ambient air quality standards in the South Coast Air Basin, which consists of all of Orange County, and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties in southern California. (California Health and Safety Code (H&SC) Sections 40402, 40410, 40460, 40913.)

Proposed Rule (PR) 415 – Odors from Rendering Facilities is designed to reduce the impacts of objectionable odors in communities near facilities conducting rendering operations. Rendering is a process that converts waste animal tissue into stable, value-added commodities, including fat commodities such as yellow grease, choice white grease and bleachable fancy tallow, and protein commodities, such as meat and bone meal and poultry byproduct meal. Industries that use the commodities produced during rendering include animal feed, fertilizer, biofuels, cosmetics and other industries.

Development of PR 415 resulted from comments and complaints received by affected members of the public at Town Hall Meetings and other public meetings in communities surrounding Vernon. In addition, odors from the rendering facilities in Vernon were also ranked as a top 10 air quality concern by the working group members that participated in a pilot study that was part of the SCAQMD's Clean Communities Plan (CCP) in and around Boyle Heights. In November 2010, the SCAQMD Governing Board approved the 2010 CCP, which included a pilot program in the communities of Boyle Heights and San Bernardino. SCAQMD staff began implementing the CCP in the pilot study area of Boyle Heights, a community near the Vernon rendering facilities, by meeting with a stakeholder working group beginning in July 2011. The purpose of this pilot program was to work with representatives of the community to better understand air quality issues in Boyle Heights and the surrounding community and to develop solutions to those air quality issues. The prevalence of odors from rendering facilities in Vernon, south/southwest of Boyle Heights, was of great concern to the working group affecting the quality of life in the area. SCAQMD staff began rule development to address odors from rendering operations in early 2014.

Rendering Facilities in the South Coast Air Basin

There are five existing rendering facilities that conduct inedible rendering operations in the Basin. All five are located in the Vernon area in close proximity to one another. Three facilities are independent, and two are integrated with either a slaughterhouse or meat-packing plant. The differences between independent and integrated rendering facilities are described in this chapter. Two facilities use a batch rendering process, in which raw rendering materials are loaded into a cooker in discrete batches, and the other three use a continuous cooking operation. All five facilities will be subject to PR 415.

Batch rendering has greater potential for odors, since the cooker door is opened at the end of the cooking cycle, resulting in emissions of steam in addition to odors from the cooking process that must be controlled. Conversely, a continuous cooking operation is a closed process where high intensity odors are vented to odor control equipment as they are generated, and there is no direct path to the atmosphere. For this reason, continuous cooking operations have a lower potential for odors than batch cooking, but are still a source of odors.

It should be noted that 4 of the facilities render material from slaughter, meat packing, butcher shops, and grocery stores, one facility renders animals from zoos, euthanized animals from humane societies, and animals that are collected by counties and cities that died for various reasons. This rendering facility uses a batch-type cooking process.

Figure 1-1 Vernon Area Rendering Facilities



Rendering Industry Characterization

According to the National Renderers Association (NRA) in 2017, the US livestock sector slaughters more than 150 million head of cattle, calves, hogs, and sheep and more than 55 billion pounds of poultry annually.¹ The rendering industry consists of more than three-dozen firms operating more than 200 plants across the US and Canada.² Rendering facilities serve animal industries by using the by-products produced in these industries. By-products amount to more than half the total volume produced by animal agriculture. By weight, approximately 49% of cattle, 44% of pigs, 37% of chicken broilers and 57% of fish are not consumed by humans.³ By-products from animal agriculture include hides, skins, hair, feathers, hoofs, horns, feet, heads, bones, blood, organs, glands, intestines, muscle and fat tissue, and entire carcasses. Many of these by-products are processed in rendering facilities. Organic by-products are highly perishable, and may include some laden with microorganisms that are pathogenic to humans and animals. Rendering offers a system of handling and processing of animal materials that complies with the requirements of disease control.

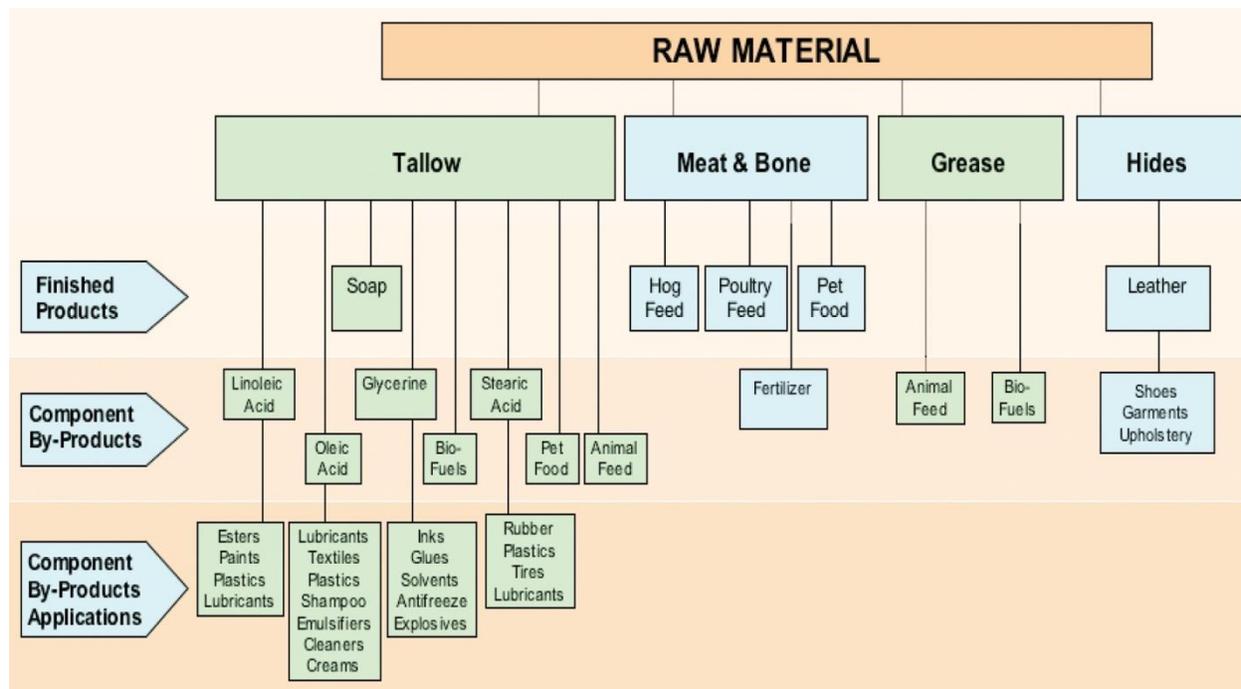
¹ NRA Website: <http://www.nationalrenderers.org/>

² NRA Website: <http://www.nationalrenderers.org/>

³ An Overview of the Rendering Industry and its Contribution to Public and Animal Health; Meeker, Hamilton

In addition to disease prevention, processing of by-products from various animal industries results in nearly 20 billion pounds of animal feed and industrial products in the form of fat and protein commodities.⁴ Figure 1-1 shows the products and by-products of the rendering process.

Figure 1-1 – Products and By-products Produced During Rendering



http://www.sec.gov/Archives/edgar/data/916540/000091654010000031/ex99_1.htm

Integrated vs. Independent Rendering Facilities

Integrated plants operate in conjunction with animal slaughter and meat processing plants and handle 65%-70% of all rendered material. The estimated 95 U.S. and Canadian integrated facilities (NRA) render most edible animal byproducts (i.e., fatty animal tissue), mainly into edible fats (tallow and lard) for human consumption. Edible rendering is subject to the inspection and safety standards of USDA's Food Safety and Inspection Service (FSIS) or its state counterparts. In California, that agency is the California Department of Food and Agriculture (CDFA). These plants also render inedible byproducts (including slaughter floor waste) into fats and proteins for animal feeds and for other ingredients.

Because a meat plant typically processes only one animal species (such as cattle, hogs, or poultry), its associated rendering operations likewise handle only the by-products of that species. The inedible and edible rendering processes are segregated.

Independent operations handle the other 30%-35% of rendered material. These plants, estimated by NRA at 165 in the United States and Canada, usually collect material from other sites using specially designed trucks. They pick up and process fat and bone trimmings, inedible meat scraps, blood, feathers, and dead animals from meat and poultry slaughterhouses and processors (usually smaller ones without their own rendering operations), farms, ranches, feedlots, animal shelters, restaurants, butchers, and markets.

⁴ "Survey Says: A snapshot of Rendering", Jekanowski, Render Magazine, 2011

As a result, the majority of independent renderers are likely to handle materials from several types of animal species. Nearly all of the resulting products of the rendering process from independent facilities are intended for non-human consumption (e.g., animal feeds, biofuels, and industrial products). The U.S. Food and Drug Administration (FDA) regulates animal feed ingredients, but its presence in rendering facilities, or in feed mills that buy rendered ingredients, is not a legal requirement if the facility does not conduct edible rendering operations.

RENDERING OPERATIONS

The Rendering Process

In most facilities, raw materials are received at the facility into a pit, which can be located in the open or under a canopy or building enclosure. Raw materials are conveyed to size reduction equipment. The raw material is ground to a uniform size and placed in cookers, which evaporate moisture and free fat from protein and bone. A series of conveyers, presses, and a centrifuge continue the process of separating fat from solids. The finished fat (e.g., tallow, lard, yellow grease) goes into separate tanks, and the solid protein (e.g., meat and bone meal, poultry meal) is pressed into cake for processing into feed. Other rendering systems may be used, including those that recover protein solids from slaughterhouse blood or that process used cooking oil from restaurants. This cooking oil is recovered (often in 55-gallon drums) for use as yellow grease in non-human food products like animal feeds.

Batch vs. Continuous Rendering

Batch Rendering

A batch cooker is designed to be loaded in discrete batches; then the raw materials are processed as a batch to a target moisture content percentage. Batch processing times vary due to moisture content of the raw material and the operator can adjust the temperature of the cooker as needed to achieve the desired moisture content at the end of the cycle. The batch is then unloaded for fat separation. A batch cooker can function as a cooker, dryer, hydrolyzer, or processor. Two of the five rendering facilities use batch cooking operations.

Continuous Rendering

In a typical continuous rendering process, raw material from receiving bins (1) is conveyed from the bins by a conveyor (2) and discharged across a magnet (3) that removes ferrous metal. A raw material grinder (4) then reduces the raw material to a uniform particle size for material handling and improved heat transfer during cooking. The ground raw material is then metered from a bin (5) at a constant rate into a continuous cooker operating at a constant temperature (6).

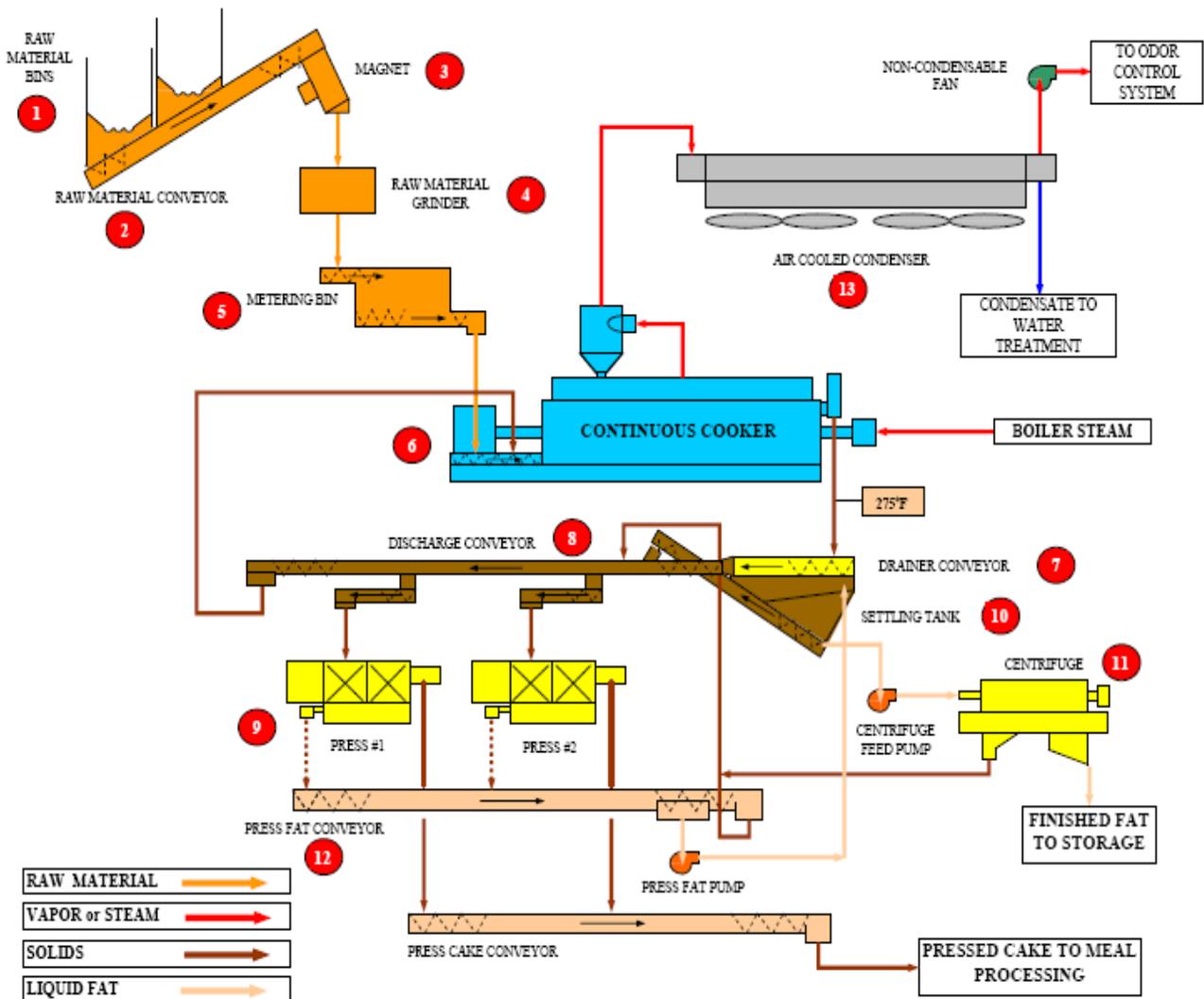
The continuous cooker is generally heated by boiler steam. The cooker brings raw material to a temperature between 240° and 290°F, evaporating moisture and freeing fat from protein and bone. A dehydrated slurry of fat and solids is discharged from the continuous cooker and transported to a drainer conveyor (7) that separates liquid fat from solids. Solids from the drainer conveyor are combined with solid discharge from the settling tank (10) and centrifuge (11) and conveyed via discharge conveyor (8) to screw presses (9), which mechanically reduce the solids' fat content. Solids discharged from the screw presses as a pressed cake (12) are further processed into meal.

The fat removed in the screw presses (9) is pumped to a settling tank (10), along with fat discharged from the drainer conveyor. In the settling tank, heavier bone and protein particles settle to the

bottom. Liquid fat from the settling tank is pumped to a centrifuge (11), which removes solid impurities from the fat. The clarified fat is further processed or stored as finished fat.⁵

Water vapor, containing significant odor potential, exits the continuous cooker (6) through a vapor duct system that generally includes an entrainment trap to separate entrained solids and return them to the cooker. A duct system then transports vapor to a condenser (13). Non-condensable gases are removed from the condenser and routed to an odor control system (not shown). Odorous gases from other parts of the process are also routed to the odor control system through a ductwork system. Figure 1-2 is a schematic diagram of a typical continuous dry rendering process.

Figure 1-3 – Schematic of Typical Continuous Dry Rendering Process



From Rendering: A Proven Disposal Technology; Hamilton, R. (2003). Kansas City, Missouri: Midwest Regional Carcass Disposal Conference.

⁵ Essential Rendering – Rendering Operations; Anderson

Potential for Odors from Rendering Operations

Odor control remains one of the rendering industry's greatest challenges.⁶ Research in the early 1970s indicated that untreated rendering plant emissions could be detected up to 20 miles away from rendering plants.⁷ There are a large number of odorous compounds in rendering odors. 110 volatile compounds have been identified in rendering plant emissions, with about 25 contributing most noticeably to rendering plant odors.⁸ Most of these organic compounds are generated from the breakdown of proteins and fats during the cooking process⁹ or during decay of raw material prior to cooking.

Besides organic compounds, other odor compounds of concern from rendering operations include hydrogen sulfide and ammonia. Because of the wide variety of chemical compounds contributing to rendering plant odors, current strategies for odor control rely on controlling all volatile compounds being emitted.¹⁰

There are several operations and processes within a rendering facility that have noticeable odors associated with them. These include, in order of process flow but not necessarily odor intensity; raw material receiving, raw material size reduction, cooking, fat processing, non-condensable vapors from the condenser following the cooker, and wastewater treatment. High intensity odors from the cooker, presses and centrifuges are currently required to be incinerated at 1202°F for at least 0.3 seconds under SCAQMD Rule 472 – Reduction of Animal Matter. Incineration at this temperature is a highly effective odor control method for organic compounds making up the majority of the composition of rendering odors.

Since the high intensity odors emitted from the cooking process are already required to be controlled, the nature of odors that continue to be present at rendering facilities from the processes noted are fugitive in nature. If there is no odor containment within a building enclosure, there can be many points both in a batch cooking process as well as in a continuous cooking process where fugitive odors can become airborne, migrate offsite and impact surrounding communities. Collectively, this large number of sources of fugitive odors can create odors which are emitted from a rendering facility and can travel well beyond the facility's property line into affected communities. Although containment of fugitive odors within a permanent total enclosure is the preferred method of odor control, closed containers, best management practices, and housekeeping provisions are also measures that can help to minimize odors from rendering facilities.

Odors from Rendering Operations

Humans perceive odors when sensory neurons inside the nose are stimulated by one or more odorants. An odorant is any substance that has a noticeable odor. There are 350 possible odorant receptor genes that are responsible for the perception of odors in the neurons within the nose, and the odor receptors on each neuron are activated by one, two or more odorant compounds. The

⁶ <http://www.rendermagazine.com/articles/2012-issues/august-2012/development-of-new-odor-control-methods/>.

⁷ "Odor Controls for Rendering Plants." *Environmental Science and Technology* 7 (6):504-510. Bethea, Murthy, Carey; 1973.

⁸ "Gas Chromatography/Mass Spectrometry Identification of Organic Volatiles Contributing to Rendering Odors." *Environmental Science and Technology* 16 (12):883-886. Van Langenhove, Van Wassenhove, Coppin, Van Acker, Schamp; 1982

⁹ <http://www.rendermagazine.com/articles/2012-issues/august-2012/development-of-new-odor-control-methods/>

¹⁰ <http://www.rendermagazine.com/articles/2012-issues/august-2012/development-of-new-odor-control-methods/>

activation of multiple sensory neurons means that there are a large number of unique odors that humans can perceive.¹¹ Odors can be described by several qualities, including:

- Character – the qualitative property of the odor (burnt, fishy, sweet, etc.)
- Intensity – weak, mild, strong
- Frequency – how often the odor appears
- Duration – the length of time an odor is present

Together, all of these qualities define the pleasantness or unpleasantness of the odor, or “hedonic tone”. Not everyone perceives odors the same way. Sensitivity to different odors can vary widely between people.

Table 1-1 on page 1-8 shows 25 common chemical compounds that contribute noticeably to rendering facility odors, and includes the odor detection threshold for each, if known. The odor detection threshold is a measure of the lowest concentration of an odorant that is perceptible by an average human sense of smell. This threshold is given in parts per billion (PPB). As evident from Table 1-1, some of these compounds can be detected by the human nose at very low concentrations; 1 PPB or lower.

¹¹ Characterization of Odor Nuisance; Curren, 2012

Table 1-1 – Character of Odors from Rendering Operations

| Chemical Abstract Service (CAS) No. | Odorant | Chemical Formula | Comments | Odor Threshold (ppb) | Odor Character | Odor Threshold References |
|-------------------------------------|---|--|---|----------------------|------------------------------------|---------------------------|
| Aldehydes and Ketones | | | | | | |
| 75-07-0 | acetaldehyde | CH ₃ CHO | Occurs naturally in coffee, bread, and ripe fruit, and is produced by plants | 50 | lemon, alcohol | 1 |
| 16423-19-1 | geosmin (trans-1,10-dimethyl-trans-9-decalol) | C ₁₂ H ₂₂ O | Earthy odor contaminant in fish, beans and water | 0.1 | earthy-muddy odor | 2 |
| 623-37-0 | 3-hexenal | C ₆ H ₁₀ O | Eye irritant | 0.25 | horseradish, fruity, fishy, sweaty | 3 |
| 557-48-2 | 2,6-nonadienal | C ₉ H ₁₆ O | Used to flavor water. | 0.01 | powerful cucumber | 3 |
| 18829-56-6 | 2-nonenal | C ₉ H ₁₆ O | Odor is perceived as orris, fat and cucumber. Has been associated with human body odor alterations during aging. | 0.1 | paper odor | 3 |
| 4312-99-6 | 1-octene-3-one | C ₈ H ₁₄ O | Odorant responsible for the typical metallic smell of metals and blood coming into contact with skin. Strong metallic mushroom-like odor with a low odor detection threshold | 0.005 | mushroom and musky | 3 |
| Amines (Nitrogen Compounds) | | | | | | |
| 7664-41-7 | ammonia | NH ₃ | Trace quantities in the atmosphere; produced from the putrefaction (decay process) of nitrogenous animal and vegetable matter. | 17 | very sharp, pungent | 4 |
| multiple | butyl amine | C ₄ H ₁₁ N | One of four isomeric amines of butane. Liquid having the fishy, ammonia-like odor common to amines. | 1,800 | fishy | 5 |
| 124-40-3 | dimethyl amine | (CH ₃) ₂ NH | Found widely in animals and plants; present in many foods at the level of a few mg/kg. Ammonia-like odor. | 37 | pungent fishy | 4 |
| 75-04-7 | ethyl amine | C ₂ H ₇ N | Strong ammonia-like odor. | 950 | fishy | 6 |
| 74-89-5 | methyl amine | CH ₃ NH ₂ | Simplest primary amine. Has a strong odor similar to fish. | 2.1 | pungent fishy | 4 |
| 462-94-2 | cadaverine (1,5-diaminopentane) | C ₅ H ₁₄ N ₂ | Toxic in large doses. | N/A | cadaver | N/A |
| 120-72-9 | indole (2,3-benzopyrrole) | C ₈ H ₇ N | Can be produced by bacteria as a degradation product of the amino acid tryptophan. Occurs naturally in human feces and has an intense fecal odor. | 1.0 | fecal | 4 |
| 110-60-1 | putracene (1,4-diaminobutane) | C ₄ H ₁₂ N ₂ | Toxic in large doses. | N/A | putrid | N/A |
| 83-34-1 | skatole (3-Methyl-1H-indole) | C ₉ H ₉ N | Mildly toxic organic compound belonging to indole family. Occurs naturally in feces (produced from tryptophan in the digestive tract); strong fecal odor | 1.2 | putrid, fecal | 4 |
| 121-44-8 | triethylamine | N(CH ₂ CH ₃) ₃ | Strong fishy odor reminiscent of ammonia; smell of the hawthorn plant. | 480 | strong fishy | 7 |
| 75-50-3 | trimethylamine | N(CH ₃) ₃ | Product of decomposition of plants and animals. Odor associated with rotting fish, some infections, bad breath | 0.8 | pungent, fishy, saline odor | 8 |
| Organic Acids | | | | | | |
| 107-92-6 | butyric acid (butanoic acid) | C ₄ H ₈ O ₂ | Product of anaerobic fermentation (including in the colon and as body odor). It has an unpleasant smell and acrid taste. Distinctive smell of human vomit. | 1.0 | sour milk, rancid butter | 4 |
| Sulfur Compounds | | | | | | |
| 109-79-5 | butyl mercaptan | C ₄ H ₁₀ S | Fetid (extremely foul-smelling) odor, commonly described as "skunk" odor. | 1.0 | ode to skunk | 9 |
| 624-92-0 | dimethyl disulfide | C ₂ H ₆ S ₂ | Flammable liquid with an unpleasant, garlic-like odor. | 12 | sour, onion like odor | 10 |
| 75-18-3 | dimethyl sulfide | C ₂ H ₆ S | Becomes highly disagreeable at even quite low concentrations. | 1.0 | cabbage like | 3 |
| 75-08-1 | ethyl mercaptan | C ₂ H ₆ S | Strongly disagreeable odor that humans can detect in minute concentrations. Intentionally added to butane and propane to impart an easily noticed smell to these normally odorless fuels. | 1.0 | sour, garlic odor | 11 |
| 7783-06-4 | hydrogen sulfide | H ₂ S | Often results from the bacterial breakdown of organic matter in the absence of oxygen gas, such as in swamps and sewers; process is known as anaerobic digestion. | 4.7 | rotten eggs | 4 |
| 74-93-1 | methyl mercaptan | CH ₄ S | Released from decaying organic matter. | 2.2 | sour, garlic odor | 12 |
| Other Compounds | | | | | | |
| 2371-42-8 | 2-methyl-iso-borneol | C ₁₁ H ₂₀ O | Odor detection threshold is very low. One of the chemicals with major influence on the quality of drinking water | N/A | camphoraceous odor | N/A |
| 123-92-2 | iso-amyl acetate (3-methylbutyl acetate) | C ₇ H ₁₄ O ₂ | Used to confer banana flavor in foods. | 25 | banana-like odor | 13 |

a. Reference: 1999 Proceeding of the Georgia Department of Agriculture Odor Control Program for Rendering Plants

N/A = Not Available

Odor Threshold References

- Lakes Environmental Software, Air Toxics Index
<http://www.lakes-environmental.com/toxic/ACETALDEHYDE.HTML>
- Off-flavor in Catfish Home Page, The Home Page of Dr. Peter Perschbacher
<http://www.geocities.com/CapeCanaveral/5824/geosmin.html>
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<http://www.leffingwell.com/odor.htm>
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- NIOSH/OSHA/DOE Health Guidelines
<http://www.osha-slc.gov/SLTC/healthguidelines/ethylamine/recognition.html - healthhazard>
- Lakes Environmental Software, Air Toxics Index
<http://www.lakes-environmental.com/toxic/TRIETHYLAMINE.HTML>
- NIOSH/OSHA/DOE Health Guidelines
<http://www.osha-slc.gov/SLTC/healthguidelines/trimethylamine/recognition.html>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/ButylMercaptan.htm>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/DimethylSulfide.html>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/EthylMercaptan.htm>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/MethylMercaptan.htm>
- NIOSH/OSHA/DOE Health Guidelines
<http://www.osha-slc.gov/SLTC/healthguidelines/isoamylacetate/recognition.html>

REGULATORY HISTORY

Rule 402 - Nuisance

Rule 402, which mirrors state ~~Health and Safety Code~~ H&SC Section §41700, prohibits the discharge of air contaminants or other material which can cause nuisance or annoyance to any considerable number of people or to the public or which endanger the comfort or repose of any such persons, or the public. Historically, facilities within the South Coast Air Basin that emit odors causing a public nuisance have been cited for violation of Rule 402.

Under Rule 402, a Notice of Violation (NOV) for public nuisance is generally issued after the SCAQMD receives a specified number of public complaints, generally 6 or more complaints from separate households, during the same odor event. This is because the nuisance must affect “a considerable number of persons or the public.” Verification of odors from rendering facilities can be challenging, particularly when rendering facilities are clustered together. In addition, for some rendering facilities there are challenges to confirm a possible upwind source due to physical barriers in upwind locations such as railroad tracks and water channels. There are limitations with the implementation of Rule 402 in addressing odors emanating from rendering facilities. Rule 402 does not contain specific mechanisms to reduce odors from rendering facilities and does not establish minimum standards to reduce or minimize odors. Rule 402 is implemented as a reactive approach to air quality related public complaints, since SCAQMD staff needs to investigate public complaints prior to taking enforcement action. For odor events that may last minutes to hours, the unavoidable lag time between the complaint and an inspector’s attempt at verification of an odor makes it difficult to address specific odor issues. In addition, since the five rendering facilities are located in relative close proximity to one another, it can be difficult for SCAQMD inspectors to trace the odor back to an individual facility.

Regulatory Authority

The District is given broad authority by the California legislature to regulate air pollution from "all sources, other than emissions from motor vehicles." California Health and Safety Code (H&SC) §Section 40000. The term "air pollutant" includes odors [H&SC Section §39013]. Therefore, the District has the authority to pass regulations to control air pollution, including odors, from rendering facilities. The District has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on the District by law. [H&SC Section §40702].~~The District is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) §40000. The term "air pollutant" includes odors [H&SC §39013]. Therefore, the District has the authority to pass regulations to control air pollution, including odors, from rendering facilities. The District has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on the District by law. [H&SC §40702].~~

The District’s legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities also derives from H&SC Section §41700, which, in pertinent part, prohibits the discharge of air contaminants causing annoyance to the public. It further prohibits the discharge of air contaminants, such as odors, which “endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.” [H&SC Section §41700]. The District’s authority granted by H&SC Section 41700 to protect the public’s comfort, repose

and health provides for the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or discomfort to the public.

In addition, H&SC Section §40001(b) authorizes the District to adopt rules and regulations and provides, in relevant part, for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons. PR 415 is a reasonable and proper use of the District's regulatory authority.

Findings of Public Nuisance

In order for an odor complaint to be verified by an SCAQMD inspector, the inspector performs several sequential steps, which include: respond to the odor complaint; interview the complainant; detect the same odor as the complainant describes, which are often many blocks from the complainant; and trace the odor upwind back to a specific facility. It is often difficult to complete this process during a temporary odor event. If rendering odors are still present when the inspector arrives, it is sometimes difficult to trace the odor upwind to a specific source due to ~~both the impediments~~ clustering of facilities. For example, it may be difficult to confirm an individual facility as the source of odors. If a specific facility cannot be identified as the source or a sufficient number of complaints to represent a "public nuisance", ~~no it is difficult to establish violation under or Rule 402 can be issued.~~

Odor events from rendering facilities in the Vernon have rarely resulted in Notices of violations Violation under Rule 402 and H&SC Section §41700. However, based on a long complaint history, comments from community members, and odor detection by SCAQMD inspectors, objectionable odors typical of rendering operations can often be detected miles away from the Vernon area rendering facilities many days out of the year. Therefore, given the difficulties of making a finding of violation under Rule 402, the low number of NOV's does not indicate a lack of impact on the surrounding homes and business.

Other SCAQMD Rules that Address Odors

As previously discussed, Rule 402 – Nuisance represents a reactive approach to odor issues. For certain source categories, it has been necessary to adopt specific requirements within a rule to address odor issues in order to be more proactive with regard to minimizing reasonably foreseeable odors from these source categories to prevent nuisance odors from occurring, or to provide a mechanism within the rule language that addresses ongoing odor issues. For example, Rule 410 – Odors from Transfer Stations and Material Recovery Facilities directly addresses odors by establishing odor management practices and requirements. These include: requiring an enclosure for certain new and existing facilities; requiring a properly-sized ventilation system for the enclosure; and requiring an Odor Management Plan with specific information on control of odors at critical locations within the facility.

An example of a rule requirement that provides a mechanism to address ongoing odor issues is found in Rule 1148.1 – Oil and Gas Production Wells, where a facility is required to submit a Specific Cause Analysis when there are three or more complaints by different individuals from different addresses, and the source of the odor is verified by District personnel. If this provision is triggered three times within a six-month period, the facility is further required to submit an Odor Mitigation Plan with specific provisions for odor monitoring and mitigation that are spelled out in the rule.

Another example of rule requirements designed to address odor issues is found in Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities. Rule 1430 establishes odor contingency measures, where a facility is required to implement either operational changes, or process-related changes, or enhance the enclosure that houses the grinding operation. Implementation of these odor contingency measures is triggered by four odor complaints within a six month period, where the odor complaints are made by different individuals from different households, with the source of the odor having been verified by District personnel.

These three examples of regulatory approaches to odor issues for various industry categories represent a precedent for odor control that has been approved by the SCAQMD’s Governing Board.

Direct Regulation of Odor Emissions in other States

In 2000, Redwine and Lacey¹² conducted a survey of states to determine regulations pertaining to odor emissions from confined animal feeding operations (CAFOs). While CAFOs are not proposed to be regulated under PR 415, the results of this study may be instructive with regard to how other states address odors in general. The study reported that ten states have regulations ~~directly~~ limiting odor emissions directly. Thirty-four other states were found to have some regulation designed to curtail odor emissions without explicit limitations.

Of the ten states with explicit odor limits, six specify odor limitations at some location such as the property line of the operation or the affected business or dwelling. Rhode Island and Vermont “prohibit emission of objectionable odors beyond the property line.” South Carolina states that “no producer may cause, allow or permit emission of an undesirable odor into the ambient air unless preventive measures to abate/control the odor are utilized.” Washington state requires that “any person that allows the emission of an odor must use recognized good practices to minimize the odors; masking is not allowed.” All ten states base odor limits on human perception; none have specified limits based on analytical measurement of odorous compounds. Of the 34 states with implicit odor regulations, ten employ setback distances. Distances vary from a low of 50 ft in Arkansas to a high of 16,000 ft in Kansas. Several states require odor control plans as a part of a pollution abatement permit.¹³

Regulation of Rendering Facilities by the City of Provo, UT

In 1999, the city of Provo, UT adopted an ordinance for rendering facilities located in and around Provo. The purpose of the ordinance includes the language: “. . . to not emit offensive or noxious odors that create a nuisance limiting the ability of other persons or entities to enjoy the safe, healthful, and economic use of their property.”¹⁴ The odor control provisions of the city ordinance represent the type of rendering odor control (i.e. enclosure of odorous operations; enclosure kept under negative pressure; venting enclosure to odor control system) that is proposed in PR 415. This ordinance applies to “All rendering facilities within Provo City limits and within one mile of Provo City limits”, including existing facilities.

Notable requirements in this ordinance include:

¹² A Summary of State Odor Regulations Pertaining to Confined Animal Feeding Operations; Redwing, J.; Lacey, R., 2000

¹³ <http://www.deq.virginia.gov/Portals/0/DEQ/LawsAndRegulations/GeneralAssemblyReports/swineodor.pdf>

¹⁴ <http://www.codepublishing.com/ut/provo/mobile/index.pl?path=../html/Provo07/Provo0706.html>

- *All storage of dead animals or renderable raw material shall be inside the rendering facility and maintained under negative air pressure at all times during storage. Finished product shall be stored inside the rendering facility. [Ch. 7.06.060(1)]*
- *The dead animal or renderable raw material receiving area shall be totally enclosed and maintained under negative air pressure and the exterior door must be closed when dead animals or renderable raw material are being delivered. [Ch. 7.06.060(3)]*
- *The rendering process shall be totally enclosed and maintained under negative air pressure at all times. The air evacuation rate shall be such that . . . there are a minimum of twenty-five (25) exchanges of building air per hour for all buildings required to be under negative air pressure while the rendering process is in operation, and for two (2) hours after the rendering process has ceased to operate. [Ch. 7.06.080(3)]*
- *The rendering facility shall not operate unless the odor control system is operating and in full use. [Ch. 7.06.080(4)]*
- *The odor control system shall operate in such a manner that unreasonably offensive or noxious odors are not detectable beyond the property line of the rendering facility. When . . . investigation determines that a rendering facility emitted unreasonably offensive or noxious odors, the rendering facility shall be served with a notice of violation. [Ch. 7.06.080(5)]*
- *Openings and doors to the rendering facility shall remain closed at all times, except during actual entry or exit of trucks and/or personnel. All doors shall be equipped with closers that will ensure positive door closure. [Ch. 7.06.080(8)]*
- *All delivery trucks, trailers and any attendant containers used to carry renderable raw materials or dead animals shall be covered or carried within a covered truck or trailer and all dump doors, covers and valves shall be maintained to prevent any water, blood or other material from leaking or escaping in any manner during the transport and/or delivery of raw material.*

Requirements for Permitting of Rendering Facilities in Texas

The Texas Commission on Environmental Quality (TCEQ) issues air permits for all rendering facilities in the state of Texas. For new rendering facilities, or when changes are made to existing rendering facilities that increase throughput limits, TCEQ imposes standard conditions on rendering facilities. The odor control provisions of the standard conditions imposed by the TCEQ represent the type of rendering odor control (i.e. enclosure of odorous operations; enclosure kept under negative pressure; venting enclosure to odor control system) that is proposed in PR 415. Darling Ingredients has nine rendering-related locations in Texas.

Standard conditions include many that deal with holding times, enclosure, ventilation of the enclosure, and the odor control system, as follows:

- *Unrefrigerated raw rendering materials shall enter the receiving pit within 24 hours of slaughter.*
- *Refrigerated raw rendering materials shall enter the rendering receiving pit within 48 hours of slaughter. Of the 48 hours, not more than 24 hours of that time shall be unrefrigerated.*

- *All slaughterhouse materials received on the plant site shall be placed in the rendering process receiving pit immediately upon receipt or shall be stored in trailers . . . for a period not to exceed 48 hours before being transferred to the rendering process receiving pit. The . . . enclosure shall be completely covered and paved with concrete.*
- *All whole animal carcasses received on the plant site shall be placed in the rendering process receiving pit immediately upon receipt or shall be stored in a staging building for a period not to exceed 48 hours before being transferred to the rendering process receiving pit. The staging building shall be completely enclosed, covered, and paved with concrete. The doors to this building shall be kept closed at all times, except when loading or unloading.*
- *The raw materials with the potential to produce nuisance odor conditions and all raw materials that have exceeded 24 hours of on-site storage time shall be treated . . . with Positive Deodorant food-grade odor suppressant.*
- *At no time shall the permit holder cause or allow conditions to exist that result in noncompliance with 30 Texas Administrative Code (TAC) § 101.4 as it relates to nuisance odor conditions.*
- *All areas of the rendering building where odors can be produced shall be maintained under negative pressure during all rendering operations including the receiving of raw material, cooker operations, processing of finished product; and during any rendering equipment maintenance period which might result in odorous emissions. All doors and openings shall remain closed during rendering and drying operations, except as necessary to enter or exit the building, to receive raw materials, or conduct maintenance activities. Raw materials shall not be allowed to accumulate in a way that would prevent the closure of any doors.*
- *All plant air discharge shall be treated by a packed-bed room air scrubber before being exhausted into the atmosphere. This scrubber shall be properly installed, in good working condition, and shall achieve 30 room air changes per hour.*
- *All inedible rendering product handling areas that are not completely enclosed shall be hooded in accordance with American Conference of Governmental Industrial Hygienist standards and vented directly to the packed-bed room air scrubber. All hooding, duct, and collection systems shall be effective in capturing emissions from the intended equipment and in preventing fugitive emissions from the building. The hooding and duct systems shall be maintained free of holes, cracks, and other conditions that would reduce the collection efficiency of the emission capture system.*

Regulation of Rendering Facilities in South Carolina

South Carolina has a regulation for rendering under Chapter 22 of the South Carolina Statutes and Codes – Rendering of Livestock and Poultry Raw Material. This regulation has requirements for enclosure and odor control of rendering operations.

§47-22-60 Location and Equipment Requirements for Transfer Centers, Rendering Plants and Vehicles Used to Transfer Raw Materials.

- *Have walls, floors and ceilings made of durable, nonabsorbent materials that can be cleaned and maintained in a sanitary condition [§47-22-60(A)(3)]*

- *Utilize buildings of sufficient size and shape to accommodate all phases of actual processing [§47-22-60(B)(2)]*
- *Be operated using reasonable precautions while handling, storing, or preparing raw material to prevent objectionable odors from being discharged beyond the boundaries of the permittee's property[§47-22-60(B)(5)]*
- *Be operated using appropriate and properly-functioning rendering equipment including, but not limited to working, efficient and effective odor-control systems to prevent the emission of objectionable odors [§47-22-60(B)(6)]*

The odor control provisions of the South Carolina rendering regulation are more restrictive than those proposed in PR 415 in that they do not allow objectionable odors beyond the facility fence line [§47-22-60(B)(5)]. This regulation requires enclosures for all phases of production, and an odor control system.

Regulation of Rendering Facilities in Mississippi

Mississippi has a regulation for rendering under Title 41, Chapter 51 of the Mississippi Code. This regulation has requirements for enclosure and setback, as follows:

- *The building must have four(4) walls complete and be provided with concrete or cement floors [§41-51-21(a)]*
- *All tanks shall be airtight except proper escapes for live steam, passing through the tanks during cooking, which steam shall be condensed by use of cold water condensers. All such equipment and other equipment which may be invented, manufactured and installed for use in disposal or rendering plants shall be so constructed and maintained as to prevent any avoidable escape of odors into the air[§41-51-21(b)]*
- *No new plant shall be located or constructed, or any discontinued plant reconstructed or reopened, at any place in this state inside of, or within two (2) miles of the nearest point of, the existing corporate limits of any municipality with a population in excess of five hundred (500) according to the latest federal census, or within one (1) mile of the nearest boundary of the lands owned or controlled in connection either with any state, county, township, city or town park, or boulevard, or of any public school or hospital, or of any charitable, religious or educational institutions [§41-51-19]*

The odor control provisions of the Mississippi rendering regulation include an enclosure for operations similar to PR 415. The setback requirements (two miles) for new and reconstructed facilities indicate the long distance rendering odors are capable of traveling.

Summary of Rendering Facility Regulations in other States

A summary of regulations in other states is presented in Appendix B. Table B-1 in Appendix B presents a summary of the requirements imposed by 16 states on rendering facilities. These state requirements are described without references to the applicable state regulations (i.e. code sections). This list should not be taken as an exhaustive list of all requirements imposed on rendering facilities in each listed state; rather, it is a brief summary of the State regulations that SCAQMD staff was able to identify.

Odor Guidance from Other Countries

The following guidance for rendering facilities is from “Review of Odour Monitoring and Control Techniques at Rendering Plants”¹⁵, a document prepared to provide additional technical advice to support practical regulation of rendering plants in the UK.

4.3.1 *The need for containment*

In order to minimise the release of fugitive emissions it is necessary to ensure that as much of the rendering process is carried out within a sealed containment envelope. However, simply enclosing sources of emission is generally not sufficient to ensure that offensive emissions are prevented. It is also important to consider ventilation/extraction of air, and treatment of odorous air streams.

The rate of ventilation required for effective containment of offensive odour released within a building depends mainly on how airtight the structure is. In a perfectly sealed enclosure, ventilation would only be required to dilute and remove contaminated air to ensure health and safety standards are met. However, no buildings are completely airtight. Deficiencies in the integrity of the structure and other openings such as doors, gaps around pipe work, gaps between cladding sheet etc. allow air to pass into and out of the building. The larger the gaps in the structure, the greater the rate of flow of air through the building and as a consequence the greater will be the rate of extract ventilation required to contain any offensive odour. Thus to prevent fugitive emission of offensive odour it is essential to ensure that the building integrity is as sound as practicable and that sufficient air is extracted from that building to prevent outward flow of air.

The cited text highlights the importance of good odor control practices that represent the type of rendering odor control (i.e. enclosure of odorous operations; enclosure kept under negative pressure; venting enclosure to odor control system) that is proposed in PR 415.

The following guidance for rendering facilities is from “Guidance Note on the Best Practicable Means for Rendering Works”¹⁶ issued by the Hong Kong Environmental Protection Department to provide guidance on air pollution management for rendering:

4. 5 *To prevent malodorous emissions arisen from the above rendering process from causing air pollution, suitable plant facilities and odour management measures shall be provided to contain fully the emissions from rendering works and associated processes as well as odorous plant ventilation. Properly designed operation process shall be installed and operated to contain and treat concentrated emissions, such as vapours and noncondensable gaseous products emitted directly from cookers and process air from presses. Feedstock treatment appliance(s) shall be of a totally enclosed vessel type to reduce process emissions and vented to an effective odour management system for treatment. The oily fume and odorous emissions from the cooker shall be collected and*

¹⁵ http://www.sniffer.org.uk/files/5713/6906/0202/ER32_project_report_FNL.pdf

¹⁶ http://www.epd.gov.hk/epd/sites/default/files/epd/english/environmentinhk/air/guide_ref/files/bpm28_2b_eng.pdf

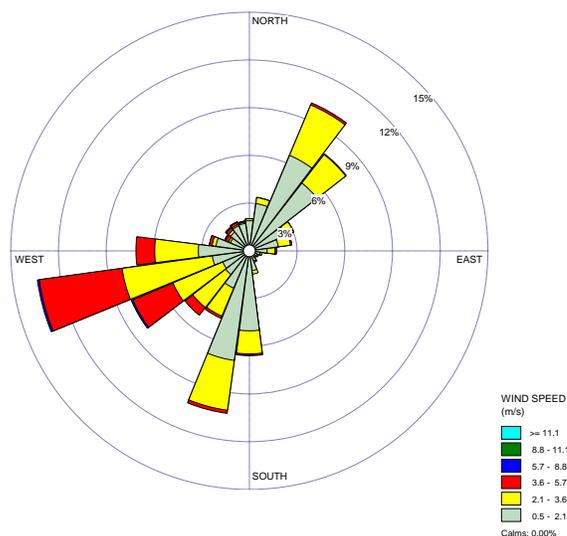
passed through a suitable oily fume and odour abatement equipment before discharging to the open air.

- 4.6 *A well designed ventilation system shall be provided and operated at the plant including, but not limited to storage, handling and processing areas to control odour emission. The ventilation system shall be capable of maintaining a reasonable negative pressure to prevent an uncontrolled escape of malodorous air to outdoors. The areas from which ventilation is provided shall be connected to suitable odour abatement plant.*
- 4.11 *For buildings in which there are possible odorous sources, they shall be designed to prevent the uncontrolled escape of odorous air from the building. Typical odour management measures may include maintaining a reasonable negative pressure and fitting self-closing doors at workplace to contain odorous emission. The odorous air shall be effectively collected and vented to suitable odour abatement equipment.*
- 4.14 *Without prejudice to the above general requirements, the following control measures shall be implemented:*
- (a) *Materials Handling and Processing*
- (i) *All raw materials should arrive at the plant in totally covered vehicles or containers designed to minimize offensive odour and spillage of any liquid or solid matter. The time interval between the materials arising and their delivery to the plant should be kept to a minimum. Raw materials should remain in lorries parked within an enclosed area on the site for as little time as possible and be kept covered until they are discharged for processing.*
- (ii) *Raw materials should be transported from the point of production to the processing plant in enclosed containers and handled in a designated work area operated under negative pressure and with extractive ventilation connected to an effective odour management system, as quickly as practicable. The design of containers shall be such as to minimize the emission of any offensive odour or spillage of any liquid or solid matter. Alternatively, enclosed conveyor system vented to the odour management system should be provided to reduce the process emission.*

The guidance from the Hong Kong Environmental Protection Department for rendering facilities represents the type of rendering odor control (i.e. enclosure of odorous operations; enclosure kept under negative pressure; venting enclosure to odor control system) that is proposed in PR 415.

Odor Complaints in Communities Surrounding Vernon

Odor complaints in the communities surrounding the Vernon rendering facilities were evaluated over a ten-year period. Complaints and NOVs were evaluated from January 2002 through October 2011. An average of 35 odor complaints per year alleged to be rendering odors were received by SCAQMD during this ten year period. Many of these complaints were not verified by an SCAQMD inspector or tracked back to a specific facility. A more recent representation of odor complaints was obtained for the time period from January 2015 through September 2017. During this 21 month period, 193 odor complaints were alleged by complainants in Vernon, Commerce,

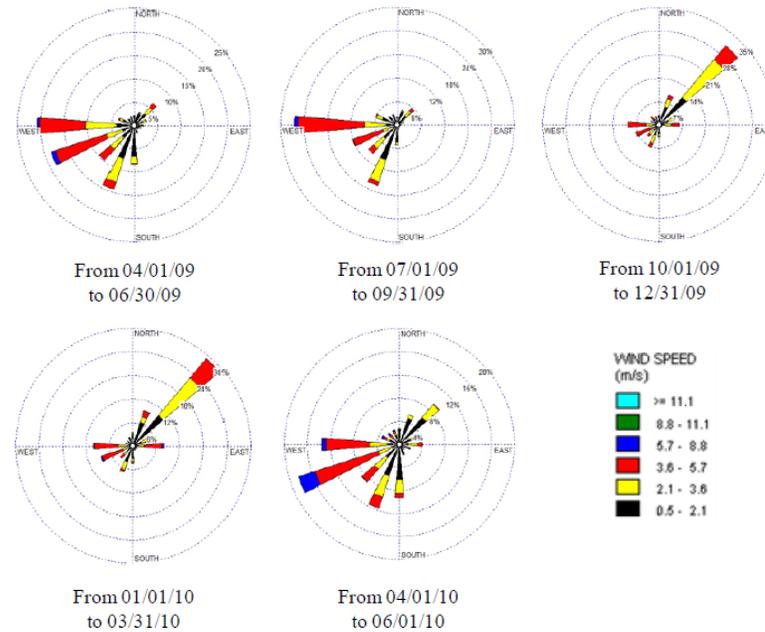
Figure 1-5 – Wind rose for Central Los Angeles Meteorological Station

Meteorological Data from Monitoring Study at Resurrection Catholic School in Boyle Heights

Beginning in 2009, SCAQMD conducted a year-long monitoring study at Resurrection Catholic School in Boyle Heights. The intent of the study was to monitor levels of air toxics in the community emitted from on-road and off-road vehicles and industrial facilities, and the potential health consequences related to exposure to such pollutants.

The study included a temporary weather monitoring station at the school which collected wind speed and direction in three-month periods. The spring (April through June) and summer (July through September) months (i.e., April through September) were characterized by predominantly westerly and west-southwesterly winds, typical of the daytime onshore sea-breezes in this part of the South Coast Air Basin. Conversely, the wind roses representative of colder fall and winter conditions show the predominance of offshore flow from the northeast. This is characteristic of cold air drainage from the mountains to the ocean and it is typically observed this time of year. The stronger northeasterly winds indicate “Santa Ana” winds where high pressure over the deserts of the Great Basin cause cold air to cross the mountains, gaining momentum and warming as it moves down-slope. Santa Ana events bring low humidity and can be warmer or cooler depending on the temperature of the air-mass over the Great Basin deserts.

Figure 1-6 shows several wind roses with three-month average wind speed and direction data from 04/01/09 to 06/01/10.

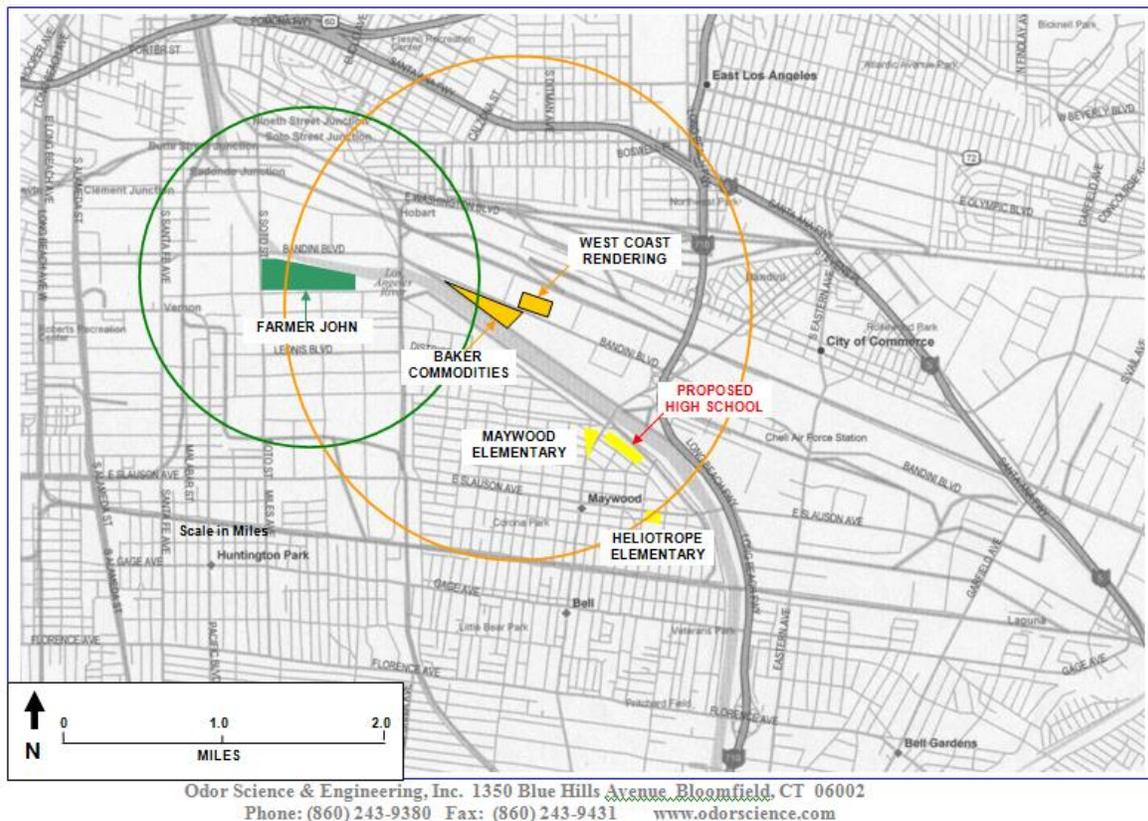
Figure 1-6 – Wind Roses From Resurrection School Monitoring Study

Field Odor Survey for South Region High School

In 2006, Odor Science and Engineering (OS&E) conducted an “Assessment of Potential Odor Impacts at the Proposed Site for the South Regional High School No. 8.”¹⁷ The assessment was conducted to address concerns regarding odor impacts prompted by odor complaints from the recently opened Maywood Elementary School, located in the immediate vicinity of the proposed school site. As part of the assessment, a field odor survey was conducted. During November 2006, OS&E conducted a series of odor surveys to document the odors in the area. The “odor footprints” for several rendering facilities are shown in Figure 1-7. The footprints shown in Figure 1-7 correspond to an intensity level of 3 on the n-butanol odor intensity scale (American Society for Testing and Materials (ASTM) E544). Odors of that intensity are likely to be considered objectionable. Detectable odors would likely extend beyond the footprints shown.

¹⁷Assessment of Potential Odor Impacts at the Proposed Site for the South Regional High School No. 8, OS&E Project No. 1582-M-00, Ostijic, 2006

Figure 1-7 – Odor Footprints of Rendering Facilities Identified During Field Odor Survey for South Regional High School No. 8



The information in Figure 1-7 is presented for informational purposes. As discussed in Chapter 2, the proposed approach for PR 415 is based on addressing fugitive odors by best management practices and best available odor control methods, with no proposed provisions for odor surveys.

Odors and Potential Health Effects

The presence of odors does not necessarily indicate the presence or absence of toxic air contaminants, and odor issues are generally addressed as a public nuisance. Odor complaints, however, are often accompanied by reports of adverse effects such as headache and nausea.

The American Thoracic Society (ATS), a scientific society that focuses on respiratory and critical care medicine, published its official guidelines as to what constitutes an adverse health effect in 1985, and updated these guidelines in 1999. The statement is intended to “provide guidance to policy makers and others who interpret the scientific evidence for the purpose of risk management.”¹⁸ The statement acknowledges that there are gradations in the degree of effects and also differentiates between an effect that is adverse from an effect that is merely a physiological response. The ATS statement indicates that air pollution exposures which interfere with the quality of life can be considered adverse. Thus odor-related annoyance can be considered

¹⁸ “What Constitutes an Adverse Health Effect of Air Pollution?”, American Thoracic Society, 1999, <http://www.thoracic.org/statements/resources/archive/airpollution1-9.pdf>

an adverse effect, even if nausea or headache or other symptoms are not present. In the ATS guidelines, odors are clearly listed as an adverse respiratory health effect.

Unpleasant odors have long been considered as warning signs of potential health risks. More recently, there have been public health concerns that odor sensations themselves, or perhaps the agents responsible for odor, may in fact cause health effects.¹⁹ Such odors often elicit complaints of respiratory irritation, headache, nausea and other adverse symptoms. While the mechanism for the production of these effects is not known, these effects have been noted at concentrations of substances that produce unpleasant odors. Postulated mechanisms include neurological changes in sensory nerves that could influence symptom production in the absence of other toxicological effects.²⁰

The literature describes symptoms of exposure to odor, survey results and health studies. Two examples follow. The first is an excerpt from *The “Gray Line” Between Odor Nuisance and Health Effects*:²¹

Non-specific, multi-system symptoms have been experienced in communities near industrial sites, waste water treatment plants, agricultural sites, and hazardous waste sites. Citizens frequently report that chemical odors are making them sick. These symptoms include: headaches, nausea, reflex nausea, G.I. distress, fatigue, eye irritation, throat irritation, shortness of breath, runny nose, sleep disturbance, inability to concentrate, and classical stress response.

In a survey near a waste treatment plant in 1983, one in nine respondents reported that odors had made them sick. A 1991 study of health effects from pesticides used on a potato field showed that while health effects were not related to proximity of citizens to the fields, odor perception was strongly related to the number of symptoms reported, the length of occurrence of the symptoms, and the severity of the symptoms. More recently these odor-related symptoms are being reported by large groups of citizens near agribusiness feedlots (concentrated animal confinement facilities) around the country.

A study in 1997 conducted at the University of Iowa assessed both the physical and mental health of residents near a large-scale swine operation. This pilot scale study consisted of interviewing 18 residents within two miles of the 4,000 sow facility and 18 comparable residents living near smaller swine facilities. The results indicated that the neighbors of the large swine facility reported higher rates of a variety of symptoms including respiratory problems, nausea, headaches, and irritated eyes, nose and throat.

The following text is from *Potential Health Effects of Odor from Animal Operations, Wastewater Treatment, and Recycling of Byproducts*:²²

¹⁹ “Odour Impact - Odour Release, Dispersion and Influence on Human Well-Being with Specific Focus on Animal Production”, Nimmermark, 2004

²⁰ “Science of Odor as a Potential Health Issue”, Schiffman, 2005

²¹ <http://www.fivesenses.com/Documents/Library/23%20%20Gray%20Line%20Nusance%20Health.pdf>

²² “Potential Health Effects of Odor from Animal Operations, Wastewater Treatment, and Recycling of Byproducts”, Schiffman et. al, Journal of Agromedicine, Oct 2008

The odor exposures that have received the greatest research attention are those that involve irritation. Physiological responses to irritation in the upper respiratory tract (nose, larynx) and/or lower respiratory tract (trachea, bronchi, deep lung sites) have been documented in both humans and animals. Irritation of the respiratory tract can alter respiratory rate, reduce respiratory volume (the amount of air inhaled), increase duration of expiration, alter spontaneous body movements, contract the larynx and bronchi, increase epinephrine secretion, increase nasal secretions, increase nasal airflow resistance, slow the heart rate, constrict peripheral blood vessels, increase blood pressure, decrease blood flow to the lungs, and cause sneezing, tearing, and hoarseness. Release of the potent hormone epinephrine (also called adrenalin) subsequent to nasal irritation may be a source of feelings of anger and tension that have been reported by persons exposed to odors. Epidemiological studies in communities with animal operations and municipal wastewater facilities have reported increased occurrence of self-reported health symptoms consistent with exposure to irritants.

PUBLIC PROCESS

The development of PR 415 was conducted through a public process. Through the rulemaking process, the SCAQMD staff met with a Working Group, consisting of industry, environmental and community members. During rule development, four Working Group meetings were held: in July 2014; December 2014; February 2015; and June 2015. A Public Workshop was conducted on March 5, 2015, and a Public Consultation meeting was held in June 2015.

When rulemaking was suspended in September 2015 in order to focus on other priorities, PR 415 was scheduled to be heard at the May 2015 Governing Board meeting. Much of the rulemaking process was completed which included various versions of the proposed rule, release of the Preliminary Draft Staff Report, and the CEQA document. Work on PR 415 was resumed on September 1, 2017 after the Governing Board directed staff to return to the November 2017 Board Hearing with PR 415. Staff re-initiated the rulemaking process to continue the work on PR415, which included responding to comments on the environmental assessment that had previously been circulated and preparation of the set-hearing (30-day) documents that are made available to the public in advance of a public hearing.

After rulemaking was suspended and then resumed in September 2017, staff provided an update to the Board's Stationary Source Committee and held an informational meeting on PR 415, both on September 15 2017. During all but the informational meeting, the working group participants and interested parties were invited to submit written comments. A summary of written comments received during the rule development process and responses to those comments are included in Appendix A of this staff report. Since the rulemaking resumed, staff has met with 3 of the affected rendering facilities, and will be meeting with a 4th rendering facility in the first week in October. Throughout the rulemaking process staff has visited the five affected rendering facilities many times, with most recent site visits in July, September, and October of this year to better understand specific operations that are affected by the proposed rule. The result has been additional revisions

to staff's proposal to better reflect actual conditions and odor sources, provide some alternative compliance options, and to address key issues raised by the affected facilities.

PR 415 is the result of a quality of life issue that was identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. In November 2010, the Governing Board approved the CCP. SCAQMD staff began holding meetings of the stakeholder working group in July 2011 in order to identify air quality issues in Boyle Heights and surrounding communities that the working group felt should be addressed. Through eight meetings with the working group for the CCP pilot study area of Boyle Heights, and the stakeholder groups within the community listed below, staff heard that reducing odors from the rendering facilities was one of the top priorities for improving air quality in the area:

- Union de Vecinos
- Communities for a Better Environment
- East Yard Communities for Environmental Justice
- Resurrection Church
- Mothers of East Los Angeles
- Diverse Strategies for Organizing

In addition to the CCP meetings, staff also heard complaints about rendering odors from community stakeholders during rule development for Rule 1420.1 - Emission Standards for Lead and Other Toxic Air Contaminants from Large Lead-Acid Battery Recycling Facilities. Rule 1420.1 impacts Exide Technologies, which is located directly across Bandini Boulevard from Baker Commodities, and on the same side of Bandini as D&D Disposal/West Coast Rendering.

CHAPTER 2: CONTROL TECHNOLOGIES

CONTROL OF ODORS FROM RENDERING FACILITIES

CONTROL OF ODORS FROM RENDERING FACILITIES

Factors Affecting Odors from Rendering Facilities

The cause of offsite odors from rendering facilities is very site-specific, and depends upon a number factors, including:

- location and configuration of raw material receiving area;
- proximity of nearby receptors to facility;
- intensity and direction of prevailing winds;
- ambient temperature; and
- ambient humidity level.

The quality of raw materials when they enter the rendering facility significantly affects odors generated from the receiving area. For example, fresh material and material that has been refrigerated until delivery has a lower potential for odors than raw material that is partially decomposed when it enters the facility. An example of partially decomposed material is an animal carcass that has been deceased for a period of time before it is delivered to the rendering facility.

In addition to the quality of incoming raw materials, the current operating configuration of a facility also may have an impact on odors that can travel beyond a facility's fenceline. These include fugitive odors from grinding and conveying raw material, cooking, fat processing and wastewater. All of these sources generate fugitive odors. The control of fugitive odors at a rendering facility can mitigate against the detection of odors in the nearby community. For example, a building with large openings that houses cooking and fat processing operations may facilitate the escape of fugitive odors well beyond the rendering facility's location, where a similar process in a building with fewer or smaller openings may be better able to limit migration of odors.

Temperature and humidity also impact odors, as odors are often stronger on summer days where both temperature and ambient humidity levels are elevated, possibly due to faster decomposition of raw materials.

Two Approaches to Regulating Odors

During rulemaking for PR 415, SCAQMD staff investigated different approaches to regulating odors from rendering facilities. These approaches are described in more detail in the following sections.

First Approach - Establish Odor Surrogates

One approach initially considered by SCAQMD staff was to establish allowable odor concentrations for certain odor compounds (odorants) emitted from rendering processes. Allowable odor concentrations are the maximum level at which an odorant would be allowed. Under this approach, limits for odorants would be established by rule limits, and measured at the facility's property boundary or other location. Examples of odorant concentrations that may be limited under this approach are some or all of the 25 odorants identified in Table 1-1.

In order to establish allowable odor concentrations, it would first be necessary to establish an objectionable level for each odorant. ASTM Method E679 defines a procedure for determining

odor concentrations in a lab setting using an odor panel. A description of ASTM Method E679 can be found in “A Review of the Science and Technology of Odor Measurement.”¹

To summarize ASTM E679, it requires each assessor in an odor panel to choose among three samples; one contains the diluted odor while the other two are blanks (odor-free air). The assessor acknowledges their choice as a guess, a detection or recognition. As defined by E679, a recognition response acknowledges that the sample smells like something.

This process starts with a highly diluted sample and continues with ascending odor concentration where the assessor is presented with the odor at twice the concentration as the previous sample. Under this method, detection threshold is represented by the number of sample dilutions needed to make an odor sample non-detectable. The recognition threshold represents the number of dilutions needed to make the odor sample faintly recognizable.

The odor panel used for the ASTM E679 test procedure consists of 5-12 trained and experienced individuals. The assessors are recruited from the general population and cannot have any specific hypersensitivity, or lack of sensitivity to odors. The assessors are then trained in the appropriate procedures. The odor concentration is derived from the panel of assessors’ responses to the laboratory dilution of odorous air samples.

From this summary, it is evident that while ASTM Method E679 may be useful in determining a detection threshold for each odorant in an odorous air sample, this method cannot establish odor thresholds that may be considered objectionable.

Staff then considered another ASTM method that is not limited to detection or recognition thresholds. ASTM Method E544 is a method for referencing ambient odor intensities in the suprathreshold region (i.e. a stimulus large enough to produce a reaction in excitable cells). The following description of ASTM Method E544 is from “Odor Intensity Scales for Enforcement, Monitoring, and Testing”²

Perceived odor intensity is the relative strength of the odor above the recognition threshold (suprathreshold, as defined in ASTM E544). ASTM E544-991, "Standard Practice for referencing Suprathreshold Odor Intensity", presents two methods for referencing the intensity of ambient odors: Procedure A - Dynamic-Scale Method and Procedure B - Static-Scale Method. Both methods use a series of increasing concentrations of a standard odorant, butanol. Field odor inspectors, monitors, plant operators and citizens commonly use the Static-Scale Method to reference the ambient odor intensity at a facility's fence line or at various points in the surrounding community. The odor intensity reported by the field observer is expressed in parts per million (PPM) of butanol (n-butanol or sec-butanol). The butanol "Odor Intensity Referencing Scale" (OIRS) is an objective measure of ambient odor intensity.

Note: Observed intensity values, such as the scale number or the equivalent butanol concentration, are not directly used in odor dispersion modeling.

ASTM Method E544 is a method used to characterize odor intensity through comparison of the intensity with a reference odor. While Method E544 indicates a method to characterize odor intensity through comparison of odor samples to a reference odor, it does not address odor

¹ A Review of the Science and Technology of Odor Measurement; St. Croix Sensory, Inc., 2005

² <http://www.fivesenses.com/Documents/Library/28%20%20Odor%20Intensity%20Scales.pdf>

character, which is very important to the perception of rendering odors. The use of this ASTM standard, while potentially useful as a tool for monitoring purposes, presents a limitation for incorporating into PR 415 rule development concepts.

Odor Panels

ASTM Methods E679 and E544 use an odor panel, consisting of 5-12 trained and experienced human assessors. The following description, from “A Review of the Science and Technology of Odor Measurement”³ gives more detail regarding odor panels:

The origins of sensory evaluation and nasal organoleptic testing are in the trade industry. Products such as perfumes, coffee, tea, wine, liquors, meat and fish were smelled or tasted to determine the quality of the product. Eventually, individuals became known as expert judges and were used to rate or grade products.

In the 1940s and 1950s great advancements took place in sensory testing by researchers performing sensory evaluation for developers of U.S. government war rations. Since that time, panels of trained sensory assessors have been the preferred method of evaluation sensory characteristics of products in a laboratory setting.

In the field of environmental engineering, odorous air samples can be collected from emission sources. Odor evaluation of odorous air samples is conducted under controlled laboratory conditions following standard industry practices using trained panelists known as assessors.

An odor laboratory is an odor-free, non-stimulating space. Each odor assessor, when working on odor evaluation, focuses on the task of observing the presented odor sample. Noise and distracting activities in the evaluation area can break the focus of the odor assessor. Odor panel sessions are organized and scheduled in order to maintain panel lengths not to exceed a period of 3-hours. Limiting panel length minimizes panelist fatigue.

Odor assessors are recruited from the community at large. From a pool of on call assessors, five to twelve assessors are selected for a scheduled odor panel. Odor panels consist of assessors that are selected and trained following the “Guidelines for Selection and Training of Sensory Panel Members” (ASTM Special Technical Publication 758) and EN13725 (ASTM, 1981; CEN, 2003). A person who smokes, who uses smokeless tobacco, who may be pregnant, or who has chronic allergies or asthma is excluded as a candidate for the odor panel.

Standing odor panel rules are part of the assessor’s agreement to participate in odor testing. Assessors:

- 1. Must be free of colds or physical conditions that may affect the sense of smell;*
- 2. Must not chew gum or eat at least 30 minutes prior to the odor panel;*
- 3. Must refrain from eating spicy foods prior to the odor panel;*
- 4. Must not wear perfume, cologne, or after shave the day of the odor panel;*
- 5. Must wear unscented deodorant the day of the odor panel;*
- 6. Must avoid other fragrance cosmetics, soaps, etc. the day of the odor panel;*

³ A Review of the Science and Technology of Odor Measurement; St. Croix Sensory, Inc., 2005

7. *Must have their hands clean and free of odors the day of the odor panel;*
8. *Must have their clothes odor free the day of the odor panel;*
9. *Must keep the odor panel work confidential; and*
10. *Must not bias the other panelists with comments about the observed samples.*

Each odor assessor is tested to determine their individual olfactory sensitivity using standard odorants, e.g. n-butanol and hydrogen sulfide. The assessor receives training that consists of olfactory awareness, sniffing techniques, standardized descriptors, and olfactometry responses.

As evident from the description and standing odor panel rules, an odor panel is intended as a controlled event that panelists plan for, or conversely abstain from participation if there are health or other issues.

SCAQMD staff believes an odor panel is not the ideal method of assessing the hedonic tone (pleasantness or unpleasantness), annoyance, objectionable nature and strength of odor samples obtained during an odor event, for the following reasons:

1. Odor sample degradation over time requires sample to be analyzed the same day or within 24 hours of collection⁴;
2. Odor samples will require lab work prior to analysis;
3. The need to convene an odor panel on short notice to analyze odor samples taken from a rendering facility during an odor event; and
4. Difficulty of odor panelists to plan for a hastily-convened panel. Due to these uncertainties, it may not even be possible to convene a suitable odor panel.

After detection thresholds are determined for each odorant under consideration, it would then be necessary to establish an allowable odor concentration for each odorant tested, as described previously. An allowable odor threshold is a level at which an odor would be considered objectionable by a reasonable person. Allowable odor concentrations may consist of a multiple of the detection threshold determined by the odor panel. The effort to determine the level at which an odor becomes objectionable would require further analysis by an odor panel. Analysis of this type is considered to be subjective in nature. From “A Review of the Science and Technology of Odor Measurement”:⁵

Measurable, but subjective, parameters of perceived odor are:

1. *Hedonic Tone - pleasantness vs. unpleasantness.*
2. *Annoyance - interference with comfortable enjoyment of life and property.*
3. *Objectionable - causes a person to avoid the odor or causes physiological effects.*
4. *Strength - word scales like “faint to strong”.*

These odor parameters are subjective because individuals rely on their interpretation of word scales and their personal feelings, beliefs, memories, experiences, and prejudices to report them. Written guidelines for subjective odor parameter scales assist individuals (citizens and air pollution inspectors) in reporting observed odor, however, the nature of these parameters remains subjective.

⁴ <http://www.aqmd.gov/docs/default-source/laboratory-procedures/methods-procedures/307-91.pdf?sfvrsn=2>

⁵ A Review of the Science and Technology of Odor Measurement; St. Croix Sensory, Inc., 2005

If staff followed this regulatory approach, odor concentration limits would become part of the rule proposal. To ensure these limits were not exceeded, it would be necessary to require periodic air sampling at a rendering facility's property boundary - or other location depending on the rule requirement.

For several reasons, staff did not pursue using odor surrogates as a regulatory approach. These reasons include:

1. **Appropriate surrogates.** As discussed in Chapter 1, there are over 25 compounds that have been detected in rendering odors. Establishing which of these odorants to use as surrogates to represent the strength, hedonic tone and other parameters of rendering odors, and establishing the level at which each surrogate is considered to be objectionable would be a costly, time-consuming and potentially subjective process.
2. **Odor panels.** As previously discussed, an odor panel is not ideal for situations where an odor sample needs to be assessed on short notice.
3. **Clustering of facilities.** There are two facilities located nearly across Bandini Boulevard from each other. In addition, there are two contiguous facilities located between Bandini and Vernon Avenue near Soto Street. It may be difficult to identify the source of odor samples that are collected at a facility fence line due to this clustering.
4. This regulatory approach would require development of new air sampling protocols and test methods for the various odorants involved.

Second Approach - Evaluation of Best Controls in Current Use

The second approach considered by SCAQMD staff was to evaluate the state of odor controls currently utilized by well-controlled rendering facilities in California and other states; evaluate areas of a typical rendering facility that have high potential for odorous emissions, and determine the best approach to eliminate or minimize odors from these areas.

Given the issues described in the first approach, staff opted to follow a "best control" approach, as such measures have proven effective in other facility practices. Such an approach looks at controls that have been achieved in practice at rendering facilities in SCAQMD and other jurisdictions.

Examples of Controls in Current Practice

Tallowmasters, Miami, FL

In April 2014, SCAQMD staff traveled to Florida to investigate an odor control technology utilized by Tallowmasters LLC, a rendering facility in Miami. During this visit, staff discovered that odors from the rendering processes were considerably lower than the odor levels at any of the Vernon area rendering facilities. In discussions with facility personnel, it was determined that the facility has made concerted and deliberate efforts to minimize odors through a combination of odor containment by enclosure of odorous operations, new odor control technology, and work practices that minimize the potential for odors. These changes were made to address odor complaints that occurred as a result of commercial and industrial establishments that encroached upon the facility over the past 20 years.

Operating personnel followed a plan modeled on recommended industry manufacturing processes and controls. The plan was established as a guideline for every employee of the facility, and all

operating personnel were trained on the “good manufacturing practices” that ensured the quality of proteins and rendered fats produced at the facility, and promoted low odors from the facility. Some of these became Best Management Practices (BMP) for the PR 415 proposal, as outlined in Chapter 2. Notable examples of the operation and work practices at this facility follow.

Resurfaced Interior Floors – all interior floors in operational areas where water, oils, fat and other drippings could collect were resurfaced to facilitate ease of cleaning and reduce standing water. Facility personnel used large squeegees to move any water or other liquids into floor drains upon discovery. Floor drains were cleaned regularly to keep them free flowing and there was no water evident in the drains. There was very little standing water present on interior floors, and there was no oil or fat residue in the cooking and fat processing rooms, in marked contrast to facilities staff visited in the Vernon area. Facility personnel stated the practice of using high pressure washdown water and not allowing standing water contributed to a major reduction in odors. Images 2-1 and 2-2 show resurfaced floors and floor drains. Image 2-3 shows the cooker. The floor around the cooker was almost completely dry.

Image 2-1 Resurfaced Concrete Floors



Image 2-2 Floor Drains



Image 2-3 Cooker Room



Replacement of Leaking Components – One work practice employed by this facility is to promptly replace leaking components. The purpose of this company policy is to prevent leaking of materials containing bacteria that can cause odors. During the visit by staff, a leaking trough that houses a screw conveyor was observed by SCAQMD staff. Facility personnel noted that raw rendering materials are highly acidic and very corrosive to the carbon steel troughs, valves and fittings at the facility. When a component fails or begins leaking, it is replaced with a stainless steel component. While stainless steel is more expensive, the facility felt it was the better long-term solution. However, replacement with stainless steel components is a decision by this facility and is therefore not incorporated as a proposed rule requirement. Images 2-4 and 2-5 show the leaking trough, and the new stainless steel trough that was intended to replace it.

Image 2-4 Leaking Raw Material Trough Image



2-5 Stainless Steel Trough



Enclosure around Odorous Operations – The cooker and all processing equipment are housed inside an enclosure. Facility personnel felt an enclosure is crucial to odor containment. One work practice used at the facility is to train operating personnel to close all doors, including access doors and roll-up doors at the entrance to the raw material receiving pits when not in use. This work practice was also considered to be very important to odor containment.

Odor control equipment – The facility utilizes odor neutralizing equipment that produces hydroxyl radicals. Hydroxyl radicals are highly reactive in the atmosphere, and consequently very short-lived. They react with many pollutants in the atmosphere, including odorous compounds that are emitted from rendering processes. Reaction with a potent oxidizer such as hydroxyl radicals or ozone can dramatically reduce the odor potential of these odorous compounds. Tallowmasters LLC uses several of these devices to control odors inside their facility enclosure, which has allowed the facility to discontinue use of their scrubber. SCAQMD staff verified the use of this technology at the facility as being very effective in reducing odors. However, staff did not have the opportunity to test one of the units to ensure they were using the technology as claimed by the manufacturer. The State of California has established standards for indoor air cleaners, due to concerns over ozone production potential and exposure of residents to ozone. The technology used by Tallowmasters LLC would require further evaluation prior to verification and potential use under Proposed Rule 415 to ensure that it constitutes an odor control technology that is safe for worker exposure.

Darling Ingredients, Fresno, CA

Darling Ingredients operates a rendering facility on West Belgravia Road in Fresno, CA. The facility is located less than half a mile from a residential community. The facility is permitted to accept up to 850,000 lbs of raw material each day and has a main processing building to house most operations. Delivery trucks enter the main processing building to empty loads of raw material, and are rinsed and disinfected prior to exiting the building. Trucks are required to be unloaded within 2 hours after entering the facility, and raw material is required to be processed within 24 hours after receipt, according to permit conditions (San Joaquin Valley APCD).

In addition to raw material delivery, all facility operations and load-out of finished product is conducted inside an enclosure. Buildings at the facility are maintained under negative pressure, and odorous air inside the building routed to two packed-tower wet scrubbers. The main processing building doors, meal building doors, and meal load-out doors are all required to be closed, except for truck entry and exit, or during an emergency. Access openings are further required to be controlled such that the building always remains under negative pressure, which keeps odors inside the building from being released to the outside.

The facility uses a thermal oxidizer to control high intensity odors generated at the cooker, presses, condenser and centrifuge. In the case of a breakdown of the thermal oxidizer, high intensity vapors are routed to the wet scrubbers, or operations are required to be shut down.

In 2011, as a result of longstanding odor complaints, the City of Fresno and Darling entered into an Abatement Agreement, where Darling – Fresno agreed to adopt a number of additional measures to further control odors. These measures included:

- Install permanent ductwork to re-route odors from the thermal oxidizer to the wet scrubbers in the event of thermal oxidizer breakdown (temporary ductwork was previously used).
- Install ductwork and/or louvers in the boiler room to provide make-up air to the boiler.
- Install a notification system on doors that are critical to maintaining negative pressure in the building so operating personnel know when a door is open.
- Modify internal ventilation system to eliminate pockets of odorous air inside building.
- Report to the City of Fresno on emerging technologies that allow real-time detection and quantification of specified odorants that can serve as an early warning system for odor events.
- Notify the City of Fresno within 24 hours after an odor complaint is made to the facility directly.
- Comply with an Odor Control Plan.

Prior to the 2011 Abatement Agreement described above, the facility continued to be the source of odor complaints from nearby residents. This is in spite of the operating conditions at the facility and all the precautions taken to that point. This represents an example of a facility that is located near a residential community that needed to do even more than simply enclosing odorous operations in order to reduce odors from the facility to acceptable levels.

Darling Ingredients, Los Angeles, CA

Darling Ingredients operates a rendering facility in Vernon, CA that will be subject to the requirements of PR 415. In 2000, after a history of odor complaints and enforcement actions by SCAQMD, Darling constructed a permanent total enclosure over the receiving pits. The receiving area is ventilated to a packed bed scrubber. The existing odor control configuration serving the receiving area at the Darling-Los Angeles rendering facility represents the same type of control (i.e. permanent total enclosure, kept under negative pressure and vented to odor control equipment) that PR 415 will impose on other facilities in Vernon as well as any new rendering facilities.

In February 2015 during initial rule development for PR 415, Darling Ingredients filed permit applications for a plant modernization that includes a new rendering line, rendering products system, a tallow line, new storage tanks, new boiler, fat load out system, an odor control system and a scrubber. Permits to construct this equipment were issued in October 2015. Much of the new equipment is located in a newly constructed building that is ventilated to a room air scrubber, sized to ventilate 100,000 cubic feet per minute (cfm) of air flow. The scrubber has two control stages that are intended to control odors from nitrogen compounds in the first stage, and odors from sulfur compounds in the second stage. The construction and commissioning of the rendering related equipment and control equipment will be complete in late 2017, with operation of this equipment projected to commence in January 2018. Control of the new rendering equipment represents the type of control that PR 415 will impose on other Vernon rendering facilities.

Baker Commodities, Rochester, NY

Baker Commodities operates a rendering facility on Browncroft Blvd. in the town of Penfield (Rochester area), NY. The facility converts inedible meat processing animal by-products to meal, tallow, oil and grease, and also processes spent restaurant grease into a saleable product.

Equipment and operations at the plant include: a grinder to reduce material to a slurry; a steam heater cooker to break down the by-products to soluble, insoluble, and volatile components; a condenser for the water component for the volatiles; a press to aid separation of fat solids from the remaining solids; a hammer mill for meal production from the remaining solids; and a centrifuge and filter for tallow production from the separated fats. In addition, spent restaurant grease processing operations include a grease cooker, and screening, sedimentation, and centrifugation equipment, to separate the grease from the water and entrained solids.

Water from both the meat by-product and the spent grease processing operations is treated at the facility before discharge to the sanitary sewer. Non condensable volatiles from both operations are directed to thermal and chemical oxidation units for odor control.⁶

Control equipment at the Baker-Rochester facility includes three scrubbers for fugitive odor control from the plant interior, as follows:

⁶ <http://www.dec.ny.gov/dardata/boss/afs/permits/826420000300009.pdf>

- VC-10 Scrubber (35,250 CFM) treats air from the raw material receiving and main processing areas.
- VC-11 (60,000 CFM) treats air from the raw material receiving, main processing, and yellow grease areas.
- VC-12 Scrubber (60,000 CFM) treats air from the grease area, grinding floor and wastewater area.

The existing odor control configuration at the Baker-Rochester rendering facility represents the same type of control (i.e. permanent total enclosure, under negative pressure, vented to odor control equipment) that PR 415 would require on existing facilities in the Vernon area. This is an example where Baker Commodities invested in odor controls similar to those proposed in PR 415 in one of the company's other locations in the United States.

CHAPTER 3: SUMMARY OF PROPOSED RULE 415

AFFECTED FACILITIES

PROPOSED RULE 415 REQUIREMENTS

Baker Commodities, Farmer John and Darling Ingredients all use the continuous cooking rendering process. West Coast Rendering and Coast Packing use a batch-type cooking process.

Site Visits

During this rule development process, SCAQMD staff visited all of the affected facilities on multiple occasions and interviewed facility operators to review the operating practices and equipment used for odor control. During site visits to the five Vernon facilities, it became apparent that there is a wide range of odor control efforts currently used by these facilities. These efforts are described below.

Odor Containment Procedures Currently Used by Vernon Area Rendering Facilities

The information on practices and equipment used to control odors in the sections that follow was obtained from direct observations during site visits, from permit descriptions, engineering drawings, and discussions with operations personnel at each rendering facility.

Housekeeping

Current housekeeping practices are not consistent across the Vernon rendering facilities. There are clear opportunities for improvement. For example, one facility uses uncovered totes to move raw materials into the cooking area after the size reduction operation. After the cooking cycle ends, cooked materials are again moved in uncovered totes to the pressing area. There is spillage between operations and the spilled material contributes to fugitive odors. Image 3-1 shows an example of an uncovered tote used for material transfer. This is one example of a housekeeping practice that is addressed in the best management practices (BMPs) in the staff proposal, where covered containers are required to transfer materials between enclosures.

Image 3-1 Uncovered Tote used for Material Transfer

At two of the facilities, there were pools of standing water during staff visits, partially due to clogged drains, grates or drainage channels. This standing water is generated by washdown of rendering operations, and contains organic matter that can allow the growth of odorous bacteria unless wastewater is routed to the wastewater treatment area in a timely manner. Image 3-2 shows an example of a partially clogged wastewater grate/channel. This housekeeping practice is also addressed by a BMP in the staff proposal.

Image 3-2 Clogged Wastewater Channel

Enclosures for Receiving Operations

Containment of odorous emissions from rendering operations, including from the raw material receiving area provides the most effective means of odor control. The accepted standard for containment of these odors is an enclosure that is kept under negative pressure, to ensure air moves inward into the enclosure and odors generated within that enclosure are not allowed to escape. Only one of the five rendering facilities has a completely enclosed raw material receiving operation. The enclosed building has roll-up doors to allow delivery truck access and the doors are only open for truck access and egress. This building is kept under negative pressure and vented to odor control equipment. The enclosure and ventilation system ductwork are shown in Image 3-3.

Image 3-3 Enclosed Raw Material Receiving Area

Two rendering facilities have partial enclosures around the receiving area. One consists of a roof with three walls and the fourth wall open. The other has only a roof structure over the receiving pit.

A fourth facility has an asphalt or concrete slab, onto which raw materials are deposited directly, with no covering. This method of receiving raw material does not offer any protection from the sun or wind, allowing accelerated decomposition to occur in the sun during warm days and allowing odors from raw material decomposition to be readily transported off-site. The fifth facility is integrated with a meat packing plant and generates most of its own material. The facility on occasion receives excess material from other facilities, but it is considered a low use facility for processing the material and is less odorous than the other facilities.

Enclosures for Cooking and Fat Processing Areas

Four of the Vernon rendering facilities have at least partially enclosed cooking and fat processing areas, consisting of a roof with one or more walls. In order to meet the proposed enclosure or closed system requirements, all four facilities would need to either conduct additional construction to completely enclose these operations, or to ensure the fugitive odor sources within the processing area are sufficiently enclosed to be considered a closed system. One facility would need to replace

or repair the sheet metal sheathing on the walls and roof which contain a number of holes from oxidation.

Enclosure for Wastewater Treatment Area

One rendering facility currently has an enclosure around the wastewater treatment area. It is an older masonry building and some additional work would need to be performed for the building to be considered a permanent total enclosure to be compliant with the rule proposal. The other three rendering facilities have open wastewater treatment processes that would need to be enclosed and vented to odor control, or converted to closed systems, in order to be compliant with the rule proposal. During site visits, staff noticed some of the most offensive odors emitting from the wastewater treatment process.

Odor Control Equipment

All rendering facilities must comply with the requirements of Rule 472 - Reduction of Animal Matter to control high intensity odors from cookers. Rule 472 requires incineration of all gases, vapors and gas-entrained effluents from equipment emitting high intensity odors. Incineration must occur at a temperature of not less than 1202 degrees Fahrenheit for not less than 0.3 seconds. This temperature and residence time ensure complete thermal destruction of the odors entrained in cooking and effluent processing operations. Alternatively, a rendering facility is allowed to use a method that is equally effective, as determined by the Executive Officer. The Vernon area rendering facilities use three methods for achieving the temperature and residence time requirement in Rule 472, including routing the vapors into an afterburner, a regenerative thermal oxidizer, or into a high temperature boiler.

In addition to control of the high intensity odors, it is necessary to control fugitive odors, which are of much lower intensity. One rendering facility uses a packed-bed scrubber that controls odors from the raw material receiving building. This facility has also installed a cross-flow scrubber that will vent odors from a new cooking and processing building.

PROPOSED RULE 415 REQUIREMENTS

Purpose (Subdivision (a))

The purpose of Proposed Rule (PR) 415 is to reduce odors from facilities rendering animals and animal parts. PR 415 will establish odor control standards as well as best management practices (BMP) to prevent and minimize odors that can cause verified odor complaints and public nuisances in and around the city of Vernon.

Under Rule 402, enforcement action can only be taken after the SCAQMD receives and verifies a sufficient number of complaints. Moreover, because rendering facilities are clustered together in Vernon, in some cases it is more challenging to ascribe odors to one specific facility and contributions of the odors may be emanating from more than one rendering facility. Rule 402 does not include a mechanism to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. Rule 402 is reactive, where PR 415 is proactive in terms of preventing and minimizing off-site odors.

Applicability and Exemptions (Subdivisions (b) and (l))

The proposed rule applies to new and existing rendering facilities that process raw rendering materials and treatment of wastewater from processes associated with rendering.

Applicability of the proposed rule is to rendering facilities that conduct inedible rendering operations, whether or not these facilities also conduct edible rendering. If a rendering facility is integrated with either a slaughter house or a meat packing house, or conducts both edible and inedible rendering operations, the edible rendering operations are not subject to the requirements of PR 415. Inedible rendering means that the products and by-products of the rendering process are not intended for human consumption.

Edible rendering processes are essentially meat processing operations; producing lard or edible tallow for use in food products consumed by humans. Edible rendering is generally carried out in a continuous process at temperatures lower than the boiling point of water. The process usually consists of heating edible fats (fat trimmings from meat cuts), followed by two or more stages of centrifugal separation. The first stage separates the liquid water and fat mixture from the solids. The second stage further separates fat from water. The solids may be used in food products or pet foods, and fat may also be used in food products, or soap making operations. Most edible rendering is done by meat packing or processing companies. Edible rendering operations are not as odorous as inedible rendering and are exempted from PR 415.

Through the rulemaking process, staff visited the five affected rendering facilities on multiple occasions. Based on staff's observations of these facilities and their operations, specific exemptions were developed as these operations or the manner in which these operations were carried out were observed to not be sources of off-site odors at rendering facilities. As a result, the proposed rule includes the following exemptions:

- Facilities conducting only edible rendering operations (producing products for human consumption) that do not also conduct inedible rendering operations or handle or process trap grease;
- Collection centers for animal carcasses and parts that do not also conduct inedible rendering operations (products not for human consumption);
- Facilities that process trap grease – odors from these facilities will be addressed under a separate rulemaking;
- Rendering facilities integrated with a slaughterhouse or meat-packing plant that process less than 130,000 pounds of inedible rendering materials per week in a batch cooking operation are not subject to the enclosure requirements of subparagraph (d)(1)(B) provided the cargo area of the vehicle that is used to store and haul materials after rendering is completely covered or fully tarped;
- Blood meal processing operations at a facility integrated with a slaughterhouse or meat-packing plant are not subject to the standards for enclosure and ventilation - provided the operation is conducted in a closed system and is vented to an odor control system; ~~and~~
- Certain meat and boneprotein meal operations (this exemption does not apply to press fat processing; ~~and~~
- Processing of used cooking oil.

In addition to the facility exemptions, an exemption is provided for wastewater treatment systems from the enclosure and odor control standards in certain situations. First, the wastewater treatment operations required to be operated in a permanent total enclosure (PTE) are not applicable for a

rendering facility integrated with a slaughterhouse or meat packing plant if the owner or operator can demonstrate that each volume of rendering wastewater is diluted with more than 30 volumes of wastewater from other sources within the facility. In addition, an exemption also is allowed for an integrated facility if the owner or operator can demonstrate that after mixing with non-rendering wastewater, the average level for chemical oxygen demand (COD) is lower than 3000 mg/L for wastewater exposed to the atmosphere, based on the most recent three year average sampling data. COD is a measure of the amount of organic compounds dissolved in water. Lower COD water has less potential for odors.

PR 415 also includes an exemption for enclosure requirements for wastewater operations at non-integrated rendering facilities provided the owner or operator can demonstrate an appropriate dilution ratio at a ratio of not less than 30:1 and provided process water from other parts of the facility is used to dilute rendering wastewater, rather than clean water being used for dilution. In both cases, dilution and low COD are surrogates for low odors from the wastewater treatment process.

Based on a visit to one of the rendering facilities in September 2017, staff observed the trap grease unloading operations and provided an exemption from the requirement for PTE for this operation, provided the trap grease is unloaded only through a hose into a wastewater tank or separator with an access or viewing hatch that is not open except during unloading operations or for maintenance. Finally, forklifts are excluded from the requirements for transport vehicles.

Definitions (Subdivision (c))

Refer to the proposed rule language for definitions. Key definitions that require further explanation or discussion in this staff report are listed below.

Closed System means a system handling any combination of solids, liquids, vapor and air at a rendering facility, in which odors are contained within the system. A batch cooker is not considered a closed system. Staff recognizes that no system can contain 100% of the solids, liquids, vapors or air that passes through it and there will always be minute amounts of fugitive emission leakage. A closed system refers to a system without significant air leakage out of the system, through which potential odors can escape. For example, a piping system containing solids with well-sealed flanges and limited access ports would be considered a closed system. A dissolved air flotation (DAF) tank in a wastewater treatment process with an open top would not be considered a closed system. Standards for a closed system are identified in paragraph (f)(3). A system that meets these standards is by definition a closed system.

Confirmed Odor Event is a rendering-related odor event that has been verified as coming from a specific source by SCAQMD Compliance personnel trained in inspection techniques, after an investigation. It takes at least three complaints, verified from different physical addresses to comprise a confirmed odor event. When an investigation following three or more such complaints determines that objectionable odors are being emitted from a particular facility and travelling beyond the property boundary of the facility, that event is determined to be a Confirmed Odor Event.

Enclosure Envelope means the total surface area of a building directly enclosing rendering operations and includes the enclosure's exterior walls, floor and horizontal projection of the roof on the ground. In the case of a rectangular building, this measurement would include the area of

the four walls plus the area of the ceiling (not the roof, which may be pitched). The intent of this definition is to serve as the basis for calculating the area of routine enclosure openings as a percentage of the enclosure envelope.

Odor Control System means a device or equipment serving a permanent total enclosure that is designed to reduce odorous emissions captured in the permanent total enclosure. An example of an odor control system is a series of collection hoods and intake ports that are ducted through a ventilation system to an odor control scrubber that meets the minimum control efficiency requirements of the proposed rule. A closed system, as defined in this chapter is not considered an odor control system.

Permanent Total Enclosure (PTE) means an enclosure having a permanently installed roof and exterior walls which are constructed of solid material, and completely surround one or more odor-generating sources, such that all odors from processes conducted within the enclosure are contained therein. The intent of this provision is for a permanent total enclosure to be constructed of material that is capable of withstanding the pressure drop created by the inward face velocity requirement of the proposed rule. Examples of solid material include masonry, sheet metal, sheet plastic, wood, metal or aluminum siding, or even industrial-grade plastic flap curtains. Other materials as approved by the Executive Officer may also be used.

Receiving Area means the area, tank or pit within a rendering facility where raw rendering materials are unloaded from a vehicle or container, or transferred from another portion of the facility for the purpose of rendering these materials. In the case of an integrated facility that conducts both slaughtering and/or meat packing in addition to rendering, and has a method of conveyance to deliver animal carcasses or parts to the rendering facility other than by truck, the receiving area would be the location where animal carcasses enter the rendering process. That area would need to be enclosed or considered a closed system according to the timetable under the proposed rule.

Routine Enclosure Opening means any of the following areas that may be open during normal operations at facilities subject to this rule, and through which odors have the potential to escape from a permanent total enclosure:

- (A) Vents for natural or forced-air ventilation, including but not limited to gable vents, eave vents, wall vents and rooftop vents;
- (B) Windows, doors and doorways; and
- (C) Spaces below metal sheathing where the sheathing does not reach the foundation.

The intent of this definition is to include all areas that are usually open where air is allowed to enter a permanent total enclosure in the calculation to determine the area of routine enclosure openings as a percentage of the enclosure envelope, in order to ensure inward airflow into the permanent total enclosure so odorous, foul air cannot escape the permanent total enclosure.

Requirements for New and Existing Facilities (Subdivision (d))

Subdivision (d) of PR 415 provides core requirements that all rendering facilities must comply with, and conditional requirements for submittal of an Odor Mitigation Plan, if certain provisions are triggered. This section provides an overview of the proposed rule with the key compliance dates and key provisions. Specific provisions are provided in other subdivisions of PR 415.

Core Requirements (Paragraph (d)(1))

Odor Best Management Practices

All facilities are required to implement Best Management Practices (BMP) for odor control. This requirement is applicable to new facilities upon startup, and to existing facilities within 90 days after rule adoption, or schedule required in the BMP. PR 415 also provides for an alternative BMP, with EO approval, provided it meets the same objective as the BMP it is replacing.

Permanent Total Enclosure or Operation in Closed System

All facilities are required to operate certain odorous processes within a permanent total enclosure or within a closed system. This requirement is applicable to new facilities upon startup and to existing facilities within 2 to 4 years after rule adoption. Existing facilities are required to submit a permit application to the SCAQMD within 12 months after rule adoption for odor control equipment, to be evaluated in combination with a permanent total enclosure. Facilities intending to operate processes affected under PR 415 in a closed system are required to notify this intention to the Executive Officer within 6 months after rule adoption.

An existing facility owner/operator may be required to submit permit applications for a closed system, if any equipment that makes up the closed system is currently permitted and requires physical modification.

The SCAQMD will issue a Permit to Construct (P/C) for a proposed total enclosure or retrofit of an existing non-compliant enclosure. The permanent total enclosure and odor control system will be evaluated together, where applicable. The timing for issuance of the P/C by SCAQMD is within 180 days after the permit application is deemed complete. A rendering facility then has up to 24 months after the date of P/C issuance to construct and commission a permanent total enclosure for a receiving or processing area, in addition to a ventilation system and odor control system, where applicable, and operate in compliance with the permanent total enclosure standards (or closed system standards, as applicable), ventilation system standards and odor control system standards. An alternative standard for a permanent total enclosure for raw materials receiving areas has been added to PR 415 that does not require ventilation with an odor control system provided other conditions are met. If a facility elects to comply with this provision, the alternative permanent total enclosure requirements must be met no later than 12 months after the date of a Permit to Construct is issued. Similarly, a rendering facility has up to 12 months after the P/C is issued to construct and operate a rule compliant permanent total enclosure for wastewater treatment facility. The implementation schedule accounts for time needed for budgeting, equipment design and procurement, and installation and testing. Staff believes this timing is reasonable for the proposed requirements.

Permanent total enclosures are required to be ventilated to odor control equipment, except those complying with the alternative standard. The purpose of this requirement is to prevent or minimize release of odorous or foul air from a permanent total enclosure directly into the environment. The timing for this requirement is the same as the timing for a permanent total enclosure – upon startup for new facilities, and 24 months after a Permit-to-Construct (P/C) is issued for the combined permanent total enclosure/odor control system for existing facilities.

Wastewater Treatment

Certain wastewater treatment processes are required to be enclosed within a permanent total enclosure (ventilated to odor control) or operated in a closed system. This includes screens, skimmers, clarifiers, including dissolved air flotation, settling tanks, sludge dewatering equipment, sludge drying equipment and the rendering facility's treated wastewater outlet to the city sewer.

This requirement is applicable to new facilities upon startup. The timing of this requirement for existing facilities is as follows. Within 12 months after rule adoption, the facility owner/operator is required to submit a permit application for necessary enclosures, to be evaluated in combination with odor control as proposed by the owner or operator. A rendering facility then has 12 months after the date of P/C issuance to construct and commission the permanent total enclosure, ventilation system and odor control system for odor control of wastewater treatment operations.

Notification of Intent to Enclose or Operate in a Closed System

The owner or operator is required to submit a letter to the Executive Officer within 6 months after the adoption of the proposed rule declaring the intent to either enclose certain odor-emitting processes and operations within a permanent total enclosure or operate these processes and operations within closed systems. A permit application is required within 12 months for new permanent total enclosures, as described earlier in this chapter. It is anticipated that a permit application may be submitted for currently-permitted equipment comprising a closed system that requires physical modification. However, for closed systems where the owner or operator may not need to submit a permit application, a mechanism to inform the SCAQMD of such intent is necessary. Therefore, this requirement will provide detailed information to SCAQMD in the absence of a permit application.

Increments of Construction Progress

PR 415 includes a provision whereby within 6 months after the date a permit to construct is issued for the permanent total enclosure, the owner or operator must show increments of progress which can include breaking ground for the new enclosure or odor control equipment and submitting a construction schedule that identifies increments of progress toward meeting the final compliance date for operating within a permanent total enclosure.

Request for Time Extension of Completing a Permanent Total Enclosure

A provision has been added to PR 415 to allow for a one-time extension of time for up to one year to complete construction of a permanent total enclosure and applicable ventilation and odor control systems for reasons beyond the control of the owner or operator. This type of provision has been included in other rules where there are substantial construction provisions such as SCAQMD Rules 1402 which implements the toxics hot spots program for implementing risk reduction plans, Rule 1420.2 for large lead melting facilities to install total enclosures and air pollution controls, and Rule 1430 for metal forging facilities for installation of total enclosures with air pollution controls. Under PR 415, a facility must submit a request for a time extension within 180 days before the permanent total enclosure deadline and must provide a description of why the extension is needed, progress to date for the construction of the enclosure, and length of time requested for the extension. The Executive Officer will approve, modify, or deny the extension based on the facility's demonstration that the specific circumstances are beyond the control of the owner or operator and based on the evidence the owner or operator provides which can include, but is not

limited to detailed schedules, engineering designs, construction plans, permit applications, and purchase orders.

Submittal of Odor Mitigation Plan (Subdivision (h))

In the case of pervasive and ongoing odorous emissions from a rendering facility, the owner or operator is required to submit an Odor Mitigation Plan (OMP). This can occur either before or after the requirement to construct an enclosure and vent that enclosure to odor control equipment within approximately 3 to 4 years after rule adoption. Submittal is required within 90 days after notification by the Executive Officer that an OMP is required. There are two situations that can trigger this requirement, as follows:

1. A Notice of Violation (NOV) is received for Public Nuisance related to rendering odors subject to Rule 402; or
2. Three or more confirmed odor events related to rendering odors are received in a consecutive 180-day period.

As described in Chapter 1, in order to receive an NOV for odor nuisance under Rule 402, generally 6 or more odor complaints must be received from separate households and verified in a short period of time to constitute a public nuisance. If this occurs for an NOV related to rendering odors, the owner or operator will be required to submit an OMP. The conditions of the OMP are distinct from any corrective action that is required under the settlement terms of the NOV.

The second trigger that can require an OMP is designed to address a long-term chronic situation, where 3 or more confirmed odor events related to rendering odors are received within a consecutive 180-day period. Although the number of complaints may not meet the criteria of a “public” nuisance, the SCAQMD is concerned about reoccurring events. A confirmed odor event is an occurrence of odor resulting in three or more complaints by different individuals from different addresses, where the source of the odor is verified by District personnel trained in inspection techniques. The verification of the odor would use the same approach used to confirm a Rule 402 odor nuisance. If a rendering facility triggered three or more confirmed odor events within a consecutive 180-day period, the owner or operator is required to take corrective actions to further minimize odors.

Content and Approval of Odor Mitigation Plan

As previously described, an Odor Mitigation Plan (OMP) may be required either prior to or after the requirement for a permanent total enclosure and odor control system is fully implemented. If an OMP is required prior to enclosure, it must include:

- Facility-specific information, as follows:
 - Facility name;
 - Location address;
 - Days and hours of operation;
 - SCAQMD facility ID number;
 - Mailing address; and
 - Title and phone number of person responsible for addressing community complaints received by the facility.
- Description of all odor emitting areas within the affected facility.

- Configuration of all odor control equipment that exists at the time of OMP submittal, and the equipment, processes and buildings or rooms it serves.
- Description of work practices that exist at the time of OMP submittal designed to minimize odors from migrating off the facility property.
- A prioritization of odor-emitting areas within the facility, in order of highest-to-lowest odor intensity.
- For each odor emitting area:
 - A description of odor mitigation activities proposed to address odors from within the area;
 - The owner or operator's intent to either enclose operations and processes within a permanent total enclosure or operate them in a closed system (for all equipment and processes that are not already within a permanent total enclosure or a closed system); and
 - A detailed construction schedule for each proposed permanent total enclosure.
- An explanation of why construction of the permanent total enclosure and odor control system cannot be expedited and completed prior to the date the enclosure standard becomes effective under the proposed rule.

An OMP submitted after the enclosure standard is fully implemented must address all of the above elements, except for the intent to enclose and detailed construction schedule.

The OMP will be approved or disapproved by the SCAQMD within 90 days, provided it is a complete OMP. If an OMP is disapproved, it must be resubmitted within 90 days for reconsideration. The Executive Officer will approve the OMP if it is complete and the Executive Officer concurs that all odor mitigation activities proposed to address odors within the odor-emitting areas at the facility are sufficient to resolve the odor problem that triggered submittal of the OMP. Failure to have an approved OMP within 90 days after submittal of an OMP to the District is a violation of this rule. Finally, an OMP is subject to plan fees under SCAQMD Rule 306 – Plan Fees.

Specific Cause Analysis

If a facility receives a single confirmed odor event related to rendering odors, an analysis of the specific cause(s) surrounding the odor event is required to be conducted. The analysis is a process used by a facility subject to this rule to investigate the cause of a confirmed odor event, and involves a description of activities during the time of the odor event, any upset or breakdown conditions at the facility, including potential sources of odors and emission points for all equipment required to be enclosed. In addition, the analysis must identify corrective measures needed, and corrective measures taken to prevent recurrence of a similar event.

Requirements for Odor Best Management Practices (Subdivision (e))

Under PR 415, rendering facilities are required to implement Best Management Practices to provide containment of materials that have the potential to generate odors and minimize the accumulation of materials and/or liquids that can lead to off-site odors. Under PR 415, there is no minimum threshold for BMPs as staff believes that all facilities should be implementing such practices to minimize odors from rendering facilities. The proposed rule identifies a number of ~~Best Management Practices (BMPs)~~ under PR 415 that will assist in reducing odors from various points or processes within a rendering facility. These include:

1. Covering of Incoming Transport Vehicles

Transport vehicles delivering raw rendering materials to a rendering facility from offsite locations are not permitted to pass the first point of contact at the rendering facility (such as a guard shack or weigh station) unless the cargo area of the vehicle is completely enclosed or fully tarped.

2. Delivery of Raw Rendering Materials

Raw rendering materials must be transferred directly from the delivery truck (or other means of conveyance in the case of inter-plant delivery within an integrated facility) into a permanent total enclosure or into covered containers on a continuous basis after material delivery, such that raw rendering material does not remain outside of a permanent total enclosure or covered containers for more than 60 minutes after the end of material delivery. Covered containers are permitted to remain outside of a permanent total enclosure after 60 minutes, provided raw rendering material is transferred directly into such containers or within 60 minutes after the end of delivery.

This BMP becomes effective after the effective date that a permanent total enclosure is required to be operational for the receiving area under the proposed rule. Prior to completion of a permanent total enclosure, another BMP limits the holding time of incoming raw rendering material.

3. Washing of Outgoing Transport Vehicles

Where raw rendering materials come directly into contact with a delivery truck, the cargo area of any vehicle exiting the rendering facility must be thoroughly washed prior to the truck leaving the facility. Outgoing trucks are currently required to be washed under the California Code of Regulations (CCR) [CCR, Title 3, Section 3-CCR-§1180.35], which states:

“Vehicles used to transport carcasses, packinghouse waste or inedible kitchen grease shall be cleaned with hot water of at least 120 degrees Fahrenheit, live steam, or other method approved by the Department. Such cleaning shall be adequate to prevent spread of disease and creation of nuisances.”

4. Washing of Drums and Containers

Open drums or containers holding raw rendering materials must be washed to remove raw rendering materials prior to leaving a rendering facility.

5. Holding Time of Incoming Raw Rendering Materials

This BMP is effective prior to the date a permanent total enclosure is required to be operational for the receiving area under the proposed rule. A time limit for incoming raw rendering material is imposed by this requirement, depending on whether the material is delivered at ambient temperature or at lower-than-ambient (i.e. refrigerated material). Within 4 hours after arrival for ambient temperature material, or 6 hours after delivery for refrigerated material, incoming raw rendering materials must be placed into the cooking process, or be staged in a permanent total enclosure or in covered containers.

6. Repair of Outside Raw Material Receiving Area

Within 180 days after rule adoption, all areas of broken concrete or asphalt, including divots, cracks, potholes and spalling of concrete in the raw material receiving area of a rendering

facility, (or the rendering portion of a facility integrated with a slaughterhouse or meat-packing plant) where raw rendering materials are unloaded and touch the ground outside of an enclosure must be patched, repaired or repaved as necessary to prevent standing water or puddles with a surface area greater than one square foot from accumulating.

7. Holding Time of Raw Materials after Size-reduction

Within one hour after size-reduction or grinding activities, raw rendering materials at a facility utilizing a batch cooking process must enter the cooking process, or be staged in a permanent total enclosure or a covered container.

8. Holding Time of Cooked Materials

Within one hour after being removed from a batch cooker at a rendering facility subject to this rule, cooked materials must be placed in downstream processing equipment to be separated into protein and fat commodities or be placed in covered containers for temporary storage.

9. Transfer of Raw or Cooked Rendering Materials between Enclosures

Raw or cooked rendering materials must be transported between permanent total enclosures only through a closed system of conveyance, or by covered containers. If a facility transports meal or other product within the facility via transport vehicle, that intra-facility transport vehicle would qualify as a closed system of conveyance if odors are not allowed to escape during transport.

10. Washdown of Receiving Area

Walls, floors, and other surfaces of the receiving area of a rendering facility and any equipment operated in the receiving area, including screw conveyors, pumps, shovels, hoses, etc., must be thoroughly washed free of animal matter at least once each working day. This receiving area washdown frequency is already required in each affected facility's permit. This BMP formalizes this permit condition requirement into rule language for ease of enforcement.

11. Cleaning of Floor Drains

Accessible interior and exterior floor drains are to be inspected and cleaned no less than once a month.

12. Alternative Odor Best Management Practices (BMP)

An alternative BMP may be used, provided:

- A. The alternative BMP meets the same objective the BMP that it is replacing, where the objective of each Odor BMP is as defined in Table 3-1;
- B. The owner or operator of the rendering facility submits a written request to the Executive Officer stating how the alternative Odor BMP meets the same objective as the Odor BMP it is replacing; and
- C. The Executive Officer approves the alternative Odor BMP.

| Table 3-1 | | |
|------------------|--|--|
| | Odor BMP | Odor Reduction Objective |
| (e)(1) | Cover Incoming Trucks | To reduce odors from incoming raw materials during transport on freeways and streets |
| (e)(2) | Delivery of Raw Rendering Materials | Limit the amount of time raw materials sitting in the sun (after enclosure standard is effective) |
| (e)(3) | Washing of Outgoing Transport Vehicles | Prevent raw materials remaining on exiting trucks |
| (e)(4) | Washing of Drums and Containers | Prevent raw materials remaining in drums and containers exiting the facility |
| (e)(5) | Holding Time of Incoming Raw Rendering Materials | Limit the amount of time raw materials sitting in the sun (before enclosure standard is effective) |
| (e)(6) | Repair of <u>Outside</u> Raw Material Receiving Area | Remove accumulation to prevent bacteria growth from standing water resulting in odors |
| (e)(7) | Holding Time of Raw Materials after Size-reduction | Prevent raw materials sitting in totes at batch cooking facilities for an extended period of time |
| (e)(8) | Holding Time of Cooked Materials | Prevent cooked materials sitting in totes or trailers at batch cooking facilities for an extended period of time |
| (e)(9) | Transfer of Raw or Cooked Rendering Materials between Enclosures | Ensure materials being transferred between operations are covered |
| (e)(10) | Washdown of Receiving Area | Remove accumulation of animal parts in and around receiving pit and floor where incoming raw material is deposited |
| (e)(11) | Cleaning Floor Drains | Remove accumulation of animal matter in drains |

Permanent Total Enclosure and Odor Control Standards (Subdivision (f))

Certain operations and processes at a rendering facility are required to be enclosed within a permanent total enclosure, or to be operated within closed systems under PR 415. These include:

- Conveyors associated with raw material transfer operations;
- Size reduction and conveying equipment, including but not limited to: screw conveyors, breakers, crushers, hoppers, grinders and conveyors associated with raw material sizing;
- Raw materials receiving area. In addition to meeting the requirements of either a permanent total enclosure with ventilation to an odor control system, an owner or operator may elect to meet the alternative standards for a permanent total enclosure for the raw materials receiving area as discussed below.
- Raw material cookers. Note that as described below, a batch cooker is not considered to be a closed system, due to fugitive odors escaping from the batch cooker whenever the

door is opened to load or unload material. Therefore, the option for a closed system is not available for batch cookers; and

- Process equipment for separating rendered fat from protein materials, including but not limited to: centrifuges, presses, separators, pumps, screens, tanks that aren't completely enclosed, bins and hoppers, and conveyors used to transport materials between equipment. Certain meat and bone meal operations are exempted from the rule.

A permanent total enclosure with ventilation and odor control system must meet two key requirements related to VOC capture and ventilation. These include:

- The combined area of all routine enclosure openings through which odors can escape from a permanent total enclosure must not exceed 5% of the enclosure envelope. This requirement comes from EPA Method 204, which establishes criteria for and verification of a permanent total enclosure for VOC capture efficiency; and
- A permanent total enclosure must be ventilated by a system designed and operated to maintain a minimum inward face velocity through each routine enclosure opening of at least 200 feet per minute (fpm). This requirement also comes from EPA Method 204, which establishes criteria for and verification of a permanent total enclosure for VOC capture efficiency. The exception to this requirement is that when truck access doors are open, an inward face velocity of at least 100 feet per minute is required to be maintained, with the added proviso that truck access doors are not allowed to be open except during ingress and egress of a truck.

The inward face velocity for each permanent total enclosure that is ventilated must to be measured using an anemometer, or an equivalent approved device at the center of the plane of any opening of the permanent total enclosure. Verification of inward face velocity will be done by SCAQMD staff during inspections.

In lieu of meeting the inward face velocity through enclosure openings, an alternative standard is also allowed for ventilated permanent total enclosures. Under the alternative standard, the ventilation system serving a permanent total enclosure must be designed and operated to maintain a minimum of 15 air changes per hour through the enclosure. The alternative standard requires the owner or operator to notify the Executive Officer (EO) at least 60 days before the final enclosure compliance date of the intent to meet the alternative standard and submit engineering calculations to demonstrate that the ventilation system is designed to meet the alternative ventilation system standard. The EO will approve or disapprove the request within 60 days. If the EO disapproves the request to use the alternative standard, the owner or operator of the rendering facility is required to meet the requirements for inward face velocity.

Exterior walls of a permanent total enclosure are to be constructed of material that is capable of withstanding the pressure drop created by maintaining the required inward face velocity. This pressure drop is expected to be extremely modest ($\ll 1''$ H₂O) , and a variety of materials are allowed for the exterior walls, including masonry, sheet metal, sheet plastic, wood, metal or aluminum siding, or even industrial overlapping plastic flap curtains, or other material as approved by the Executive Officer. Building materials chosen and used for construction are at the discretion of the affected facility, and SCAQMD does not endorse or advocate any building material over

another. If a certain material is not ideal for an application or is not allowed by an authority other than SCAQMD, a facility should use a material that better fits the application.

PR 415 includes an alternative standard for a permanent total enclosure for raw materials receiving. An owner or operator may elect to either install either a permanent total enclosure that is ventilated to an odor control system, or meet the following alternative standard for the raw materials receiving area for a permanent total enclosure that does not require ventilation. An owner or operator that elects to meet the alternative provisions must submit a permit application for the permanent total enclosure within 12 months after rule adoption, and complete the permanent total enclosure within 12 months after a Permit to Construct is issued.

The alternative permanent total enclosure standard include: meeting enclosure opening requirements and exterior wall requirements as previously discussed above; closing all access doors except during ingress and egress of a vehicles, equipment or people; closing any openings on opposite ends of a building where air movement can pass through both openings, such that both openings are not simultaneously open for more than 5 minutes; and including one of the following for all openings for vehicles, equipment, or personnel ingress and egress:

- ~~automatic~~-automated roll-up doors with an air curtain mounted on the interior of the opening that is designed with an average velocity of 3,000 feet per minute and that is operated continuously when the door is open,
- vestibule;
- air lock system; or
- an alternative method to minimize release of odors from the building enclosure may be used if the owner or operator can demonstrate to the Executive Officer (an) equivalent or more effective method(s) to those specified.

If an unventilated permanent total enclosure meeting the alternative standard is subsequently ventilated, the ventilation system must meet the requirements for ventilation and odor control system.

A closed system must meet the following minimum requirements:

- Each component of a closed system must be maintained in a manner that minimizes leaks from occurring and prevents odors from escaping from the system, to the maximum extent possible;
- Material conveyors and troughs that are components of a closed system must be completely enclosed on all sides, except for doors or panels for maintenance and personnel access;
- Bins and hoppers that are components of a closed system must be completely enclosed on all sides, except for doors or panels for rendering material loading, and maintenance and personnel access;
- Mating metal surfaces on doors or access panels described above must be sealed with gasket material;
- Air gaps in components of a closed system must be sealed with gasket material or with caulk or sealant; and
- Each section of ductwork containing vapor within a closed system must be sealed at every connection to mating components of the closed system using best industry materials and practices.

These minimum requirements should not be considered a comprehensive list, and additional conditions may be imposed if a facility owner/operator is required to submit permit applications for modification of a piece of equipment that is currently permitted. The facility owner/operator may propose and use an alternative to these minimum requirements if that alternative is approved by the Executive Officer.

A batch cooker is not considered to be a closed system due to fugitive odors escaping from the batch cooker whenever the door is opened to load or unload material. Therefore, operation of batch cookers is only allowed inside a permanent total enclosure that is vented to odor control equipment.

An odor control system that treats fugitive odors from inside a permanent total enclosure must meet certain minimum standards. It must be designed and operated to maintain a control efficiency of not less than 70% for nitrogen compounds and not less than 70% for sulfur compounds. A control system serving a permanent total enclosure for raw material receiving is allowed to meet a 70% control efficiency for either nitrogen or sulfur compounds.

As shown in Chapter 1, there may be 11 or more nitrogen compounds in rendering odors and 6 or more sulfur compounds. Testing of multiple compounds would be expensive, so PR 415 allows a marker compound to represent all sulfur compounds and a marker for nitrogen compounds as well. Markers are designated as follows:

1. Ammonia (NH₃) for nitrogen compounds; and
2. Hydrogen sulfide (H₂S) for sulfur compounds.

EPA estimates that achievable emission reductions for inorganic gases from packed-bed scrubbers are over 95%. From EPA's "Air Pollution Control Technology Fact Sheet" [EPA-452-/F-03-015],¹

Achievable Emission Limits/Reductions:

Inorganic Gases: Control device vendors estimate that removal efficiencies range from 95 to 99 percent (EPA, 1993).

VOC: Removal efficiencies for gas absorbers vary for each pollutant-solvent system and with the type of absorber used. Most absorbers have removal efficiencies in excess of 90 percent, and packed-tower absorbers may achieve efficiencies greater than 99 percent for some pollutant-solvent systems. The typical collection efficiency range is from 70 to greater than 99 percent (EPA, 1996a; EPA, 1991).

The intent of using inorganic marker compounds (NH₃ and H₂S) is that they provide an indication of the control efficiency of nitrogen compounds and sulfur compounds respectively and methods for testing and analysis are readily available. Rendering odors also include VOC compounds, as shown in Table 1-1. Staff believes control efficiencies higher than 70% are achievable; however,

¹ <http://www.epa.gov/ttnchie1/mkb/documents/fpack.pdf>

the lower value of 70% in the literature was chosen to ensure an achievable control efficiency for organic compounds as well.

Within 180 days after the effective date to conduct operations within a permanent total enclosure (where required by the rule), a performance test is required to be conducted by a third-party tester, to demonstrate the required control efficiency. Testing and analytical methods are as follows:

- SCAQMD Method 207.1 for ammonia; and
- SCAQMD Method 307 for hydrogen sulfide.

It should be noted that marker compounds are only used in the very limited application of a performance test demonstration to calculate control efficiency of odor control equipment. Marker compounds should not be seen as surrogates for fugitive rendering odors, and are not used or allowed in any other application under PR 415. It should also be noted that the minimum control efficiency requirements of PR 415 are not for testing of odor control equipment serving high intensity odors that are already addressed by Rule 472 – Reduction of Animal Matter. Odor control equipment serving high-intensity vapors must meet higher control efficiency.

Wastewater Treatment (Subdivision (g))

Unless specifically exempted, certain wastewater treatment processes at a rendering facility are required to be enclosed within a permanent total enclosure, or to be operated in a closed system. These include:

- Screens
- Skimmers
- Clarifiers, including dissolved air flotation
- Settling tanks
- Sludge dewatering equipment
- Sludge drying equipment, and
- The rendering facility treated wastewater outlet to city sewer.

These equipment are subject to the timing requirements of paragraph (d)(1) in PR 415, which requires permit applications to be submitted within 12 months after rule adoption, and an effective date for operation of a permanent total enclosure within 12 months after a permit-to-construct is issued by SCAQMD.

Installation of Odor Complaint Contact Sign (Subdivision (i))

All rendering facilities are required to display a sign with contact information for area residents and businesses to phone in odor complaints. This requirement is applicable upon startup for new facilities and within 6 months after rule adoption for existing facilities.

The sign must list the SCAQMD's 1-800-CUT-SMOG number as the first contact for odor complaints. The sign must also include the name of the rendering facility or integrated facility. If desired by the rendering facility owner/operator, a secondary contact at the facility may be listed on the sign. However, if the rendering facility receives an odor complaint directly, facility personnel must notify the SCAQMD by telephone at 1-800-CUT-SMOG within three hours after receiving the odor complaint or after facility personnel became aware of the complaint, or should reasonably have become aware of the complaint.

The sign must be installed within 50 feet of the facility entrance. The reason for this requirement is that some area residents and businesses may not be aware of rendering facility operations in all cases, especially where two facilities exist in close proximity.

Other requirements for the odor complaint contact sign have to do with visibility. The sign must be 4 feet square, have lettering at least 4 inches tall that contrasts with the background and be located 6 to 8 feet above grade. Finally, the sign must be unobstructed so it is clearly visible from outside the facility property.

Both Rule 403 (Fugitive Dust) and Rule 410 (Odors from Transfer Stations and Material Recovery Facilities) have a similar requirement to install a complaint contact sign, so there is precedent for this requirement.

Installation of Signage Requiring Covering of Incoming Trucks

All rendering facilities are required to display a sign at each truck entrance requiring all trucks to be enclosed or fully covered. This requirement is applicable upon startup for new facilities and within 6 months after rule adoption for existing facilities. The sign must meet all of the same sizing and visibility requirements as for the odor complaint contact sign, unless otherwise approved by the Executive Officer.

Recordkeeping Requirements (Subdivision (j))

Upon startup for a new facility, or within 30 days for an existing facility, the following records would be required to be maintained at the rendering facility:

- Records of all readings taken by anemometer to demonstrate compliance with the inward face velocity requirement of openings in a permanent total enclosure; and
- A written log of all odor complaints received by the rendering facility. The odor complaint log must contain:
 - Date and time complaint was received;
 - Date and time of alleged odors;
 - Outdoor ambient temperature at time of complaint;
 - Odor description and intensity (i.e., weak, moderate, strong);
 - Weather conditions;
 - Wind speed and direction;
 - Name and contact phone number of complainant, if provided; and
 - Determination of cause for odor emissions that generated the complaint, if found
- Weekly records of the weight of inedible raw rendering materials, for rendering operations located at integrated rendering facilities, to demonstrate compliance with the exemption for batch cookers using less than 130,000 lbs/week at integrated rendering facilities
- Records of each day of operation for low-use rendering facilities that are exempt due to operation of less than 25 days per year.

These records are required to be kept for at least 3 years and made available to SCAQMD personnel upon request.

Equipment Breakdowns and Emergency Rendering Services (Subdivision (k))

For situations where a rendering facility breaks down and another rendering facility is forced to accept additional materials, additional time for the raw rendering material to enter the raw material receiving enclosure may be necessary. Therefore, an allowance for this situation is provided in the proposal for Rule 415. The provision for additional time is conditioned upon the owner or operator of the rendering facility that accepts additional materials not having received a Notice of Violation relating to odors or implementation of provisions of PR 415 within the most recent past 12 months.

The owner or operator of the rendering facility that accepts additional materials must comply with all provisions of the proposal, with the following allowances:

- If a permanent total enclosure is constructed, incoming raw rendering materials must be transferred into the permanent total enclosure or into covered containers within ~~6~~4 hours after the end of material delivery; and
- If a permanent total enclosure is not constructed, incoming raw rendering materials must be stored in a covered container within ~~8~~6 hours after delivery of material delivered at ambient temperature, or within ~~12~~8 hours after delivery for materials delivered below ambient temperature.

~~These emergency breakdown~~ provisions only allow additional time for raw rendering material to enter a permanent total enclosure, covered container or a cooking process that is a closed system. These provisions do not allow a rendering facility accepting additional materials to exceed any limits on raw material receiving or throughput as defined in the facility's permit. A rendering facility exceeding these limits would be required to seek a variance prior to exceeding these limits.

CHAPTER 4: IMPACT ASSESSMENT

REDUCTIONS IN ODORS

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

SOCIOECONOMIC ANALYSIS

AQMP AND LEGAL MANDATES

**DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE
40727.2**

COMPARATIVE ANALYSIS

ALTERNATIVE ANALYSIS

COMMENTS AND RESPONSES

CONCLUSIONS AND RECOMMENDATIONS

REDUCTIONS IN ODORS

Implementation of PR 415 will require rendering facilities to implement Best Management Practices (BMP) and will require processes with the greatest potential for generation of off-site odors to be enclosed. The odor BMPs in the proposal are achieved in practice and reasonable measures that will result in odor reductions from rendering facilities. Implementation of PR 415 will minimize odors from rendering facilities through a combination of odor capture by enclosing odor-generating processes, odor control by venting odorous air from within enclosures to odor control equipment, and BMPs. Requiring affected facilities to submit a permit application for the combination of enclosure and odor control to be analyzed as a single permit unit will give a measure of assurance regarding the efficacy of an enclosure/control combination proposed by a rendering facility to effectively capture and treat odors.

Although implementation of PR 415 is expected to minimize odors from rendering facilities, there is no practical way to measure odors before and after measures are implemented; therefore, the magnitude of odor reduction is not quantifiable. However, to demonstrate the effectiveness of odor control equipment, marker compounds to represent certain classes of compounds (i.e., nitrogen and sulfur) can be used. Implementation of PR 415 provides a proactive approach to controlling odors that is expected to reduce the number of odor complaints and significantly improve the air quality for residents that live or work in the Vernon area.

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

SCAQMD staff has reviewed the proposed project pursuant to CEQA Guidelines §15002 (k) – General Concepts, the three-step process for deciding which document to prepare for a project subject to CEQA. SCAQMD staff has determined that Proposed Rule 415 is a discretionary action by a public agency, which has the potential for resulting in direct or indirect changes to the environment and, therefore, is considered a “project” as defined by CEQA. SCAQMD Staff’s review of the proposed project shows that the proposed project would not have a significant adverse effect on the environment. Therefore, pursuant to CEQA Guidelines §-Section 15252 (a)(2)(B) since no significant adverse impacts were identified, no alternatives or mitigation measures are required. SCAQMD has prepared a draft Environmental Assessment to address the potential adverse environmental impacts associated with the proposed project which was released for a 30-day public review from July 14, 2015 to August 12, 2015. The final Environmental Assessment, with comments and responses will accompany the final staff report for the public hearing.

SOCIOECONOMIC ANALYSIS

Staff has prepared a socioeconomic analysis of PR 415 which has been released for public review and comment in this staff report and PR 415 for a 30 day public review and comment period prior to the SCAQMD Governing Board hearing as currently scheduled for November 3, 2017. The analysis identifies affected facilities and presents the capital costs of new enclosures (specific to each affected facility, as applicable) and the capital and operating costs of ventilation systems and odor control equipment. In addition, the analysis presents the potential costs of best management practices, such as signage, covering of incoming trucks, and repair of rendering material receiving areas. The socioeconomic report also assesses the employment impacts of PR 415 on the regional economy, including the potential impacts on small businesses. The socioeconomic report is included as Chapter 5 of this staff report.

AQMP AND LEGAL MANDATES

There are no specific legal requirements for SCAQMD to propose Rule 415, and it will not be submitted into the State Implementation Plan (SIP). PR 415 is a direct result of a quality of life issue that was identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. In November 2010, the Governing Board approved the CCP. SCAQMD staff began holding meetings of the stakeholder working group in July 2011 in order to identify air quality issues in Boyle Heights and surrounding communities that the working group felt should be addressed. The prevalence of odors from the five rendering facilities in the Vernon area, directly south of Boyle Heights was of great concern to the working group and the reduction of rendering odors a top concern. As a direct result of the CCP pilot study process, SCAQMD staff undertook rulemaking in 2014 to minimize public exposure to these distinct rendering odors.

DRAFT FINDINGS UNDER CALIFORNIA HEALTH AND SAFETY CODE 40727.2, COMPARATIVE ANALYSIS

Under ~~H&SC Section Health and Safety Code (H&SC) Section 40727~~, the SCAQMD is required to make findings of necessity, authority, clarity, consistency, non-duplication and relevance.

Necessity

A need exists to adopt PR 415 to reduce public exposure to rendering odors that have the potential to create odors in the surrounding community, especially when the odors from nearby rendering plants are combined. PR 415 is intended to reduce the potential for nuisance-level odors in the commercial and residential areas surrounding the rendering plants.

Authority

The SCAQMD Governing Board obtains its authority to adopt, amend, or repeal rules and regulations from ~~H&SC Sections California Health & Safety Code Sections 39002, 40000, 40001, 40440, 40702, and 40725 through 40728, inclusive, and 41700.~~

Clarity

PR 415 has been written or displayed so that its meaning can be easily understood by persons directly affected by it.

Consistency

PR 415 is in harmony with and not in conflict with or contrary to, existing statutes, court decisions or state or federal regulations.

Non-Duplication

PR 415 does not impose the same requirements as any state or federal regulations. PR 415 is necessary and proper to execute the powers and duties granted to, and imposed upon, the SCAQMD.

Reference

In adopting this regulation, the SCAQMD Governing Board will be implementing, interpreting, and making specific the provisions of the ~~H&SC Sections California Health & Safety Code Sections 40000~~ (authority over non-vehicular sources), 40001 (rules to prevent and abate air pollution episodes, and to achieve ambient air quality standards), and 41700 (public nuisance).

COMPARATIVE ANALYSIS AS REQUIRED UNDER CALIFORNIA HEALTH AND SAFETY CODE 40727.2

Under ~~H&SC Section Health & Safety Code section~~ 40727.2, the SCAQMD is also required to perform a comparative written analysis when adopting, amending or repealing a rule or regulation. The comparative analysis is relative to existing federal air pollution control requirements, existing or proposed SCAQMD rules and air pollution control requirements and guidelines which are applicable to the same equipment or source type as Proposed Rule 415. All references are to California statutory codes, unless otherwise noted.

Citations

Civil Code Section 3482.6(e)(1), includes rendering plants in its definition of “Agricultural processing activity.” Section 3482.6(e)(3), defines proper and accepted customs and standards as the compliance with all applicable state and federal statutes and regulations governing the operation of the agricultural processing activity, operation, facility, or appurtenances with respect to the condition or effect alleged to be a nuisance.

~~H&SC Section Health and Safety Code section~~ 39011.5 states in pertinent part, “Agricultural source of air pollution” or “agricultural source” means a source of air pollution or a group of sources used in the raising of animals located on contiguous property under common ownership or control that is a confined animal facility, including, but not limited to, any structure, building, feed storage area, or system for the collection, storage, treatment, and distribution of liquid and solid manure, if domesticated animals, including, swine are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

~~H&SC Section Health and Safety Code section~~ 39013 includes odors in its definition of an “air contaminant” or “air pollutant.”

~~H&SC Section Health & Safety Code section~~ 41700 and SCAQMD Rule 402, both prohibit air emissions, including odors, which annoy any considerable number of persons or the public.

~~H&SC Section Health and Safety Code section~~ 41705(a) exempts odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals from ~~H&SC Section Health & Safety Code section~~ 41700.

SCAQMD Rule 409 limits the emission of combustion contaminants from the burning of fuel.

SCAQMD Rule 472 limits the emission of air pollutants from the reduction of animal matter.

SCAQMD Rule 476 limits the emission of air pollutants from the operation of steam generating equipment.

SCAQMD Rules 1146, 1146.1, and 1146.2 limit emissions of oxides of nitrogen from large water heaters, boilers, steam generators, and process heaters.

SCAQMD Rule 1147 limits the emissions of oxides of nitrogen from miscellaneous sources.

Food and Agricultural Code Section 19213 defines “Rendering” as all recycling, processing, and conversion of animal and fish materials and carcasses and inedible kitchen grease into fats, oils,

proteins, and other products that are used in the animal, poultry, and pet food industries and other industries.

Food and Agricultural Code Sections 19300-19306 pertain to the California Department of Food and Agriculture's licensing requirements for rendering plant and collection center operators.

Vehicle Code Section 2460(i) defines "Rendering" as all recycling, processing, and conversion of animal and fish materials and carcasses and inedible kitchen grease into fats, oils, proteins, and other products that are used in the animal, poultry, and pet food industries and other industries. Section 2460(j) defines "Collection Center" as a receiving area for the temporary storage of animal carcasses, packinghouse waste, or other products before transportation to a licensed rendering plant or pet food processor.

~~CCR, Title 3, Section~~ ~~Title 3, California Code of Regulations, Section~~ 1180.35, requires vehicles used to transport carcasses and packinghouse waste to be washed to prevent the spread of disease and creation of nuisances.

~~CCR, Title 13, Section 2449(c)~~ ~~Title 13, California Code of Regulations, Section 2449(e)~~, requires the reduction from oxides of nitrogen (NOx), diesel particulate matter (PM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Equipment or vehicles used exclusively in agricultural operations are not subject to this regulation.

~~CCR, Title 27, Section~~ ~~Title 27, California Code of Regulations, Section~~ 20890, provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. ~~CCR, Title 27, Section~~ ~~Section~~ 20760, ~~Title 27, California Code of Regulations,~~ further states that each disposal site shall be operated and maintained so as not to create a public nuisance.

Section 406 of the Sanitation Districts of Los Angeles County's Wastewater Ordinance states that they have jurisdiction over wastewater as a public nuisance. Section 406 specifies, in pertinent part, that any discharge to the Sanitation Districts' sewerage systems which may otherwise endanger the public, the environment, or create a public nuisance is a violation and the discharger shall be subject to enforcement. Section 406 further specifies no person shall discharge or cause to be discharged to the Districts' sewerage systems, any wastes which adversely affect air quality, or place the Sanitation Districts in noncompliance with any standard or regulation promulgated by the SCAQMD.

Relevant Findings

With respect to the comparison of the elements of Proposed Rule 415 to the elements of existing requirements, Proposed Rule 415 establishes new control and operational requirements for equipment at rendering plants for the control of odors from rendering operations. Existing requirements either limit the quantity of specific criteria air pollutants, not odors, or they prohibit the facility from emitting such quantities of odors as to cause a nuisance.

SCAQMD Rule 472 requires operators of equipment used to reduce animal matter, not exclusively processed for human consumption, to some means of controlling high-intensity odors from cookers.

Section 406 of the Sanitation Districts of Los Angeles County's Wastewater Ordinance regulates the condition of wastewater that is discharged into the sewerage systems. This section does not, however,

regulate the process of treating the water prior to meet discharge requirements, which PR 415 is designed to address odors from.

PR 415 is not changing the policy for when an odor nuisance NOV is issued; instead the rule is defining a separate and distinct “confirmed odor event.” The purpose of an Odor Mitigation Plan is to establish practices and requirements to reduce odors from rendering facilities. PR 415’s definition of a confirmed odor event does not conflict with District Rule 402; a confirmed odor event requires a lower level of impact on the community than does a nuisance and does not trigger a notice of violation. New and existing facilities will still have to implement Best Management Practices (BMP), operate in a closed system or permanent total enclosure, or install odor control equipment, regardless of a nuisance violation or “Confirmed Odor Event”.

District staff is not aware of any rendering plants operating in the South Coast Basin that are raising animals at the same location so as to be able to claim that odors from their rendering operations are exempt from H&SC Section Health and Safety Code section 41700 under H&SC Section Health and Safety Code section 41705(a).

The District’s legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities derives, in part, from H&SC Section Health and Safety Code section 41700. The District is authorized under H&SC Section Health and Safety Code section 41508 to adopt rules imposing requirements that are stricter than those set forth in state law, including Civil Code Section 3482.6(e)(3). PR 415’s “Rendering Facility” definition is not inconsistent with the State law definition of rendering plants.

The District’s legal authority to adopt and enforce PR 415, including requirements for wastewater associated with rendering processing derives, in part, from H&SC Section Health and Safety Code section 41700. SCAQMD has conducted multiple on-site inspections of rendering plants in the District and has observed through these inspections that the wastewater treatment systems at the plants are a significant source of odors. SCAQMD staff has detected rendering odors during onsite inspections at rendering plants coming from wastewater treatment systems that have the potential to create odor nuisances in the surrounding community, especially when combined with odors from other rendering operations and from nearby rendering plants.

District staff has determined that at the present time, there is not a landfill in Los Angeles County that is permitted to landfill dead animal carcasses at their site unless it is due to an emergency.

PR 415’s regulation of odors from rendering plants is not in conflict with State laws regarding rendering plant operations, and is within the SCAQMD’s authority under H&SC Section Health and Safety Code section 40440(a).

ALTERNATIVES ANALYSIS

H&SC Section Health and Safety Code Section 40440.5, subsection (c)(3) requires an analysis of alternative control measures. Staff conducted such a review. There were several key approaches considered by staff relative to the development of PR 415 that were not pursued for various technical reasons. A summary of each key approach considered relative to the development PR 415 are summarized below and the reasons for which they were not pursued.

Facility-Specific Odor Management Plan (OMP)

Submitting a facility-specific odor management plan instead of containing fugitive sources of odors and routing them to odor control equipment falls short of the steps necessary to control odors from rendering facilities and reduce odor problems in the communities surrounding Vernon. In particular, the OMP approach does not include a requirement for timely enclosure of odorous operations at a rendering facility, or operation of those odorous operations in a closed system as the staff proposal does. SCAQMD staff believes the approach represented by the PR 415 proposal is necessary in order to ensure containment and reduction of fugitive odors from certain odorous processes at a rendering facility.

An odor management plan-first approach does not provide the same certainty as the staff proposal, which will create a level playing field among the existing Vernon area rendering facilities. Staff did not pursue this OMP approach for the proposed rule in part because requiring individual plans would not allow for the discussion of requirements in a public process. The proposed rule has undergone a full public process and all stakeholder input has been considered. Staff believes an enclosure or closed system is the most effective and still reasonable method of reducing odors.

The SCAQMD Governing Board will consider the proposal and has the option to adopt the staff proposal, make modifications, or decline to take an action. Should the rule be adopted, the facilities that will be subject to the rule will have certainty as to what will be required. The process for submittal of individual plans by each facility would undergo review by staff and there could be, through the review process, some inconsistencies between requirements for different facilities.

Use of Odor Surrogates

This approach considered two ASTM methods, including ASTM E679 and E544. ASTM Method E679 is a dilution-to-threshold method that relies on an odor panel to determine a detection threshold for an odor sample. As such, its potential value would only be to establish the level at which odors from an odor sample can be detected by an odor panel – not the level at which a complainant may find an odor to be objectionable. Use of this method will not help to establish baseline conditions nor the development of minimum odor standards.

While ASTM Method E679 may be useful in determining a detection threshold for an odorous air sample, this method does not designate an odor threshold that may be considered objectionable. ASTM Method E544 is a method for referencing ambient odor intensities in the suprathreshold region (i.e. a stimulus large enough to produce a reaction in excitable cells). While ASTM Method E544 indicates a method to characterize odor intensity, through comparison of odor samples to a reference odor, it does not address odor character, which is very important to the perception of rendering odors. The use of this ASTM standard, while potentially useful as a tool for monitoring purposes, presents a limitation for incorporating into PR 415 rule development concepts.

Quantitative Approach for Establishing Minimum Standards based on Measurement/Modeling of Chemical Compounds in Odors

As discussed in Chapter 1, there are more than 100 chemical compounds that have been identified in rendering odors. Modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not currently have established methods for collection, speciation and analysis. Many do not currently have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science and the present state of technology. It follows that it is therefore

not currently possible to establish initial concentrations for modeling considering all possible compounds.

Even if the limitations in the current science can be overcome, there are multiple sources of odor that originate from rendering facilities (raw rendering material, cooking, non-condensable vapors from cooker condensate, wastewater) and therefore multiple odor profiles from the various fugitive odors at each facility. Odors may also be different at the same facility depending on the materials being processed at the time and other factors. Processed materials may also change over time based on market demands.

Furthermore, a modeling approach may present uncertainty for two reasons. First, modeling of multiple, overlapping volume sources of fugitive odors with different odor profiles would require many simplifying assumptions to be made. Second, there is uncertainty with regard to downwind chemical reactions; that is, reactions occurring in the atmosphere before odors reach receptor locations. These uncertainties may lead to possible over-prediction or under-prediction of actual ground level concentrations at receptor locations. In summary, staff does not believe the existing science allows for the suggested modeling approach to be implemented.

In summary, staff believes the current science does not allow direct measurement of all the chemical compounds that make up odors. Therefore, setting minimum odor standards based on measurement of chemical compounds in odors is not feasible given the existing science and technology which create too many uncertainties for a regulatory approach.

COMMENTS AND RESPONSES

Comments received during the rule development process and responses to those comments are included in Appendix A.

CONCLUSIONS AND RECOMMENDATIONS

This rulemaking is the direct result of a quality of life issue that was identified by the working group for the CCP in the pilot study area of Boyle Heights. The need to address odors from the Vernon area rendering facilities is a key air quality priority for the CCP stakeholders and other members in the communities where they live, work, and breathe.

As noted, the impacts of odors vary for each individual, but can lead to nuisance and health impacts. The cumulative impacts from the facilities on the surrounding communities is unacceptable and needs to be addressed. PR 415 is consistent with existing technology- and BMP-based requirements in other states and countries that were implemented to protect the public health from odors. In addition, it is reflective of existing good industry practices and is a balanced approach given the nature of the existing local rendering facility operations and as noted earlier, some of the owners/operators of the local facilities affected by the rule have other similar facility operations with odor controls that PR 415 will require. These facilities should provide the same level of public protection here in the South Coast Air Basin as is provided for other communities.

PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they come to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred. For these reasons, PR 415 is necessary.

CHAPTER 5: SOCIOECONOMIC IMPACT ASSESSMENT

AFFECTED INDUSTRIES AND FACILITIES

COMPLIANCE COSTS

SMALL BUSINESS' SHARE OF COMPLIANCE COSTS

MACROECONOMIC IMPACTS ON REGIONAL ECONOMY

AFFECTED INDUSTRY AND FACILITIES

Based on the North American Industry Classification System (NAICS), rendering facilities are classified under the broader industry of Rendering and Meat Byproduct Processing (NAICS 311613). In the State of California, the industry provides nearly 700 jobs at a total of 18 facilities, with an estimated average annual wage of \$63,000 per job.¹ However, not all of these facilities conduct rendering operations.

Within the SCAQMD jurisdiction, there are five facilities with rendering operations in the urban portion of Los Angeles County. Therefore, they would be potentially affected by PR 415. All five facilities are clustered in close proximity, with four located in the heavily industrialized City of Vernon and one in the City of Los Angeles bordering the City of Vernon (see Figure 5-1). Facilities A, B, and C use a continuous rendering process, and each of these three facilities belongs to a nationally or internationally operated company. The remaining two facilities D and E use a batch rendering process and are much smaller in their business scales. PR 415 focuses on the operations and areas most likely to contribute to offsite odors, including raw material receiving, fugitives from cooking and processing operations, and wastewater treatment.

Figure 5-1: Locations of Affected Facilities



Source: Google Maps.

According to the City of Vernon website, the city encompasses 5.2 square miles and currently houses more than 1,800 businesses that employ approximately 55,000 people.² While there are just over 100 inhabitants within its city boundaries, City of Vernon is surrounded by many socioeconomically disadvantaged communities.³ Among the 20 census tracts immediately adjacent to the City, 13 tracts have unemployment rates above the Los Angeles County average of 10 percent, with rates as high as 29 percent; 18 out of the 20 census tracts have poverty rates above

¹ Quarterly Census of Employment and Wages, 2016 annual estimates. Data for Los Angeles, Orange, Riverside, and San Bernardino Counties are not publically available due to confidentiality requirements.

² See <http://www.cityofvernon.org/>.

³ City of Vernon had a population of 113 according to the U.S. Census Bureau's 2016 Population Estimates.

the County average of 18 percent, with rates as high as 51 percent; and compared to the County average of 26 percent, 16 out of the 20 census tracts have higher shares of children 18 years or younger living in households with annual income below the federal poverty level, with shares as high as 74 percent.⁴

Small Businesses

The SCAQMD defines a "small business" in Rule 102 for purposes of fees as one which employs 10 or fewer persons and which earns less than \$500,000 in gross annual receipts. The SCAQMD also defines "small business" for the purpose of qualifying for access to services from SCAQMD's Small Business Assistance Office (SBAO) as a business with an annual receipt of \$5 million or less, or with 100 or fewer employees. In addition to SCAQMD's definition of a small business, the federal Clean Air Act Amendments (CAAA) of 1990 and the federal Small Business Administration (SBA) also provide definitions of a small business.

The CAAA classifies a business as a "small business stationary source" if it: (1) employs 100 or fewer employees, (2) does not emit more than 10 tons per year of either VOC or NO_x, and (3) is a small business as defined by SBA. The SBA definitions of small businesses vary by six-digit NAICS codes. For NAICS 311613, a small business must have no more than 750 employees.⁵

All the definitions above apply at the firm level (i.e., not to each individual plant under the same ownership) and do not apply to the public sector. Based on the 2017 Dun and Bradstreet database and publicly available company information, none of the five facilities would be classified as small businesses under SCAQMD's Rule 102 definition. The two facilities utilizing a batch rendering process would be classified as small businesses under the SBA definition. Estimated compliance costs for these two small businesses will be discussed below.

COMPLIANCE COSTS

For each facility subject to PR 415, incremental costs were estimated for the capital outlays and related expenditures—including operations and maintenance (O&M)—that would be necessary for compliance with the proposed requirements. Incremental costs to comply with Best Management Practice (BMP) requirements were also estimated. As rule compliance was assumed, potential costs related to Odor Mitigation Plan and Specific Cause Analysis were not included in this analysis, which would only be triggered by confirmed odor event(s) and/or violation of Rule 402 as specified in paragraphs (d)(2) and (d)(3) of PR 415.

All the costs discussed in this section are expressed in 2017 dollars. For the purpose of projecting future compliance costs, it is assumed that these costs would remain the same in the foreseeable future, with any increase being a result of inflation. Additionally, while it is considered in this analysis that all estimated costs would be borne by the affected facilities, the compliance costs could potentially be passed onto downstream buyers of rendering services and products.

⁴ Based on the U.S. Census Bureau's American Community Survey, 2011-2015 five-year estimates.

⁵ See the latest SBA definition: <http://www.sba.gov/content/table-small-business-size-standards>.

It is important to note that when conducting the cost analysis, every effort was made to represent costs as realistically as possible, given that many factors would ultimately dictate what price a business will pay to implement a control. The estimated cost for each line item was either represented by an industry average or a reasonable range, based on the information and data available. The procedure and assumptions for each cost estimate are discussed below. Overall, the total annualized compliance costs for all affected facilities by PR 415 was estimated to range from \$405,000 to \$527,000 per year.

Capital and Other Related Upfront Costs

PR 415 proposes requirements for permanent total enclosures or operations in closed systems. These requirements would vent the objectionable odors collected within the enclosures to odor control equipment or contain odors within closed systems. The requirements are applicable to new facilities upon startup and to existing facilities within approximately two to four years after rule adoption, with exemptions as proposed in subdivision (1).⁶ PR 415 does include an additional compliance option for the receiving area to allow a permanent total enclosure that is not ventilated to an odor control system, provided opening are equipped with measures to ensure odors are maintained within the enclosure.

Based on information provided by the affected facilities and staff's observations during site visits, each facility was evaluated to determine its probable approach or approaches to complying with the permanent total enclosure/closed system requirements in subparagraphs (d)(1)(B) and (d)(1)(C). The range of estimated costs reflect the differences in probable approaches and the range of unit costs for various cost components.

Overall, it is expected that only three facilities (B, C, and D) would incur costs related to the permanent total enclosure/closed system requirements. Facility A would not incur additional costs as the proposed permanent total enclosure/closed system requirements have already been met within its current setup. Facility E would qualify for the proposed exemption from the permanent total enclosure/closed system requirements based on the amount of materials processed.

The cost assumptions are discussed below:

➤ *Permanent Total Enclosure/Closed System*

PR 415 would require the affected facilities to operate certain odorous processes—including raw material receiving, cooking and processing operations, and wastewater treatment—either within a permanent total enclosure or within a closed system. The associated capital cost estimates are provided in Table 5-1 below. For permanent total enclosures, they include

⁶ For existing facilities, a permit application to construct is required within 12 months after rule adoption. The requirements for permanent total enclosure or closed system and the applicable requirements for ventilation to odor control equipment shall be met by existing facilities no later than 24 months after the date a Permit to Construct is issued, except for wastewater treatment area where the same requirements shall be met no later than 12 months after the date a Permit to Construct is issued. However, it would be possible to extend the deadline for completion of permanent total enclosure pursuant to subparagraph (d)(1)(F) of PR 415.

construction and design costs, demolition costs when applicable, costs of fire suppression system, and fees to obtain permits to construct. There are separate costs estimated for closed systems or alternatives to the same effect.

Table 5-1: Incremental Capital Costs for Permanent Total Enclosure/Closed System for PR 415 Facilities

| | Permanent Total Enclosure | | | | | Closed System |
|-----------------------------|---------------------------|-----------|------------|-------------------------|------------|---------------|
| | Construction | Design | Demolition | Fire Suppression System | Permit Fee | |
| Lower Bound Estimate | \$1,977,000 | \$60,000 | \$13,000 | \$38,000 | \$14,000 | \$64,000 |
| Upper Bound Estimate | \$2,098,000 | \$150,000 | \$26,000 | \$134,000 | \$15,000 | \$154,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

In general, staff used a cost estimate of \$110 per square foot (ft²) for each new enclosure, inclusive of materials, construction, and foundation. This represents the median construction cost in the Los Angeles area for a one-story industrial building.⁷ For Facility D, the lower bound estimate for capital costs are based on the enclosure design and the associated cost estimates submitted by the facility instead of using \$110/ ft². These lower cost estimates included \$91,000 to enclose Facility D's cooking area and \$73/ft² for the facility's raw materials receiving/grinding and wastewater treatment areas.⁸

Architectural design fees were included for each new enclosure or building structure modification, based on 100 hours of design time and an architect's hourly rate of \$100 to \$250, which were used for the lower and upper bound estimates.⁹ Demolition cost estimates of \$1/ft² to \$2/ft² were estimated for facilities that must remove old buildings to erect a new enclosure.¹⁰ It was additionally assumed that all permanent total enclosures would be required to install a fire suppression system. Based on Facility A's current setup which would satisfy the proposed permanent total enclosure/closed system requirements, it was assumed that water sprinkler-type fire suppression systems would be sufficient for the enclosed areas to meet the municipal

⁷ Median lump-sum construction cost for building a one-story factory in Los Angeles, assuming 10% overhead, 5% profit, and 1% bonding. The amount is rounded to the nearest tens to arrive at \$110/ft² (source: <http://www.buildingjournal.com/construction-estimating.html>).

⁸ These cost estimates reflected what was proposed by Facility D in 2015, inflated by the ratio of RS Mean's Construction Cost Index as of 2015 to the Index as of 2017 January. According to Facility D, the \$91,000 cost estimate included the capital costs of infilling existing structure with reused materials and a ventilation system with carbon odor control.

⁹ See <http://architecturalfees.com/architect-hourly-fee-rates/>.

¹⁰ See <http://buildingjournal.com/commercial-construction-estimating-demolition.html>.

fire code requirements. Such systems were estimated to cost between \$2/ft² and \$7/ft².¹¹ Finally, permit fees to obtain permits to construct from the City of Vernon were also included.¹²

For Facility B, in addition to enclosures in raw materials receiving and wastewater treatment areas, a one-time cost of \$20,000 to \$50,000 was assumed for cooking and processing areas where closed systems or their alternatives as defined in paragraph (f)(3) would be sufficient to meet the proposed rule requirements. SCAQMD Rule 301's Schedule B permit fees were included in the cost estimates for the closed systems for Facility B.¹³ Facility C is expected to continue utilizing an existing enclosed building to conduct its rendering operations with no modifications needed to the building structure. However, the building currently does not meet the definition of Permanent Total Enclosure in paragraph (c)(15) and minor improvements, assumed to cost \$20,000 to \$50,000, are expected to achieve a closed system. These minor improvements assumed for Facility C, on their own, were assumed not to result in changes in SCAQMD permit conditions, and therefore, no permit fee implications were included in the cost analysis.

➤ *Ventilation of Permanent Total Enclosure to Odor Control Equipment*

All permanent total enclosures are required to be ventilated to odor control equipment, except for the raw materials receiving areas where the affected facilities may elect to meet the proposed alternative permanent total enclosure requirements as specified in paragraph (f)(5) which does not require ventilation to an odor control system, but does have other costs associated with additional provisions for enclosure openings. The purpose of this requirement is to treat fugitive odors generated from rendering operations and collected within the permanent total enclosure prior to being released into the environment.

This cost analysis assumed that Facilities B and C would choose to comply with the proposed alternative permanent total enclosure requirements for their raw materials receiving areas; moreover, these two facilities were assumed to achieve closed systems for their processing and cooking operations as discussed above. As Facility D's raw materials receiving area is currently co-located with its grinding operations and would remain so in its proposed enclosure design, cost estimates for Facility D's ventilation systems therefore included ventilating the joint area for raw materials receiving and grinding processes. As previously discussed, Facility A and E would not incur additional costs for permanent total enclosures or associated ventilation. As a result, capital costs associated with the requirement to ventilate permanent total enclosure to odor control equipment were included for Facility B's wastewater treatment area and all of Facility D's rendering operations including receiving/grinding, cooking, and wastewater treatment.

The associated capital cost estimates are provided in Table 5-2 below. Based on a vendor quote obtained by staff, a cost of \$2.5 per cubic feet per minute (CFM) was assumed for a ventilation

¹¹ See <http://itknowledgeexchange.techtarget.com/itanswers/fire-suppression-system-for-server-room/>.

¹² Based on City of Vernon's 2017 permit fee schedule. See http://www.cityofvernon.org/images/General_Fee_Schedule_2017.pdf.

¹³ Schedule B fees are applicable to administrative changes to existing equipment permits. Two administrative changes were assumed per area, and the fee rates for Fiscal Year 2018-2019 were used.

system, including ventilation ductwork, intakes, one or more high-pressure blowers, electrical, controls and instrumentation, freight, installation of the ventilation system and start-up assistance. The cost estimates for the size of the ventilation system were based on the volume of the permanent total enclosure that it would serve. In general, the lower bound estimate assumes 15 air changes per hour, while the upper bound estimate assumes 20 air changes per hour. Note that PR 415 does not require a minimum air exchange rate for a permanent total enclosure. The assumed ventilation rates used in this cost analysis were based on good engineering practice for ventilating low concentration odors from industrial buildings.¹⁴ For Facility D, however, smaller ventilation blowers were assumed based on the enclosure design proposed by the facility.

Table 5-2: Incremental Capital Costs for Ventilation

| | Ventilation System |
|-----------------------------|---------------------------|
| Lower Bound Estimate | \$79,000 |
| Upper Bound Estimate | \$112,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

➤ *Odor Control Equipment*

Odor control equipment would be required for any affected facility that does not already have existing equipment that is adequate for the size of each permanently enclosed cooking, processing, and wastewater treatment area. As previously discussed, for the receiving area, affected facilities may elect to meet the proposed alternative permanent total enclosure requirements as specified in paragraph (f)(5) which does not require ventilation to an odor control system. Similar to the assumptions for ventilation, the cost analysis for the odor control system for the receiving area assumes Facilities B and C would choose to comply with the proposed alternative permanent total enclosure requirements and Facility D comply with a permanent total enclosure with ventilation and an odor control system.

PR 415 does not specify a particular type of odor control equipment. In this cost analysis, cross-flow type wet scrubbers were assumed to be utilized by Facility B for its wastewater treatment area, and Facility D would be using carbon systems as the odor control method according to its proposed enclosure design. Other related upfront costs include a performance test cost and equipment permit fees. These capital cost estimates are provided in Table 5-3 below.

¹⁴ An air change is the length of time it takes to ventilate the volume of air within the enclosure. For example, 15 air changes per hour equates to the entire volume of air inside a permanent total enclosure being replaced within 4 minutes.

Table 5-3: Incremental Capital Costs for Odor Control Equipment

| | Odor Control Equipment¹ | Performance Test | Permit Fee |
|-----------------------------|---|-------------------------|-------------------|
| Lower Bound Estimate | \$216,000 | \$20,000 | \$25,000 |
| Upper Bound Estimate | \$263,000 | \$40,000 | \$25,000 |

Notes: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

¹ Cost estimates reflected those for cross-flow room air scrubbers only, as capital costs associated with carbon systems were assumed to be included in the cost estimates for ventilations systems.

Wet scrubbers are commonly used in low-concentration, high flow rate applications, such as the conditions expected for control of fugitive odors in receiving, wastewater and processing areas of a rendering facility. These scrubbers consist of cylindrical or rectangular chambers in which an air stream containing odors comes into contact with liquid droplets generated by spray nozzles. Reduction of odors occurs as a result of physical and chemical interaction between odorants in the air stream and the scrubber solution. Physical absorption depends on properties of the air stream and solvent, as well as specific characteristics of the chemical compounds in the air and liquid streams (e.g., diffusivity, equilibrium solubility).¹⁵

Two types of wet scrubbers are appropriate for use in fugitive odor control at rendering facilities, including packed-bed and cross-flow room air scrubbers. Packed-bed and cross-flow type scrubbers with airflows up to 100,000 CFM, or even larger, are available commercially. An advantage of a cross-flow type scrubber is that it can have two separate stages that allow for different chemical treatments of the airstream. Another advantage is that it can often be roof mounted on a self-contained skid. A roof mounted installation typically requires less ductwork relative to a packed-bed scrubber, thereby reducing installation costs. Therefore, this analysis generally assumes a cross-flow type scrubber unless an affected facility indicated its potential use of another type of odor control equipment. Staff assumed a cost of \$4/CFM to \$9/CFM for the capital cost of a scrubber, based on data from U.S. EPA which represented the lower and upper bound estimates, accordingly.¹⁶

Based on its proposed odor control method, Facility D was assumed to utilize carbon systems instead of wet scrubbers. The majority of costs for such systems are regular replacements of carbon drums, which will be discussed in the O&M cost section below. Based on Facility D's proposed enclosure design and cost estimates, it was further assumed that the capital costs associated with carbon systems were included in the capital cost estimates for Facility D's ventilation systems.

¹⁵ See <http://www.epa.gov/ttnchie1/mkb/documents/fsprytwr.pdf>.

¹⁶ See <http://www.epa.gov/ttnchie1/mkb/documents/fsprytwr.pdf>. An inverse unit cost-to-CFM was assumed, with costs at the low end of the range being assumed for the largest scrubbers, and costs at the high end of the range assumed for the smallest scrubbers. Values between the range endpoints were linearly interpolated. Cost estimates were inflated to 2017 dollars using the proprietary Marshal and Swift Index and included sales tax, freight, instrumentation, direct installation costs (foundation & supports, handling & erection, electrical, piping, insulation, painting), and indirect installation costs (engineering, construction & field expenses, contractor fees, start-up, performance test and other contingencies).

The costs for a one-time performance test for each piece of odor control equipment, as required in subparagraph (f)(4)(D), was included and estimated to range from \$5,000 to \$10,000 per test which were used in the lower and upper bound estimates. Moreover, each piece of newly installed equipment would need to obtain a SCAQMD permit to operate. This cost analysis used the current Rule 301 Schedule D permit fee rates that will become effective in Fiscal Year (FY) 2018-2019.¹⁷

➤ *Alternative Permanent Total Enclosure Requirements for Raw Materials Receiving Area – Additional Provisions for Enclosure Openings*

For raw materials receiving areas, the affected facilities may elect to meet the proposed alternative permanent total enclosure requirements which includes more enhanced measures for enclosure openings where vehicles or equipment are accessed which includes the use of an automatic roll-up door with an air curtain, vestibule, and air lock system to minimize fugitive odors escaping through enclosure openings; the alternative requirements would also be applicable to personnel access doors (see subparagraph (f)(5)(D)). Based on staff's observations, it was assumed that multiple air curtains would be installed at the permanent total enclosures of raw materials receiving areas at Facilities B and C. (As previously discussed, Facility D's raw materials receiving area is co-located with its grinding operations, and as is, would be subject to the requirement to ventilate the permanent total enclosure to odor control equipment.) The associated capital cost estimates are provided in Table 5-4 below.

Table 5-4: Incremental Capital Costs for Secondary Odor Containment System

| | Air Curtain | Permit Fee |
|-----------------|--------------------|-------------------|
| Estimate | \$63,000 | \$20,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

Costs of each air curtain was estimated based on the proposed air velocity requirement and the size of each access door using price quotes from an industrial product supplier.¹⁸ Automatic roll-up doors were assumed for truck/equipment access and hinged doors were assumed for personnel access. Additional costs were included to account for tax and shipping, installation, motor control panel, and door limit switch costs. Finally, a contingency factor of 1.3 was applied to the sum of these itemized costs to account for uncertainties, especially in the costs of installation and control (i.e., electrical hookup). As a result, cost estimates of \$4,000 to \$7,500 per air curtain were used, in addition to the SCAQMD Schedule D permit alteration/modification fees evaluated at the rates effective in FY 2018-2019. The range of unit cost reflected mainly the difference in the size of each door assumed.

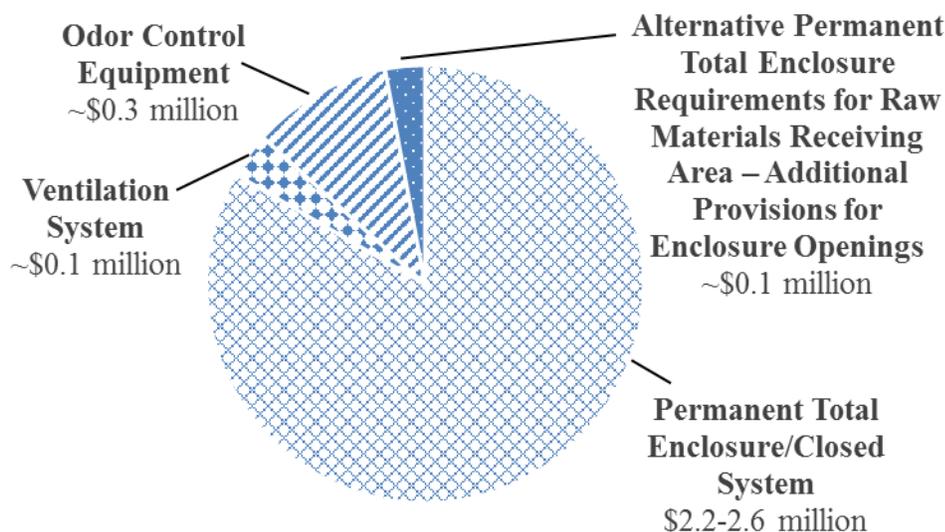
Overall, to comply with PR 415, Facilities B, C and D together would incur capital and other upfront costs totaling \$2.6 million to \$3.1 million within approximately two to four years after rule

¹⁷ Either Schedule C or Schedule D fee rates may be applicable for odor control equipment. To be conservative, the higher Schedule D rates were assumed.

¹⁸ See <https://www.grainger.com/category/air-curtains/air-curtains-and-accessories/ventilation-equipment-and-supplies/hvac-and-refrigeration/ecatalog/N-ykb#nav=%2Fcategory%2Fair-curtains%2Fair-curtains-and-accessories%2Fventilation-equipment-and-supplies%2Fhvac-and-refrigeration%2Fecatalog%2FN-ykb>.

adoption. More than 80 percent of these estimated costs are associated with expected expenditures related to the permanent total enclosure or operation in closed system requirements (see Figure 5-2). While capital financing could be potentially used by an affected facility to lessen the stress on the facility's cash flow, this analysis does not take into account financial decisions made at the facility or firm level.

Figure 5-2: Incremental Capital and Other Related Upfront Costs



Note: Numbers may not sum up due to rounding.

Annual O&M Costs of Ventilation and Odor Control Equipment

Annually, there would be additional costs associated with the operations and maintenance of ventilation systems, odor control equipment, and provisions for enclosure openings for the raw materials receiving area for alternative permanent total enclosure. As previously discussed, these costs would be incurred by Facilities B, C, and D only. The cost assumptions are discussed below:

➤ *Electrical Power Usage*

Increased electrical power usage would occur in three areas. First, increased usage would be needed to operate one or more high pressure blowers that are necessary to move sufficient air through the ventilation system to achieve the assumed air changes per hour in an enclosure. Second, increased usage would be also needed to operate one or more recirculation pumps to circulate the scrubbing solution necessary for the operation of wet scrubbers. Third, increased usage would be additionally needed to operate air curtains when the physical door(s) in raw materials receiving areas are open during ingress and egress activities.¹⁹ These O&M cost estimates are provided in Table 5-5 below.

¹⁹ As previously discussed, Facility D was assumed to use carbon systems instead of wet scrubbers as its odor control equipment. Moreover, secondary odor containment systems such as air curtains **were assumed for** Facilities B and C at their raw materials receiving areas but not assumed for Facility D. This is because Facility D's

Table 5-5: Incremental O&M Costs for Electrical Power Usage

| | Ventilation Blowers | Scrubber Recirculation Pumps | Air Curtain |
|-----------------------------|--------------------------------|---|--------------------|
| Lower Bound Estimate | \$29,000 | \$9,000 | \$1,000 |
| Upper Bound Estimate | \$46,000 | \$14,000 | \$2,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

To estimate the electrical power usage for ventilation blowers, a factor of 1.5 horse power (hp) per 1,000 CFM was assumed for one or more industrial motors capable of continuous operation at the 75% utilization level to power the ventilation blower(s). To estimate the electrical power usage for scrubber recirculation pumps, a factor of 0.5 hp per 1,000 CFM was assumed for two pumps operating at the 75% utilization level at each enclosure. To estimate the electrical power usage for air curtains, a 3-hp motor was assumed for each truck/equipment access door and a 1-hp motor was assumed for each personnel access door. In all cases, it was assumed that the motors used would be operating at near-full load. Therefore, full load current was used to estimate electrical costs. This is a conservative assumption which overestimates actual usage and corresponding costs.

The operating schedule was assumed to be 24 hours per day and 365 days per year for wastewater treatment areas; 8 to 24 hours per day and 312 days per year for areas of raw materials receiving and cooking/processing operations. Two hours per day and 312 days per year of enclosure openings for ingress and egress activities were further assumed for the raw materials receiving areas at Facilities B and C.

For calculation of the cost of electrical power consumed, composite rates ranging between \$0.10/kWh and \$0.12/kWh were used. These rates were based on the City of Vernon Gas & Electric Department's current rate schedule, taking into account different rates for various seasons and peak periods.²⁰

➤ *Scrubber Chemicals*

Scrubber solution and a chemical for potential of hydrogen (pH) adjustment of the scrubbing liquor are needed to operate wet scrubbers. The associated incremental cost estimates are provided in Table 5-6 below.

raw materials receiving area would be vented to odor control equipment as the area is co-located with its grinding operations.

²⁰ City of Vernon Gas & Electric Department Schedule No. TOU-V. See: <http://www.cityofvernon.org/images/electric-rates/2017/TOUV-Large%207-1-2017.pdf>.

Table 5-6: Incremental O&M Costs for Scrubber Chemicals

| | Scrubber Solution | Chemical for pH Adjustment |
|-----------------------------|--------------------------|-----------------------------------|
| Lower Bound Estimate | \$11,000 | \$17,000 |
| Upper Bound Estimate | \$23,000 | \$23,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

For this analysis, the scrubber solution was assumed to be sodium hypochlorite, which is a moderate-cost scrubber solution in current use for control of low-concentration fugitive rendering odors. Usage and costs of scrubber solution and a chemical for pH adjustment of the scrubbing liquor were estimated for each scrubber, based on the size of the ventilation blower/scrubber and anticipated operating schedule of the enclosure. Based on existing practices, 350 gallons of scrubber solution and 70 gallon of chemical for pH adjustment per 1,000 CFM were assumed. Typical pricing for sodium hypochlorite solution is \$0.60 to \$0.90 per gallon, which were used for the lower and upper bound estimates, whereas the chemical for pH adjustment was assumed to cost \$4.50 per gallon.

➤ *Scrubber Makeup Water*

It is necessary to provide fresh water to a scrubber continuously to maintain overflow of contaminated sump water. The volume of makeup water is small relative to the recirculation rate of the scrubber, typically a few percent of the recirculation rate. A cost for fresh makeup water was assumed for each scrubber, in addition to a cost to dispose of an equal amount of water. The associated incremental cost estimates are provided in Table 5-7 below.

Table 5-7: Incremental O&M Costs for Scrubber Makeup Water

| | Makeup Water Usage | Makeup Water Disposal |
|-----------------------------|---------------------------|------------------------------|
| Lower Bound Estimate | \$2,000 | \$1,000 |
| Upper Bound Estimate | \$3,000 | \$1,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

Similar to scrubber chemicals, the volume of scrubber makeup water was estimated for each scrubber, based on the size of the ventilation blower/scrubber and anticipated operating schedule of the enclosure. The lower and upper bound estimates reflected mainly the size differences in the ventilation systems assumed. Based on existing practices, 3 gallons per hour of makeup water per 1,000 CFM were assumed. A rate of \$2.097 per 100 cubic feet of water was used to calculate the cost of scrubber makeup water.²¹ Disposal costs for wastewater were obtained from the Los Angeles County Sanitation District (LACSD) surcharge rates. LACSD District 1, which includes City of Vernon, charges \$843 per million gallons of flow, in addition to \$149 per thousand pounds of chemical oxygen demand (COD), and \$421.50 per thousand pounds of total suspended solids (TSS).²² Since TSS levels were not known to staff, a likely

²¹ City of Vernon current water rate. See http://www.cityofvernon.org/images/community-services/water/VERNON_Rate_Summary_2016.pdf.

²² See <http://www.lacsd.org/civicax/filebank/blobdload.aspx?blobid=9472>.

disposal rate could not be determined. A conservative estimate of \$1,100 per million gallons of flow was assumed for the cost analysis.²³

➤ *Carbon Drums*

It was assumed that Facility D would use carbon systems as its odor control equipment. The costs of such systems are mainly comprised of the costs of purchasing and replacing carbon drums. These incremental costs are provided in Table 5-8 below.

Table 5-8: Incremental O&M Costs for Carbon System

| | Carbon Drums |
|-----------------------------|---------------------|
| Lower Bound Estimate | \$11,000 |
| Upper Bound Estimate | \$14,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

Cost of carbon was estimated at \$665 per 55-gallon drum.²⁴ The number of carbon drums needed was estimated based on the size of each ventilation system, which provided the lower and upper bound estimates. 43.2 cubic feet of carbon was assumed to be needed per 1,000 CFM based on a vendor quote obtained by staff. Saturation of the carbon and annual replacement of all drums were further assumed in this analysis.

➤ *Other Annual O&M Costs*

Other O&M costs include the costs of labor hours associated with regular monitoring and maintenance of odor control equipment and SCAQMD permit renewal fees for the control equipment. The incremental cost estimates are provided in Table 5-9 below.

Table 5-9: Other Incremental O&M Costs

| | Labor Costs | Permit Renewal Fees |
|-----------------|--------------------|----------------------------|
| Estimate | \$153,000 | \$6,000 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

It was assumed that Facilities B and D would hire an additional worker at a part-time and full-time basis, respectively, to conduct routine monitoring and maintenance of odor control equipment.²⁵ (As discussed below, the additional personnel could be tasked with compliance

²³ This unit cost estimate builds in ample buffer for up to 610 pounds of TSS or up to 1725 pounds of COD per million gallons of flow, the latter of which was well above the worst-case COD level known to staff among the potentially affected facilities,

²⁴ See <http://www.envisupply.com/equipment/carbon-filter-systems.htm>. Nominal disposal costs were assumed for the spent carbon as it can be transported to a local landfill.

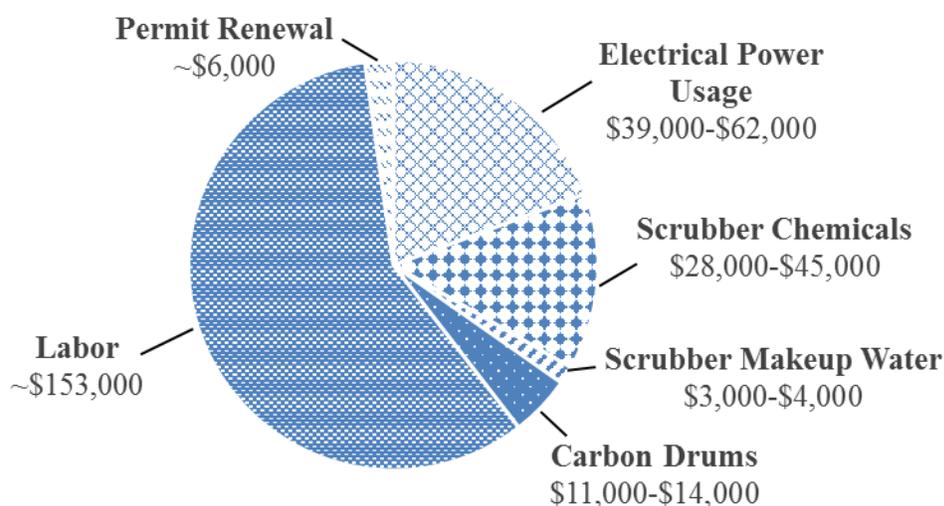
²⁵ The analysis assumed that Facilities B and C would elect to meet the proposed alternative permanent total enclosure requirements for the raw materials receiving areas and would achieve closed systems for their processing and cooking areas. Therefore, only one wet scrubber was assumed to be needed at Facility B's wastewater treatment

with Best Management Practice requirements.) The annual labor cost was estimated based on the latest wage rate for the industry of Rendering and Meat Byproduct Processing in California and assuming wage would account for two thirds of total labor cost and benefits account for the remaining one third.^{26,27} For scrubber maintenance, a semiannual internal inspection of wet scrubbers by a professional third-party was assumed at a daily rate of approximately \$220.²⁸

SCAQMD's annual permit renewal fees were included for each piece of odor control equipment, based on the current Rule 301 Schedule D permit renewal fee rate that will become effective in FY 2018-2019.

Overall, Facilities B, C and D together would incur annual costs totaling \$241,000 to \$284,000 to operate and maintain ventilation systems, odor control equipment, and secondary odor containment systems. The majority of these estimated costs are associated with additional labor assumed for the monitoring and maintenance of odor control equipment, and the remaining costs are mainly for the electricity and chemicals needed for the operation of ventilate and odor control systems (see Figure 5-3).

Figure 5-3: Incremental O&M Costs



Note: Numbers may not sum up due to rounding.

Costs of Compliance with Best Management Practice (BMP) and Signage Requirements

All potentially affected facilities would need to implement BMPs as required in paragraphs (e)(1) through (e)(12). All BMPs are applicable to existing facilities within 90 days after rule adoption

area. In comparison, Facility D was assumed to use carbon systems for three separate enclosures, and therefore, would likely need more personnel hours for odor control equipment monitoring and maintenance.

²⁶ Quarterly Census of Employment and Wages, 2017 first quarter estimates.

²⁷ See "Employer Costs for Employee Compensation" by the U.S. Bureau of Labor Statistics at <https://www.bls.gov/web/ecec/ececqrtn.pdf>.

²⁸ Based on the hourly wage rate for industrial machinery mechanics in Los Angeles County, as obtained from the 2017 first quarter Occupational Employment Statistics, and assuming eight hours per site visit.

and applicable to new facilities upon startup, as required by subparagraph (d)(1)(A). For the five existing facilities that would be affected by PR 415, many of the BMPs either do not differ from facilities' current practices (i.e., requirements (e)(3)—Washing of Outgoing Transport Vehicles, (e)(5)—Holding Time of Incoming Raw Rendering Materials, and (e)(10)—Washdown of Receiving Area) or are expected to be implemented using existing staff or additional staff assumed for odor control equipment monitoring and maintenance (i.e., requirement (e)(2)—Delivery of Raw Rendering Materials and the labor needed for requirements (e)(4)—Washing of Drums and Containers and (e)(11)—Cleaning Floor Drains). The incremental cost estimates related to implementing the remaining BMPs, together with the signage requirements as specified in subdivision (i), are provided in Table 5-10 below.²⁹

Table 5-10: Annualized Incremental Costs for BMP Implementation

| | (e)(1) | (e)(4) | (e)(6) | (e)(7)-(9) | (e)(11) | (i) |
|--|---------------|------------|---------------|----------------|------------|----------------|
| Recurring Frequency | Every 5 Years | Every Year | Every 5 Years | Every 10 Years | Every Year | Every 20 Years |
| Annualized at 1% Real Interest Rate | \$5,100 | \$100 | \$400 | \$500 | < \$100 | < \$100 |
| Annualized at 4% Real Interest Rate | \$5,400 | \$100 | \$400 | \$600 | < \$100 | < \$100 |

Note: Costs are expressed in 2017 dollars and rounded to the nearest '00s.

- To comply with BMP (e)(1)—Covering of Incoming Trucks, it was assumed that an average of ten trucks owned by Facilities A, B, and D would need to install truck covers that were estimated at \$2,500 per cover, inclusive of the associated hardware. (Facilities C and E do not receive raw materials from outside of their own operations.) It was further assumed that the covers would need to be replaced every five years. Additional costs may be incurred by third-party truck operators unloading raw materials at Facilities A, B, and D; however, no reasonable estimates were available to staff regarding the number of such trucks operating at these facilities.
- Additional water usage and disposal are expected for Facilities A, B, and D to comply with BMP (e)(4)—Washing of Drums and Containers and for all five existing facilities to comply with BMP (e)(11)—Cleaning Floor Drains. Ten gallons of water was estimated to be needed

²⁹ The SCAQMD has since 1987 adopted a real interest rate of four percent for the purpose of cost-effectiveness analysis. In comparison, the federal Office of Management and Budget annually updates the discount rates that are to be used for cost-effectiveness analysis of federal programs and policies. These discount rates are based on Treasury borrowing rates on marketable securities of comparable maturity to the period of analysis. The prevailing inflation-free rates in recent years are approximately one percent.

to wash each drum, and for each of the three affected facilities, an average of ten drums per day for 312 operating days per year was assumed. For cleaning of floor drains, the monthly or more frequent washdown requirement was assumed to result in additional water consumption of 660 gallons at each of the five affected facilities.³⁰ The water usage and disposal rates assumed were the same for the scrubber makeup water and discussed in the O&M cost section.

- To comply with BMP (e)(5)—Holding Time of Incoming Raw Rendering Materials, all five existing facilities are expected to incur costs related to the labor and materials for concrete paving on a continuous and needed basis. For the purpose of cost analysis, costs for one truckload (ten cubic yards) of high strength (4,500 psi) concrete and 20 hours of labor were assumed to recur on average every five years. Typical pricing of concrete was \$125 per cubic yard, and the hourly labor of \$27.51 was used in the analysis.³¹
- BMPs (e)(7)—Holding Time of Raw Materials after Size-reduction, (e)(8)— Holding Time of Cooked Materials, and (e)(9)—Transfer of Raw or Cooked Rendering Materials between Enclosures are applicable to Facilities D and E that utilize a batch rendering processes. To comply with these BMPs, lids are expected to be needed on the existing wheeled totes. An average of five totes per affected facility was assumed, and each lid was estimated at \$1,000, which would need to be replaced every ten years.
- Signage requirements in subdivision (i) would require facilities to install a sign to inform the public of how to report odor complaints to SCAQMD and another sign to be posted at each truck entrance at a facility subject to this rule requiring all incoming trucks to be enclosed or fully covered. A cost of \$500 per sign and two signs per facility were included, which were assumed to last 20 years.

Overall, the incremental annualized costs for BMP implementation and to comply with signage requirements would range from \$19,000 to \$20,000, depending on the interest rate used to amortize the costs over the respective recurring frequencies.

Total Estimated Costs to Comply with PR 415

Tables 5-11(a) and 5-11(b) summarize the lower and upper bound estimates, respectively, for the total costs of compliance for each of the five affected facilities. Overall, the total annualized compliance costs were estimated to range from \$405,000 to \$527,000 per year combined for all five potentially affected facilities. Note that capital and other related upfront costs were annualized over 20 years—which is the expected lifetime of a permanent total enclosure/closed system and

³⁰ Assume flowrate at 11 gpm, 60 psi line pressure, 200-foot hose, 3/4" nominal hose diameter, and washing of one hour.

³¹ The hourly labor rate was based on the Occupational Employment Statistics' 2017 first quarter estimate for Cement Masons and Concrete Finishers in Los Angeles County.

the related equipment—except for air curtain costs which were amortized over 10 years due to their shorter expected equipment life.

Facility B is expected to incur about two thirds of the total estimated costs, followed by Facility D which would incur the remaining one third. Facilities A, C, and E together would incur less than three percent of the total estimated compliance costs. Facilities A and E would incur BMP and signage related costs only, as Facility A has already voluntarily taken steps to implementing the proposed permanent total enclosure/closed system requirements, and Facility E is expected to be exempt from such requirements due to limited rendering operations. Facility C is expected to implement only minor changes to achieve a closed system within an existing building structure, with the use of secondary odor containment systems.

Table 5-11: Incremental Costs Associated with PR 415 by Facility**(a) Lower Bound Estimates**

| | Capital and Related Costs (Present Worth Value) | Annualized Recurring Costs including O&M, BMP, and Signage² (with 1% Real Interest Rate) | Annualized Recurring Costs including O&M, BMP and Signage² (with 4% Real Interest Rate) | Total Annualized Cost Per Year³ (with 1% Real Interest Rate) | Total Annualized Cost Per Year³ (with 4% Real Interest Rate) |
|--------------------------|---|---|--|---|---|
| Facility A | \$0 | \$6,000 | \$6,000 | \$6,000 | \$6,000 |
| Facility B | \$2,311,000 | \$127,000 | \$127,000 | \$256,000 | \$293,000 |
| Facility C | \$44,000 | \$1,000 | \$1,000 | \$4,000 | \$5,000 |
| Facility D | \$235,000 | \$125,000 | \$126,000 | \$138,000 | \$142,000 |
| Facility E | \$0 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Total¹ | \$2,589,000 | \$260,000 | \$261,000 | \$405,000 | \$447,000 |

(b) Upper Bound Estimates

| | Capital and Related Costs (Present Worth Value) | Annualized Recurring Costs including O&M, BMP, and Signage² (with 1% Real Interest Rate) | Annualized Recurring Costs including O&M, BMP, and Signage² (with 4% Real Interest Rate) | Total Annualized Cost Per Year³ (with 1% Real Interest Rate) | Total Annualized Cost Per Year³ (with 4% Real Interest Rate) |
|--------------------------|---|---|---|---|---|
| Facility A | \$0 | \$6,000 | \$6,000 | \$6,000 | \$6,000 |
| Facility B | \$2,589,000 | \$167,000 | \$167,000 | \$311,000 | \$353,000 |
| Facility C | \$74,000 | \$1,000 | \$1,000 | \$6,000 | \$7,000 |
| Facility D | \$437,000 | \$129,000 | \$129,000 | \$153,000 | \$160,000 |
| Facility E | \$0 | \$1,000 | \$1,000 | \$1,000 | \$1,000 |
| Total¹ | \$3,100,000 | \$303,000 | \$305,000 | \$477,000 | \$527,000 |

Notes: Costs are expressed in 2017 dollars and rounded to the nearest '000s.

¹ Numbers may not sum up due to rounding.

² Recurring costs were amortized over respective recurring frequencies.

³ Capital and related costs were amortized over 20 years, except for air curtain costs which were amortized over 10 years due to shorter expected equipment life

SMALL BUSINESS' SHARE OF COMPLIANCE COSTS

As discussed above, the two facilities (Facilities D and E) that utilize a batch rendering process would be classified as small businesses under the SBA definition. While Facility E is expected to incur annualized costs of \$1,000 per year to comply with PR 415, the total annualized compliance costs expected to be incurred by Facility D would range between \$138,000 and \$160,000 per year, which include capital, O&M, BMP, and signage related costs. While the compliance costs estimated for Facility D would account for about a third of the total combined compliance costs associated with PR 415, this particular facility is much smaller in its operation scale and annual revenue generated, when compared to Facility B which would incur nearly all the remaining cost impacts. Moreover, capital outlay and related expenditures estimated at \$235,000 to \$437,000 in present worth value (i.e., not annualized over equipment life) would need to be incurred by Facility D, with or without capital financing, within approximately two to four years after rule adoption. Facility D may request an extension of time pursuant to subparagraph (d)(1)(f) of PR 415.

Based on two proprietary data sources, namely the latest Dun and Bradstreet firm-level data for Facility D and the historical profit margin estimates for the industry of Rendering and Meat Byproduct Processing, which was obtained from the Risk Management Association's Annual Statement Studies, this facility's estimated annualized compliance costs could potentially account for approximately 20 to 50 percent of its pre-tax net profits when the historical range of the industry's average profit margins were used.³² Note that there are large variabilities among all companies in this industry and the profit margin estimates were not based on a representative sample. Therefore, the 20 to 50 percent share was reported for informational purposes only and was not intended as an accurate estimate for the compliance cost to net profit ratio. Moreover, it could be possible for this and other affected facilities to pass some or all of the actual compliance costs onto the upstream buyers of their rendering services, and probably to a lesser extent, onto the downstream buyers of the rendering products due to sluggish rendering commodity prices.³³

While at least part of the operations at the other four potentially affected facilities are associated with edible products or their waste, Facility D is uniquely positioned in the range of rendering services that it provides. It holds multi-year contracts with city and county agencies and public and private animal shelters throughout Southern California to process carcasses such as deceased animals on roadways or highways and euthanized animals.³⁴ Based on Facility D's own account, it is in fact the only facility offering such services south of Fresno County and north of California's border with Mexico.

³² The profit margin estimates for the Rendering and Meat Byproduct Processing industry are available up to year 2012. In year 2011-2012, the industry's average profit margin was 3.5%, down from 8.0% that was estimated for year 2007-2008.

³³ See "Market Report: Prices Are Down But Demand Remains Strong" in the April 2016 issue of the *International Magazine of Rendering* (http://pubs.rendermagazine.com/2016-04/pubData/source/Render_Apr16.pdf).

³⁴ See, for example, a sole source contract justification prepared by the County of Los Angeles in 2008 for contract renewal with Facility D at http://file.lacounty.gov/SDSInter/bos/bc/105412_BoardMemo-Contract-D&DDisposal,Inc.pdf.

MACROECONOMIC IMPACTS ON REGIONAL ECONOMY

It has been a standard socioeconomic practice that, when the annual compliance cost is less than one million current U.S. dollars, the Regional Economic Models Inc. (REMI)'s Policy Insight Plus Model is not used to simulate jobs and macroeconomic impacts, as is the case here. This is because the resultant impacts would be diminutive relative to the baseline regional economy.

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REFERENCES

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APPENDIX A: COMMENTS AND RESPONSES

Comments from PR 415 Stakeholders

Responses to Community Comments from Public Consultation Meeting

SCAQMD staff held a public consultation meeting on June 30, 2015 in East Los Angeles.. A number of comments were received at the meeting. Approximately 10 members of the public and environmental community provided comments at the meeting. The comments are summarized below:

1. Comment: Odor migrates into Boyle Heights from the direction of Vernon as early as 3:00 a.m. and is the smell of blood. Staff should research to control the odors. No one has done anything in the past and it affects the community. We deserve to breathe clean air.
2. Comment: When on the way to summer school in Commerce, you can smell the odors as early as 5:00 a.m. and I have to hold my breath. Please stop the odors.
3. Comment: In the last 10 years, I don't hear about complaints about the freeways, but I do hear about the complaints of smells from rendering plants. It smells like dead cows and these animals can be diseased. The community has complaint fatigue. Please do something.
4. Comment: As a resident of East Los Angeles, you can smell the odors at about 4:00 to 5:00 p.m. and in the early morning. What can be done, what technologies can be added to control the smell?
5. Comment: As a 40-year community member, the stench from rendering plants is the worst from 1:00 to 4:00 a.m. and may represent criminal activity. When awakened by the odors, I have to shut the windows and am deprived of sleep, which is affecting my health. The rendering facilities are not being good neighbors. People are afraid to call, afraid of deportation due to the language barrier. We are unfairly being punished by the facilities.
6. Comment: As a resident of Huntington Park, we experience the smells early in the morning and the odor stays for a long time. The industry is important, however the odors need to be reduced and this represents a lack of ownership by the facilities. We cannot identify a particular facility, but can smell the odors. It is an insult to the community for the facilities to say there is no smell there. The majority of the community does not have air conditioners and must keep their windows open. The community is thankful for the approach and rule.
7. Comment: I was born and raised in Boyle Heights and built my retirement home there in 1965. I cannot enjoy the gardens in my backyard because of the rendering odors. My family goes to another city for get-togethers. Why are the companies making excuses? They should take responsibility and not

say it is too much money. What about the money I have lost because I cannot enjoy my home? The city of Vernon is not a responsible city and the SCAQMD should therefore do more. Residents should be able to sue for air conditioning in all homes. Don't listen to the companies that it costs too much, we have spent a lot of money to live here too.

Response: SCAQMD staff appreciates the comments from community members and proposes a rule (PR 415 – Odors from Rendering Facilities) that is designed to address odor issues from rendering facilities with the intent of reducing odors in the communities surrounding the City of Vernon (Master Response for Comments 1 – 7).

8. Comment: Relative to enclosure, a 70% efficiency is too low and should be higher, say 95%+ based on EPA data for control equipment. Markers should be developed based on each facility to measure and control odors.

Response: SCAQMD staff believes that scrubber efficiencies for the two marker compounds addressed by the rule will be higher than 70%. As discussed in Chapter 3, EPA estimates that achievable emission reductions for inorganic gases from packed-bed scrubbers are over 95%. From EPA's "Air Pollution Control Technology Fact Sheet" [EPA-452-/F-03-015]¹

Achievable Emission Limits/Reductions:

Inorganic Gases: Control device vendors estimate that removal efficiencies range from 95 to 99 percent (EPA, 1993).

VOC: Removal efficiencies for gas absorbers vary for each pollutant-solvent system and with the type of absorber used. Most absorbers have removal efficiencies in excess of 90 percent, and packed-tower absorbers may achieve efficiencies greater than 99 percent for some pollutant-solvent systems. The typical collection efficiency range is from 70 to greater than 99 percent (EPA, 1996a; EPA, 1991).

The intent of using inorganic marker compounds (NH₃ and H₂S) is that they provide an indication of the control efficiency of nitrogen compounds and sulfur compounds respectively and methods for testing and analysis are readily available. Rendering odors also include VOC compounds, as shown in Table 1-1. Staff believes control efficiencies higher than 70% are achievable; however, the lower value of 70% in the literature was chosen to ensure an achievable control efficiency for organic compounds as well.

¹ <http://www.epa.gov/ttnchie1/mkb/documents/fpack.pdf>

Responses to Baker Commodities Comment Letters

1. Comment: Rendering protects the environment, prevents disease and provides products for other industries. Without rendering plants, diseased and rotting carcasses would cause a stench and the spread of viruses and bacteria. Inedible wastes containing carbon and nitrogen are recycled into usable materials. Without recycling, financial and environmental costs of these products would likely increase.

Response: SCAQMD staff agrees that rendering is an important industry.

2. Comment: Waste recycled by a rendering facility will not disappear if the rendering operations shut down. What does SCAQMD propose happen to these wastes in the absence of rendering operations in the South Coast Air Basin?

Response: SCAQMD staff has repeatedly said at working group meetings and other public meetings that it is not the intent of PR 415 to cause any rendering facility to shut down. Staff has worked in good faith with the commenter as well as other rendering facilities to minimize cost impacts, including making substantial changes to the scope of PR 415 from early versions of draft rule language. The commenter has not substantiated that provisions of PR 415 would require it to shut down. In fact, staff has learned that the commenter has used similar controls in other facilities it operates in the United States. The commenter's question regarding the absence of rendering operations within the SCAQMD is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. Staff does not believe such a scenario is supported by the requirements of PR 415 or the impacts on rendering facilities.

3. Comment: SCAQMD has regulated odors since 1976 under Rule 402. Rule 402 conforms to California H&SC §41700. PR 415 is unnecessary because the SCAQMD already has Rule 402.

Response: SCAQMD staff disagrees that PR 415 is unnecessary. PR 415 intends to establish odor control standards as well as best management practices (BMP) to prevent or minimize odors that can cause verified odor complaints and public nuisances in the communities surrounding Vernon. Under Rule 402, enforcement action can only be taken after the SCAQMD receives and verifies a sufficient number of complaints. Moreover, because there are several rendering facilities located within a relatively small area, in some cases the odors cannot be ascribed to one specific facility and indeed are likely contributed to by several of the facilities. Rule 402 does not contain any mechanisms to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. Rule 402 is reactive, where PR 415 is proactive in terms

of preventing or minimizing odors. For these reasons, SCAQMD staff feels PR 415 is necessary.

4. Comment: SCAQMD derives authority from the Legislature. SCAQMD lacks statutory authority to adopt a rule more stringent than §41700, or to regulate bacteria.

Response: The District is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." ~~Health and Safety Code (H&SC) Section §40000.~~ Health and Safety Code (H&SC) Section §39013. The term "air pollutant" includes odors [H&SC Section §39013]. Therefore, the District may regulate to control air pollution, including odors, from PR 415 sources. In addition, the District has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on the District by law. [H&SC Section §40702].

The District's legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities also derives from H&SC Section §41700, which, in pertinent part, prohibits the discharge of air contaminants causing annoyance to the public. It further prohibits the discharge of air contaminants, such as odors, which "endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property." [H&SC Section §41700]. The District's authority granted by H&SC Section §41700 to protect the public's comfort and health and safety ~~includes—the~~includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. The District is authorized under H&SC Section §41508 to adopt rules imposing requirements that are stricter than those set forth in state law, including Section 41700.

In addition, H&SC Section §40001(b) authorizes the District to adopt rules and regulations, such as PR 415, and provides, in relevant part, for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons. This statute, which is phrased very similarly to Section 41700, allows rules to prevent air pollution episodes caused by any type of pollutant, not just criteria air pollutants. *Ultramar v. SCAQMD* (1993) 17 Cal. App. 4th 689,707. PR 415 serves to prevent or at least reduce the likelihood of the occurrence of a nuisance through imposing reasonable odor control measures. PR 415 is a reasonable and proper use of the District's regulatory authority.

5. Comment: Not every odor constitutes a public nuisance. An odor must be substantial and unreasonable. If normal persons would not be annoyed or disturbed, an odor is not significant. Unreasonableness must compare the social utility against the harm it inflicts. SCAQMD's failure to implement Rule 402

prevents lawful consideration of laches or coming to a nuisance. Current residents knew about our facility's presence when they moved into the area.

Response: SCAQMD staff has been present at complainants' locations and agrees that in many cases, normal persons would be annoyed or disturbed by the odors. PR 415 seeks to require reasonable controls to prevent or minimize public nuisances odors from rendering operations. The doctrines of laches and coming to the nuisance do not apply to the adoption of a rule designed to prevent the occurrence of a public nuisance. The case cited regarding "coming to the nuisance", *Hellman v. La Cumbre Golf & Country Club*, (1992) 6 Cal. App. 4th 1224, involved an action for private nuisance. The case cited for the application of laches involved a unique situation where the City Board of Permit Appeals had ruled that the defendants' home was a legal use, but many years later the City sought to declare their occupancy illegal, and due to the passage of time the transcripts of the Board hearing had been lost. *City and County of San Francisco v. Pacello* (1978) 85 Cal. App. 3d 637. This is not precedent for arguing that a source of objectionable odors should not be required to minimize such odors merely because of the passage of time. SCAQMD staff believes that all residents are entitled to protection from air pollution and offensive odors regardless of where they live.

6. Comment: SCAQMD staff informed the Governing Board that public nuisance involves complaints from 6 or more households or business; odors must be confirmed by an inspector, traced back to the source and the complainant must sign a form. SCAQMD staff contends PR 415 is necessary because odors in Boyle Heights cannot be traced to a specific company. If the source cannot be traced to a facility, SCAQMD lacks authority to require the facility to comply with PR 415. SCAQMD cannot bypass Rule 402.

Response: As noted in response #4, SCAQMD has authority to adopt rules to prevent the occurrence of a nuisance, and to adopt rules more stringent than the state nuisance law. Staff has explained in the following response #7 that rendering odors are very distinctive, and staff has also experienced that all of the subject facilities, including the commenter's facility, produce objectionable odors. The difficulty in tracing the odors to a specific facility does not mean there is not a problem. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near one another. In many cases, it is likely that more than one facility is contributing to the odor. This creates the need to require all facilities to take reasonable measures to reduce odors emanating from their operations. In similar fashion, the SCAQMD requires many facilities to take all reasonable measures to reduce pollutants such as PM2.5, even though no one facility is solely responsible for creating a violation of the National Ambient Air Quality Standards (NAAQS).

PR 415 would not bypass Rule 402. Both would be tools and approaches that would be available to staff. The rules would not be duplicative because Rule 402 does not require specific actions of the facility, and is reactive when there is a problem. PR 415 would require specific requirements that are designed to be proactive in nature, to reduce or prevent the potential for offsite odors.

7. Comment: Vernon is an industrial city, currently housing more than 1,800 businesses. Between our facility and Boyle Heights there are freeways, rail yards and other facilities that cause odors. SCAQMD has not demonstrated that odors in Boyle Heights are not caused by another use, or the effect of proximity to an industrial city. SCAQMD cannot claim that odor issues in Boyle Heights are caused by rendering facilities located miles away. There is no proof our facility is causing a public nuisance in Boyle Heights.

Response: SCAQMD staff acknowledges there may be other odorous industrial and commercial operations in Vernon in addition to rendering facilities. However, the smell of rendering is distinctive and unmistakable and SCAQMD staff does not believe odors created by rendering facilities are attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable and offensive to many in the communities surrounding the city of Vernon. SCAQMD staff disagrees with the commenter's claim that odors alleged by complainants in Boyle Heights and other communities surrounding Vernon to be from rendering facilities, are in fact from other sources.

8. Comment: PR 415 applies to all rendering plants regardless of whether the plant creates public nuisance. The definition of "confirmed odor event" requires only 3 verified complaints. This standard is inconsistent with Rule 402. Why are rendering facilities held to a different standard than other facilities?

Response: SCAQMD has found it necessary to adopt certain rules which are designed to reduce odors in specific industries. Besides PR 415, these include Rule 410-*Odors from Transfer Stations and Material Recovery Facilities*, Rule 1148.1-*Oil and Gas Production Wells* and Rule 1430 - *Control of Emissions from Metal Grinding Operations at Metal Forging Facilities*. The commenter is correct in the assertion that rendering facilities are subject to PR 415 irrespective of whether an affected facility has received a notice of violation (NOV) for public nuisance in the past. This is true of all rules adopted by SCAQMD, including Rule 410 – *Odors from Transfer Stations and Material Recovery Facilities*. PR 415 establishes certain requirements that are applicable to all rendering facilities, and then requires an Odor Mitigation Plan if certain triggering events occur. The commenter is also correct in stating that a confirmed odor event is defined in the proposed rule

as 3 verified odor complaints by different individuals from different addresses. The purpose of defining a confirmed odor event in PR 415 is that it is one of two “triggers” for submittal of an odor mitigation plan (OMP). The number of verified complaints necessary for a confirmed odor event, while less than SCAQMD normally requires for issuing an NOV for violating Rule 402, is considered to indicate a higher potential for causing an odor nuisance. Because this rule is designed to prevent such occurrences, the threshold is intentionally lower than the typical standard for actually causing a public nuisance. A confirmed odor event is simply a measure under PR 415 whereby a facility that receives 3 confirmed odor events within a 180 day period is required to take further action to control odors from their rendering facility. As such, there is no inconsistency between a confirmed odor event and Rule 402.

9. Comment: The most sensitive person can create an odor event. An operation or process is a source if an odor ‘may’ be emitted. PR 415 mandates an on-site zero odor threshold. This standard is not reasonable and cannot be met. On-site odors may not cause migrating public nuisance level odors. PR 415 does not distinguish between local and migrating odors. PR 415 should concentrate on migrating odors. If implementation of Best Management Practices (BMP) sufficiently reduces odor at a facility, why is it necessary for an existing facility to operate in a closed system or permanent enclosure?

Response: SCAQMD staff disagrees that a single person can create a confirmed odor event, regardless of how sensitive that person is to rendering odors. A confirmed odor event is defined by 3 verified odor complaints from separate addresses. In order to be verified, the source of an alleged odor must be determined according to standard SCAQMD procedure. This involves a trained inspector tracing an odor back to a specific source. If a source cannot be determined, the odor complaint cannot be verified. The most a single person can do is call in an odor complaint to SCAQMD. A complainant cannot verify the source of that odor, no matter how sensitive they are to rendering odors. Verification requires an SCAQMD inspector. Even after a complaint is verified, a confirmed odor event requires two more verified complaints, from different addresses, following the same verification procedure as for the complaint from the highly-sensitive person.

The commenter is correct in stating that an odor generating source, as defined under paragraph (c)(13) means an operation or process from which odors may be emitted. The definition goes on to give examples of odor generating sources.

SCAQMD staff disagrees that PR 415 mandates an on-site zero odor threshold. Staff recognizes that there may still be odors at the facility even after implementation of PR 415. The intent of the rule is to minimize the likelihood that odors will travel off-site and cause an odor nuisance in the

community. If odors generate at least 3 complaints, verified by an SCAQMD inspector as previously described, and this occurs over the course of 3 separate and distinct events, these odors will trigger a requirement for a facility to submit an OMP detailing actions that a facility will take to reduce odors.

SCAQMD staff believes that while BMPs should help to reduce odors, BMPs by themselves do not represent the best control that can reasonably be achieved for odors. Staff concludes that more effective controls for odors from rendering facilities are to enclose the operations that generate odors within a permanent total enclosure, keep the enclosure under negative pressure to contain odors within the enclosure, and vent those odors to control equipment*. Staff believes that a closed system of cooking and processing equipment is an acceptable alternative to a permanent total enclosure, provided fugitive odors from that closed system do not continue to cause verified odor complaints. If these core requirements do not prevent the occurrence of an odor nuisance, or three or more confirmed odor events within 180 days, then the facility must implement an Odor Mitigation Plan.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

10. Comment: SCAQMD lacks authority to require the BMP requiring covered trucks.
- Response: SCAQMD staff disagrees with the commenter that the SCAQMD lacks authority to require the truck covering BMP or any other BMP in PR 415, for the reasons expressed in staff's response to comment #4 of this letter.
11. Comment: It has not been demonstrated that these measures will reduce odors in Boyle Heights. The Executive Officer has unfettered authority to require an Odor Mitigation Plan (OMP) and approval of that plan. SCAQMD requires a facility to do its work in investigating the cause of a confirmed odor complaint.
- Response: SCAQMD staff believes the requirement to operate odorous equipment and processes within a permanent enclosure or a closed system under PR 415, as well as requiring BMPs will result in a high level of fugitive odor control from rendering operations. Staff believes PR 415 will not only reduce odors in Boyle Heights but also in other impacted communities surrounding Vernon. The commenter's implication that the Executive Officer can require submittal of an OMP arbitrarily is not correct. Under PR 415, an OMP will be required only if a facility receives an NOV for public nuisance, or has 3 confirmed odor events within a 180 day period. Both triggers for OMP submittal are subject to odor complaint verification, requiring SCAQMD inspectors to verify 6 or more complaints in the case of an NOV,

or 3 or more complaints over the course of three separate events in the case of confirmed odor events. The standard for triggering an OMP is therefore relatively high. If an OMP is triggered under either of these scenarios, it indicates that a rendering facility either is causing a public nuisance or has a high potential for doing so, and should do more to control odors. If the facility believes its plan was improperly disapproved, or had improper conditions imposed upon it, it has the right to appeal the plan action to the Hearing Board under Rule 221(e).

Regarding the commenter's assertion that a facility is doing SCAQMD's work in investigating the cause of a confirmed odor event, SCAQMD staff feels that facility personnel are better situated than SCAQMD inspectors to determine causation for and the actual source of odors on a real-time basis after a confirmed odor event, due to complaint response lag time. In public meetings, a recurring theme heard by SCAQMD staff was that rendering facility personnel know their facility better than SCAQMD.

12. Comment: PR 415 would impose compliance costs that make Baker's operation financially infeasible. PR 415 will make it impossible for our facility to operate in the City of Vernon. When a regulation goes too far, it is taking, and the owner is afforded a remedy under the US and California Constitutions. The Fifth Amendment provides that just compensation be made for taking by the federal government. The California Constitution contains a similar requirement.

Response: The commenter has not presented evidence to show that PR415 would make it impossible for the commenter to operate in the City of Vernon. Nevertheless, staff has revised the proposed rule in an effort to address the commenter's concerns without sacrificing the primary benefits of the proposed rule. If the commenter were to make a business decision to cease its operations in Vernon, that would not turn the proposed rule into a taking under the Constitutional provisions cited. A taking will generally be found if a regulation completely deprives an owner of "all economically beneficial uses" of the property. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1004 (1992) But if a regulation is otherwise a valid exercise of the government's regulatory power, the fact that it has the effect of prohibiting a particular beneficial use to which the property has previously been put does not make it a taking. *Goldblatt v. Hempstead*, 369 U.S. 590, 593 (1962). The courts will examine the individual facts of each case, considering three basic factors: (1) the character of the government action (taking is more likely to be found for physical invasion of property)(2) the economic impact of the regulation on the plaintiff, and (3) the property owner's distinct investment-backed expectations for the use of that property. *Penn Central Transp. Co. v. New York City*, 434 U.S. 104, 124 (1978). The commenter has not presented evidence on these issues, including information on its profits, and how any expenses to comply with

the rule would affect the commenter. In addition, staff has learned that the commenter's facility in the Rochester New York area already uses similar controls as would be required under PR 415.

13. Comment: The Confirmed Odor Event standard is vague. There is no time frame in which complaints must occur. The original draft of PR 415 requiring an SCAQMD inspector to verify an odor was removed. Any untrained staff member or the Executive Officer can verify an odor event. Odor verification is at the discretion of each SCAMQD employee.

Response: A time frame is not specified for a confirmed odor event because a single event can last for an indeterminate length of time. If a time limit is specified in PR 415, SCAQMD compliance staff would be obligated to consider a new event at the conclusion of the time limit. For example, if a time limit of 24 hours is specified in the proposed rule and 3 complaints are received and verified for this time period; if the odor event continues for more than 24 hours, any complaints received and verified after this period would be counted toward another odor complaint event.

SCAQMD staff disagrees that "any untrained staff member" can verify a complaint. The rationale for the language change to "verified by District personnel" under paragraph (c)(4) was to allow an SCAQMD compliance supervisor or manager to verify a complaint. Supervisory personnel receive the same training as inspectors with regard to verifying complaints. Clarifying language has been added to paragraph (c)(4) to be: ". . . and the source of the odor is verified by District personnel *trained in odor inspection techniques*".

14. Comment: Why is a violation of an approved OMP also a violation of PR 415? How can an OMP be required when there is no violation of the rule? Public nuisance is not a prerequisite for this requirement. There are no standards for an approvable OMP. What are the standards for approving or disapproving an OMP?

Response: A violation of an approved OMP is considered a violation of PR 415 because it is necessary to make the requirements of the plan enforceable against the facility, and it is impractical to spell out the individual requirements of each facility's plan in the rule language itself. This principle is already part of District Rules. Pursuant to Rule 221, an "operation shall not be conducted contrary to any conditions specified in the approved plan" and "a violation of the plan is a violation of the rule." The requirement to submit an odor mitigation plan (OMP) by a facility subject to PR 415 is based on a facility receiving either a notice of violation (NOV) for public nuisance, or three confirmed odor events within a 180-day period, as specified in subparagraphs (d)(2)(A) and (d)(2)(B). Therefore, the commenter's statement is not correct: public nuisance is one of the triggers

for submittal of an OMP. However, the commenter is correct in stating that submittal of an OMP is not based on violation of a requirement of the proposed rule. The Executive Officer will approve or disapprove an OMP within 90 days, as stated in subparagraph (h)(3)(A). In addition, standards for approval of an OMP are addressed in subparagraph (h)(3)(C).

15. Comment: Standards for closed system, permanent enclosure and odor control equipment must be articulated in PR 415.

Response: Paragraph (f)(3) defines the minimum requirements for a closed system. Paragraph (f)(2) defines the requirements for a permanent total enclosure and a ventilation system capable of maintaining the required minimum face velocity through enclosure openings. In addition, staff has provided an alternative for an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening. Paragraph (f)(4) defines the requirements for an odor control system and associated testing requirements.

16. Comment: How will SCAQMD maintain consistency between odors from different rendering operations? How will an inspector determine whether a complainant's odor comes from a rendering facility? What methodology will SCAQMD use to determine the cause of an odor complaint? How will SCAQMD determine whether odors are escaping from individual pieces of equipment?

Response: SCAQMD compliance inspectors are trained to follow standard surveillance procedures to identify the source of an odor. Prior to conducting odor surveillance, inspectors attempt to gather information about the community impacted by the alleged emissions, along with any available information about potential odor sources in the general vicinity. These information gathering activities often involve interviews of individuals who have reported air quality complaints to SCAQMD, during which inspectors typically inquire about the character, intensity, frequency, timing, and duration of odors reported by the complainants.

During odor surveillance, the inspector periodically measures wind speed and direction using a District-issued wind meter, noting and documenting information about the character and intensity of any detectable emissions at each location where such measurements have been taken. Based on this information and/or on information from previous surveillance activities, the inspector follows a surveillance route that begins downwind of, and traces detectable emissions, if any, to their apparent source. The inspector continues along the surveillance route to a point upwind of the apparent source where the emissions are no longer detectable, then returns to a downwind location and performs repeated surveillance activities in this manner, from downwind to upwind locations, ruling out all other possible

sources, until a probable emissions source can be identified. The inspector documents these findings, and may prepare a table or map that shows the surveillance route(s) taken, wind data collected, and the character and intensity of odor emissions detected at key locations along the route. Once a probable source has been determined, the inspector typically enters to verify whether the emissions detected at that source match those described by the complainant(s) and/or detected by the inspector at locations downwind of that location, and to identify the particular equipment and/or process from which the emissions emanate.

17. Comment: Our facility should be permitted to use alternative methods to address odors when there is a violation of Rule 402. Construction of a permanent enclosure is cost-prohibitive and our facility cannot retrofit existing structures because of control system requirements.

Response: As indicated in the response to comment #6 of this letter, staff has observed objectionable odors emanating from all rendering facilities staff visited. However, in many cases it is difficult to pinpoint a particular odor nuisance as coming from one specific facility. Indeed, odors from two or more facilities may contribute to a single nuisance event. Therefore, staff believes reasonable preventative measures are necessary for all affected facilities. SCAQMD staff has worked in good faith with the commenter to modify the language and requirements of PR 415 in order to accommodate the commenter's existing facility configuration and minimize the number and size of permanent total enclosures that the commenter would need to construct under the proposed rule. Regarding the commenter's assertion of prohibitive construction costs for enclosure, SCAQMD staff is aware of other facilities subject to PR 415 where cost estimates for new permanent total enclosures are considerably lower on a per-square-foot basis than estimated by the commenter. Moreover, staff has learned that the commenter has at least one other facility that uses a similar control strategy as would be required under PR 415 in terms of enclosure of rendering operations, maintaining negative pressure on the enclosure and routing to odor control equipment.

18. Comment: We have not received an answer regarding whether our facility's existing operation complies with the closed system requirement. What standards will determine if a system is closed? Is our facility's equipment, excepting the raw material pit considered a closed system? Is a screw that is covered considered a closed system? What areas is our facility required to permanently enclose under PR 415? What parts of the trap grease process need to be enclosed? What materials should be used for the permanent enclosure?

Response: The commenter's existing operation in the main processing building is not considered a closed system. During a site visit in April 2015, SCAQMD

staff noted several pieces of equipment that are not closed, including two inclined screw conveyors as well as a hopper feeding the grinder. These would need to be enclosed in order to consider the conveying, grinding, cooking and post-cooking processing equipment in the main building a closed system. Paragraph (f)(3) defines the standards for a closed system, including sealing requirements. A screw conveyor that meets these minimum requirements would be acceptable as part of a closed system. Trap grease processing needs to be closed from the point of delivery, through separation and into wastewater treatment, or conversely, these processes need to be conducted within a permanent total enclosure. Subparagraph (f)(3)(D) defines acceptable materials from which a permanent total enclosure may be constructed. Notwithstanding the materials used in construction, the receiving area must be enclosed, including the receiving pit from which the screw conveyors move material toward processing equipment.

19. Comment: PR 415 must include language stating that our current operation fully complies with the closed system requirement and no more will be required. Why is a permit application for enclosure required if a facility complies by a closed system?

Response: PR 415 does not include language stating the existing operations at the commenter's facility or any other facility subject to PR 415 fully comply with the closed system requirements. As noted in the response to comment #18 of this letter, the facility does not currently comply with the requirements for a closed system. Under subparagraph (d)(1)(B), a permit application for a permanent total enclosure is required to be submitted within 12 months after the date of rule adoption. A permit application is required for a closed system only if modifications are made to currently permitted equipment that is part of a closed system. Otherwise, a permit application is not required for a closed system. The proposed rule has been clarified to provide that a permit application for an enclosure must be submitted only where an enclosure is required, and that a facility must give notice if it is instead intending on using a closed system.

20. Comment: What types of negative air pressure systems are acceptable? Does a closed system need a negative pressure system? Is the negative air pressure standard reasonable considering some enclosures are partially open or regularly opened?

Response: PR 415 does not specify the type of negative pressure system; only that the system is capable of meeting the inward face velocity requirements of paragraph (f)(2). A negative pressure system for a partially-open enclosure will need to be designed to maintain the required minimum inward face velocity through all openings. Likewise, a system for an enclosure with regularly opened doors will need to maintain minimum face velocity

accounting for all doors open at once. Note that subparagraph (f)(2)(A) limits the combined area of all routine enclosure openings through which odors can escape from a permanent total enclosure to 5% of the enclosure envelope. Note that an unventilated permanent total enclosure is allowed for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

21. Comment: It is not reasonable to require implementation of all BMPs within 90 days. Additional washing will generate significant wastewater and may require modification to wastewater facilities, including permitting.

Response: SCAQMD staff disagrees that BMPs, excluding paragraph (e)(6) – Repair of Raw Material Receiving Area cannot be implemented beginning 90 days after rule adoption. Staff also disagrees that the requirements of PR 415 will result in additional water usage, for reasons expressed in the response to comment #26 in this letter. However, if the commenter is required to modify its wastewater permit to comply with the requirements of subdivision (g), the timing of requirements to submit permit applications and operate within a permanent total enclosure are contained in subparagraph (d)(1)(C). If a facility is unable to meet the construction deadlines in subparagraph (d)(1)(C) due to conditions beyond its reasonable control such as delay in obtaining a permit from a wastewater agency, it may apply for a variance before the District’s independent Hearing Board.

22. Comment: What if material holding BMPs cannot be met due to breakdown or variation from standard procedure or other circumstances beyond our facility’s control? Will emergency breakdown provisions apply or an NOV be issued? What are penalties for NOV? Are penalties defined or up to SCAQMD discretion? When would a notice to comply be issued instead of an NOV?

Response: Rule 430 – *Breakdown Provisions* provides for relief from most rule requirements during breakdowns, excluding Rule 402, provided the breakdown is reported by telephone in a timely manner and a written, complete Breakdown Emissions Report is submitted in a timely manner. Penalties for violations of District rules are set forth in H&SC Section §§42400 et seq., and the maximum penalties vary depending on whether the violation involved excess emissions and whether the facility operator was negligent, strictly liable, operating in knowing violation, etc. In all cases a court or the District in evaluating a case must consider all relevant factors including those set forth in H&SC Section §42403, including the extent of harm caused by the violation, the length of time over which it occurs, the financial burden to the defendant, and any action taken by the defendant to mitigate the violation. If the facility and the District cannot agree on a settlement, then the District must prove its case in court. A notice to comply

may be issued where a minor violation may be promptly corrected, depending on factors such as the facility's prior compliance history.

23. Comment: Why is there a 3-hour deadline to contact SCAQMD when our facility receives an odor complaint? What if the complaint is made after hours or on the weekend? What if the odor is not coming from our facility?

Response: PR 415 (i)(2) requires a facility to notify SCAQMD “. . . no more than three hours after receiving an odor complaint, after facility personnel became aware of the complaint, or after facility personnel should reasonably have become aware of the complaint.” If a complaint is made directly to a facility after hours or on a weekend, and facility personnel do not become aware of the complaint until Monday morning, the SCAQMD should be advised of the complaint within 3 hours after facility personnel become aware of the complaint on Monday. This requirement is necessary to enable SCAQMD to respond to the complaint in a timely manner in the event that a complainant contacts a rendering facility directly but does not contact SCAQMD. The District's contact number (1-800-CUT-SMOG) is accessible 24-hours a day, 7 days a week in the event that the commenter receives a complaint after hours or on the weekend. The requirement to contact SCAQMD does not indicate that the commenter is the source of the odor; only that the commenter received a complaint. SCAQMD will investigate the complaint and, if possible, determine the source of the odor.

24. Comment: Why does PR 415 establish deadlines for repairing leaking components? Why is a written log of leaking valves, flanges, etc. required?

Response: The BMP to repair leaking components within 72 hours (formerly paragraph (e)(18) in the 2/18/15 rule draft) has been removed from the rule.

25. Comment: PR 415 appears to require extensive paving/repaving (perhaps entire 13 acre facility) that is not necessary for odor control. It will cost our facility about \$8.5 million to pave all of the areas required by PR 415, not including costs to repave cracks. What type of cracks and potholes need to be repaired? What are standards for maintaining facility grounds?

Response: The Repair of Raw Material Receiving Area BMP under paragraph (e)(6) has been clarified to limit repairs to the raw material receiving area where material touches the ground. Divots, cracks and potholes that hold standing water with a surface area greater than one square foot are required to be repaired under this BMP. The intent of this BMP is to prevent standing water that can allow odorous bacteria to multiply. When SCAQMD staff visited the commenter's facility in April 2015, no potholes were noted in the raw material receiving area that met the criteria in paragraph (e)(6). The concrete in the receiving area appeared to be very durable in spite of being decades-old. It is expected that the receiving area will be maintained in

similar condition. Therefore, staff assumes the commenter will not need to fill any potholes to comply with this BMP and compliance costs for this BMP will be minimal. An estimate of costs to comply with the BMP will be included as part of the socioeconomic impact assessment.

26. Comment: PR 415 requires washing of trucks, drums, containers and grounds. Washing requirements will increase standing water and wastewater.

Response: SCAQMD staff disagrees with the commenter that PR 415 requirements will increase either standing water or wastewater volume. Outgoing trucks are currently required to be washed under CCR, Title 3, Section 1180.353 ~~CCR §1180.35~~. BMP (e)(4) for washing of drums and containers has been limited such that only drums and containers that previously contained raw rendering materials that are open upon exiting the facility are required to be washed. With regard to standing water, facility grounds at facilities that staff visited, including receiving areas appeared to be sloped to drain standing water to wastewater control. The commenter is not correct regarding a requirement to wash facility grounds. Facility grounds were not required to be washed in earlier versions of the rule. Staff believes washing with high-pressure water will decrease water usage, relative to washing with water at line-pressure. However, this BMP has been removed due to concerns expressed by industry in light of the current drought.

27. Comment: Processing material within 4 hours is unreasonable. Our facility does not receive enough material to process every 4 hours. It is not practical to wash the exterior of trucks as proposed in the rule.

Response: The BMP for holding time of incoming raw rendering materials under paragraph (e)(5) [paragraph (e)(7) in the 2/18/15 rule draft] allows for three options for handling incoming raw material, including the material entering the cooking process within the holding time limit, being staged in a permanent total enclosure, or stored in a covered container. The holding time BMP allows 6 hours holding time for material that enters the facility at lower-than-ambient (i.e. refrigerated) temperature, in addition to 4 hours holding time for material at ambient temperature as the BMP was originally proposed. It should be noted that the 4-hour or 6-hour time limit begins when material enters the facility and is deposited in the receiving area; the BMP does not require material to be processed “every 4 hours” as the commenter suggests. After an enclosure for raw material receiving is constructed, the holding time BMP is no longer effective, as facility owners/operators will be required to move material into the enclosure within 60 minutes on a continuous basis after delivery. The requirement to wash truck exteriors was removed.

28. Comment: The 30 minute time limit for cleaning spilled material is unrealistic.

- Response: The BMP to clean materials washed out of transport vehicles within 30 minutes [formerly paragraph (e)(8) in the 2/16/15 rule draft] has been removed.
29. Comment: What are standards for preventing accumulation and drippings in the plant?
- Response: The requirement for preventing accumulations of processed materials has been removed. However, staff feels it is only common sense for a facility to monitor accumulations and remove them before they create odor issues.
30. Comment: Our facility does not own or operate all trucks that enter its facility and has no control over whether trucks use tarps on public streets. If tarping requirements are limited to truck entry, the tarp would only be on the truck for a few minutes until being removed for material unloading. This requirement is not unlike currently existing requirements under Rule 1157.
- Response: Owners/operators of third-party trucks will have 6 months to become familiar with the requirements of paragraph (e)(1), Covering of Incoming Transport Vehicles. Staff feels it is not likely that after going to the trouble to make a truck compliant with the covering requirements, a third-party owner or operator would choose to wait until arriving at the commenter's facility before covering an incoming load.
31. Comment: Trucks transfer meal to the grinding department. Do these trucks need to be sealed? What is an odor tight container?
- Response: BMP (e)(9) requires cooked material to be transported between permanent total enclosures only through a closed system of conveyance, or by covered containers. An intra-facility transport vehicle would qualify as a closed system of conveyance if it was covered. Odors from a covered container should be substantially contained within the container since the cover allows minimal contact between the material and air outside the container.
32. Comment: The requirement for venting trap grease delivery vehicles is unclear.
- Response: All requirements for trap grease have been removed from the staff proposal.
33. Comment: Commenter states that CEQA requires the SCAQMD to evaluate the potential environmental impacts caused by the adoption of PR 415 in an EIR. Commenter outlines 10 specific environmental topic areas that should be evaluated further:
- Aesthetics
 - Greenhouse Gas (GHG) Emissions
 - Land Use / Planning
 - Agriculture and Forestry Resources
 - Public Services

- Solid Waste
- Transportation
- Utility/Service Systems
- Air Quality
- Hydrology/Water Quality

Response: While the California Environmental Quality Act (CEQA) requires the evaluation of potential environmental impacts caused by the proposed project, an EIR or EIR equivalent document is only required if the environmental analysis determines that significant environmental impacts could occur as a result of the proposed project. This type of document is then circulated for a 45-day public review and comment period. If no potential significant environmental impacts are expected to occur as result of the proposed project, an environmental assessment (EA) is prepared and circulated for a 30-day public review and comment period. Through the environmental analysis conducted for PR 415, it has been determined that implementation of PR 415 is not expected to significantly adversely impact any environmental topic area. Therefore, the Draft EA for PR 415 demonstrating the analysis and conclusions was prepared and circulated for a 30-day public review and comment period on July 14, 2015 and ended on August 12, 2015.

The Draft EA, which is available at <http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2015/pr-415---draft-ea-revised-062515.pdf?sfvrsn=2>

analyzed 17 environmental topic areas and mandatory findings of significance. The environmental topic areas were aesthetics, agriculture and forestry resources, air quality and greenhouse gas emissions, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, solid/hazardous waste, and transportation/traffic. A total of three comment letters were received during the 30-day public review and comment period. Staff is reviewing and preparing responses to the comments in accordance with CEQA and the SCAQMD's Certified Regulatory Program Guidelines. Public Resources Code Section 21080.5(d)(2)(D) and SCAQMD's Certified Regulatory Program (Codified under Rule 110) require that the final action on PR 415 include written responses to issues raised during the public process. The written responses will be made available for public review 10 days before the SCAQMD's Governing Board considers the Final EA and PR 415 for adoption on November 3, 2017 pursuant to CEQA Guidelines Section 15088. Additionally, based on the comments on the Draft EA for PR 415, staff is evaluating the environmental analysis for the 17 topic areas in the Draft EA. The SCAQMD's Governing Board will review and consider the final

CEQA document for PR 415 for adoption at the same Governing Meeting on November 3, 2017.

34. Comment: SCAQMD has no evidence to support its contentions that Baker is the cause of public nuisance level odors in the Boyle Heights community. PR 415 rule-makers have presumed Baker is guilty, formed a predetermined prejudice against Baker, and as a result have targeted Baker specifically in this rulemaking.

Response: SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has observed through these inspections that the rendering plants are a significant source of odors. SCAQMD staff has detected rendering odors during onsite inspections at Baker and at the District's other rendering plants that have the potential to create odor nuisances in the surrounding community, especially when the odors from nearby rendering plants are combined. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public workshops on Proposed Rule 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

PR 415 seeks to establish standards for odor controls, including: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. Such odor control standards are reasonable and proper and well within SCAQMD's scope of authority. The commenter is incorrect in stating that SCAQMD staff has presumed the commenter's client is "guilty", that staff have "formed a predetermined prejudice" or has "targeted" the commenter's client in this rulemaking. SCAQMD staff has done no such thing, but has based this rulemaking on observations and evidence.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

35. Comment: SCAQMD has spent considerable time researching Baker's out-of-state activities, particularly for its New York and Washington state operations, even though these activities are clearly not within SCAQMD's jurisdiction.

Response: SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating an open-air rendering process such as the commenter's client currently operates within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. This same standard of operation is used in at least three of the other facilities owned by the commenter's client outside of Vernon around the nation, while the commenter's client continues to deny the same standard of operation to the communities and workers at businesses surrounding the Vernon rendering facility.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

36. Comment: The last odor-related Notice of Violation ("NOV") SCAQMD issued against Baker was on September 3, 1998 – almost 17 years ago. SCAQMD has received 69 odor complaints about Darling International, Inc. ("Darling") and issued seven (7) NOV's. SCAQMD has collected only two documents for Darling's operations elsewhere. The record does not contain information about any of the other renderers, even though some of them have received an NOV in the past.

Response: Regarding Notices of Violation received by any other facility subject to PR 415, the commenter should be aware that the purpose of an NOV as it relates to PR 415 is as one of two triggers to require submittal of an Odor Mitigation Plan under PR 415 requirements. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. This research was conducted at facilities irrespective of whether that facility received an NOV within the recent past. In doing this research, SCAQMD staff determined that other Darling facilities currently have controls that support the reasonable odor control standards recommended by SCAQMD staff in the proposal for PR 415, including: enclosure of odorous operations, (in particular, the receiving area), maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

37. Comment: SCAQMD's authority to regulate rendering-plant odors from Baker's Vernon facility is preempted by Civil Code Section 3482.6. SCAQMD is also barred by Civil Code Section 3482.

Response: By its terms, Civil Code Section 3482.6 would not apply to SCAQMD's adoption or implementation of PR 415. First, PR 415 falls within an exemption to Section 3482.6 created by 3482.6(c). Subdivision (c) of Section 3482.6 states as follows:

(c) This section does not supersede any other provision of law, except provisions of this part, if the agricultural processing activity, operation, facility, or appurtenances thereof, constitute a nuisance, public or private, as specifically defined or described in the provision.

Pursuant to subdivision (c), Section 3482.6 does not preempt PR 415 because the rule: (1) is another provision of law; (2) that is not a provision of Division 4, Part 3, of the Civil Code; (3) that specifically describes rendering plants and the measures that they must undertake to avoid constituting a nuisance.

Further, 3482.6(d) exempts PR 415 from Section 3482.6 preemption. Subdivision (d) of Section 3482.6 states:

(d) This section prevails over any contrary provision to any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, *except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993* (emphasis added).

PR 415 falls within this provision. PR 415 is based on the SCAQMD's authority to regulate nuisance under H&SC Section ~~Health and Safety Code section~~ 41700. As of January 1, 1993, the rendering plants in the City of Vernon, including Baker, were surrounded by both housing and commercial development. Thus, subdivision (d) also exempts PR 415 from preemption under Section 3482.6(d).

Civil Code Section 3482, which states “[n]othing which is done or maintained under the express authority of a statute can be deemed a nuisance.” This statute only applies if the statutes under which Baker claims to act expressly sanction the odor complained of, and “mentions the possibility of noxious emanations from such facilities.” *Varjabedian v. City of Madera* (1977) 20 Cal 3d 285, 292. Staff is not aware of any statute

specifically mentioning and endorsing the noxious odors from rendering facilities-. Thus Section 3482 does not apply.

38. Comment: SCAMQD lacks authority to impose Rule 415.

Response: The District is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." ~~Health and Safety Code (H&SC Section) § 40000~~. The term "air pollutant" includes odors [H&SC Section §39013]. Therefore, the District may regulate to control air pollution, including odors, from PR 415 sources. In addition, the District has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on the District by law. [H&SC Section 40702].

The District's legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities also derives from H&SC Section 41700, which, in pertinent part, prohibits the discharge of air contaminants causing annoyance to the public. It further prohibits the discharge of air contaminants, such as odors, which "endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property." [H&SC Section 41700]. The District's authority granted by H&SC Section 41700 to protect the public's comfort and health and safety includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. The District is authorized under H&SC Section 41508 to adopt rules imposing requirements that are stricter than those set forth in state law, including Section 41700.

In addition, H&SC Section 40001(b) authorizes the District to adopt rules and regulations, such as PR 415, and provides, in relevant part, for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons. This statute, which is phrased very similarly to Section 41700, allows rules to prevent air pollution episodes caused by any type of pollutant, not just criteria air pollutants. *Ultramar v. SCAQMD* (1993) 17 Cal. App. 4th 689,707. PR 415 serves to prevent or at least reduce the likelihood of the occurrence of a nuisance through imposing reasonable odor control measures. PR 415 is a reasonable and proper use of the District's regulatory authority.

39. Comment: PR 415 is being developed solely because of a working group recommendation made for the Clean Communities Plan in the pilot study area of Boyle Heights. SCAQMD conducted a year-long study to measure ambient air pollutants in the Boyle Heights neighborhood, authored by Dr. Fine.

Exide Technologies as source of emissions in Boyle Heights was ruled out. Exide is closer to Resurrection School than Baker. For the same reasons SCAQMD finds it unlikely that emissions from Exide travel toward Resurrection School, emissions from Baker are unlikely to affect Resurrection School.

PR 415 targets sulfur compounds (PR 415(f)(5)(A)(ii)). However, according to the SCAQMD study, sulfur is typically generated from combustion of sulfur containing fuel. How can SCAQMD distinguish between freeway/roadway-generated sulfur compounds and industry-generated compounds, let alone compounds traced from Baker? How can SCAQMD rule out freeway/roadway-generated sulfur compounds as a problem in the Boyle Heights neighborhood?

Response: Although rulemaking for PR 415 arose from one of the recommendations from the working group for the Boyle Heights Clean Communities Plan (CCP), during rule development of PR 415, SCAQMD came to understand that the current and accepted practices for operating a rendering facility within an urban area include enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. This was verified by the operating configuration in at least 3 of the other rendering facilities operated by the commenter's client in the United States outside of the City of Vernon.

Regarding the monitoring study authored by Dr. Fine: this study was conducted to evaluate toxic air contaminant concentrations at Resurrection Church. The study was not conducted to evaluate odors, including those from rendering facilities, and any extrapolation of the study findings to odors from rendering operations are out of context with that study and are not relevant. In particular, the conclusion drawn by the commenter that odors from Baker Commodities, components of which are detectable in the parts-per-billion (PPB) range would behave in the same manner as particulate (lead) emissions from Exide misses the point.

Regarding the commenter's contention that PR 415 targets sulfur compounds, this assertion is incorrect. In fact, the current proposal of PR 415 does not target sulfur or any other compounds. Although staff believes that reduced sulfur compounds are a component of odors generated during cooking and wastewater treatment at rendering facilities, the current PR 415 proposal merely establishes hydrogen sulfide (H₂S) as one of two marker compounds that are used to evaluate the control efficiency of an odor control device. Staff has experienced odors emanating from the rendering facilities subject to this rule and found that they are distinct and different from the types of odors one experiences from diesel emissions and other roadway traffic.

Furthermore, although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

40. Comment: SCAQMD receives fewer odor complaints for rendering facilities than for other industries. SCAQMD's inability to identify and verify the source demonstrates that SCAQMD lacks data to establish a causal connection between Baker and odors complaints received by SCAQMD. In the event that the odor source is a single nuisance operation in Vernon, PR 415 would be unlawfully over-inclusive.

SCAQMD has also relied on resources that discuss odor outside of the context of animal rendering. Use of this literature is misplaced because it is aimed at exposure in the workplace, not on nuisance odors detected by a neighborhood.

Response: Regarding the number of complaints received alleging rendering odors, SCAQMD staff has long held that the number of complaints is not fully indicative of the impact on area residents for several reasons. First, stockyards, meat packing houses and slaughterhouses that supplied animal carcasses to rendering facilities have existed in the Vernon area for nearly one hundred years. As a result, odors from rendered animal carcasses have long been part of the landscape in the communities surrounding Vernon, impacting the quality of life for area residents. Furthermore, SCAQMD staff has learned from conducting community meetings in the area that proactive complainants didn't perceive a reduction in odors after repeated complaints, and became discouraged, resulting in a general sense from community members that reporting odors does not yield results. This may occur because SCAQMD staff is unable to pinpoint an individual facility as the source of the odor being complained of, as the facilities are relatively near one another and two are extremely close to each other.

Regarding the objections by the commenter about the studies cited, staff disagrees if the commenter is suggesting that health effects from odorous compounds cited in these studies are not relevant because they are targeted

at workplace odors or because they arise from animal production operations rather than from rendering operations.

41. Comment: "Closed System" (c)(2) is defined as a system "in which odors are contained within the system." What does "contained" mean? Is "contained" defined by the closed system standards in (f)(4)? If so, there is a conflict between sections (f)(4) and "odor" defined in (c)(12). Odor is defined as "the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves." Therefore, a system is only considered "closed" if a person cannot perceive a chemical substance in the air. It is left up to the complete discretion of SCAQMD staff, the majority of which are not qualified to determine if there is an odor. Renderers will not know whether their system is "closed" because SCAQMD staff with sensitive olfactory nerves may smell something the renderers or previous SCAQMD staff persons do not. What if one SCAQMD staff person does not perceive a chemical substance in the air, and a second SCAQMD staff person does? Is this a one-time test, or can SCAQMD at any point in the future declare a system not to be closed if at any time a SCAQMD staff person perceives a chemical substance in the air? SCAQMD has yet to inform Baker whether its operation is considered "closed." SCAQMD has visited Baker several times and there is no reason why SCAQMD cannot definitively inform Baker as to whether the operation complies as is with the proposed rule, or whether an enclosure is required.

Response: The definition of "closed system" in (c)(2) has been changed to clarify that a system that meets the requirements of (f)(3) is a "closed system" within the meaning of the definition. Staff recognizes that that no system can completely contain all of the solids, liquids, vapors or air that passes through it and there will always be some amount of fugitive emissions leakage. "Contained" as used in paragraph (c)(2) means air leakage from a closed system is not significant and the escape of potential odors is greatly reduced. The closed system standards in paragraph (f)(3) are the minimum requirements to minimize air leakage and contain odors within the system. SCAQMD disagrees with the commenter that there is a conflict between paragraphs (f)(3) and "odor" defined in (c)(11), in that paragraph (f)(3) describes the minimum requirements to prevent the escape of odors from a closed system and paragraph (c)(11) defines what constitutes an odor. A system is closed if air leakage from the system is insignificant and odors are contained in the system to the maximum extent possible, because the system meets the elements of paragraph (f)(3). Staff recognizes that there may still be odors at the facility even after implementation of PR 415. The intent of the rule is to minimize the likelihood that odors will travel off-site and cause an odor nuisance in the surrounding housing and commercial development areas. In order for the SCAQMD to verify an odor complaint a trained inspector must trace the odor back to a specific source according to standard

SCAQMD procedure. If a source cannot be determined, the odor complaint cannot be verified. SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has advised whether the SCAQMD considers their system “closed.” Within 6 months from the date of adoption of PR 415, Baker and other existing rendering plants in the District shall submit a letter of intent to the Executive Officer to select whether they will construct permanent total enclosures or operate in a closed system.

42. Comment: "Collection Center" (c)(3) refers to a licensed rendering plant or pet food processor. What licensing is SCAQMD referring to? There is no definition of a "pet food processor." What businesses besides rendering plants is SCAQMD attempting to regulate under PR 415 by referencing "pet food processor"?

Response: The definition of “collection center” was taken from the California Vehicle Code §Section 2460(j). Please note that certain collection centers are exempted pursuant to PR 415 (l)(1)(B). Licensing of collection centers is pursuant to Section 19300.5 of the Food and Agricultural Code. “Pet food processor” is a term used in that definition.

43. Comment: “Confirmed Odor Event” as defined in 415(c)(4) is an unlawful discretionary standard. The definition of “Confirmed Odor Event” is inconsistent with the Civil Code definition of nuisance. Any SCAQMD staff person can declare a confirmed odor event. There is no time frame for the odors making up a Confirmed Odor Event. How will SCAQMD exclude other sources of odors when determining Confirmed Odor Events? When addressing odors, SCAQMD should only use the standard for enforcing public nuisance.

Response: The comment does not identify in what regard the definition of Confirmed Odor Event is an unlawful discretionary standard. There are two possibilities, both of which will be considered. The first possibility is that the definition causes an illegal delegation of discretion from the SCAQMD Governing Board to the SCAQMD staff. In this regard, H&SC Section Health and Safety Code section 40482 provides:

Any power, duty, purpose, function, or jurisdiction which the south coast district board may lawfully delegate is conclusively presumed to have been delegated to the executive officer unless it is shown that the south coast district board, by affirmative vote recorded in its minutes, specifically has reserved the particular power, duty, purpose, function, or jurisdiction for its own purpose.

Therefore, PR 415 causes an illegal delegation only if it is one the Board cannot make because it is unconstitutional.

An unconstitutional delegation of legislative power occurs when a legislative body confers upon an administrative agency unrestricted authority to make fundamental policy decisions. *Golightly v. Molina* (2014) 229 Cal.App.4th 1501, 1516 (citing *Samples v. Brown* (2007) 146 Cal.App.4th 787, 804). According to the court in *Golightly*:

The nondelegation doctrine serves, “to assure that ‘truly fundamental issues [will] be resolved by the Legislature’ and that a ‘grant of authority [is] ... accompanied by safeguards adequate to prevent its abuse.’ [Citations.] This doctrine rests upon the premise that the legislative body must itself effectively resolve the truly fundamental issues. It cannot escape responsibility by explicitly delegating that function to others or by failing to establish an effective mechanism to assure the proper implementation of its policy decisions.” (*Kugler v. Yocum* (1969) 69 Cal.2d 371, 376–377.)

Golightly v. Molina, supra at 1516, *review denied* (Jan. 14, 2015.)

The definition of Confirmed Odor Event “means the occurrence of an odor resulting in three or more complaints by different individuals from different addresses, and the source of the odor is verified by District personnel trained in odor inspection techniques.” The definition of Confirmed Odor Event does not authorize or require SCAQMD staff to make fundamental policy decisions. The definition requires the staff to respond to odor complaints and verify the source of the odors. Although there is some discretion involved in this task, it does not involve policy choices, much less fundamental policy choices. Therefore these activities do not involve an unconstitutional delegation.

A second possibility raised by the comment that the definition of Confirmed Odor Event is an unlawful discretionary standard is that the definition is unconstitutionally vague. Since the comment does not identify a particular word or phrase that is alleged to be vague, it is assumed that the comment asserts that the definition is vague when taken in its entirety.

In a nuisance case, the California Supreme Court followed two guiding principles endorsed by the United States Supreme Court for applying the vagueness doctrine. *People ex rel. Gallo v. Acuna* (1997) 14 Cal.4th 1090, 1116-1119. The first principle is that the particular allegedly vague term must be considered in context. *Id.* at 1116. In *Acuna*, the California Supreme Court explained that:

The first principle is derived from the concrete necessity that abstract legal commands must be applied in a specific *context*. A contextual application of otherwise unqualified legal language may supply the clue to a law's meaning, giving facially standardless language a constitutionally sufficient concreteness. Indeed, in evaluating challenges based on claims of vagueness, the court has said “[t]he particular context is all important.” (*American Communications Assn. v. Douds* (1950) 339 U.S. 382, 412, 70 S.Ct. 674, 691, 94 L.Ed. 925.)

People ex rel. Gallo v. Acuna, supra at 1116.

The second guiding principle is the notion of “reasonable” specificity or “reasonable certainty” *Id.* at 1117. (citing *Coates v. City of Cincinnati* (1971) 402 U.S. 611, 614; *People v. Victor* (1965) 62 Cal.2d 280, 300; see also *In re Marriage of Walton* (1972) 28 Cal.App.3d 108, 116 [statute will not be held void for vagueness “if any reasonable and practical construction can be given its language or if its terms may be made reasonably certain by reference to other definable sources”].) In explaining the reasonable specificity or reasonable certainty standard, the California Supreme Court quoted the United States Supreme Court decision in *Boyce Motor Lines v. United States*:

“few words possess the precision of mathematical symbols, most statutes must deal with untold and unforeseen variations in factual situations, and the practical necessities of discharging the business of government inevitably limit the specificity with which legislators can spell out prohibitions. Consequently, no more than a reasonable degree of certainty can be demanded. Nor is it unfair to require that one who deliberately goes perilously close to an area of proscribed conduct shall take the risk that he may cross the line.” (*Boyce Motor Lines v. United States* (1952) 342 U.S. 337, 340.)

People ex rel. Gallo v. Acuna, supra at 1117.

Under the two guiding principles adopted by both the California Supreme Court and the United States Supreme Court, the definition of Confirmed Odor Event is not vague. First, the definition must be placed in the context of PR 415. Under PR 415(d)(2)(B), a rendering facility must submit an Odor Mitigation Plan to SCAQMD if three Confirmed Odor Events are received regarding the facility within a 180 day period. Further, PR 415(d)(3), requires a rendering facility to submit a Specific Cause Analysis within a day of notification by the Executive Officer of the receipt of a confirmed odor event regarding the facility. In context, it is clear that a Confirmed Odor Event must involve rendering facilities and rendering odors. The

context of the definition also makes it clear that the activities specified are a trigger for further regulatory action by the SCAQMD to address rendering-plant odors. Second, taken in its entirety, the definition is reasonably specific and certain. According to the definition of Confirmed Odor Event, SCAQMD must receive complaints from three different individuals at three different addresses regarding an odor from a rendering plant. The definition further requires that the SCAQMD must confirm that the odor is caused by a particular rendering plant. The definition finally requires that the SCAQMD staff confirming the source of the odors must be trained in odor inspection techniques. Taken as a whole, the definition of Confirmed Odor Event is highly specific and not unconstitutionally vague. Regarding the definition of “Confirmed Odor Event”, see response to comment 8, selected comments from the PR 415 Working Group.

Regarding the comment that any SCAQMD staff person can declare a confirmed odor event, the definition of confirmed odor event has been modified so that only SCAQMD personnel trained in odor detection techniques can identify a Confirmed Odor Event.

Regarding the time frame for a confirmed odor event, only single odor events fall within the definition of Confirmed Odor Event. Can SCAQMD add up complaints over days, weeks, or years? The definition states that a Confirmed Odor Event “means the occurrence of *an* odor....”(Emphasis added.) Also the use of the word *Event* in the definition of Confirmed Odor Event indicates that only single events fall within the definition. Thus, a Confirmed Odor Event occurs only when three people complain about the same event giving rise to odors. It would not be allowable under the definition to string together three separate odor events to meet the three-complaint requirement. On the other hand, it is not possible to give a specific time limit for an odor event. Odor events can have very different durations. They can be very short—for example, the momentary release of odors from cooking operations. Or they can be very long—for example, open air storage of rendering materials over a weekend. See also response to comment 13 selected comments from the PR 415 Working Group.

Regarding the question of how SCAQMD will exclude other sources of odors when determining Confirmed Odor Events, according to the definition of Confirmed Odor Event, the odor must be confirmed by District personnel trained in odor inspection techniques. To constitute a confirmed odor, the odor must be traced back to its source. The training in odor inspection techniques includes the requirement that odors must be traced back to their particular source and the cause of the odors must be identified, if possible. If odors cannot be traced back to a particular source, then it is not possible for there to be a confirmed odor event for that facility. See also response to comments 7 and 16, selected comments from the PR 415 Working Group.

Regarding the comment that SCAQMD should only use the standard for enforcing public nuisance, please see the response to Comment 4, above.

44. Comment: "Odor Generating Source" (c)(13) means "an operation or process at a rendering facility from which odors *may be* emitted..." (Emphasis added.) This should be "are" emitted, otherwise it is vague, ambiguous, and unlawfully discretionary.

Response: The intent of PR 415 is to require certain odor generating sources to be enclosed within a permanent total enclosure or closed system at all times. This includes odor generating sources that do not operate at a given time during the day but may be operated at another time (example: sources that generate odors during two shifts per day but do not generate odors during the third shift because the rendering facility is not operating). Therefore, the use of "may be" within this context is completely appropriate, and the definition of "odor generating source" is neither vague, ambiguous, nor unlawfully discretionary.

45. Comment: "Permanent Enclosure" (c)(14) requires that the enclosure contain all odors from the odor-generating sources. Odor is defined as "the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves." Therefore, a permanent enclosure is only considered as such if a person cannot perceive a chemical substance in the air. It is left up to the complete discretion of SCAQMD staff. Renderers will not know whether their enclosure is sufficient because SCAQMD staff with sensitive olfactory nerves may smell something the renderers or other SCAQMD staff do not. What if one SCAQMD staff person does not perceive a chemical substance in the air, and a second SCAQMD staff member does? Is this a one-time test, or can SCAQMD make a future determination that an enclosure does not meet the requirements if at any time any SCAQMD staff person perceives a chemical substance in the air? What happens if SCAQMD decides that an enclosure does not meet the requirements of PR 415 after it is built? This is also inconsistent with "Routine Enclosure Opening (c)(20), which properly recognizes that enclosures must have certain openings. How will SCAQMD staff determine that the allowed openings are the source of the odor and not the enclosure?

Response: See response to comment #13 in the Revised Preliminary Staff Report regarding staff discretion. Regarding the commenter's questions on enclosures, PR 415 requires a minimum inward face velocity through routine enclosure openings. The purpose of this requirement is to ensure airflow into the building and prevent odors from escaping. SCAQMD staff believes routine enclosure openings that comply with the minimum inward face velocity will not be a source of odors that remain after an enclosure is

constructed. Regarding the comment about SCAQMD declaring a permanent total enclosure to be insufficient after it is built, the standards for permanent total enclosure are described in subdivision (f). During permitting of an enclosure, SCAQMD will evaluate the enclosure to determine whether it meets these standards. After the owner or operator receives a Permit to Operate an enclosure, SCAQMD does not retain the discretion to declare it insufficient after it is built.

46. Comment: The requirements are based on the presumptions that all renderers are causing odors in the Boyle Heights community, and that enclosure is the only method of addressing the issue. There is no evidence to support these assumptions.

Response: SCAQMD disagrees with the commenter that PR 415's requirements are based on the presumptions that all renderers are causing odors in the Boyle Heights community; that enclosure is the only method of addressing the issue; and there is no evidence to support these assumptions, for the reasons expressed in staff's response to comment #7 in the June 30, 2015 PR 415 Preliminary Draft Staff Report. SCAQMD staff has detected rendering odors during onsite inspections at Baker and at the other rendering plants that have the potential to create odor nuisances in the surrounding housing and commercial development areas, especially when the odors from nearby rendering plants are combined. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding housing and commercial development areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public workshops on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other housing and commercial development areas surrounding the rendering plants.

SCAQMD staff does not presume that enclosure is the only method of addressing rendering odors. District staff evaluated the state of odor controls established and followed by rendering facilities in the City of Vernon, California, and other states. During inspections at some of the rendering plants described above, staff observed odor controls achieved in practice. At a rendering facility in Miami, Florida for example, staff saw resurfaced interior floors that promote a clean interior, prompt replacement of leaking components, enclosures around odorous operations, and odor control equipment, resulting in reduced odors during rendering processes. At a rendering facility in Fresno, staff looked at their air district permit requirement operations which included the rinsing and disinfecting of delivery trucks prior to exiting their main processing building, unloading of

delivery trucks within 2 hours of entering the facility, and the processing of raw material within 24 hours of receipt at the facility. All of this facility's raw material delivery, facility operations and load-out of finished product are conducted inside an enclosure. Buildings at the facility are maintained under negative pressure, odorous air is routed to two wet scrubbers; and the main processing doors, meal building doors, and meal load-out doors are all required to be closed, except for delivery truck traffic or an emergency. A rendering facility in the Vernon area operates their receiving pits in a permanent total enclosure ventilated to a packed bed scrubber. Baker Commodities in Rochester, New York, operates their rendering and inedible restaurant grease operations in a permanent total enclosure, under negative pressure, vented to odor control equipment. Staff has concluded that enclosure of odorous rendering operations provides the most effective means of odor control.

47. Comment: Subparagraph (d)(1)(A) requires that all applicable odor BMPs identified in subdivision (e) be implemented. Who determines whether BMPs are applicable?

Response: The qualifier "applicable" was included in subparagraph (d)(1)(A) primarily to distinguish between BMPs that are only applicable to batch cooking operations, including those in paragraphs (e)(7) and (e)(8). In addition, some facilities do not conduct operations subject to one or more BMPs.

48. Comment: SCAQMD should not interfere in operations that are regulated by the Food and Agricultural Code. There is no legal justification to require businesses to implement BMPs unless an NOV was issued for public nuisance and adjudicated.

Response: The applicability of BMPs can be determined by the language of the rule; the District is available to meet and discuss any questions the facilities may have regarding these requirements and their applicability. Regarding the legal justification for requiring rendering plants to implement Odor BMPs in the absence of a public nuisance NOV and all related appeals and judicial proceedings, please see the response to comment #4, and selected comments from PR 415 Working Group. As this response explains, the SCAQMD has the authority to regulate odors from rendering plants. There is no such authority granted by the Food and Agriculture Code.

49. Comment: Clause (d)(1)(B)(ii) requires rendering facilities to submit permit applications for an enclosure even if the facility has a closed system or it has not been the subject of a public nuisance NOV. PR 415(e)(2) assumes all raw rendering receiving locations will be enclosed, although this requirement is not part of PR 415(d)(1)(B)(ii). In short, this rule presumes

every existing facility will be required to construct permanent enclosures, and that the "closed system" provisions are not really an option.

Response: Facilities that have closed systems are not required to submit applications for a total enclosure. PR 415 (d)(1)(B)(ii) states that applications for total enclosures "*required under this rule*" must be submitted. Under PR 415 paragraph (f)(1), a facility has the option of operating within a closed system or a total enclosure. The commenter is correct, however that raw rendering material receiving must be conducted within a total enclosure, or moved into a permanent total enclosure within 60 minutes after the end of material delivery. This requirement is set out in PR 415(e)(2).

50. Comment: The time frames in PR 415(d) are unreasonable for existing facilities, due to time necessary to evaluate BMPs, change business practices, obtain permits, conduct demolition activities, obtain financing, obtain inspections. The rule does not provide sufficient time to develop an effective odor mitigation plan, and does not recognize any appeal time frames for challenging "confirmed odor events." One day to conduct a specific cause analysis for a confirmed odor event is unreasonable.

Response: The time frame for construction under subdivision (d) allows between 3 and 4 years for construction of enclosures at existing facilities. SCAQMD staff believes this timing is sufficient to conduct all necessary steps to construct an enclosure. SCAQMD staff believes 90 days to develop an effective odor mitigation plan (OMP) after notification by the Executive Officer, as allowed under paragraph (d)(2) is sufficient. A facility has 30 days under paragraph (d)(3) to submit a specific cause analysis to SCAQMD. The intent of this requirement is that after a facility is notified of a confirmed odor event, facility personnel begin the analysis within a short period of time while details of the circumstances surrounding the confirmed odor event are fresh.

51. Comment: Rule 415 requires enclosures for wastewater treatment systems even though SCAQMD has no evidence that wastewater treatment systems at rendering plants are causing public-nuisance-level odors in Boyle Heights.

Response: SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has observed through these inspections that the wastewater treatment systems at the plants are a significant source of odors. SCAQMD staff has detected rendering odors during onsite inspections at Baker and at the other Vernon area rendering plants coming from wastewater treatment systems that have the potential to create odor nuisances in the surrounding community, especially when combined with odors from other rendering operations and from nearby rendering plants. Although the SCAQMD is concerned that rendering odors from wastewater treatment systems at Baker and at the nearby rendering plants are affecting

the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public workshops on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering plants.

52. Comment: What is the purpose of the odor complaint contact sign requirement in PR 415(d)(1)(E) and (i)? If there are any odors at the perimeter of the rendering operations, these would only affect persons in vehicles driving by, which does not qualify as a public nuisance and would not further any public purpose. Moreover, this requirement would impermissibly create undue and unjustified negative publicity for rendering companies, despite the fact that the companies are lawfully operating.

Response: SCAQMD has conducted public workshops on PR 415 where residents and workers from the housing and commercial development areas surrounding the rendering plants have stated that they were not aware of whom they should call if they smelled odors they believed were coming from the rendering plants.

53. Comment: There is no legal or factual basis for requiring an odor mitigation plan in PR 415(d)(2) when there is a no proven public nuisance under Rule 402. The 180-day provision for confirmed odor events conflicts with Civil Code Section 3480.

Response: Please see the response to comment #3 of this letter, and selected comments from PR 415 Working Group. The commenter does not explain the purported conflict with Civil Code 3480. That section refers to a public nuisance being one which affects at the same time a considerable number of persons or the public. The commenter apparently refers to the 180-day time period in which multiple Confirmed Odor Events will trigger an Odor Mitigation Plan, and contends that these events do not occur “at the same time.” SCAQMD is not redefining a public nuisance through this rule, but instead is requiring an Odor Mitigation Plan when a series of Confirmed Odor Events (which each must have three separate verified complaints) establishes that the facility has an elevated likelihood of causing an odor nuisance. Rule 415 requires reasonable preventative measures to ensure, to the extent feasible, that such nuisances do not occur.

54. Comment: The notification requirement in PR 415(d)(1)(F) and covering requirement in Odor Best Management Practices PR 415(e)(1) are unlawful. SCAQMD has no authority to regulate whether trucks are covered on public roadways

or to force a rendering operation to regulate trucks for SCAQMD under the guise of “best management practices.”

Response: SCAQMD disagrees with the commenter that the installation of an odor complaint contact sign at rendering facilities and covering of incoming transport vehicles is unlawful. ~~H&SC Section Health and Safety Code section 41508~~, grants the District authority to regulate odors, which includes the adoption of PR 415, which imposes requirements that are stricter than those set forth in ~~H&SC Section Health and Safety Code section 41700~~. SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has observed through these inspections that the rendering materials at the plants are a significant source of odors. ~~H&SC Section Health and Safety Code section 40000~~ provides the District with the primary responsibility for control of air pollution from rendering plants and all other sources except emissions from motor vehicles located in their jurisdiction. Rendering materials at the plants are a significant source of odors, and odors are an air pollutant under ~~H&SC Section Health and Safety Code section 39013~~. PR 415’s regulation of odors from raw rendering materials from trucks leaving their plants in the jurisdiction of the District is within the SCAQMD’s authority both because it is a regulation of the rendering plant’s operations and because odors emanating from rendering materials in trucks are not “emissions from motor vehicles” within the meaning of Section 40000, which was intended to give the Air Resources Board exclusive authority to establish standards which motor vehicle engines in California must meet. Please also see response to comment 10, selected comments from the PR 415 Working Group.

55. Comment: There is no factual evidence justifying covering of trucks. Odors from trucks are fleeting, minor, and not a nuisance. Covering trucks will not reduce odors in Boyle Heights.

Response: The commenter is correct in assuming that all trucks are required to be tarped prior to entry to the rendering facility, whether they are owned by the facility or a third-party transporter. SCAQMD staff believes that odors from trucks can be more than “fleeting, minor and not a nuisance”, as suggested by the commenter. Staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes covering of trucks. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have

complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

56. Comment: There is no evidence showing that the raw rendering material receiving areas are the source of odors in Boyle Heights. Paragraph (e)(2) requires an enclosure for receiving areas. The option of storing the materials in sealed, odor tight containers on a continuous basis after material delivery is not operationally possible and thus, not a real option.

Response: The commenter is not correct in stating that PR 415 (e)(2) requires an enclosure for raw rendering materials. PR 415 (e)(2) states that after the date a permanent total enclosure is required, incoming raw rendering materials be transferred into the permanent total enclosure or into covered containers. The commenter appears to be responding to an earlier version of the rule than was available for the commenter's June 19, 2015 response. The current version of the staff proposal requires this best management practice (BMP) *after* the enclosure standard is required. Transfer of raw rendering materials is allowed under two distinct and separate scenarios: transfer into a covered container, or transfer into a permanent total enclosure.

Regarding the comment of evidence showing that the raw rendering material receiving areas are the source of odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP for raw material receiving. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

57. Comment: The extensive washing requirements in PR 415(e)(3)-(4), (13)-(14) are inconsistent with State drought policies and Executive Orders. These requirements will generate more wastewater to be treated. Who determines how much water is needed to wash outgoing trucks in PR 415(e)(3)? How does the truck washing and drum washing requirements relate to reducing odors in Boyle Heights?

Response: The washing of trucks under PR 415(e)(3) is currently required under the permit held by the commenter's client. The washing required under PR 415 (e)(4) for open drums and containers and (e)(11) cleaning floor drains is modest and reasonable. As such it is neither extensive nor inconsistent with State drought policies and Executive Orders. It will not result in more wastewater, or changes to wastewater permits which require a considerable time to obtain under the commenter's scenario. Regarding the comment on PR 415 (e)(14), the commenter appears to be responding to an earlier version of the rule than was available for the commenter's June 19, 2015 response.

Regarding the comment of reducing odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMPs for truck and container washing, most of which is already being performed by the commenter's client under the requirements of their permit. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

58. Comment: What authority does SCAQMD have to prevent track out of raw rendering materials on to public streets? What about tanker trucks that cannot be washed and do not contribute to track out of raw rendering materials on public streets?

Response: The Department of Food and Agriculture under CCR, Title 3, Section ~~Section~~ 1180.35, Title 3, California Code of Regulations already requires vehicles used to transport carcasses and packinghouse waste to be washed to prevent the spread of disease and creation of nuisances. SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has observed through these inspections that the rendering materials at the plants are a significant source of odors. H&SC Section ~~Health and Safety Code section~~ 40000 provides the District with the primary responsibility for control of air pollution from all sources other than emissions from motor vehicles. The limitations on controlling air pollution from motor vehicles is a limitation on establishing motor vehicle emission standards—so-called tailpipe standards—under Section 209 of the Clean Air Act. Rendering materials at the plants are a significant source of odors,

and an air pollutant under H&SC Section Health and Safety Code section 39013. PR 415's regulation of odors from raw rendering materials from trucks leaving their plants in the jurisdiction of the District is within the SCAQMD's authority.

59. Comment: The requirements in PR 415 (e)(5) relating to holding time of raw rendering materials cannot be implemented until a permanent enclosure is constructed as the storage in a sealed, odor tight container is not an option as discussed above. There is no evidence showing that limiting the holding time and requiring the raw materials be enclosed will reduce odors in Boyle Heights.

Response: SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has observed through these inspections that trucks transporting animal parts and products to the plants are a significant source of odors. SCAQMD staff has detected rendering odors during onsite inspections at Baker and at the other rendering plants coming from trucks transporting animal parts and products that have the potential to contribute to odor nuisances in the surrounding community, especially when combined with odors from other rendering operations and nearby rendering plants. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering plants.

Regarding the comment of reducing odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP for holding time of raw rendering materials prior to the enclosure standard becoming effective.

60. Comment: The requirement to repair the raw material receiving area in paragraph (e)(6) is required to reduce bacteria, in addition to preventing standing water. Not only is there no evidence that bacteria causes odors in Boyle Heights, but SCAQMD lacks authority and jurisdiction to regulate bacteria or standing water. Further, there is no evidence showing that preventing standing water will reduce odors in Boyle Heights.

Response: The requirement to repair the raw rendering material receiving area is one of a number of best management practices (BMP) that SCAQMD staff

believes will reduce the potential for fugitive odors generated from the facility owned by the commenter's client. Potholes that hold standing water with a surface area greater than one square foot are required to be repaired under this BMP. The intent of this BMP is to prevent standing water that can allow odorous bacteria to multiply. When SCAQMD staff visited the commenter's facility in April 2015, no potholes were noted in the raw material receiving area that met the criteria in paragraph (e)(6). The concrete in the receiving area appeared to be very durable in spite of being decades-old. It is expected that the receiving area will be maintained in similar condition. Therefore, staff assumes the commenter will not need to fill any potholes to comply with this BMP and the compliance costs will be minimal. Given the fact that SCAQMD staff visited the facility owned by the commenter's client in April 2015 and specifically informed the commenter as well as the commenter's clients that no pothole repairs were expected under PR 415 (e)(6). SCAQMD has authority to require rendering operations to take reasonable steps to reduce odor emissions, including those that may emanate from bacterial activity in standing water., under its authority to regulate air pollution from all sources except emissions from motor vehicles. H&SC Section Health & Safety Code Section 40000.

Regarding the comment of reducing odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP to repair potholes. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

61. Comment: There is no evidence that bacteria from standing water at rendering plants is causing odors in Boyle Heights. SCAQMD has no authority to regulate bacteria or standing water. Is it an ongoing or one-time requirement in Rule 415(d)(5) to take steps to eliminate the causes of standing water in raw material receiving areas of rendering plants where raw materials touch the ground?

Response: With regard to the ability of bacteria to cause odors, please see Science Daily, "Bacteria Can Have a 'Sense of Smell.'" (August 17, 2010):

Bacteria are well-known to be the cause of some of the most repugnant smells on earth....²

With regard to bacteria causing odors in rendering operations, please see A.C. Stern, ed., *Sources of Air Pollution and Their Control*, Vol. III, Food and Feed Industries (1968):

Localized odor problems of an objectionable nature are related to transportation and storage of the raw material. Bacterial decomposition of animal tissue begins at the death of the animal and putrefaction progresses rapidly with time and elevated temperatures. Just dumping of a “ripe” load of offal can create a problem.

Id. at 282.

With regard to the commentator’s assertion that there is no evidence that odors due to bacteria in standing water have reached Boyle Heights, please note that although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public workshops on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering plants.

With regard to SCAQMD’s authority to regulate odors from bacteria and standing water, please see the response to comment #4 in this letter, selected comments from PR 415 Working Group and response to comment #27 above.

With regard to the timing of the obligation to repair conditions in raw-material receiving areas creating standing water where raw materials touch the ground, the obligation to make repairs is ongoing.

62. Comment: The requirements in PR 415(e)(9) limit transfer of raw or cooked renderings materials between enclosures to a closed system of conveyance or odor-tight drum. There is no evidence showing that transporting material between enclosures causes odors in Boyle Heights.

Response: SCAQMD disagrees with the commenter that there is no evidence showing that transporting material between enclosures causes odors in Boyle

40000.² <http://www.sciencedaily.com/releases/2010/08/100816095719.htm>

Heights. SCAQMD has conducted multiple on-site inspections of Baker and other rendering plants in the District and has observed through these inspections that rendering materials out in the open at rendering facilities are a source of odors.

Regarding the comment of material transportation causing odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP for transporting materials in closed containers. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

63. Comment: The accumulation of processed materials requirements in PR 415(e)(12) are unlawfully vague and ambiguous as to time, in part because of the use of the word "accumulate." Water which is regulated by this requirement is not an accumulation of the processed materials, or within SCAQMD's jurisdiction to regulate. There is no evidence showing that regulating accumulations of processed materials will reduce odors in Boyle Heights. The requirements related to floor drains in PR 415(e)(14) suffer from the same defects. PR 415(e)(12) is also unlawfully vague and ambiguous as to the terms "grease" and "oils" because it does not state whether they are derived from the rendering process. Rendering companies may utilize other processes that generate grease and oils that are entirely unrelated to the rendering process that would not be subject to PR 415.

Response: The BMP under PR 415 (e)(10) relates to washdown of the receiving area. The commenter appears to be responding to an earlier version of the rule than was available for the commenter's June 19, 2015 response. The former requirement under the old staff proposal to clean accumulations has been removed in the current proposal. Similarly, there is no BMP under (e)(14).

64. Comment: The permanent enclosure requirements in PR 415 are not justified. There is no evidence demonstrating that constructing a permanent enclosure will reduce odors in Boyle Heights. The requirements are extremely costly. If SCAQMD is truly interested in reducing odors and had jurisdiction to impose this rule, it should focus on less costly alternatives such as masking

agents. Why does PR 415 specify the materials that the enclosure can be constructed of?

Response: SCAQMD staff continues to believe, after review of rendering operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. This same standard of operation is used at least three of the other facilities owned by the commenter's client outside of Vernon around the nation, while the commenter's client continues to deny the same standard of operation to the communities and workers surrounding the Vernon rendering facility. In a review of other rendering operations, nationally, staff was unable to find even a single example of a rendering facility in an urban area operating an open-air rendering process such as the commenter's client currently operates within the City of Vernon.

Regarding the comment of permanent total enclosures contributing to odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the enclosure standards in PR 415. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

65. Comment: Since SCAQMD approves the enclosure materials, it should bare the risk if the enclosure does not perform as required by the rule.

Response: Under Section 818.4 of the Government Code, commonly referred to as the California Tort Claims Act, a public entity is not liable for an injury caused by the issuance or denial of, or by the failure or refusal to issue or deny any permit, approval, or similar authorization where the public entity or an employee of the public entity is authorized by enactment to determine

whether or not such authorization should be issued or denied. *Elson v. Public Utilities Commission* (1975) 51 Cal.App.3d 577, 587-588. Thus, the decisions by SCAQMD in permitting an enclosure, including the selection of enclosure material, are immune from suit under California law.

66. Comment: The closed system requirements in PR 415(f)(4) are inconsistent with the definition of closed system in PR 415(c)(2). The use of the phrase "to the maximum extent possible" makes the requirement vague and ambiguous, and grants unlawful discretion to SCAQMD staff. Who makes the determination of whether a system is considered "closed" and when does that determination occur? Why is there a need to close air gaps - these small gaps cannot conceivably cause odors in Boyle Heights. Where does a closed system end; which part of the process?.

Response: The definition of a closed system in (c)(2) means a system handling any combination of solids, liquids, vapors, and air at a rendering facility in which odors are contained within the system.. The closed system standards in (f)(4) are the minimum requirements for a closed system. Under (d)(1)(B) and (D) within 6 months from the date of adoption of PR 415, Baker and other existing rendering plants in the District shall submit a letter of intent to the Executive Officer to select whether they will enclose or operate in a closed system; the District will then inform the facility on whether their selection meets PR 415's standards. SCAQMD disagrees with the commenter that the use of the phrase "to the maximum extent possible" makes the requirement vague and ambiguous, and grants unlawful discretion to SCAQMD staff. It is assumed that the commenter means that District staff can determine what constitutes "to the maximum extent possible" without any standards. The District has articulated the minimum standards to minimize air leakage and contain odors in a closed system in (f)(3):

- Material conveyors and troughs that are components of a closed system must be completely enclosed on all sides, except for doors or panels for maintenance and personnel access;
- Bins and hoppers that are components of a closed system must be completely enclosed on all sides, except for doors or panels for maintenance and personnel access;
- Mating metal surfaces on doors or access panels described above must be sealed with gasket material;
- Air gaps in components of a closed system must be sealed with gasket material or with caulk or sealant; and
- Each section of ductwork containing vapor within a closed system must be sealed at every connection to mating components of the closed system using best industry materials and practices.

~~H&SC Section Health and Safety Code section 40482~~ provides, in relevant part, that any power, duty, purpose, function, or jurisdiction which the south coast district board may lawfully delegate is conclusively presumed to have been delegated to the executive officer unless it is shown that the south coast district board, by affirmative vote recorded in its minutes, specifically has reserved the particular power, duty, purpose, function, or jurisdiction for its own purpose. PR 415 causes an illegal delegation only if it is one the Board cannot make because it is unconstitutional. An unconstitutional delegation of legislative power occurs when a legislative body confers upon an administrative agency unrestricted authority to make fundamental policy decisions. *Golightly v. Molina* (2014) 229 Cal.App.4th 1501, 1516 (citing *Samples v. Brown* (2007) 146 Cal.App.4th 787, 804). According to the court in *Golightly*, the nondelegation doctrine serves “to assure that ‘truly fundamental issues [will] be resolved by the Legislature’ and that a ‘grant of authority [is] ... accompanied by safeguards adequate to prevent its abuse.’ [Citations.] This doctrine rests upon the premise that the legislative body must itself effectively resolve the truly fundamental issues. It cannot escape responsibility by explicitly delegating that function to others or by failing to establish an effective mechanism to assure the proper implementation of its policy decisions.” (*Kugler v. Yocum* (1969) 69 Cal.2d 371, 376–377.)

The determination whether a closed system contains odors within the system to the maximum extent possible does not authorize or require the SCAQMD staff to make fundamental policy decisions. The definition requires the staff to evaluate whether the facility’s closed system meets the minimum standards set out in (f)(3). There is discretion involved in this task, however it does not involve policy choices, much less fundamental policy choices. Therefore these activities do not involve an unconstitutional delegation.

A “closed system” ends at the point where odorous solids, liquids or vapors contained within the closed system first come into contact with the air. If commenter’s client wishes to identify their cooking and processing equipment as a closed system, that system would end where odorous solids, liquids or vapors contained within the closed system first come into contact with the air. The commenter’s client has repeatedly told SCAQMD staff they are the rendering experts. As the rendering experts, the commenter’s client should have an excellent idea of where odorous solids, liquids or vapors contained within the closed system first come into contact with the air. In the notification required under subparagraph (d)(1)(D), the commenter’s client is expected to define the precise points where they believe their closed system begins and ends.

Regarding the comment of air gaps causing odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the closed system standards, requiring small air gaps to be sealed. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

67. Comment: The June 3rd version of PR 415 is the first attempt by SCAQMD to apply standards to any aspect of the rule. Unfortunately, these "standards" have no scientific basis. This was especially evident at the June 4 meeting during the exchange between SCAQMD staff and a Los Angeles city employee about increasing the control efficiencies with no discussion of a basis for doing so. There is no evidence of whether nitrogen and sulfur compounds are causing odors in Boyle Heights. There is no evidence that the control efficiencies selected are achievable, cost-effective, and will reduce odors in Boyle Heights. SCAQMD needs to also address these issues in the socioeconomic analysis. The provision allowing the Executive Officer to identify other marker compounds causes these requirements to be impermissibly vague and ambiguous and an unlawful delegation of discretion. 180 days is not sufficient time to have source testing protocols approved. The testing and analytical methods are not identified and are to be determined.

Response: The commenter is incorrect in stating the June 3rd version is the first version to apply standards to any aspect of the rule. In fact, earlier versions of the rule included enclosure and ventilation system standards. Instead, the commenter appears to be referring to the very limited application of the use of the marker compounds ammonia (NH₃) and hydrogen sulfide (H₂S) under paragraph (f)(4) to represent odor control efficiency of an odor control device. SCAQMD staff made the point at the June 3 Working Group meeting that the use of these two marker compounds for the express purpose of determining odor system control efficiency should not be taken as SCAQMD allowing these marker compounds to be used as surrogates for rendering odors, which contain many more chemical compounds than NH₃ and H₂S. No assumption should be made by the commenter or the commenter's client that SCAQMD is treating these marker compound as surrogates for odors in the communities surrounding Vernon (including

Boyle Heights among other communities), and therefore, any attempt by the commenter or the commenter's client to establish a linkage between other potential emitters of NH₃ and H₂S is not appropriate.

Regarding the comment of nitrogen and sulfur compounds causing odors in Boyle Heights, staff believes the requirements of PR 415, including the enclosure or closed system standards and best management practices (BMP), taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. Although the SCAQMD is concerned that rendering odors from Baker and the nearby rendering plants are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants.

SCAQMD staff believes 180 days is a sufficient time to have source testing protocols approved, as this is a standard length of time to allow under permitting for new equipment. The testing and analytical methods are specified in the staff proposal.

67. Comment: The Odor Mitigation Plan requirements in PR 415(h) presume that all existing facilities will be constructing a permanent enclosure. There are no standards governing the approval or disapproval of the Odor Mitigation Plan. This provides SCAQMD with unfettered discretion in deciding which Odor Mitigation Plan should be approved or disapproved.

Response: The commenter is not correct in stating the Odor Mitigation Plan (OMP) requirements in subdivision (h) presume an enclosure. In fact, the requirements of paragraphs (h)(1) and (h)(2) clearly bifurcate the submittal content of the OMP depending on whether an enclosure is present or not.

68. Comment: PR 415 prescribes enclosure of all rendering and wastewater treatment processes, regardless of the effectiveness of current odor control technologies in place. This measure would place a significant financial burden on Baker, whose facility has not been proven to be at fault for the odors experienced in nearby communities. There is equipment available to monitor the origin and range of odors in an area. This rule should have sound data behind it. Conduct a scientifically rigorous investigation of Vernon's odor issues that would specifically identify the sources of those traveling odors experienced in surrounding communities. Without data on

the origin and extent of odors that residents are experiencing, these measures might prove ineffective at solving odor problems

Response: Regarding the comment on the source of traveling odors, as stated in Chapter 1 of the staff report, due to the very long distances rendering odors can travel and the proximity of the five Vernon area facilities relative to one another, it is often not possible to pinpoint a single facility as the source of odors. For this reason, it is often not possible to verify odor complaints, and odor events from rendering facilities in the Vernon area rarely can be attributed to a specific individual facility since the facilities are located relatively close together. This is true despite the fact that unpleasant odors typical of rendering operations can often be detected miles away from the Vernon area rendering facilities, and odors are prevalent many days out of the year.

For these reasons, the approach taken for PR 415 was to research operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating an unenclosed rendering process such as Baker operates within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*.

Regarding the comment on monitoring the origin of odors, as discussed in the staff report, there are more than 100 chemical compounds that have been identified in rendering odors. Many of these compounds do not currently have established methods for collection, speciation and analysis. Many do not currently have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science and the present state of technology.

Even if the limitations in the current science can be overcome, there are multiple sources of odor that originate from rendering facilities (raw rendering material, cooking of meat, non-condensable vapors from cooker condensate, wastewater) and therefore multiple odor profiles from the various fugitive odors at each facility. Odors may also be different at the same facility depending on the materials being processed at the time and other factors. Processed materials may also change over time based on market demands.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

69. Comment: Requiring an odor management plan (OMP) for rendering facilities is a more reasonable measure. Best management practices should be considered as elements of each facility's OMP. PR 415 should be limited to describing the OMP process, with standardized components

Response: SAQMD staff believes submitting an OMP instead of containing fugitive sources of odors and routing them to odor control equipment falls short of the steps necessary to control odors from rendering facilities and reduce odor problems in the communities surrounding Vernon. In particular, this approach does not include a requirement for timely enclosure of odorous operations at a rendering facility as the staff proposal does. SCAQMD staff believes the approach represented by the PR 415 proposal is necessary in order to ensure containment and reduction of fugitive odors from odorous processes at a rendering facility.

An OMP-first approach does not provide the same certainty as the staff proposal. Staff did not take this approach for the proposed rule in part because requiring individual plans would not allow for the discussion of requirements in a public process. The proposed rule has undergone a full public process and all stakeholder input has been considered. Staff believes an enclosure or closed system is the most effective and still reasonable method of reducing odors.

The SCAQMD Governing Board will consider the proposal and has the option to adopt the staff proposal, make modifications, or decline to take an action. Should the rule be adopted, the facilities that will be subject to the rule will have certainty as to what will be required. The process for submittal of individual plans by each facility would undergo review by staff and there could be some inconsistency between requirements for different facilities.

70. Comment: Instead of an odor complaint sign at each facility, we propose a shared number that would instantly notify all renderers that someone has called in a complaint. We are recommending this as voluntary measure.

Response: SCAQMD staff believes the odor complaint contact sign is an important element of the proposed rule, because it allows affected workers at the commercial businesses in Vernon and community members from the communities surrounding Vernon to know where to call for nuisance odors. This is especially important for people who do not understand that SCAQMD has jurisdiction over nuisance odors. Other SCAQMD rules have similar complaint sign requirements, such as Rule 410 and Rule 403. However, since a shared sign is recommended as a voluntary measure, there is nothing that prevents the Vernon-area rendering facilities from cooperating on this approach.

71. Comment: Use confirmed violations of Rule 402 as the trigger for whether a facility needs to make changes.
- Response: Under the requirements of subparagraph (d)(2)(A), verified odor complaints related to rendering odors that result in a Notice of Violation (NOV) under Rule 402 are indeed the trigger for further action under PR 415. A facility that receives an NOV under rule 402 is required to submit an odor mitigation plan (OMP) with specific content requirements as described in subdivision (h). In addition, a second trigger for submittal of an OMP is when a facility receives three confirmed odor events within a 180 day period. The intent of this second trigger for submittal of an OMP is to prevent an odorous situation from degenerating to the point where an NOV must be issued.
72. Comment: Baker does not receive enough material to process every four hours. Material should be allowed to accumulate until there is enough to process.
- Response: Under the requirements of paragraph (e)(5), until the permanent total enclosure standard is effective, a rendering facility has either 4 hours or 6 hours to handle incoming raw material, depending on whether the material is delivered at ambient temperature, or is delivered at lower than ambient temperature. Paragraph (e)(5) allows 3 options for handling of this incoming raw rendering material, including entering the cooking process, being staged in a permanent total enclosure, or being stored in covered containers. SCAQMD staff believes these options provide sufficient flexibility for facility operators to deal with incoming raw material.
73. Comment: There is no scientific basis for exemptions. SCAQMD appears to be granting favoritism.
- Response: Regarding the scientific basis for exemptions, SCAQMD staff consulted with LACSD to craft the exemption for wastewater enclosure. Based on the recommendations from LACSD and combined experience of two agencies, this exemption is based on sufficient dilution of rendering wastewater with other process water such that after mixing, the chemical oxygen demand (COD) is reduced to a sufficiently low level to minimize odors. Regarding the comment about favoritism, exemptions provided under subdivision (l) are available to all facilities that qualify under the stated criteria.

Responses to Farmer John Comment Letters

1. Comment: The purpose of PR 415 is to reduce odors. 350 odor complaints related to rendering operations were received in 10 years. This number is not a sufficient measure of odor levels, as it is subjective and based on sensitivity of nearby residents.

Response: SCAQMD staff is not directly correlating the number of odor complaints that allege rendering facilities with odor levels in the community. As described in the staff report, odors from rendering plants was a key issue during discussions with residents in the Boyle Heights area during the Clean Communities Plan pilot study work. Staff has experienced the unique and unmistakable rendering odors on many occasions when in the areas in and around Vernon and the surrounding communities.

The number of complaints received is not commensurate with the frequent, pervasive odors reported by many residents and observed by SCAQMD staff. Some community members do not complain to SCAQMD for a variety of reasons, which can include not knowing this is available, not wanting to contact a government agency, and not seeing any improvement after they complain.

2. Comment: PR 415 does not have a procedure for determining current baseline odor levels. Conduct more research, including background contribution of both freeways in the immediate vicinity, before any measures are included in this rule. Develop a procedure for measuring odor levels. There are standard methods for quantifying odor, including ASTM D1391, E679 E544 and CEN 13725.

Response: Rendering odors are a complex mixture of many compounds that may include:

“organic sulfides, disulfides, C-4 to C-7 aldehydes, trimethylamine, C-4 amines, quinoline, dimethyl pyrazine, other pyrazines, and C-3 to C-6 organic acids. In addition, lesser amounts of C-4 to C-7 alcohols, ketones, aliphatic hydrocarbons, and aromatic compounds” (AP-42 9.5.3).

Regarding the comment about established laboratory and field odor measurement procedures, ASTM Method D1391 was withdrawn by ASTM in 1986 and is no longer a valid method. ASTM Method E679 is a dilution-to-threshold method that relies on an odor panel to determine a detection threshold for an odor sample. As such its potential value would only be to establish the level at which odors from an odor sample can be detected by an odor panel – not the level at which a complainant may find an odor to be objectionable.

Regarding ASTM E544, this ASTM standard indicates a method to characterize odor intensity, through comparison of odor samples to a reference odor, but does not address odor character, which is very important to the perception of rendering odors. Therefore, the use of this ASTM standard presents a limitation for incorporation into PR 415 rule

development concepts. Please see response to Farmer John comment #114 for further discussion on odor character.

SCAQMD staff believes the cost to collect and analyze odorous samples from multiple locations within a facility in order to define “baseline odor levels” as suggested by the commenter would be excessive due to the number of samples necessary and the number of chemical compounds that would need to be analyzed for each sample collected. The cost of analyzing 25 compounds may run into the tens of thousands of dollars, according to the experts SCAQMD staff has contacted. In addition, there may be issues with collection and transportation of multiple odor samples to a location where an odor panel can analyze them, due to different collection methods required. There are also timing issues involved; in order to avoid sample degradation, certain samples would need to be assessed by an odor panel within a short period of time. Even if these technical issues can be surmounted, staff believes the value of having “baseline odor levels” is questionable, since there are no currently available objective measures to measure ‘objectionable’ odors as described above.

Therefore, in this rule development effort, staff focused on identifying the current and accepted practices around the state of California and the nation for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating an open-air rendering process such as several of the rendering facilities currently operate within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. This same standard of operation is used in other areas by at least two of the companies that operate rendering facilities within Vernon.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

3. Comment: PR 415 does not implement odor reduction requirements. There is no objective means to ensure the rule purpose is fulfilled. Incorporate odor reduction requirements into rule. Ex: 20% by 2020, or 50th percentile (average sensitivity) cannot identify odors.

Response: The rationale for not implementing quantifiable odor reduction requirements is included in the response to Farmer John comment #2. Please refer to that response.

4. Comment: Facilities may include other operations that are not related to rendering. Add clarifying language such as “rendering related”.

- Response: Clarifying language has been added to indicate operations that are subject to the requirements of PR 415 are related to rendering or wastewater, where appropriate in the current language.
5. Comment: It is unclear whether wastewater stored within a tank prior to off-site wastewater treatment meets the definition of “wastewater treatment processes.” Add “capturing of rendering wastewater and treating offsite” as an exemption to wastewater requirements.
- Response: PR 415 does not include a definition for wastewater treatment process. If wastewater that is stored within a tank prior to off-site wastewater treatment meets the definition of wastewater treatment, i.e. *“any chemical, biological, or mechanical procedure used to remove, reduce, or neutralize contaminants in water at a rendering facility from rendering- and trap grease-related operations”*, it would be subject to the requirements for locating in an enclosure or a closed system under subdivision (g).
6. Comment: The phrases “odors are not allowed to escape” and “odors are contained within the system” are unclear. A perfect ‘closed system’ is unattainable. Clarify definition of closed system. The language should refer to odors that are treated with an odor control device.
- Response: Clarifying language has been added to the definition of closed system, as follows: *“A system that meets the requirements of paragraph (f)(3) is a closed system.”* The definition of closed system does not refer to an odor control device, because under the requirements of PR 415, a closed system is not required to be vented to odor control equipment.
7. Comment: Definition of ‘continuous cooker’ is unclear. Does it include supporting equipment or vessels, such as entrainment tanks? Definition does not include operating scenarios that do not meet definition of ‘batch cooker’, such as varying speeds or partial interruptions. Refine definition of ‘continuous cooker’ and add definition for ‘semi-continuous cooker’.
- Response: The definition of continuous cooker has been removed from PR 415. Supporting equipment or vessels such as entrainment tanks are not considered part of the cooker.
8. Comment: The definition of permanent enclosure includes materials that are “impervious to odor”. This definition has potential for high cost. Define “impervious to odor”. Define ‘odor generating source’.
- Response: The definition of permanent total enclosure has been changed to remove the term ‘impervious to odor’. The definition reads: *“an enclosure having a*

permanently installed roof and exterior walls which are constructed of solid material, and completely surround one or more odor-generating sources such that all odors from processes conducted within the enclosure are contained therein.”

A definition was added for ‘odor generating source’ at the commenter’s suggestion to be: *“a process at a rendering facility from which odors may be emitted, including raw material receiving, size reduction, cooking, separation and processing of cooked materials into fat commodities and protein commodities, and wastewater treatment”*.

9. Comment: Are sanitation activities included in the definition of ‘rendering operations’? Refine ‘rendering operations’ definition to limit them to “recycling, processing and conversion” activities.

Response: There is no definition of rendering operations in PR 415. However, sanitation activities may be subject to certain provisions in the rule. For example, washdown water used for sanitation to comply with the BMPs under (e)(3) [Washing of Outgoing Transport Vehicles], (e)(4) [Washing of Drums and Containers] and (e)(10) [Washdown of Receiving Area] that is treated in the wastewater treatment plant is subject to the wastewater enclosure requirements under subdivision (g), unless specifically exempted.

10. Comment: Add definition of ‘odor’, including specific compounds related to rendering operations.

Response: A definition of odor was added under (c)(11), as *“the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves.”* It does not include specific compounds, as these compounds may not be the same for all rendering odors. However, Table 1-1 of the staff report includes a list of chemical compounds commonly found in rendering odors.

11. Comment: SCAQMD must establish an acceptable odor level or identify odor reduction requirements.

Response: PR 415 focuses on containment of fugitive odors via enclosure or closed system and odor control standards, as well as a number of best management practices (BMP) as a means to reduce odors from rendering facilities. SCAQMD staff believes this approach will result in odor levels being emitted from that are sufficiently reduced at the source (i.e. operation or process within a rendering facility) such that rendering odors caused by rendering operations at a rendering facility will not create a public nuisance at locations not within the rendering facility property.

12. Comment: It is unclear whether wastewater treatment processes includes water associated with wet scrubber water or air-cooled condenser water. Add definition for wastewater treatment processes. Clarify that wastewater treatment is only for rendering-related processes.
- Response: The definition of wastewater makes it specific to rendering-related and trap-grease related operations (i.e.: *“any chemical, biological, or mechanical procedure used to remove, reduce, or neutralize contaminants in water at a rendering facility from rendering- and trap grease-related operations.”*). However, if rendering wastewater is co-mingled with other wastewater in the water treatment plant (whether the other water is referred to as wastewater, process water, scrubber water, condenser water, or another term) it is the intent of PR 415 that the entire treatment plant is subject the wastewater treatment requirements under subdivision (g) and subparagraph (d)(1)(D), unless it is exempted under paragraph (l)(2).
13. Comment: Refine requirements for direct transfer of raw rendering materials to include all operating configurations. Some facilities do not receive raw materials via transport trucks.
- Response: The requirements for delivery of raw rendering materials under paragraph (e)(2) have been modified to remove the reference to a transport vehicle.
14. Comment: Standards for washing are likely to have an impact on POTW wastewater and RECLAIM air permitting. These standards will increase wastewater flow, increased energy usage to heat the water and may require a facility to obtain a portable pressure washer, increasing NOx emissions. Substantial costs would be involved to provide offsets or ERCs, and increasing water usage should be avoided during droughts.
- Response: SCAQMD staff disagrees that washing standards would result in an increase in water usage. However, this BMP has been removed from the current staff proposal.
15. Comment: Holding time of incoming raw materials duration may not be appropriate. If a facility receives material right before the end of a shift, they would be required to process or store it regardless of when the next shift takes over. Receiving area is required to be vented to odor control; therefore it is unnecessary to implement a time period restriction.
- Response: The holding time requirements for incoming raw rendering materials under paragraph (e)(5) are applicable prior to the enclosure standard for the receiving area becoming effective. Clarifying language has been added to paragraph (e)(5) to include: *“Prior to the date a permanent total enclosure is required . . .”* The holding time requirement after the enclosure standard becomes effective is limited to 60 minutes from the end of material delivery

under paragraph (e)(2), provided material is moved into the permanent total enclosure on a continuous basis during this 60 minutes period. The commenter is correct in stating that if a facility receives material right before the end of a shift, that material must be processed or stored in covered containers within the time period allowed under paragraphs (e)(2) and (e)(5), as applicable.

16. Comment: Cleanup of spilled raw materials requirement may not be appropriate. Receiving area is required to be vented to odor control; therefore it is unnecessary to implement a time period restriction.

Response: The BMPs for cleanup of spilled raw materials have been removed from PR 415.

17. Comment: ‘Facility grounds’ includes other areas that are not applicable for facilities that perform other operations besides rendering. Odor from standing water is required to be routed to odor control. Add clarifying language such as “rendering-related”. Define ‘facility grounds’.

Response: The definition of facility grounds has been removed from PR 415. The BMP for repair under paragraph (e)(6) was formerly applicable to ‘facility grounds’ and a definition for facility grounds was therefore provided. However, this BMP has since been limited to the raw material receiving area only, and there is no further need to define facility grounds.

18. Comment: The time limits for: holding time limit for raw materials after size reduction; and cooked materials are not necessary for continuous cookers, because material is continuously fed. The resulting odor is required to be routed to an odor control device; therefore, it is not necessary to store in a “sealed odor-tight container”.

Response: The requirement for holding time limits for raw material after grinding are specific to batch cooking operations, not continuous cookers. In addition, the staff proposal has been changed from the use of an “odor-tight container” to a “covered container”.

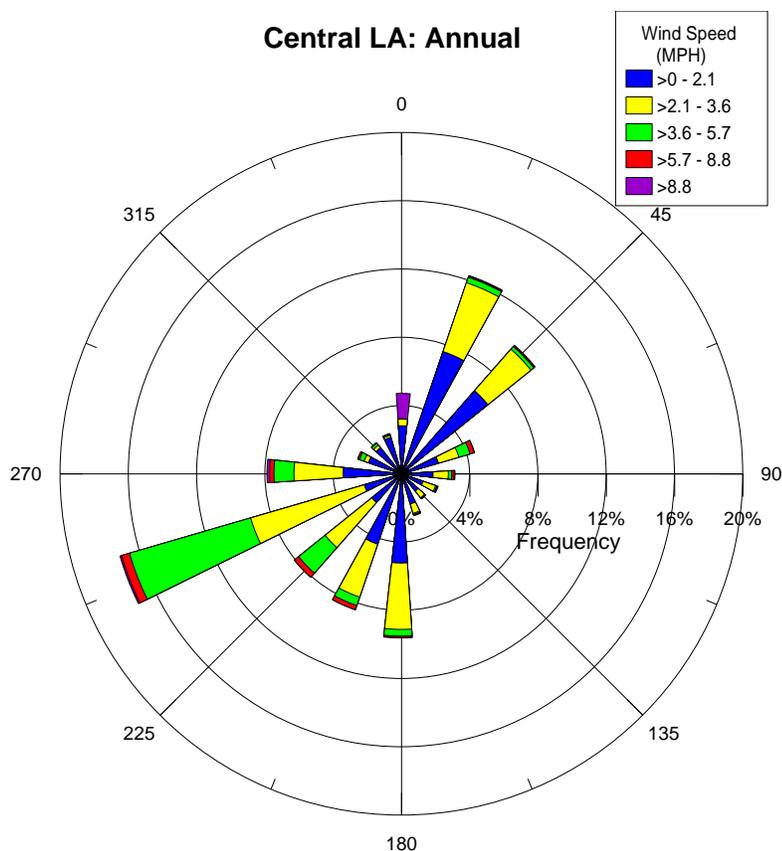
19. Comment: Clarify that trap grease delivery is applicable to “rendering-related” operations.

Response: The requirements for trap grease have been removed from the proposal for PR 415.

20. Comment: The requirement for preventing accumulation of processed materials within enclosures is not necessary, since odors resulting from accumulation are routed to an odor control device.

- Response: The requirement for preventing accumulation was removed from the staff proposal.
21. Comment: The requirement for washdown of receiving areas once per shift is excessive and burdensome.
- Response: The washdown requirement for the receiving area under paragraph (e)(10) has been changed to “. . . *once each working day*” to mirror the frequency of the washdown requirement in the commenter’s permit and other rendering facility permits.
22. Comment: The requirement to wash floor drains is not necessary since resulting odor is required to be routed to an odor control device.
- Response: The language of the BMP for cleaning of floor drains under paragraph (e)(11) has been modified in the latest language for PR 415 to read “. . . *Accessible interior and exterior floor drains shall be inspected and cleaned not less frequently than once per month to remove accumulation of rendering materials.*” SCAQMD staff believes this requirement is necessary since it affects both interior as well as exterior drains. Odors emanating from drains in exterior locations would not be routed to odor control equipment. In addition, odors from drains in interior locations may not be routed to odor control equipment, depending on whether a closed system is chosen to comply with the requirements of subdivision (f) instead of a permanent total enclosure.
23. Comment: The requirement for repair of leaking components is excessive and burdensome since resulting odor is required to be routed to an odor control device. A “reasonable person” is subjective and ambiguous.
- Response: The BMP to repair leaking components within 72 hours after discovery has been removed from the staff proposal for PR 415.
24. Comment: The requirement for inward face velocity through enclosure openings should be limited to “routine enclosure openings”.
- Response: The requirement for inward face velocity under subparagraph (f)(2)(B) states, “*A minimum inward face velocity of not less than 200 feet per minute shall be maintained at all times through each routine enclosure opening of a permanent total enclosure*”.
25. Comment: Include all stakeholders in the working group (including regulators, industries, citizens, environmental control equipment manufacturers, consultants and researchers) in development of PR 415.

- Response: SCAQMD staff has spoken with a variety of stakeholders during the rule development process, including industrial stakeholders (rendering facilities), odor control equipment manufacturers, consultants that are experts in rendering, rendering facility personnel, and researchers, as the commenter suggests.
26. Comment: PR 415 directly affects the economic viability of the affected facilities. If plants shut down due to the rule's economic burden from implementing requirements such as enclosures, rendering material may be landfilled.
- Response: ~~CCR, Title 27, Section 20890, Title 27, California Code of Regulations,~~ provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. ~~CCR, Title 27, Section 20760, Title 27, California Code of Regulations,~~ further states that each disposal site shall be operated and maintained so as not to create a public nuisance. District staff has determined that at the present time, there is not a landfill in Los Angeles County that is permitted to landfill dead animal carcasses at their site unless it is due to an emergency.
27. Comment: Exempt blood meal processing if the process is conducted in an enclosed system with negative air pressure, where all the odors are vented to an RTO.
- Response: Such an exemption is included in PR 415 under paragraph (1)(4).
28. Comment: The study "*Odor Controls for Rendering Plants.*" *Environmental Science and Technology* 7 (6):504-510. *Bethea, Murthy, Carey; 1973* infers that SCAQMD Headquarters, which is within 20 miles from Rendering Row in Vernon would be impacted. However, it does not appear that any SCAQMD staff ever called to complain about rendering odors.
- Response: SCAQMD staff does not think that simply because rendering plant emissions could be detected up to 20 miles away means these odors necessarily create an offensive odor at that distance. Westerly winds (SCAQMD headquarters is due east of renderer's row) only blew approximately 8% of the time, as evident from the following wind rose compiled using 2005 to 2007 data from the central Los Angeles meteorological station. As can be seen in the wind rose, westerly winds were most often below 3.6 mph, requiring at least 6 hours to travel 20 miles. Staff believes there is ample opportunity for dispersion during a 6-hour, 20 mile trek.



29. Comment: Approximately 313,000 vehicles travel the I-5 corridor daily. Odors from rendering plants are also found in vehicle exhaust emissions (e.g. mercaptans are from the sulfur in gasoline), poor maintenance (e.g. catalytic converter, leaking oil, coolant, burning clutch and A/C) and human body odor. The majority of these vehicles are stuck in traffic, with single passenger vehicles.

Response: Regarding the commenter’s suggestion that rendering odors are actually caused by mobile source emissions from passenger vehicle traffic, SCAQMD staff believes if this were the case, similar rendering odor-type complaints would be received all along the hundreds of miles of freeways in the South Coast Air Basin, many of which are subjected to daily rush hours causing slow traffic speeds similar to the speeds in the communities surrounding the Vernon rendering facilities. The same would be true for the suggestion that rendering odors are caused by human body odor from people in single-passenger vehicles.

30. Comment: Develop objective-based measurements instead of odor complaints as the rule’s success measure. *(Note: commenter suggests this rule approach many times and provides the following reasons):*

- a. Determine the sources of odor and how best to develop a policy strategy toward eliminating them.

- b. There are “international standards that are in place, which dictate the scientific methods and practices of odor measurement.
- c. A community may get desensitized or over sensitized to an odor. The number of complaints lodged may not correspond to the severity of an odor problem and a verification process is needed.
- d. To objectively improve quality of life.
- e. To verify that there has been a reduction of odors/air pollution in the area.
- f. To reduce the subjective nature of Rule 402.
- g. Analyze emissions levels of specific chemical odorants as a means of measuring odor that is not reliant on human sensory perception but instead is aimed at identifying chemicals that may be “surrogates” for perceived odor. Field analysis of chemical odorants and other chemical substances can be accomplished using portable analysis methods ranging from low-cost colorimetric detector tubes to higher cost portable electronic equipment. Examples of gas surrogates include hydrogen sulfide, total reduced sulfur, ammonia and volatile organic compounds.
- h. Impose ambient odor limits:
 - Odor concentration as D/T (Dilution Threshold)
 - Odor intensity as part per million butanol
- i. Impose source odor limits
 - Odor concentration as odor units per cubic meter; or
 - Odor rates as odor units per second.
- j. Establish a minimum odor standard which will aid in the identifying the cause and determining the appropriate response to odor events.

Response: A discussion of the limitations of this approach is found in response to Farmer John comment #2. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

31. Comment: Rendering plants have significantly improved their odor control performance over the past 10 years and current odor levels do not warrant rule making. Enforcement of existing rules would result in PR 415 becoming unnecessary.

Response: The rationale for the necessity of PR 415 is articulated in the staff report. Staff does not agree that current odor levels do not warrant rule making. In

working group meetings, it has been suggested that Rule 402 is sufficient to handle odors from rendering plants. While Rule 402 can be used to issue a Notice of Violation if there are a considerable number of persons that are impacted by an odor (or other problems such as dust), that is a reactive measure. PR 415 is intended to reduce odors from rendering operations, which would help avoid a public nuisance. However, the two rules are not mutually exclusive. There are many SCAQMD rules that reduce odors (e.g. Rules 410, 1148.1, 1430). Facilities subject to these rules are also subject to Rule 402.

Staff recognizes that 350 odor complaints and one NOV for odor nuisance has been attributed to rendering plants in the City of Vernon over the past 10 years. SCAQMD has conducted multiple on-site inspections of the rendering plants in the District and has observed through these inspections that the rendering plants are a significant source of odors. SCAQMD staff has detected rendering odors during onsite inspections at the rendering plants in the District that have the potential to create odor nuisances in the surrounding community, especially when the odors from nearby rendering plants are combined. SCAQMD has conducted public workshops on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering plants. SCAQMD disagrees with the commenter that enforcement of existing rules would result in PR 415 becoming unnecessary

32. Comment: PR 415 conflicts with H&SC Sections Health and Safety Code sections 40440(a) and 41705(a)(1), and CCR, Title 13, Section 2449(c)~~Section 2449(c), Title 13, California Code of Regulations.~~

Response: SCAQMD disagrees with the commenter that PR 415 conflicts with the following State laws; H&SC Sections Health and Safety Code sections 40440(a) and 41705(a)(1), and CCR, Title 13, Section 2449(c)~~Section 2449(c), Title 13, California Code of Regulations.~~ Clougherty Packing, LLC contends that since meat and bone-meal from their rendering facility is fed to pigs that they currently raise for food at another facility they own, they meet the exemption under H&SC Section Health and Safety Code section 41705(a)(1), which exempts odors emanating from agricultural operations that are necessary for the raising of animals. H&SC Section Health and Safety Code section 39011.5 states in pertinent part, “Agricultural source of air pollution” or “agricultural source” means a source of air pollution or a group of sources used in the raising of animals located on contiguous property under common ownership or control that is a confined animal facility, including, but not limited to, any structure, building, feed storage area, or system for the collection, storage, treatment, and distribution of liquid and solid manure, if domesticated animals,

including, swine are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing. Clougherty Packing, LLC is not operating their rendering facility at the same location they are raising pigs to be able to claim that odors from their rendering operations are exempt from H&SC Section Health and Safety Code section 41700. The purpose of CCR, Title 13, Section 2449(c)~~Section 2449(c), Title 13, California Code of Regulations~~, is to reduce oxides of nitrogen (NOx), diesel particulate matter (PM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Equipment or vehicles used exclusively in agricultural operations are not subject to this regulation. PR 415 does not regulate off-road diesel-fueled vehicles. PR 415's regulation of odors from rendering plants is not in conflict with State laws H&SC Section Health and Safety Code section 41705(a)(1) and CCR, Title 13, Section Section 2449(c), Title 13, California Code of Regulations, and is within the SCAQMD's authority under H&SC Section Health and Safety Code section 40440(a).

33. Comment: Allow facilities to implement site-specific SCAQMD-approved OMPs and eliminate the current rule conditions that required all applicable BMPs to be implemented. Based on the current BMP implementation structure, the OMP submittal is relegated to punitive status. The OMP is the appropriate implementation approach for affected facilities and SCAQMD to reduce odors. *(Note: commenter suggests this rule approach many times and offers the following additional reasons):*
- a. Facilities should have the flexibility to choose site-specific BMPs via an OMP-based approach.
 - b. To allow facilities to determine whether a permanent enclosure is appropriate based on site-specific conditions.
 - c. To determine which BMPs are appropriate based on site-specific conditions.
 - d. Facilities would be able to be proactive and quickly implement new BMPs as needed.
 - e. To proactively reduce the potential for an odor complaint and respond to complaints.
 - f. To allow facilities to respond to drought weather conditions.
 - g. The 2004 Review of National and International Odor Policy states that "if prevention and mitigation cannot fully eliminate the need for odor emissions, then an assessment of odor impact is needed."
 - h. This approach that would take advantage, of existing resources and staff expertise.
 - i. To help identify buffer zones and other issues.
 - j. To incorporate a Corporate Social Responsibility factor.
 - k. Rule applicability and requirements are dependent on throughput rate and proximity to residential areas..
 - l. To include setback requirements in lieu of prescriptive approach.
 - m. To implement rule applicability thresholds.

- n. A facility specific Odor Management Plan is needed for bad actors. An OMP levels the playing the field.

Response: SCAQMD thanks the commenter for suggesting an alternative approach to the staff proposal. Unfortunately, SCAQMD staff believes the commenter's proposal to submit a plan instead of containing fugitive sources of odors and routing them to odor control equipment falls short of the steps necessary to control odors from rendering facilities and reduce odor complaints in the communities surrounding Vernon. In particular, the alternative proposal does not include a requirement for timely enclosure and containment of odorous operations at a rendering facility as the staff proposal does. As the commenter is aware, having participated in numerous discussions during the rule development process, the approach PR 415 has taken involves establishing equipment and operational standards SCAQMD staff believes represent the best and most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating unenclosed rendering processes, as the commenter's facility and other rendering facilities currently operate within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

34. Comment: Remove waste water requirements for facilities that have dilution factors of 30% or less.

Response: An exemption under paragraph (1)(2) specifically exempts wastewater operations that meet certain criteria.

35. Comment: Remove the contact sign requirement. Our facility has been the subject of animal rights protests. These protests could use the contact sign to interrupt facility operations by making unsubstantiated claims of odor.

Response: Under the odor complaint contact sign content requirements of paragraph (i)(1), a facility is obligated only to specify 1-800-CUT-SMOG as the primary contact for odor complaints. A facility contact is optional. If the commenter is concerned about disruption of operations during animal rights protests, the odor complaint contact sign need not specify a facility contact.

The requirements for the odor complaint contact sign, as required under subparagraph (i)(1) stand as written.

36. Comment: Amend Rule 1173 to include rendering processes. Rule 1173 addresses leaks from components and releases from processes.

Response: Rule 1173 is specific to components at petroleum facilities and chemical plants. SCAQMD staff does not believe the suggested approach is appropriate due to the requirements of PR 415 that do not involve leaks and releases from components; namely the permanent total enclosure, ventilation, closed system and odor control standards under subdivision (f).

37. Comment: Provide an exemption for meat and bone meal activities. Add a definition of where meat and bone meal activities begin.

Response: An exemption is provided for meat and bone meal activities under subdivision (l). The exemption describes in general terms where in the process the exemption from enclosure requirements for meat and bonemeal activities begin.

38. Comment: Use ASTM standard definitions. Per ASTM E253, an odorant is a “Substance that stimulates the olfactory receptors” (i.e. a chemical gas).

Response: PR 415 does not include a definition for odorant. However, it does include a definition for odor, as “*the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves*”, which is similar to the standard ASTM E253 definition for aroma: “*Perception resulting from stimulating the olfactory receptors.*” The ISO 5492 definition for odor is: “*Organoleptic attribute perceptible by the olfactory nerves on sniffing certain volatile substances.*”

39. Comment: Develop an odor management study to determine an odor inventory. Without data substantiating individual contributions to an odor inventory, rendering facilities would be held accountable for their neighbor’s odor emissions by requiring costly and ineffective odor controlling best management practices. Develop an odor study to better characterize odor causing components and to determine odor plume and its occurrence throughout the year. According to the data provided, the farthest unconfirmed odor event SCAQMD is attributing to rendering is 2.5 miles away.

Response: Please see response to Farmer John comment #65. Development of an odor management study would have many of the same issues as described in the response to this comment.

40. Comment: Rulemaking necessity has not been adequately justified for the costs incurred by rendering facilities.

- Response: Rulemaking necessity is addressed in Chapter 4 of the staff report. Regarding the costs, staff has prepared a socioeconomic assessment for PR 415 that describes the costs and regional impact of the proposed rule.
41. Comment: Put windrose diagrams from SCAQMD “Ambient Measurements of Air Toxic Pollutants at Resurrection Catholic School in Boyle Heights” into the Staff Report.
- Response: Windrose data from the cited study has been included in the Draft Staff Report.
42. Comment: Train SCAQMD inspectors to follow ASTM standards on odor and to apply a standard odor intensity referencing scale when confirming an odor event. Field air pollution inspectors, using a standard odor intensity referencing scale can provide measured, dependable, repeatable observations of ambient odor intensity. Odor intensity referencing compares the odor in the ambient air to the odor intensity of a series of concentrations of a reference odorant (n-butanol). A monitor observes the odor in the ambient air and compares it to a standard Odor Intensity Referencing Scale (OIRS). Field analysis of chemical odorants can be accomplished using a variety of portable analysis methods at low cost.
- Response: SCAQMD inspectors currently use a similar procedure. See response to Farmer John comment #114. SCAQMD thanks the commenter for the suggestion and will pass this information along to the appropriate Compliance staff.
43. Comment: Ensure that safety concerns are adequately addressed. As testified by the City of Vernon Environmental Health Director, the City of Vernon Building Inspector and Fire Marshall had concerns regarding placing grease generating processes under a roof. The concern is for grease fires. Also, wastewater location is so impacted that further construction would not be allowed by the City of Vernon. Because of the issues with permanent enclosure, we do not have a subject matter expert who could better speak to the requirements for permanent enclosure.
- Response: In discussions with personnel at a facility subject to the requirements of PR 415, staff heard that the Fire Marshall’s concern was not with enclosure of operations where grease is present, but rather with the type of fire suppression system used. The City of Vernon can address this concern by requiring an adequate fire suppression system. Regarding the comment about enclosure of wastewater operations, the commenter’s facility may be entitled to take advantage of the exemption for enclosure of wastewater treatment operations under paragraph (1), if the commenter can provide sufficient documentation for the limitations stated in the exemption.

44. Comment: For integrated rendering process, the receiving area should not be under permanent enclosure nor require control equipment. Rendering processes begin with size reduction prior to going to a cooker. If there were no rendering process, this is where the material would be collected and picked up by a rendering truck.
- Response: Per discussions with the commenter, SCAQMD staff understands the non-traditional raw material delivery system to the rendering plant at Farmer John, and that Farmer John intends to propose measures to turn the material delivery system/receiving operation into a closed system. If this is accomplished, such a closed system would comply with the requirements of paragraph (f)(3) for the receiving area.
45. Comment: Require a weather monitoring station to identify whether rendering plants are the cause of odor complaints.
- Response: The SCAQMD maintains a network of 39 permanent ambient air quality monitoring stations in the South Coast Air Basin, including one in downtown Los Angeles at 1630 North Main Street. SCAQMD staff believes wind data from this station is the best representation of the conditions in the Vernon area. As such, there is no need to establish another monitoring station in Vernon or to require each facility to install and maintain a weather monitoring station.
46. Comment: Provide scientific evidence showing a comparison between Tallowmasters and Vernon area rendering plants. Allow the City of Vernon to update and improve their Health Department program. Work with the City of Vernon to implement these programs.
- Response: SCAQMD staff does not know what kind of scientific evidence or comparison the commenter refers to. Regarding the comment to allow the City of Vernon to update and improve their Health Department program, the City can update and improve their program(s) independent of PR 415. SCAQMD staff is available to work with the City of Vernon if there are air quality issues that need to be addressed.
47. Comment: Disregard Tallowmaster's recommendations because SCAQMD staff cannot differentiate the odor control effectiveness of BMPs.
- Response: Tallowmaster made no recommendations to SCAQMD staff. Staff went to this facility to see their odor control equipment.
48. Comment: Develop a procedure for determining current/"baseline" odor levels and incorporate odor reduction requirements into the rule. Without such levels or requirements, affected facilities and SCAQMD have no objective means of ensuring that the purpose of the rule is fulfilled. It is necessary to

determine which EPA method a facility or the District can use to determine migration from the facility to the residential portion of the communities and measure intensity in terms of concentration (e.g. Odor Units). Since there were no baseline measurements of odors, how do we know what the improvements are to local or migratory odors? Since the majority of odor complaints are coming from the community that exists beyond Vernon's border, the rail yard and the commercial buildings area, conditions need to clarify migration and intensity of odors in the community.

Response: SCAQMD staff is concerned about odor impacts to commercial business locations within Vernon as well as to residential locations to the non-commercial areas outside of Vernon. The requirements of PR 415 intend to reduce odors at the source of odor generation, rather than attempting to regulate nuisance odors after they have migrated from the commenter's location into the adjoining commercial and non-commercial locations surrounding the Vernon rendering facilities. For this reason, the staff proposal includes: enclosure of odorous operations at a rendering facility, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

49. Comment: The April 2012 Boyle Heights study concluded that mobile vehicle traffic was the source of odor affecting the community instead of the rendering facilities.

Response: The study referred to by the commenter, "*Ambient Measurements of Air Toxic Pollutants at Resurrection Catholic School in Boyle Heights*" was conducted for the express purpose of measuring air toxic pollutant levels at Resurrection Catholic School. During VOC sample collection and analysis, no attempt was made to speciate chemical compounds found in rendering odors. The study conclusion that "*atmospheric levels of diesel PM and VOCs were higher [than two reference sites] likely due to the very close proximity of the Resurrection School site to the I-5 and busy surface streets.*" does not mean that rendering odors are not present at Resurrection School; only that the air toxic pollutant VOCs measured at Resurrection are likely to be from mobile sources. Any extrapolation of the study data or conclusions to rendering odors from the Vernon rendering facilities is not appropriate.

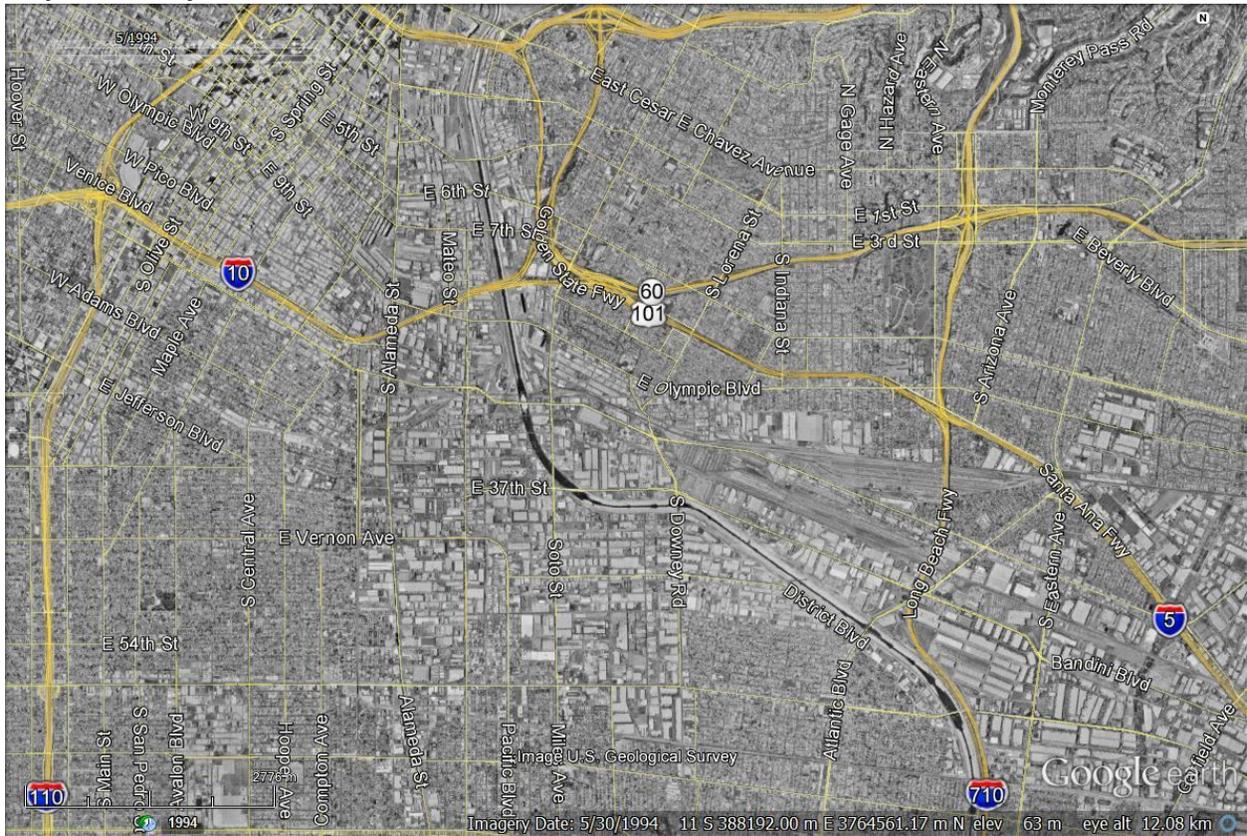
50. Comment: Civil Code Section 3482.6 (The Right to Farm Act) includes rendering plants licensed pursuant to Food and Agricultural Code Section 19300 as

an “agricultural processing activity, operation, facility.” After a rendering plant has been in continuous operation for more than 3 years, it may not become a public or private nuisance due to changed conditions in or about the locality, if it is operated in a manner consistent with proper and accepted customs and standards, or if it was not a nuisance at the time it began. If the above conditions are met and the rendering facility is operating within the limits of its SCAQMD permit and the SCAQMD receives odor complaints, the SCAQMD has no authority to take an enforcement action against the facility. Creating PR415 to reduce odors would be circumventing and undermining Civil Code Section 3482.6.

Response: Staff has investigated the land uses surrounding the Vernon rendering facilities and determined that between 1989 and 1994, the facilities were surrounded by commercial and residential (i.e. non-agricultural) uses as of 1993. See maps in this response. Under Civil Code Section 3482.6, an air district may enforce regulations adopted pursuant to H&SC Section Health & Safety Code §41700, such as PR 415, in these circumstances

SCAQMD staff disagrees with the commenter that the SCAQMD has no authority to take an enforcement action against rendering plants and creating PR415 to reduce odors would be circumventing and undermining Civil Code Section 3482.6, for the reasons expressed in staff’s response to Baker Commodities comments #37 and #59.

Map from May 30, 1994



Map from August 22, 1989

51. Comment: Reword the purpose statement to read as follows, *“The purpose of this rule is to reduce perceived odors from facilities licensed to render animals and animal parts from reaching the nearby communities.”*

Response: The purpose of PR 415 is to reduce odors from rendering operations at the rendering facility. The purpose statement in the proposed rule stands as written.

52. Comment: Clarify the meaning of “Process”. No definition is found in section (c). It is unclear whether “Process” includes carcasses that are converted to ash for off-site disposal; and does not include if meat and bone meal, blood drying operations, or other slaughtering activities are associated that leads to a need for inedible rendering are included.

Response: Under the rendering definition in paragraph (c)(19), process means the same as operation. If carcasses are converted to ash for off-site disposal in an operation or process that falls under the definition of rendering (*i.e.*

converting raw rendering materials into fat commodities and protein commodities by heat and mechanical separation), that operation or process is subject to the requirements of PR 415. Blood drying operations and meat- and bonemeal processing operations meeting certain requirements are specifically exempted under subdivision (l).

53. Comment: Implement a facility threshold for applicability based on a fixed parameter (e.g. on the raw material input), which will represent the rendering plant size. PR 415 does not account for facility size which impacts the odor generation potential for a rendering plant.

Response: During rule development, SCAQMD staff visited all of the Vernon rendering facilities. In spite of a wide range of raw rendering materials and facility throughput limits, staff detected noticeable odors at the facilities. Staff believes the nature of inedible rendering creates odors, and therefore a facility threshold for applicability based on a fixed parameter which represents rendering plant size is not part of the staff proposal.

54. Comment: The definition of Collection Center is unclear. Under the Food and Agricultural Code Sections 19300-19306, rendering facilities and collection centers have the same requirements. Please consider exempting collection centers under PR415, since it is part of the overall process of rendering and is included in the definition of rendering operations.

Response: The definition of “collection center” was taken from Vehicle Code Section 2460(j). Food and Agricultural Code Sections 19300-19306 pertain to the California Department of Food and Agriculture’s licensing requirements for rendering plant and collection center operators. The purpose for including a “collection center” in PR 415(c)(3) is to provide for an exemption under PR 415(l)(1)(B) for collection centers that do not conduct inedible rendering or handle or process trap grease. Therefore, it would not be appropriate to define “collection center” in a manner which would include (and therefore exempt) the entire rendering operation.

55. Comment: Define “Transportation”. “Transportation” may not be consistent with other uses of transportation such as: “Facility Grounds”, Receiving Area, “Transport Vehicles”, “Delivery of Raw Rendering Materials”, “transportation within permanent enclosures”.

Response: In the staff proposal, transportation is only used in the definition for collection center. As described in another response, the purpose for including the definition of a collection center in paragraph (c)(3) is only to provide a basis for exemption under subparagraph (l)(1)(B) for collection centers that do not conduct inedible rendering or handle or process trap grease. Therefore, there is no need to define transportation, as it its use in

PR 415 is not in conflict with other uses in the proposed rule, since there are none.

56. Comment: There is no procedure defined for the District Inspector to verify an odor complaint or current odor levels. CPC believes that it is imperative that a procedure is developed to objectively determine and document the current odor levels. Require a valid form of identification during odor complaints to prevent callers calling from making multiple calls from different locations, such as payphones.

Response: SCAQMD Compliance personnel follow a prescribed procedure to verify the source of all odor complaints. If verification cannot be made by SCAQMD staff, there is no enforcement action taken against a facility alleged to be the source of an odor, including a rendering facility. Regarding multiple calls from different locations, such as payphones, a complainant is free to make multiple calls from as many locations as they choose. However, multiple odor complaints made by the same individual from different phone numbers will not count toward a confirmed odor event. During the odor verification process, a trained, professional SCAQMD inspector investigates the odor complaint by interviewing the complainant. The inspector then attempts to verify the odor. This requires the inspector to detect the same odor as the complainant describes and trace that odor to its source. If the inspector does not smell the same odor as the complainant describes (many times odors are not present when an inspector interviews the complainant) or cannot verify the source of the odor, the odor cannot be verified. It requires three verified odor complaints to constitute one confirmed odor event. A confirmed odor event by definition requires “. . . *three or more complaints by different individuals from different addresses. . .*” [PR 415(c)(4)]. Therefore, the commenter’s concerns about the lack of procedure and individuals trying to take unfair advantage of the system are unfounded.

57. Comment: Refine the definition of "Enclosure Envelope" to focus on rendering operations only. This definition potentially includes all buildings at a facility; even non-rendering associated buildings.

Response: The definition of enclosure envelope (*i.e. the total surface area of a building directly enclosing rendering operations and includes the enclosure’s exterior walls, floor and horizontal projection of the roof on the ground*) is specific to the building directly enclosing rendering operations. It does not include non-rendering associated buildings.

58. Comment: Are odorous compounds considered an air contaminant? Clarify the meaning of “odorous compounds” and revise the definition of “Odor” as an air contaminant instead of perceptory?

- Response: ~~H&SC Section Health and Safety Code section 39013~~ includes odors in its definition of an “air contaminant” or “air pollutant.” Odorous compounds are considered air contaminants. PR 415 does not “target” sulfur or any other compounds, although staff believes that reduced sulfur compounds are a component of odors generated during cooking and wastewater treatment at rendering facilities, PR 415 establishes ammonia (NH₃) and hydrogen sulfide (H₂S) as one of two marker compounds that are used to evaluate the control efficiency of an odor control device. SCAQMD staff disagrees with the commenter that the definition of “Odor” in PR 415(c)(12) should be revised as an air contaminant instead of the perception experienced by a person. Odors are subjective in nature, thus the level at which an odor becomes objectionable is subject to each person’s perception.
59. Comment: Civil Code Section 3482(e)(1) includes odor generating sources from rendering under an agricultural processing activity, operation, facility or appurtenances thereof that is conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards. Refine the definition of odor generating source to the State’s definition in regards to rendering. Refine “Rendering Facility” definition so as to be consistent with the State law definition of rendering.
- Response: It is assumed that the commenter is referring to the definition of “Agricultural processing activity” under Civil Code Section 3482.6(e)(1), which includes rendering plants. SCAQMD staff disagrees with the commenter that the Right to Farm Act contains any definition of odor generating sources. Civil Code Section 3482.6(e)(3), defines proper and accepted customs and standards as the compliance with all applicable state and federal statutes and regulations governing the operation of the agricultural processing activity, operation, facility, or appurtenances with respect to the condition or effect alleged to be a nuisance. Civil Code ~~§Section~~ 3482.6 allows enforcement of regulations adopted pursuant to ~~H&SC Section Health & Safety Code §41700~~, such as PR 415, where the affected facilities were surrounded by commercial and residential uses in 1993. Staff has determined that this is the case for the Vernon rendering plants. See attached maps from 1989 and 1994. The District’s legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities derives, in part, from ~~H&SC Section Health and Safety Code section 41700~~. The District’s authority granted by ~~H&SC Section Health and Safety Code section 41700~~ to protect the public’s comfort and health and safety includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. The District is authorized under ~~H&SC Section Health and Safety Code section 41508~~ to adopt rules imposing requirements that are stricter than those set forth in state law, including Civil Code Section 3482.6(e)(3). PR 415’s “Rendering Facility”

definition is not inconsistent with the State law definition for rendering plants.

60. Comment: Is a permanent enclosure designed to be air pollution control equipment?
- Response: A permanent total enclosure is a component of air pollution control equipment. Under PR 415, a permanent total enclosure, in combination with an associated ventilation system designed to keep the permanent total enclosure under negative pressure is intended to function as containment for fugitive odors from the rendering operations it encloses.
61. Comment: "Raw Rendering Materials" definition does not represent all potential operating configurations. Some rendering facilities may exclude certain streams specified in this definition, such as blood, offal, and feces from the rendering process. As a result of including non-typical rendering material, the rule may inadvertently affect non-typical rendering operations, such as anaerobic digesters.
- Response: The definition of raw rendering materials includes all materials that may be present in an incoming waste stream. Defining raw rendering materials in this way does not infer that these materials must be present for the raw material receiving area to be subject the PR 415 rule requirements. The intent of PR 415 is not to include anaerobic digesters that are completely covered.
62. Comment: Add applicable NAICS or SIC codes to the definition. Definition does not include the applicable NAICS or SIC codes.
- Response: NAICS and SIC codes are not typically included in SCAQMD rules. They are not included in the definition of "rendering facility".
63. Comment: Refine "ventilation system" definition. The definition is missing shutdown criteria language for maintenance and non-operational periods.
- Response: It is not appropriate to include shutdown criteria in a definition. The definition of a ventilation system does not change when the system is shut down for maintenance or non-operational periods. During permitting of a permanent total enclosure, , the evaluation will consider the appropriate timing for shutdown during maintenance and non-operational periods.
64. Comment: Refine "Wastewater Treatment" definition. Use the California Association of Sanitation Agencies (which is a part of) definition which focuses on suspended solids, not on COD. Their Waste water definition is "A series of chemical, physical or biological processes to remove dissolved and suspended solids from wastewater before discharge."

- Response: The definition clearly states “. . . *for the purpose of this rule.* . . .” and is specific to wastewater treatment for rendering and trap-grease related operations, as appropriate for PR 415. The definition does not include chemical oxygen demand (COD), as the commenter implies.
65. Comment: Conduct dispersion modeling of odors per each facility (since each facility will emit different odors from rendering and each facility has different configurations, equipment, and operations.) By standardizing a measurement of odors, we would be able to:
- a. Facilitate compliance monitoring assurance as part of any permit requirements.
 - b. Determine specific odor sources during complaint investigations.
 - c. Measure and track odor levels to evaluate odor performance.
 - d. Compare operating practices/requirements when evaluating operating alternatives.
 - e. Compare odor mitigation measures during tests and trials.
 - f. Verify estimated odor impacts from dispersion modeling.

Response: SCAQMD thanks the commenter for suggesting an alternative approach to the staff proposal. Regarding the suggestion to conduct dispersion modeling of odors from each rendering facility, staff believes this approach is not feasible for several reasons, which are described below.

In order to conduct dispersion modeling, it is necessary to first understand the chemical makeup and source strength of odors. As discussed in the staff report, more than 100 chemical compounds have been identified in rendering odors. Modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not currently have established methods for collection, speciation and analysis. Many do not currently have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science and the present state of technology. It follows that it is therefore not currently possible to establish initial concentrations for modeling.

Even if the limitations in the current science can be overcome, there are multiple sources of odor that originate from rendering facilities (raw rendering material, cooking of meat, non-condensable vapors from cooker condensate, wastewater) and therefore multiple odor profiles from fugitive odors at each facility. Odors may also be different at the same facility depending on the materials being processed and other factors.

Furthermore, a modeling approach as suggested by the commenter may present uncertainty for two reasons. First, modeling of multiple, overlapping volume sources of fugitive odors with different odor profiles

would require many simplifying assumptions to be made. Second, there is uncertainty with regard to downwind chemical reactions; that is, reactions occurring in the atmosphere before odors reach receptor locations. These uncertainties may lead to possible overprediction or underprediction of actual ground level concentrations at receptor locations. In summary, staff does not believe the existing science allows for the suggested modeling approach to be implemented. However, as test methods develop and the science of odor measurement evolves, it may be possible to conduct modeling of odors in the future.

SCAQMD staff believes that rendering odors are distinctive and unmistakable as a whole, even if existing science does not allow chemical compounds that make up these odors to be fully identified and quantified. For this reason among others, staff has elected to follow the approach in PR 415 of establishing enclosure and closed system standards, building ventilation standards and odor control equipment standards. The staff proposal contains odor reduction requirements, including: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. Staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

66. Comment: Develop an acceptable odor level or odor reduction requirements. After implementing an objective odor measurement procedure, SCAQMD must establish an acceptable odor level or identify odor reduction requirements. Include a standard so a facility can demonstrate a reduction in odor. What if other BMPs were demonstrated to show effectiveness in reducing odor?

Response: SCAQMD thanks the commenter for suggesting an alternative approach to the staff proposal. The staff proposal contains odor reduction requirements, including: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations. Regarding the suggestion to establish a standard for acceptable odor levels, SCAQMD staff believes that the PR 415 proposal will reduce odors in the communities and commercial areas surrounding the Vernon rendering facilities to acceptable odor levels and will result in fewer complaints from these areas. In the event a facility still has odor issues, after implementing the staff proposal that result in an NOV for Public Nuisance or 3 confirmed odor events within a consecutive 180-day period (a very difficult standard to meet, for reasons described in other responses to comments), that facility

will be asked to submit an Odor Mitigation Plan (OMP) to propose further odor mitigation activities.

Regarding the comment about other BMPs being demonstrated to show effectiveness in reducing odor, the commenter should be advised that all of the BMPs in the rule proposal, as described in subdivision (e) would be required and a facility may not substitute another BMP that they deem equally effective in controlling odors for one or more of the required BMPs. The commenter participated in working group and public meetings during rule development of PR 415. If the commenter identified other BMPs that are thought to be as effective in controlling odors as those in the staff proposal, the commenter had ample opportunity to share that information with SCAQMD rule development staff.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

67. Comment: Add clarifying language such as, "Best Management Practices including permanent enclosure and closed systems, which may or may not involve BACT to mitigate odor, which is considered an Air Contaminant, are needed only if the emissions are greater than one pound per day." Under BACT guidelines, modifications subject to Regulation XIII require an emissions increase in potential to emit. Was BACT pre-determined as an enclosure and odor control equipment?

Response: Under PR 415, a permanent total enclosure is not considered a Best Management Practice (BMP). In the proposed rule, the requirement for a permanent total enclosure is independent of compliance with BMPs as described under subdivision (e). In addition, the staff proposal does not require a determination of an increase in actual emissions or potential to emit (PTE) from a rendering facility to trigger compliance with BMPs or the enclosure standard under subdivision (f).

Regarding the comment and question about BACT; during evaluation of an application submitted for a permanent total enclosure/odor control system under PR 415, SCAQMD staff will look at all applicable rule requirements as well as whether BACT must be applied. Under New Source Review (Regulation XIII), if there is an increase in the "potential to emit" (PTE) or actual emissions of any criteria pollutant of at least 1 lb/day, BACT must be applied. Whether or not there is an increase in PTE or actual emissions, SCAQMD staff must evaluate an application for compliance with all applicable rules. After adoption of PR 415, staff will evaluate an application for compliance with the requirements of PR 415, irrespective of whether an increase in PTE or actual emissions occurs as a result of the permit application. Furthermore, BACT is a separate requirement for

criteria pollutants rather than odors. Therefore, BACT is not pre-determined.

68. Comment: Trigger the submittal requirement of 12 months to submit permit applications only after approval is received to construct/build by the local building permitting agency. In order for an SCAQMD permit application to be submitted, we would need to be ensured that we will receive the proper permits from the City of Vernon.

Response: SCAQMD staff disagrees with the commenter's statement that it is necessary to have assurance from the City of Vernon prior to submittal of a permit application to the SCAQMD for enclosures. Air Quality Permits, like building and other business permits are a part of doing business in California. The City of Vernon's permitting requirements are separate and distinct from the SCAQMD's permitting process.

69. Comment: In the event an OMP requires construction, add language that timelines will be from the Executive Officer approving the OMP. In the event an OMP is triggered by an NOV, where a permanent enclosure and/or closed system is required, the timeline should get reset to Executive Officer approval of the OMP.

Response: The only timeline included under the requirement to submit an OMP under paragraph (d)(2) is that the owner or operator submit an OMP within 90 days after notification by the Executive Officer. There are no fixed timelines under the OMP content requirements, as defined in subdivision (h). Instead the owner or operator is required to identify a detailed construction schedule for each proposed permanent total enclosure, and an explanation of why construction of proposed permanent total enclosures cannot be expedited prior to the date a permanent total enclosure is required under subparagraph (d)(1)(B), for OMPs that are submitted prior to the enclosure standard becoming effective. Therefore, no clarifying language is required.

70. Comment: What does "good operating condition" mean?

Response: The term "operating in good condition", as used in the context of control equipment in the proposal refers to odor control equipment that operates within the parameters established by the manufacturer (pressure drop, air flow rate, recirculation rate, concentration of scrubber solution, etc.). In the case of a packed-bed scrubber or a room air scrubber used for room air to treat fugitive odors from within a permanent total enclosure, it also means being cleaned regularly to ensure packing media, if used is not fouled. A requirement to maintain equipment in "good operating condition" is typically included in permitting as well.

71. Comment: Include “all incoming trucks containing raw material to process in rendering. Trucks entering the facility may not be rendering trucks.
- Response: SCAQMD staff believes the language of paragraph (e)(1) is sufficiently clear to limit this BMP to transport trucks delivering raw rendering materials.
72. Comment: If a truck is found without a cover, who will receive the NOV?
- Response: PR 415 is applicable to new and existing rendering facilities that process raw rendering materials; and trap grease wastewater associated with rendering or trap grease processing. The intent of the BMP under PR 415(e)(1) to cover incoming transport vehicles, as well as the requirement for the rendering facility to install signage notifying incoming truck drivers of the requirement to cover incoming trucks is to place rendering facility personnel and independent third-party truck drivers on notice of the requirement to cover incoming loads of raw rendering materials. If rendering facility personnel allow an uncovered truck past the first point of contact at a rendering facility for incoming trucks, such as a guard shack or weigh station, and an SCAQMD inspector witnesses this occur, the owner or operator of the rendering facility would be potentially subject to an enforcement action. The enforcement action could include the issuance of a Notice to Comply (N/C) or a Notice of Violation (NOV), depending on the specific circumstances of the incident.
73. Comment: Specify the type of NOV that would trigger submittal of an OMP. An NOV triggered for odor nuisance is regulated under Rule 402.
- Response: The language of subparagraph (d)(2)(A) limits a notice of violation (NOV) that triggers submittal of an OMP to an NOV issued for public nuisance related to rendering odors under Rule 402.
74. Comment: Add applicability clarifying language as to what confirmed odor events mean. Because an NOV can be triggered by a confirmed odor event, it is important for further clarification on “confirmed odor event”.
- Response: SCAQMD staff believes the definition of confirmed odor event; (i.e. “*the occurrence of an odor resulting in three or more complaints by different individuals from different addresses, and the source of the odor is verified by District personnel trained in odor inspection techniques*”) is sufficiently clear and no clarifying language is necessary. The commenter is not correct in stating that an NOV can be triggered by a confirmed odor event. An NOV is typically not issued for fewer than 6 verified odor complaints.
75. Comment: Add a definition of "transport vehicles". PR 415 does not define "transport vehicles." It is unclear whether transport vehicles include onsite forklifts.

- Response: The intent of the requirements for transport vehicles (BMPs under paragraph (e)(1) and (e)(3)] is not to include forklifts. Forklifts are exempted under subdivision (l).
76. Comment: The receiving area is required to be vented to an odor control device; therefore, it is not necessary for the cargo area transport vehicle to be covered while in the receiving area.
- Response: PR 415 does not require a transport vehicle to be covered while inside an enclosed receiving area that complies with the requirements of subdivision (f).
77. Comment: Farmer John both renders and sends material to be rendered. When material is placed outside in odor sealed containers, the material may be there until picked up by an outside rendering facility. We do not have control the amount of time until the material is picked up. Would we need to build a permanent enclosure for this material, even though it is packaged in an odor proof container?
- Response: The intent of paragraph (e)(2) would be met by placing materials intended to be rendered at another facility into covered containers within 60 minutes after removing these materials from the slaughter or packing portion of the commenter's facility.
78. Comment: Clarify whether BMPs are required to be tracked on a continuous basis. The recordkeeping requirements do not include tracking compliance with the BMP requirements.
- Response: Recordkeeping of BMPs is not required in the staff proposal. Recordkeeping under subdivision (j) is limited to measurements of inward face velocity [paragraph (j)(1)] and odor complaints received directly by a facility [paragraph (j)(2)], in addition to recordkeeping to demonstrate that a facility is eligible for an exemption.
79. Comment: Remove requirement for washing of outgoing transport vehicles.
- Response: Tarping of incoming vehicles is required under paragraph (e)(1). Washing of outgoing transport vehicles is required under paragraph (e)(3).
80. Comment: Revise BMP for holding time of incoming raw materials to "By the end of a standard work shift or within 4 hours after arrival, whichever is less, incoming loads of raw rendering materials to the facility shall be processed in a cooker or placed in a sealed, odor-tight container for temporary storage." It is not known what is the purpose of the condition since

difference between a four and six hour standard is based solely on temperature. Any material will quickly be the same ambient temperature.

Response: SCAQMD staff understands that the commenter's facility only renders unusable hog parts at ambient temperature. The purpose of the best management practice under paragraph (e)(5) is to ensure that, before the enclosure standard for a raw material receiving enclosure becomes effective, raw material is not allowed to remain outside for an extended period of time. Note that the staff proposal has been changed from the use of an "odor-tight container" to a "covered container".

81. Comment: The holding time duration requirement may not be appropriate or necessary for all facilities. If a facility receives material at the end of a shift, then they would be required to process (or store) it regardless of when the next shift will take over. The raw rendering material odor is required to be routed to an odor control device; therefore, it is not necessary to implement a time period restriction.

Response: Under paragraph (e)(5), existing rendering facilities subject to PR 415 have three options to comply with the BMP for holding of incoming raw rendering material, including entering the cooking process, being staged in a permanent total enclosure or stored in covered containers. The timing of this BMP is within 4 hours after delivery for material delivered at ambient temperature, or within 6 hours after delivery for material delivered below ambient temperature. Staff feels these three options provide sufficient flexibility for rendering facilities to process potentially odorous incoming raw material at rendering facilities. The commenter is correct in the assumption that once the enclosure standard is effective under PR 415, the enclosure will be vented to odor control equipment, and BMP (e)(2) requiring affected facilities to move material into a raw rendering enclosure within 60 minutes supersedes the requirements of BMP (e)(5). Staff has also provided an alternative standard for an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

82. Comment: Remove "...including but not limited to divots, cracks, potholes and spalling of concrete or asphalt" and rewrite "all areas of broken concrete or asphalt repaired or repaved to prevent standing water with a surface area greater than one square foot from accumulating. The areas impacted will include raw material receiving area of a rendering facility or the rendering portion of a facility integrated with a slaughterhouse or meat-packing plant where raw rendering materials are unloaded." It is the intent of this condition that breaches in the floor material could harbor bacteria which causes odor. The condition is clear regarding the size that this breach would be. As such, there is no need to define broken areas.

- Response: SCAQMD staff feels a description of the different types of broken concrete and asphalt (i.e. divots, cracks, potholes and spalling) can only lend clarity to the requirement. During several visits to the commenter's facility, SCAQMD staff did not note any potholes in the raw material receiving area at the commenter's facility that would require repair. The delivery of raw rendering materials at the commenter's facility is not conducted in an area where potholes are present.
83. Comment: Remove exterior floor drains. Add "Accessible interior floor drains inside the receiving area, collection center or the rendering process area." The requirement may not be appropriate or necessary for all facilities especially integrated renderers.
- Response: During SCAQMD staff visits to rendering facilities during the rule development process, staff noted clogged exterior drains in areas other than in raw material receiving areas that created pools of stagnant water. Therefore, it is necessary to include exterior floor drains as well as interior drains under paragraph (e)(11). Please note that collection centers that do not conduct inedible rendering are exempt from the requirements of PR 415 under subparagraph (l)(1)(B).
84. Comment: Remove requirements for inward face velocity. Inward face velocity is based on the size of the opening under Rule 410. Include a sliding scale similar to Rule 410.
- Response: The permanent total enclosure standards are based on EPA Method 204, *Criteria for and Verification of a Permanent or Temporary Total Enclosure*. EPA Method 204 establishes several criteria to define a permanent total enclosure for VOC control, including an inward face velocity of at least 3,600 m/hr (200 fpm), and total area of all natural draft openings (routine enclosure openings under PR 415) not more than 5 percent of the surface area of the enclosure's four walls, floor, and ceiling. It also requires the direction of air flow through all routine enclosure openings into the enclosure.
85. Comment: Would a closed system be considered BACT? Would a closed system be considered under USDA (potential for bacterial growth)? Would a closed system be considered under the Fire code, with oil and grease material? Would containing hot grease and solids material in a closed system cause a BLEVE?
- Response: As discussed on several occasions with the commenter, the part of the commenter's facility that is currently considered a closed system under the current language of PR 415 is the cooking/pressing operations. In addition SCAQMD staff understands that the commenter intends to propose solutions to the receiving and grinding area to be considered a closed system

for purposes of complying with the rule requirements. However, it must be stated that the commenter is responsible for complying with all other codes, regulations and requirements that the commenter's facility is subject to, including but not limited to fire codes and USDA requirements by local, district, state or federal authorities. If a closed system is not allowed for a certain application under the jurisdiction of another authority, it should not be proposed as a compliance solution under PR 415, and the commenter's facility may wish to instead propose an enclosure that complies with the requirements of subdivision (f).

Regarding the question about whether a closed system would be considered BACT, if PR 415 is adopted, the requirements of the rule could be considered by SCAQMD as well as other districts when a BACT determination is needed for new or modified rendering operations. In future BACT determinations, the requirements of PR 415 may be considered BACT for VOC from rendering operations, since BACT only applies to criteria pollutants. The entirety of the rule requirements would be considered, including closed systems as achieved-in-practice BACT, like the raw material receiving enclosure (vented to odor control equipment) at the Darling Los Angeles rendering facility is considered achieved-in-practice BACT for raw rendering material receiving operations. Therefore, it is possible that closed systems for certain operations will be considered in future BACT determinations.

86. Comment: Include exclusion language for closed systems in a permanent enclosure with odor control equipment. This requirement would be unnecessary if the closed system is enclosed in a permanent enclosure, which is vented to odor control equipment.

Response: PR 415 does not require a closed system to be operated within a permanent total enclosure. Therefore, exclusion language is not necessary.

87. Comment: Conduct an odor study in the community to determine year-long odor concentrations to establish a baseline for any future odor rules to measure.

Response: SCAQMD thanks the commenter for suggesting an alternative approach to the staff proposal. The staff proposal does not include an odor study conducted in the community to determine year-long odor concentrations to establish a baseline for any future odor rules to measure. Instead, the approach PR 415 has taken involves establishing standards SCAQMD staff believes represent the best and most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating unenclosed rendering processes, as the

commenter's facility and other rendering facilities currently operate within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations. See response to Farmer John comment #65.

Regarding the suggestion to establish a baseline for future rules, it is not necessary to establish baseline odor levels because PR 415 does not require specific percent reductions. Instead enclosure, ventilation and odor control system standards, in addition to BMPs reduce the potential for odors. In cases where rendering odors from a facility constitute a public nuisance or trigger three confirmed odor events, an Odor Mitigation Plan will be required.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

88. Comment: A performance warranty or guaranty must be available with the purchase of the control technology and should be used to determine compliance. The community is concerned on how many times per day a system check would be required to ensure that it is working.

Response: During permitting of odor control equipment, SCAQMD staff typically includes a requirement that equipment should be operated according to manufacturer's specifications. If a piece of control equipment, including odor control equipment at a rendering facility subject to the requirements of PR 415 is not being operated in compliance with the manufacturer's specifications during inspection by SCAQMD Compliance staff, a rendering facility can be subject to enforcement action. A typical odor scrubber, if maintained in good operating condition does not require multiple "system checks" per day, as suggested by the commenter to ensure it is in good working order. SCAQMD staff believes a performance test of the odor control device as required under subparagraph (f)(4)(D), along with regular inspections conducted by SCAQMD Compliance staff are sufficient to ensure odor control equipment is reducing fugitive odors from enclosures under PR 415 as it was designed to do.

89. Comment: Clarify conditions to focus specifically on receiving, processing and wastewater. Integrated rendering facilities conduct more varied operations than rendering facilities. The rule's focus is the inedible rendering activities associated with receiving, processing and wastewater discharge.

Response: The areas of an integrated rendering facility that will be subject to PR 415 are clearly spelled out in the rule requirements and no clarifying language is necessary.

90. Comment: Conduct modeling studies in the community to determine the contribution of each facility's odorous sources from rendering so as to determine migration and intensity through plume determination and concentration. Conduct a modeling study in the communities as they relate to the markers to determine the contribution of each facility. Then create an OMP that is site specific based on this assessment. The rule indicates for the first time there is a scientific method to quantify at its source both migration and intensity of each individual facility's odorous emissions. The only question that remains is what the contribution is from each facility.

Response: Staff does not agree that the rule should include site specific odor mitigation plans instead of complying with the standards for permanent total enclosure (or closed system), ventilation system and odor control system. PR 415 establishes best management practices and other requirements that have been used at rendering facilities in the United States to reduce odors. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating unenclosed rendering processes, as the commenter's facility and other rendering facilities currently operate within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

The commenter is not correct in the statement that the rule indicates there is a scientific method to quantify at its source both migration and intensity of each individual facility's odorous emissions. The comment appears to be referring to the staff proposal establishing marker compounds for the express purpose of verifying compliance with the control efficiency requirements for an odor control device under paragraph (f)(5). If that is the context in which the statement is made, the commenter should be cautioned that marker compounds are not to be viewed as surrogates for odors in the areas surrounding the Vernon rendering facilities. Marker compounds were introduced in the staff proposal for the very limited purpose of verifying compliance with control efficiency requirements, and should not be used in any other way. See response to Farmer John comment #65.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

91. Comment: Restructure Odor BMP section to be implemented as applicable for each individual facility based on cost of implementation and reduction effectiveness of potential odors. Allow facilities to implement site-specific SCAQMD-approved OMPs and eliminate the current rule conditions that required all applicable BMPs to be implemented. The OMP is the appropriate method for implementing the BMPs because each facility can incorporate the BMPs that are most appropriate based on the effectiveness of odor control and cost of implementation. The OMP allows for affected facilities to implement different BMPs if the prescribed BMPs are not sufficient or are ineffective.

Response: SCAQMD thanks the commenter for suggesting an alternative approach to the staff proposal. Unfortunately, the commenter's proposal does not include timely enclosure of odorous operations at a rendering facility as the staff proposal does. As the commenter is well aware, having participated in numerous discussions during the rule development process, the approach PR 415 has taken involves establishing standards SCAQMD staff believes represent the best and most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating unenclosed rendering processes, as the commenter's facility and other rendering facilities currently operate within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

Implementation of all applicable BMPs is part of the staff proposal, rather than allowing each facility to choose selected BMPs. In the commenter's case, applicable BMPs do not include those targeted to batch cooking operations. In addition, under paragraph (e)(12), a rendering facility is allowed to use an alternative BMP that meets the same objective the BMP it replaces, upon approval.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

92. Comment: Make odor complaints public by publishing on the AQMD website. Provide name, address, phone number and other identifying information so as to be used in assessing and remedying the situation. There should be no anonymity when the public is providing information that could be detrimental (e.g. slander). There is no procedure for District inspectors to verify an odor complaint. It is imperative a procedure is developed.

Response: SCAQMD investigates air quality complaints to determine possible sources of air contaminants and whether the emission of such contaminants violates applicable air quality rules and regulations and/or permit conditions designed to protect public health. Any member of the public may allege any facility as the source of nuisance odors, but SCAQMD Compliance inspectors are required to witness and confirm the odors in the presence of “a considerable number” of complainants and trace the odors back to the operation of a unique source to prove a violation of SCAQMD Rule 402 – Nuisance.

Complainants are not required to provide their names or contact information when they make a complaint to SCAQMD. Complainant contact information, when provided to SCAQMD, is not released to alleged sources, other facilities, or the public but remains confidential for internal use only by SCAQMD staff, except where required to be disclosed in an enforcement action. Such information helps inspectors identify possible upwind sources of air contaminants based on the complainant’s location and determine whether odors can be detected and verified at that location in the complainant’s presence.

Unless an inspector can detect and verify an odor of at least six complainants from separate households who have provided sufficient contact information for follow-up, then trace that odor back to the operation of a specific facility, no enforcement action can be taken against that facility for creating a public nuisance.

Some alleged sources of air contaminants solicit direct community feedback by posting their own complaint line phone number on signage visible by the public at their facility perimeter. This enables complainants to voice air quality concerns directly to facility personnel who may be able quickly to address and remedy any problems they may find on site. The commenter may wish to consider this option, but is advised that even when facility complaint lines are available, complainants always have the option of reporting air quality complaints to SCAQMD.

93. Comment: Clarify the recordkeeping requirements. Proposed recordkeeping will not address the problem of determining migration and intensity without similar data collected at the source of the complaint.

- Response: The limited recordkeeping as proposed under paragraph (j)(2) is not intended to correlate conditions at a complainant location with conditions at a rendering facility. It is intended to capture the conditions at the rendering facility when a complainant makes a complaint directly to a rendering facility. SCAQMD staff believes most complaints will contact the SCAQMD using the primary contact number on an odor complaint contact sign (i.e. 1-800-CUT-SMOG). When a rendering facility receives a complaint directly through the secondary (facility) contact number, the recordkeeping requirement under paragraph (j)(2) ensures there will be a record of the contact.
94. Comment: The April 1, 1972 Waste Water Ordinance from the Los Angeles County Sanitation District, SECTION 406 - PROHIBITED AND RESTRICTED WASTE DISCHARGES states that they have jurisdiction over wastewater as a public nuisance and contains materials that adversely affects air quality. Because Clougherety Packing, LLC's rendering plant in the City of Vernon has a wastewater permit that predates the SCAQMD, this codified condition should be the one Waste Water permit holders would have to comply, not any other Agency. The wastewater requirement under odors from rendering should be removed from PR 415(1)(2). Among the seven rendering facilities as identified by Los Angeles as operating in Vernon, CA (Darling is partial since only the garage portion sits on the City of Vernon's jurisdiction), there are at least two integrated renderers in Vernon and many throughout the SCAQMD that this rule is going to impact. Therefore, to capture all integrated renderers we would need to clarify the language by removing "facility integrated with a slaughterhouse or meat-packing plant to "integrated rendering facility."
- Response: SCAQMD staff disagrees with the commenter's implication that Section 406 of the Sanitation Districts...Ordinance states that they have *exclusive* jurisdiction over wastewater as a public nuisance. Section 406 specifies, in pertinent part, that any discharge to the Sanitation Districts' sewerage systems which may otherwise endanger the public, the environment, or create a public nuisance is a violation and the discharger shall be subject to enforcement. Section 406 further specifies no person shall discharge or cause to be discharged to the Districts' sewerage systems, any wastes which adversely affect air quality, or place the Sanitation Districts in noncompliance with any standard or regulation promulgated by the SCAQMD. See http://www.lacsd.org/wastewater/industrial_waste/iwordinances/wastewater_ordinance.asp. The District's legal authority to adopt and enforce PR 415, including requirements for wastewater associated with rendering processing derives, in part, from ~~H&SC Section Health and Safety Code section 41700~~ H&SC Section Health & Saf. Code §40449. City and county agencies may adopt air pollution rules that are stricter than those adopted by SCAQMD (~~H&SC Section Health & Saf. Code §40449~~) but otherwise do not have authority over air pollution control.

~~H&SC Section Health & Saf. Code §40450~~. Therefore, the existence of LA County Sanitation Districts regulations has no effect on the SCAQMD's authority to adopt PR 415. The District's authority granted by ~~H&SC Section Health and Safety Code section 41700~~ to protect the public's comfort and health and safety includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. SCAQMD staff disagrees with the commenter that the wastewater requirement under odors from rendering should be removed from PR 415(1)(2). SCAQMD has conducted multiple on-site inspections of rendering plants in the District and has observed through these inspections that the wastewater treatment systems at the plants are a significant source of odors. SCAQMD staff has detected rendering odors during onsite inspections at rendering plants coming from wastewater treatment systems that have the potential to create odor nuisances in the surrounding community, especially when combined with odors from other rendering operations and from nearby rendering plants. The language under exemption (1)(2) is not intended to capture all integrated rendering facilities, as the commenter suggests.

95. Comment: Clarify the definition by removing "40 volumes of" and include "process water."

Response: The intent of the exemption under paragraph (1)(2) is to allow wastewater from other parts of the facility at an integrated facility to be used to dilute rendering wastewater. Staff is using the term "wastewater" to indicate water that passes through the wastewater treatment plant from all operations at a facility (whether at facility that only performs inedible rendering, or at an integrated rendering facility), and to differentiate wastewater from fresh water; thereby preventing a facility from using fresh water to dilute rendering wastewater. In this context, "process water" is considered to be wastewater. See response to Farmer John comment #96 also.

96. Comment: Remove "has an average chemical oxygen demand (COD) lower than 1500 mg/L, based on not less than 5 calendar years of sampling data." It is unknown how 1500 ppm COD relates to contributing to a public nuisance.

Response: In response to comments, the exemption in the staff proposal under paragraph (1)(2) has been changed to: "*Wastewater treatment operations at a facility integrated with a slaughterhouse or meat-packing plant shall not be subject to the enclosure requirement of subdivision (g), provided each volume of rendering wastewater is diluted with more than 30 volumes of wastewater from other sources within the facility or, after such mixing, any wastewater exposed to the atmosphere has an average chemical oxygen demand (COD) lower than 3000 mg/L, based on the most recent three year average sampling data, which shall be made available to the Executive Officer upon request.*"

97. Comment: Clarify the definition to include “40 volumes of process water”. Wastewater at a minimum may contain oil and grease (especially at a meat packing/slaughtering processes), that have high fats, oils and greases which could create a hazard if it is in an entirely closed system which may cause a BLEVE situation prior to DAF wastewater treatment in which any hazard would be removed. Would a sludge blanket that forms due to a properly working Dissolved Air Floatation system be considered a cover since the waste water itself is not being exposed to the elements?

Response: For exemption (1)(2), SCAQMD staff is using the term wastewater to describe all water that is processed through the commenter’s wastewater treatment plant. If the commenter will dilute rendering wastewater with other wastewater that is high in fat content in an entirely closed system that would create a boiling liquid expanding vapor explosion (BLEVE) situation, the proposed exemption is not appropriate and the commenter’s facility should instead comply with the requirements of subdivision (f) for a permanent total enclosure. A sludge blanket that temporarily forms on the top of a dissolved air flotation (DAF) tank is not considered to be a closed system under subdivision (g).

98. Comment: Civil Code Section 3482.6 (The Right to Farm Act) specifically includes rendering plants and meat processing plants in the definition of agricultural activity. It also exempts agricultural processing facilities and rendering plants from nuisance rules if the nuisance is due to changed conditions that occur after an agricultural activity has been in continuous operation for more than three years so long as it was not a nuisance at the time it began operation. If the above conditions are met and the rendering facility is operating within the limits of its SCAQMD permit and the SCAQMD receives odor complaints, the SCAQMD has no authority to take an enforcement action against the facility. Creating this rule to reduce odors would be circumventing and undermining Civil Code Section 3482.6?

Response: SCAQMD staff disagrees with the commenter that the SCAQMD has no authority to take an enforcement action against rendering plants and creating PR415 to reduce odors would be circumventing and undermining Civil Code Section 3482.6, for the reasons expressed in staff’s response to Baker Commodities comments #37 and #59.

99. Comment: Clarify the purpose to be consistent with the definitions of “odor” and “collection center”. Reword the purpose statement to read as follows, “*The purpose of this rule is to reduce perceived odors from facilities licensed to render animals and animal parts from reaching the nearby communities.*”

Response: The definition for odor is similar to the definition of aroma under ASTM E253 in relating it to the perception of an odor. Collection center is defined

specifically to provide an exemption under subparagraph (1)(1)(B). The purpose of PR 415 is to reduce odors from rendering operations at a rendering facility so the requested change was not made.

100. Comment: Clarify the meaning of “Process” to include combustion contaminants.
- Response: Combustion contaminants are outside the scope of PR 415. Therefore, there is no need to specifically include combustion contaminants in the definition of ‘process’.
101. Comment: Definition for Continuous Cooker has been deleted and did not indicate whether supporting equipment falls under the continuous cooker definition. Some continuous cookers may include operating periods with varying speeds or partial interruptions. Revise to: “*CONTINUOUS COOKER means a cooking vessel used for rendering where the raw material flows through the system at a constant or varying speed with limited interruption. It does not include supporting equipment or vessels, such as entrainment tanks.*”
- Response: Since the rule requirements for PR 415 do not specifically refer to a continuous cooker, no definition is provided in the proposed rule language. Supporting equipment or vessels, such as entrainment tanks are subject to the requirements for a permanent total enclosure or closed system.
102. Comment: “Licensed rendering plant” is not defined. Farmer John is licensed as a food processor. According to Civil Code Section 3482.6, licensed rendering plants, processing of meat and egg products are considered “Agricultural processing operation.” Further, existing law authorizes the Secretary of Food and Agriculture in lieu of any civil action and lieu of seeking prosecution to levy a civil penalty against a person who violates certain of these provisions, or any regulation adopted in an amount not to exceed \$1,000. Finally, H&SC Section Health and Safety Code section 41704 states that nuisance odors do not include agricultural operations. The definition of “Collection Center” and “Rendering Operations” in PR 415 should be refined.
- Response: “Licensed rendering plant” in PR 415(c)(3) refers to rendering plants licensed pursuant to Food and Agricultural Code Section 19300. SCAQMD staff agrees with the commenter that Farmer John’s rendering plant in the City of Vernon is an “agricultural processing activity, operation, facility” under Civil Code Section 3482.6. Pursuant to H&SC Section Health and Safety Code section 42403, the SCAQMD may bring a civil action in the name of the People of the State of California to enjoin any violation of Part 4, Division 26 of the H&SC Health and Safety Code, or of any SCAQMD order, rule, or regulation and to seek civil penalties for violations pursuant to H&SC Sections Health and Safety Code, sections

42401, 42402, 42402.1, 42402.2, 42402.3, and 42402.4. SCAQMD disagrees with the commenter that H&SC Section Health and Safety Code section 41704 states that nuisance odors do not include agricultural operations. H&SC Section Health and Safety Code section 41704 states in relevant part, that restrictions on discharges into the atmosphere under H&SC Section Health and Safety Code section 41701 do not apply to agricultural operations and the use of other equipment in agricultural operations necessary for the growing of crops or raising of fowl or animals. H&SC Section Health and Safety Code section 41701 defines prohibited discharges as obscuring an observer's view to a degree equal to or greater than smoke, or as dark or darker in shade as that designated as No. 2 on the Ringelmann Chart. H&SC Sections Health and Safety Code sections 41701 and 41704 do not reference odors or nuisance, and do not exempt agricultural operations from odor nuisance violations. Please see the response to Farmer John comments #54 and #59, regarding the definition of "collection center" under PR 415(1)(1)(B), and PR 415's "Rendering Facility" definition. If the commenter meant to refer to H & S C Section 41705 instead of 41704, please see Response to Farmer John comment #32.

103. Comment: What "odorous compounds" are being referred to in the collection efficiency definition?
- Response: The control efficiency definition refers to odorous compounds in an odor control system.
104. Comment: The intent of the Receiving Area is to define it as an odor generation source activity. To make the definition of Civil Code Section 3482(e)(1) consistent, then the definition needs to incorporate agricultural processing activity, operation, facility or appurtenances thereof that is conducted or maintained for commercial purposes. Refine the definition of odor generating source to the State's definition in regards to rendering.
- Response: It is assumed that the commenter is referring to the definition of "Agricultural processing activity" under Civil Code Section 3482.6(e)(1), which includes rendering plants. SCAQMD staff disagrees with the commenter that the Right to Farm Act contains any definition of odor generating sources. The District's authority granted by H&SC Section Health and Safety Code section 41700 to protect the public's comfort and health and safety includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. PR 415's "Receiving Area" definition is not inconsistent with the State law definition for rendering plants.
105. Comment: The intent of rendering is to define it consistently with the California / Food and Agricultural Code - FAC / ARTICLE 1. Definitions [19200. - 19216.] / Section 19213. "Pursuant to Rendering" means all recycling, processing,

and conversion of animal and fish materials and carcasses and inedible kitchen grease into fats, oils, proteins, and other products that are used in the animal, poultry, and pet food industries and other industries. This definition was used in the previous draft of PR 415. Refine "Rendering" definition so as to be consistent with State Law's definition of rendering.

- Response: SCAQMD staff agrees with the commenter that the November 18, 2014 version of PR 415 defined "Rendering Operations" according to Food and Agricultural Code Section 19213. The definition of "Rendering" in PR 415(c)(19), June 23, 2015 version, was made more general following requests from other stakeholders. PR 415's "Rendering" definition is not inconsistent with the State law definition for rendering operations.
106. Comment: 24 months may be unrealistic for timing requirements for permanent enclosure (d)(1)(B)(iii) and venting to odor control equipment (d)(1)(C)(ii). Timing for these requirements should be based on approval to construct/build by local building permitting agency.
- Response: SCAQMD staff disagrees with the commenter's statement that 24 months may be unrealistic for timing requirements for construction of a permanent total enclosure and venting to odor control equipment. The 24 month deadline is following the issuance of a Permit to Construct from the SCAQMD to the facility. The facility should also timely submit any permits required by their local building permitting agency to coordinate with the SCAQMD's permitting process.
107. Comment: There are more than 5 rendering operations in the Basin (Stiles in Ontario, Co-West Commodities in San Bernardino). Include all renderers.
- Response: Neither Stiles Animal Removal nor Co-West Commodities conduct inedible rendering, and therefore do not meet the applicability criteria for PR 415.
108. Comment: The SCAQMD staff report does not include modeling data to show how far rendering odors travel.
- Response: Please refer to response to Farmer John comment #65.
109. Comment: Remove the wastewater enclosure requirement for integrated rendering facilities.
- Response: As discussed with the commenter, an exemption is provided under paragraph (1)(2) specifically exempting wastewater operations that meet certain criteria.
110. Comment: For paragraph (i)(2), remove "after receiving the odor complaint or after facility personnel" and add "first contact became aware of the complaint."

- Response: Since the requirement under paragraph (i)(2) does not require a contact person at a rendering facility to be listed on the odor complaint contact sign, the obligation falls to the facility personnel that took the odor complaint. Therefore, it is appropriate to say “facility personnel” instead of “first contact”).
111. Comment: Clarify language in the staff report regarding the date the permanent enclosure and odor control equipment standards become effective.
- Response: This change has been made.
112. Comment: What does affected facility mean in the staff report?
- Response: Affected facility means a facility subject to the requirements of PR 415.
113. Comment: Remove the time limit to enclose raw materials within an odor-tight container within 60 minutes.
- Response: Paragraph (e)(2) has been amended in the latest language of PR 415 to read: *“After the date a permanent total enclosure is required under clause (d)(1)(B)(iii), the owner or operator shall ensure incoming raw rendering materials are transferred into the permanent total enclosure pursuant to subdivision (f) or into covered containers.”* Note that the staff proposal has been changed from the use of an “odor-tight container” to a “covered container”.
114. Comment: What ASTM Standard do SCAQMD inspectors use to verify an odor complaint?
- Response: Other comments have addressed ASTM E679, used to establish odorant detection thresholds (ASTM E679) and ASTM E544, used to match the concentrations of odorants to scaled odor intensities.
- Odor verification requires that inspectors first confirm, in the complainant’s presence, that the qualitative character of the odor they themselves detect matches that of the odor perceived and described by a complainant. Once the odor character is confirmed, the odor is traced to its origin through a process of upwind/downwind surveillance that rules out other possible sources. Inspectors also ask complainants to rank the intensity of the odor they detect on an ordinal scale from 1-5. Scaled odor intensity also appears to represent the hedonic quality of the odor perceived by the complainant; in general, odors ranked higher on the scale evoke a more negative response and are a surrogate for the level of annoyance or discomfort the odor creates for the complainant. Scaled intensity values also provide a means by which complainants can indicate the relative intensities of odors perceived at

different times. This information coupled with meteorological data can also help the inspector locate the likely or actual source of odors.

115. Comment: Put a moratorium of 10 years on any rule amendments to PR 415.
- Response: It is not appropriate for staff to include such a commitment because staff cannot restrict any future Board action. A moratorium could also be a detriment to industry if a rule amendment was needed that would have a positive effect for the facilities under the rule.
116. Comment: Eliminate the requirement for odor control equipment until it is proven that it is needed.
- Response: The requirement for odor control equipment is necessary once a permanent total enclosure is installed. A permanent total enclosure acts as containment for odors that can escape from the cooker, presses and centrifuges, as well as fugitive odors that are not currently addressed by Rule 472 (i.e. from raw material receiving area, processing equipment, wastewater treatment). Unless these odors are collected in a ventilation system and routed to odor control, they will escape from the permanent enclosure as fugitive odors through building ventilation releases. Hence, the requirements for a permanent enclosure and odor control equipment are linked in the rule and the timing for these standards to become effective is coincident. However, staff has also provided an alternative standard for a permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.
117. Comment: Specify anemometer reading frequency in paragraph (j)(1).
- Response: A specific frequency for anemometer readings taken by facility personnel to verify the inward face velocity standard under subparagraph (f)(3)(B) is not stated in the recordkeeping requirement under paragraph (j)(1). SCAQMD inspectors will verify the inward face velocity during inspections. However, these readings are required under PR 415 to allow an SCAQMD inspector to compare readings taken by rendering facility personnel with readings as determined by the inspector. Under the proposal facility operators are allowed to determine the appropriate frequency to take such readings.
118. Comment: PR 415 was rushed and does not account for stakeholder comments. Stakeholders have to wait for the final staff report for response to comments. Allow sufficient time for feedback.
- Response: PR 415 has gone through 3 major revisions to accommodate many of the comments made by stakeholders in the rule development process. SCAQMD has complied with all legal requirements for noticing and staff

has done its best to release new language in sufficient time to allow stakeholder review prior to working ground meetings. The due date has been extended for submittal of comments based on industry requests. Regarding the comment that stakeholders need to wait for the final staff report for formal, written responses to comments; staff provided responses to many comments in the revised preliminary draft staff report released in June 2015. It is more typical during rulemaking for a written response to comments to be provided in the draft of the staff report that is provided for the Board Hearing on the proposed rule. In addition, the schedule for this proposed rule to be considered by the Governing Board has been extended. PR 415 was originally scheduled to be heard in May 2015. That schedule was moved back to June 2015 and then October 2015 due to comments from stakeholders requesting more time for rule development. It is now scheduled for hearing by the Governing Board in November 2017.

119. Comment: Blood meal is used for animal feed. Include animal feed in the description under “The Rendering Process” in the staff report.

Response: Blood meal has been added as one of the solid proteins that is used to manufacture animal feed.

120. Comment: Remove the statement regarding rendering odors being detected up to 20 miles from rendering plants. This statement is not reflective of current situations.

Response: The statement clearly refers to “*untreated rendering plant emissions*”, and research from the early 1970s. It is intended to convey the idea that rendering odors can be detected for great distances. Since the time period for the research is stated and the statement is qualified by referring to untreated odors, SCAQMD staff feels it is appropriate to include this statement in the staff report.

121. Comment: Remove the statement “*It is often difficult to complete this process during an odor event while the odors are still present, assuming that a facility source can even be identified. Due to the very long distances rendering odors can travel and the proximity of the five Vernon area facilities relative to one another, it is often not possible to pinpoint a single facility as the source of odors.*” from Findings of Public Nuisance section in Chapter 1 of the staff report. This is an assumption not verified by data.

Response: In support of this request to remove the statement, the commenter presents summary data of all confirmed odor complaints as a percentage of the total number of odor complaints received by SCAQMD from 2002 to 2014. SCAQMD staff believes use of the overall data set is not appropriate to make the commenter’s point. Furthermore, odor complaint verification is much more straightforward for most sources of odor in the summary data,

where verification is not thwarted by having five facilities in the same industry in close proximity to each other. The nature of odors from other industrial processes are not comparable to rendering odors, which can be detectable at low concentrations for miles.

122. Comment: The effective implementation of Rule 402 renders PR 415 unnecessary. If SCAQMD believes that odor from rendering plants result in public nuisance events, then SCAQMD must either enforce Rule 402 or revise Rule 402 such that SCAQMD can enforce the existing regulation effectively.

Response: PR 415 is not changing the policy for when an odor nuisance NOV is issued, instead the rule is defining a separate and distinct “confirmed odor event.” Submittal of an Odor Mitigation Plan (OMP) under PR 415 is not enforcement action. The purpose of an OMP is to establish practices and requirements to reduce odors from rendering facilities. PR 415’s definition of a confirmed odor event does not conflict with District Rule 402, both rules require an investigation into the source of the odor. However, regardless of a nuisance or “Confirmed Odor Event,” new and existing facilities may still have to implement Best Management Practices (BMP), operate in a closed system or permanent total enclosure, or install odor control equipment. Please also refer to responses to Baker Commodities comments 38 & 43.

123. Comment: No evidence has been provided that alleged rendering odors have travelled past the facility boundary, much less the City of Vernon boundary.

Response: Odors typical of rendering facilities were noticeable at a number of locations surrounding Vernon during SCAQMD staff visits to the rendering facilities. SCAQMD staff detected rendering odors on the Farmer John property near the rendering facility and the same odors after leaving the property. Staff believes these odors are real and they are impacting the quality of life for residences and commercial employees in the communities surrounding Vernon. For these reasons, the approach PR 415 has taken involves establishing equipment and operational standards SCAQMD staff believes represent the best and most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

124. Comment: Texas only imposes odor control on rendering facilities for new facilities and changes to existing facilities that result in increased throughput. Make PR 415 consistent with other state's provisions.

Response: PR 415 is applicable to new and existing facilities, due to the need to impose a basic standard of operation on rendering facilities operating in an urban setting.

125. Comment: Remove assumptions of health impacts coming from rendering facilities since they are not supported by facts.

Response: District staff disagrees with the commenter's statement that assumptions of health impacts coming from rendering facilities is not supported by facts. The statements in the staff report are references to published articles from experts in the field. As such, any conclusions drawn in these articles are not 'assumptions', but the opinions of the authors based on their respective fields of research

126. Comment: Develop an odor panel-based approach in lieu of the current marker-compound based approach.

Response: The staff proposal establishing marker compounds is used for the express purpose of verifying compliance with the control efficiency requirements for an odor control device under paragraph (f)(4). Marker compounds are not to be viewed as surrogates for odors in the areas surrounding the Vernon rendering facilities. Marker compounds were introduced in the staff proposal for the very limited purpose of verifying compliance with control efficiency requirements, and should not be used in any other way. Regarding the suggestion to develop an odor panel-based method, the approach PR 415 has taken involves establishing equipment and operational standards SCAQMD staff believes represent the best and most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

127. Comment: PR 415 does not account for other controls and best management practices (BMP's) for ensuring odors are removed. PR 415 would create duplication of procedures and records and will require prescriptive and costly changes in existing odor control programs.

Response: The requirements of PR 415 establish a consistent approach to odor control at rendering facilities and a basic level of odor control to new and existing rendering facilities. Staff has made efforts to avoid duplication of recordkeeping and worked with rendering facility operators to modify rule language so that costs are minimized

128. Comment: Applying a "one-size fits all approach" to controls does not accommodate existing effective systems already in use at our facility.

Response: Regarding the comment on applying a "one-size-fits-all" approach, please see response to Vernon Chamber of Commerce comment #6.

129. Comment: If PR 415 is implemented, the new regulation will become administratively burdensome for both regulatory and operator.

Response: The recordkeeping requirements of PR 415 are limited by intent, specifically to prevent administrative burden on a facility. The recordkeeping requirements under subdivision (j) are limited to anemometer readings taken by facility personnel to verify compliance with inward face velocity, a record of odor complaints that a facility receives directly, and records to demonstrate a facility qualifies for an exemption under subdivision (l). SQAQMD staff does not believe these requirements are burdensome.

Responses to Teamsters Joint Council 42 Letter

1. Comment: Should PR 415 be enacted in its present state, it will have severe effects on rendering facilities operating in the City of Vernon, as well as on the men and women who work at these facilities. Vernon's rendering industry has created an economic web of union jobs and wages that will be disastrously affected should PR 415 become law.

Response: SCAQMD staff disagrees with the assessment of the economic impacts on the rendering facilities subject to PR 415. Of the five rendering facilities subject to PR 415, one has already submitted permit applications for an enclosure and odor control equipment that will meet the permanent total enclosure, ventilation system, and odor control equipment standards in the

proposed rule. Two other facilities have indicated their anticipated compliance with the rule requirements. Of the two remaining facilities, one will be able to take advantage of an exemption from enclosure for their process. SCAQMD staff has taken every opportunity to work with the remaining facility to address their concerns and extremely high cost estimates. Costs for all five of the rendering facilities are addressed in the socioeconomic impact analysis that accompanies PR 415. SCAQMD has worked diligently with all the rendering facility operators that chose to engage in meaningful cooperation with staff, in order to minimize costs where possible.

2. Comment: On the basis of 350 citizen complaints over a decade, SCAQMD has created PR 415. PR 415 aims to stop those complaints by creating a set of regulations meant to contain odors escaping facility properties.

Response: As described in the staff report, frequent and pervasive rendering odors were a key issue identified in the pilot Clean Communities Plan for the areas in and around Boyle Heights. In addition, many SCAQMD staff have experienced the distinctive rendering odors when visiting the rendering plants and other facilities in the area. The commenter is correct in assuming that the proposed requirements of PR 415 intend to contain fugitive odors that currently escape facility boundaries and create potential odor nuisance issues in the communities surrounding Vernon.

3. Comment: SCAQMD created a “one-size-fits-all” regulatory package that does not account for production and material differences. Because the costs are currently estimated in the tens of millions, rendering companies will be forced to lay off a portion on the workforce or shut their plants and go out of business.

Response: SCAQMD staff proposes requirements for PR 415 after researching operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating unenclosed rendering processes. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

Regarding the commenter’s assessment that costs are estimated in the tens of millions of dollars and rendering companies will be forced to lay off a portion on the workforce or shut their plants and go out of business, the commenter should be advised that costs for all five of the rendering facilities

are addressed in the socioeconomic impact analysis that accompanies PR 415. The estimate of costs is based on industry-related cost estimates and is nowhere near tens of millions of dollars.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

4. Comment: Allow each company to create its own Odor Management Plan and set it in practice. SCAQMD inspectors would monitor the success or failure of each facility and plan. Should a significant number of complaints be verified and traced to a single rendering facility, that company would need to enact the Best Practices or physical alterations. If initial strategies prove ineffective, a second, more stringent level of would need to be completed by the company. Enclosing a rendering company's entire operation would be the last solution, not the first, in order to prevent job losses in the hundreds.

Response: Staff did not take this approach for the proposed rule in part because requiring individual plans would not allow for the discussion of requirements in a public process. The proposed rule has undergone a full public process and all stakeholder input has been considered. Staff believes an enclosure or closed system is the most effective and still reasonable method of reducing odors.

The SCAQMD Governing Board will consider the proposal and has the option to adopt the staff proposal, make modifications, or decline to take an action. Should the rule be adopted, the facilities that will be subject to the rule will have certainty as to what will be required. The process for submittal of individual plans by each facility would undergo review by staff and there could be some inconsistency between requirements for different facilities.

5. Comment: The Teamsters hope the SCAQMD will allow whatever time rendering companies request, even if the vote does not occur on the proposed date of May 1, 2015.

Response: Due to comments from the Teamsters and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, to October 2, 2015. The current schedule for Governing Board consideration is November 2017.

Responses to Kirst Pump, Urban Legend Public Relations, and PromoShop Promotional and Marketing Services

1. Comment: Our company is concerned about PR 415 and the impact it will have on businesses. If PR 415 is enacted in its present state it will have severe

effects on rendering facilities operating in the City of Vernon, on the men and women who work at these facilities and those that supply rendering companies with materials and services. Vernon's rendering industry has created an economic web of union jobs and wages that will be disastrously affected should PR 415 become law

Response: Thank you for taking the time to comment on this proposed rule. SCAQMD staff shares your concern about the employees at these facilities and those who supply rendering companies with materials and services. However, staff disagrees with your assessment of the impact that PR 415 will have on rendering facilities, for the reasons discussed in responses to other commenters.

2. Comment: We implore SCAQMD to suspend rulemaking to allow stakeholders to develop comments, identify issues and offer alternative solutions. We request an additional 8 months to allow parties to carefully study PR 415.

Response: SCAQMD delayed the Board hearing for PR 415 by 5 months, to October 2, 2015, in order to give stakeholders in the rule development process the opportunity to express their concerns about the proposed rule requirements, offer alternative suggestions for a rule approach and work with SCAQMD staff to minimize costs for compliance with the proposed requirements. The current schedule for Governing Board consideration is November 2017.

Responses to City of Vernon Letter

1. Comment: The problem of rendering odors has been an issue for many decades. Many of the existing rendering plants established their locations away from residential areas years ago and encroachment by homes into nearby neighborhoods has placed them closer to the source of the odors, by no fault of the rendering community.

Response: The SCAQMD staff thanks the City of Vernon for acknowledging that odors from rendering facilities have been an issue in the communities surrounding Vernon for many decades. However, staff has determined that these facilities were surrounded by commercial and residential uses at least by 1993. SCAQMD does not have any authority over land use decisions but has the responsibility for air quality in the South Coast Air Basin. The purpose of the proposed rule is to reduce rendering odor problems in the surrounding communities.

2. Comment: Allow rendering plants and local regulatory agencies (CUPA, LEA, Planning Dept., etc) to have flexibility in implementing odor management plans and working on effective remedies for each site, and not jumping to a 36 month compliance date.

Response: SCAQMD staff remains available to consult with rendering facilities as well as facilities of other odorous operations on the best way to contain or control odors from their facility. SCAQMD staff assumes the City of Vernon LEA is also available to consult with regarding odor reduction activities at rendering facilities. Regarding the 36 month compliance date, the commenter refers to an early version of the staff proposal for PR 415: the requirement for a permanent total enclosure over certain odorous operations at a rendering facility in the current version of PR 415 is likely to be more like 3½ to 4 years, as the trigger for compliance with the enclosure requirement is based on issuance of a permit from SCAQMD.

3. Comment: Find remedies to fund total enclosure plans for facilities that show a need for financial assistance.

Response: SCAQMD staff investigated sources of supplemental funding, but was not able to identify a source of funding for financial assistance to rendering facilities for enclosure costs. However, staff will continue to investigate sources of possible funding in order to be able to accommodate this request.

4. Comment: Develop a method to qualitatively quantify and measure odors in order to legitimize and scientifically identify the problem. Nuisance problems are not necessarily public health issues.

Response: Early in the rule development for PR 415, SCAQMD staff considered a quantitative approach to assessing odors from rendering facilities. For reasons discussed in the staff report; namely, limitations with the current science with regard to quantifying specific chemical compounds, staff took a different approach. Instead of pursuing quantitative methodology, staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

Regarding the comment on nuisance problems not necessarily being health issues, staff believes that for many people, unpleasant odors do cause health effects such as nausea and headaches. Further information on health effects is contained in the staff report.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

5. Comment: Emphasize the odor mitigation plan concept first, over building a total enclosure at the site, and allow the local enforcement agency authority to be the primary regulator.
- Response: SCAQMD staff thanks the commenter for suggesting an alternative approach to the staff proposal. Unfortunately, SCAQMD staff believes the commenter's proposal to submit an odor mitigation plan instead of containing fugitive sources of odors and routing them to odor control equipment falls short of the steps necessary to control odors from rendering facilities and reduce odor problems in the communities surrounding Vernon. In particular, the commenter's suggestion does not include a requirement for timely enclosure of odorous operations at a rendering facility as the staff proposal does. SCAQMD staff believes the approach represented by the PR 415 proposal is necessary in order to ensure containment and reduction of fugitive odors from certain odorous processes at a rendering facility. An odor mitigation plan-first approach does not provide the same certainty.
6. Comment: Consider other mitigation methods of odor control to reducing odors (such as quantity restriction when exceeding odor limits, and mist controls).
- Response: For reasons discussed in other comments, SCAQMD staff does not believe developing odor limits as suggested by the commenter is a practical suggestion. In addition, every rendering facility already has multiple throughput limits in their SCAQMD-issued permit, and SCAQMD staff does not believe such a correlation between throughput limits and odors that may migrate offsite from a rendering facility exist.
7. Comment: Consider other AQMD data to model air dispersion from each site to the nearest receptors (residential units) and determine how they may effect odors and different times of the day.
- Response: In order to conduct dispersion modeling, it is necessary to first understand the chemical makeup and source strength of odors. As discussed in the staff report, more than 100 chemical compounds have been identified in rendering odors. Modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not have established methods for collection, speciation and analysis. Many do not have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science, and therefore to establish initial concentrations for modeling. In summary, staff does not believe the existing science and technology allows for the suggested modeling approach to be implemented.

However, SCAQMD staff does believe that rendering odors are distinctive and unmistakable as a whole, even if existing science does not allow chemical compounds that make up these odors to be quantified. For this reason among others, staff has elected to follow the approach in PR 415 of establishing enclosure and closed system standards, building ventilation standards and odor control equipment standards. The staff proposal contains odor reduction requirements, including: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. Staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

8. Comment: No consideration is given to adverse effects if rendering facilities which fail to meet compliance requirements are forced to close and stop doing business (CEQA?)

Response: Please refer to the response to comments 1.0-1 and 1.0-4 in addition to Master Response #2 for the letter from the City of Vernon dated August 3, 2015 commenting on the Draft Environmental Assessment.

9. Comment: No consideration is given to the effects if rendering facilities close as to the effects on AB 939 in landfills, additional greenhouse gases emitted due to longer driving to landfills, using landfills to take unrendered carcasses; and moving rendering odor problems to landfills. Further discussion with CalRecycle staff and the effects this would have on solid waste disposal would be recommended.

Response: See response to Farmer John comment #26.

17. Comment: Consideration for other odor causing industries should follow using the same guidelines (what about odor complaints from fast food restaurants, farms, food processing plants, etc?)

Response: While there are a number of other industries that have significant numbers of odor problems, SCAQMD has addressed the rendering industry under PR 415 due to the distinctive and unmistakably unpleasant nature of odors from rendering operations. All facilities in the Basin are subject to the same procedures for complaint investigation and resolution and may have permit conditions and/or rule requirements related to reducing odors. Industries have rules that reduce odors, such as from landfills, and sewage treatment plants. The unique, frequent and bothersome odors from rendering plants were identified as a significant issue which warranted a proposed rule.

Through this rule development, SCAQMD staff is responding to the public concerns expressed at the Clean Communities Plan working group meetings and the public meetings during rule development of PR 415, which indicated a high degree of public concern over odors from rendering facilities.

Responses to Vernon Chamber of Commerce Letter (July 16, 2015)

1. Comment: The Vernon Chamber agrees with SCAQMD's response and the public's interest to address and reduce the level of odors stemming from businesses in Vernon.

Response: SCAQMD thanks the Vernon Chamber of Commerce for acknowledging that there is an odor issue that arises from rendering facilities in the City of Vernon.

2. Comment: In its current form, PR 415 does not solve the problem of odor. There is a low level of odor complaints and violations. This does not justify a mandate to require total enclosures. Odors are not constant, but occur during certain hours of the day and times of the year.

Response: SCAQMD staff disagrees with the commenter regarding the justification for total enclosure for the reasons articulated in the staff report. Enclosures are used at rendering facilities across the country for the purpose of containing odors.

3. Comment: PR 415 threatens the existence of an industry that plays a critical economic and recycling role for many related industries. Can SCAQMD really afford to legislate an important industry out of business and be responsible for eliminating thousands of jobs?

Response: SCAQMD has worked with rendering facilities to identify cost-effective solutions to minimize cost impacts to rendering facilities. Three of the five affected rendering facilities subject to PR 415 have already either submitted permit applications for new enclosures and equipment that will comply with the requirements of PR 415, or have indicated to SCAQMD staff the indication that they will comply. One additional rendering facility will take advantage of an exemption in the proposal that does not require them to construct an enclosure. Therefore, the rendering industry, as it has existed in the City of Vernon for decades is not threatened, as suggested by the commenter. Furthermore, SCAQMD staff disagrees with the commenter that thousands of jobs are at stake with the adoption of PR 415, for the reasons expressed in other responses to comments.

4. Comment: Timing of the release of rule drafts, CEQA and other reports does not give enough time to analyze material or provide feedback in a timely manner.

- Response: PR 415 has gone through 3 major revisions to accommodate the comments made by stakeholders in the rule development process. SCAQMD has complied with all legal requirements for noticing and staff has done its best to release new language in sufficient time to allow stakeholder review prior to working ground meetings. In situations where it was not possible for staff to release new language prior to a working group meeting, a two- to three-week period was allowed for stakeholders to analyze and comment on that language. The public hearing was delayed 5 months in order to provide additional time for stakeholder input. The current schedule for consideration by the SCAQMD Governing Board is November 2017.
5. Comment: Commenter seeks a science-based solution. If passed in its current form, there will be economic consequences that impact the region.
- Response: SCAQMD staff feels the approach in the current proposal represents the best solution for control of odors, as the City of Vernon has acknowledged that there is an odor issue that arises from rendering facilities in the City of Vernon in a previous comment. Regarding the economic impacts on the region, SCAQMD has prepared a socioeconomic analysis that addresses impacts on the region, as well as impacts on each facility subject to PR415. The commenter is directed to this socioeconomic impact analysis.
6. Comment: The Vernon Chamber of Commerce opposes a one-size-fits-all total enclosure solution on existing rendering operations as it does not solve the problem of odor. PR 415 does not account for differences in plants that only do edible rendering vs. inedible rendering. This approach does not take into account the unique building layouts and creates fire and safety risks that put employee's lives at risk.
- Response: The rule approach for PR 415 considers differences in operation at each facility. While the proposed rule requirements seek enclosure of certain very odorous processes (raw material receiving, wastewater treatment), attempts were made during the rule development process to accommodate each facility's needs. For example, one facility reported they would have difficulties constructing a receiving enclosure tall enough to accommodate trucks that tilt up to dump raw materials. Staff changed a requirement in the proposed rule to allow this facility to continue to use its current material delivery configuration, as long as continuous effort is made to move this material into an enclosure within 60 minutes after the end of material delivery. The same facility conducts cooking and processing operations in a large building that would be very expensive to demolish and reconstruct. Staff worked to craft rule requirements that would allow the cooking and processing operations to be considered a closed system, provided that modest changes are made to certain bins, hoppers and conveyors. Another example of the flexibility of the PR 415 approach involves the wastewater

treatment plant at an integrated rendering facility. This facility processes wastewater from several areas of the facility, where rendering wastewater is currently diluted by a large volume of less-odorous water. Staff crafted an exemption for the wastewater enclosure for this facility, with the help of the Sanitation Districts of Los Angeles County (LACSD). This rule is far from the ‘one-size-fits-all’ approach suggested by the commenter. Staff has been extremely responsive to the needs of rendering facilities.

Regarding the differences in edible vs. inedible rendering, the commenter should be aware that facilities that conduct only edible rendering operations are exempted from the requirements of PR 415 under subparagraph (1)(1)(A).

Regarding the comment that the proposed rule approach does not take into account unique building layouts and creates fire and safety risks that put employee’s lives at risk, SCAQMD staff disagrees with this statement. Enclosures constructed under the requirements of the proposed rule will need to meet all appropriate fire and safety codes. PR 415 does nothing to undermine worker safety.

7. Comment: PR 415 contradicts and overreaches with regulations from other agencies such as LACSD, California Department of Agriculture, USDA Food Safety & Inspection, and City of Vernon Health Department and Fire Department.

Response: The commenter offers no specific regulations under the authority of these agencies that are contradicted by PR 415. SCAQMD staff has not identified any contradictions with other regulations. See responses to Farmer John comments #32, #59 and #94.

8. Comment: Community and SCAQMD feedback center on Vernon rendering facilities. It is assumed that rendering facilities in Ontario and San Bernardino would also be forced to comply.

Response: The commenter appears to be referring to Stiles Animal Removal in Ontario and Co-West Commodities in San Bernardino. If this is correct, neither Stiles nor Co-West meet the applicability criteria for PR 415. Neither facility performs inedible rendering. Co-West Commodities has been identified as one of the facilities that will be included during rule development of PR 416, which addresses odors from kitchen trap grease.

9. Comment: Where would product go if companies go out of business as a result of this rule?

Response: SCAQMD staff has prepared a CEQA document that addresses this question. Please refer to the Draft Environmental Assessment.

10. Comment: PR 415 must have a science-based foundation to assess and reduce odor. The Vernon Chamber would support a more customized template of PR 415 if it outlined a methodology to measure, track and identify odors and impacts.

Response: Rendering odors are a complex mixture of many compounds that may include:

“organic sulfides, disulfides, C-4 to C-7 aldehydes, trimethylamine, C-4 amines, quinoline, dimethyl pyrazine, other pyrazines, and C-3 to C-6 organic acids. In addition, lesser amounts of C-4 to C-7 alcohols, ketones, aliphatic hydrocarbons, and aromatic compounds” (AP-42 9.5.3).

SCAQMD staff believes the cost of the approach suggested by the commenter to collect and analyze odorous samples from multiple locations within a facility would be excessive due to the number of samples necessary and the number of chemical compounds that would need to be analyzed for each sample collected. The cost of analyzing 25 compounds may run into the tens of thousands of dollars, according to the experts SCAQMD staff has contacted.

Therefore, in this rule development effort, staff focused on identifying the current and accepted practices around the state of California and the nation for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating an open-air rendering process such as several of the rendering facilities currently operate within the City of Vernon. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. This same standard of operation is used in other areas by at least two of the companies that operate rendering facilities within Vernon.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

11. Comment: PR 415 should include an extensive Best Practices Odor Management Plan as a template for renders to customize on a plant-by-plant basis. Rule 410 outlines an Odor Mitigation Plan. Rule 472 addresses high intensity odors.

Response: SCAQMD staff believes PR 415 incorporates necessary flexibility for each rendering facility subject to its requirements for the reasons expressed in other responses to comments. The commenter is correct regarding Rule 472 addressing high intensity odors from rendering. However, it does not

address fugitive odors that are the source of complaints in the communities surrounding Vernon, and the commercial locations in and around Vernon.

12. Comment: Odors are not continuous on a 24-hour basis. Odors are seasonal, occur at certain hours of the day and are stronger with certain wind patterns. Therefore, SCAQMD should commission a study to measure odors before passing PR 415.

Response: SCAQMD thanks the commenter for this suggestion. The staff proposal does not include an odor study. Instead, the approach PR 415 has taken involves establishing standards SCAQMD staff believes represent the best and most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

13. Comment: Adverse economic impacts if PR 415 is passed today:
- Not all rendering facilities will continue business operations
 - Compliance costs will be \$7 million to \$30 million per facility
 - SCAQMD's 3 – 5 year compliance schedule does not account for new building layout
 - 1,100 jobs will be at risk; mostly prevailing wage union jobs
 - Odors will increase as product is transport to other cities or out of state
 - Consumers will see an increase in the cost of food and commodities
 - California taxpayers, SCAQMD and rendering facilities do not need another lawsuit

Response: The commenter has not presented any evidence for the assumptions that rendering facilities will go out of business, any jobs will be lost, or that rendering facilities will incur high cost to comply with PR 415. Regarding the comments on rendering facilities not continuing operations, high compliance costs and 1,100 jobs at risk, SCAQMD staff has high confidence that rendering facilities subject to the requirements of PR 415 will continue to operate as they currently do. As evidence of this conclusion, one facility has already submitted permit applications for an enclosure and odor control equipment that will meet the permanent total enclosure, ventilation system, and odor control equipment standards in the

proposed rule. Two other facilities have indicated their anticipated compliance with the rule requirements. Of the two remaining facilities, one will take advantage of an exemption in the proposal and will not be required to build an enclosure. Staff has made every effort to work with the fifth facility to limit the scope of best management practices and consider a portion of their operation to be a closed system in order to limit costs for this facility.

SCAQMD staff conducted a socioeconomic impact analysis for estimated costs incurred by this facility as well as the other 4 facilities subject to the requirements of PR 415. Please refer to that analysis for an estimation of the costs to comply with the proposed requirements.

Regarding the comment on timing of the enclosure requirement, staff believes this timing is reasonable. Three of the 5 rendering facilities have already indicated their anticipated compliance with the proposed rule requirements.

Regarding the comment that consumers will see an increase in the cost of food and commodities, the commenter offers no data to support this conclusion or justification for it. SCAQMD cannot respond to this comment without specific information to support the commenter's conclusion that consumer costs will increase as a result of compliance with the requirements of PR 415.

Finally, regarding the comment about a lawsuit, SCAQMD staff agrees with the commenter.

Responses to North American Meat Institute Letter (July 17, 2015)

1. **Comment:** PR 415's mandatory permanent enclosure and ventilation requirements would adversely affect companies' ability to do business in the area such that long term viability of those companies would be jeopardized. The regulatory goal can be met by setting objective compliance criteria and allowing companies to determine the best method to achieve compliance. PR 415 fails to establish baseline conditions or minimum odor standard.

Response: SCAQMD staff disagrees with the commenter about long term viability of rendering facilities in the South Coast Air Basin (and particularly in Vernon) for the reasons expressed in response to comment 30. Regarding the comment about setting objective compliance criteria, staff believes the current science does not allow direct measurement of all the chemical compounds that make up odors, for reasons expressed in other comments. Therefore, setting objective compliance criteria is not a practical approach to rule compliance for PR 415. The approach PR 415 has taken involves establishing requirements SCAQMD staff believes represent the best and

most reliable way to control odors from rendering operations. SCAQMD staff researched operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. This includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*. SCAQMD staff believes this approach represents the best and most reliable way to control odors from rendering operations.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

2. Comment: PR 415 presumes each rendering facility is creating an odor problem that can only be addressed by permanent enclosures or closed systems. Enclosure requirements are not necessary to reduce odor concerns and are so costly that PR 415 will likely cause businesses to leave the area.

Response: The proposed rule has undergone several changes in response to industry comments that reduce the number of areas that would need to be enclosed. SCAQMD staff disagrees with the comment about the cost of enclosure requirements, for reasons expressed in the response to other comments.

3. Comment: Research is available on how to objectively measure odor using standardized odor measurement procedures and there are well established laboratory techniques for testing odor and development odor standards (e.g. ASTM E679). A regulatory approach based on objective measures requires an understanding of baseline conditions and development of minimum odor standards.

Response: ASTM Method E679 is a dilution-to-threshold method that relies on an odor panel to determine a detection threshold for an odor sample. As such, its potential value would only be to establish the level at which odors from an odor sample can be detected by an odor panel – not the level at which a complainant may find an odor to be objectionable. Use of this method will not help to establish baseline conditions nor the development of minimum odor standards.

Regarding the comment about development of minimum odor standards, staff believes the current science does not allow direct measurement of all the chemical compounds that make up odors. Therefore, setting minimum odor standards based on measurement of chemical compounds in odors is not feasible given the existing science and technology.

4. Comment: Reconsider the proposed approach. NAMI requests postponing the rule for at least 6 months.

Response: Due to comments from the NAMI and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, to October 2, 2015. It is now scheduled for consideration by the SCAQMD Governing Board in November 2017.

Responses to Betty T. Yee Letter (April 24, 2015)

1. Comment: Extend the rulemaking process beyond June 5, 2015 so PR 415 may be amended to authorize the SCAQMD to work with rendering facilities individually to identify site-specific controls that may be necessary.

Response: Due to comments from the State Controller and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, from the original May 2015 hearing date to October 2, 2015. The proposed rule was developed with consideration of many of the individual facility needs. PR 415 is now scheduled for consideration by the SCAQMD Governing Board in November 2017.

2. Comment: Fast-tracking of PR 415 intended to address citizen complaints about odors with a “one size fits all approach,” will have unintended consequences, including the loss of jobs in the rendering industry.

Response: The rule approach for PR 415 accounts for differences in operation at each facility. While the proposed rule requirements seek enclosure of certain very odorous processes (raw material receiving, wastewater treatment), attempts were made during the rule development process to accommodate each facility’s needs. For example, one facility reported they would have difficulties constructing a receiving enclosure tall enough to accommodate trucks that tilt up to dump raw materials. Staff changed a requirement in the rule to allow this facility to continue to use its current material delivery configuration, as long as continuous effort is made to move this material into an enclosure within 60 minutes after the end of material delivery. The same facility conducts cooking and processing operations in a large building that would be very expensive to demolish and reconstruct. Staff worked to craft rule requirements that would allow the cooking and processing operations to be considered a closed system, provided that modest changes are made to certain bins, hoppers and conveyors. Another example of the flexibility of the PR 415 approach involves the wastewater treatment plant at an integrated rendering facility. This facility processes wastewater from several areas of the facility, where rendering wastewater is currently diluted by a large volume of less-odorous water. Staff crafted an exemption for the wastewater enclosure for this facility, with the help of the Sanitation Districts of Los Angeles County (LACSD). This rule is far from the ‘one-size-fits-all’ approach suggested by the commenter. Staff has been extremely responsive to the needs of rendering facilities.

Regarding the comment about unintended consequences, including the loss of jobs in the rendering industry, SCAQMD staff has prepared a socioeconomic impact analysis that addresses impacts on the region, as well as impacts on each facility subject to PR415.

3. Comment: PR 415 is not based on science, and assumes all rendering facilities are the origin of the citizen complaints without consideration of other existing odors in the region and accounting for wind direction. PR 415 is short-sighted and will cause financial harm and hardship to these companies.

Response: Regarding the comment about rule requirements being based on science, staff believes the current science and technology does not allow direct measurement of all the chemical compounds that make up odors, for reasons expressed in other responses to comments. However, staff believes odors from rendering operations are distinct and unmistakable. Staff has experienced these distinctive rendering odors both at the facilities and in the communities surrounding Vernon. These odors are distinguishable from those from other sources such as diesel combustion.

4. Comment: The rendering industry should be given the opportunity to engage and educate the community on its operations and practices. Allowing rendering companies to have this public dialogue and the SCAQMD to work with each individual facility will ensure a better outcome for addressing citizens' odor complaints.

Response: The rendering industry is not precluded from engaging with the community independent of a rule development process. Staff has attempted to work with each of the facilities during this effort. The response by the facilities has varied widely.

Responses to City of Vernon (Green Vernon Commission) Letter (April 2, 2015)

1. Comment: Suspend rulemaking process for 180 days to allow additional time for parties to address concerns.

Response: Due to comments from the Green Vernon Commission and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, from the original May 2015 hearing date to October 2, 2015. It is now scheduled for consideration by the SCAQMD Governing Board in November 2017.

2. Comment: Construction alternatives in light of restrictions from the Planning Department and Fire Marshall. The Vernon Fire Marshall would object to enclosing processing areas as it would make fighting grease/oil fires more difficult when inside an enclosure than an open area.

- Response: The City of Vernon has allowed at least one facility that SCAQMD staff is aware of to operate grease generating processes within an enclosure. The City of Vernon has not presented any evidence as to why this practice is acceptable in current situations, but the Fire Marshall has objections to enclosure of operations that would be subject to the requirements of PR 415. In discussions with personnel at another facility subject to the requirements of PR 415, staff learned that the Fire Marshall was not concerned with enclosure of operations where grease is present, per se, but with the type of fire suppression system used. In any case, the Fire Marshall has not commented on this aspect of rulemaking for PR 415.
3. Comment: CEQA implications as a result of site upgrades and new construction requirement. Requiring rendering facilities to enclose operations might require a CEQA review if the changes proposed increase the operations foot-print.
- Response: A Draft Environmental Assessment was prepared for PR 415. The commenter is directed to that document for review.
4. Comment: Consider impacts on local economy and potential loss of jobs. There are potentially 800 jobs currently in rendering that would be subject to closure.
- Response: SCAQMD staff has high confidence that facilities subject to the requirements of PR 415 will continue to operate as they currently do. Please see response to Vernon Chamber of Commerce comment for justification of this conclusion. In addition, SCAQMD staff has prepared a socioeconomic analysis that addresses impacts on the region, as well as impacts on each facility subject to PR415. The commenter is directed to this socioeconomic impact analysis for a discussion of job impacts.
5. Comment: Consider financial impacts to rendering and auxiliary businesses. Where would businesses operate if not in Vernon? Would such businesses be incentivized to leave California? Where would businesses send animal waste if rendering sites close?
- Response: Based on an estimation of the costs of compliance with the requirements of PR 415 that was used in the socioeconomic impact analysis, SCAQMD staff does not believe the compliance costs will be so burdensome to any single facility that it will cause any rendering facility to close the rendering operations at their facility. Rendering will continue to operate in Vernon. The next nearest rendering facilities are in central California.
6. Comment: Allow alternative options to control odors. The Vernon businesses are better equipped to control site specific odor issues.

- Response: PR 415 includes two compliance options for odorous operations, including enclosure, and operation of closed systems which are not required to be ventilated to odor control equipment. SCAQMD staff has worked with the facilities to identify lower cost solutions than enclosure, and have proposed exemptions for several types of operations under subdivision (l). Regarding the comment that Vernon rendering facilities being better equipped to control site specific odors; there is nothing in the proposed rule that would prevent a rendering facility from implementing additional work practices and installing controls the operators believe would further reduce odors.
7. Comment: Quantify and qualify odors in a scientific fashion. There is currently no scientific accepted practice to identify an odor or specify the intensity of given odors in order to identify the source of the odors. This issue would require further study.
- Response: Staff believes the current science does not allow direct measurement of all the chemical compounds that make up odors, for reasons expressed in other comments. SCAQMD staff will continue to look for ways to measure odors.
8. Comment: Develop a technical standard to document complaints so they can be measured and assessed. How will inspectors be able to identify the source of a complaint if the odor is not currently present, lag time exists between complaint and inspection, or high winds carry odors over multiple sources?
- Response: SCAQMD Compliance personnel follow a prescribed procedure to verify the source of all odor complaints. The commenter has identified issues that sometimes make it difficult for SCAQMD inspectors to trace an odor to its source. If verification cannot be made by SCAQMD staff, this would not be considered as counting towards a confirmed odor event or a potential public nuisance.

Responses to JR Grease Services Email

1. Comment: Our company is deeply concerned about PR 415 and the serious impacts it will have on our business. We depend on the service contract that is provided by rendering facilities. Suspend rulemaking for 8 months to allow stakeholders to develop comments, identify issues and offer solutions.
- Response: SCAQMD staff shares your concern for economic viability of rendering facilities that are subject to the requirements of PR 415 and companies that do business with rendering facilities. Regarding the comment of a rule delay, due to comments from JR Grease Services and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, from the original May 2015 hearing date to October 2,

2015. It is now scheduled for consideration by the SCAQMD Governing Board in November 2017.

Responses to Senator Andy Vidak

1. Comment: PR 415 assumes rendering plants in Vernon are the true emitter of this odor. It does not take into account other industries in the area that may emit odors. PR 415 will require costly upgrade or lead to job losses for rendering facilities and affiliated facilities throughout California.

Response: SCAQMD staff believes odors from rendering facilities are distinctive and unmistakable. Staff has experienced these distinctive rendering odors both at the facilities and in the communities surrounding Vernon. These odors are distinguishable from those from other sources such as diesel combustion. Regarding the comment on costly upgrades and job losses, SCAQMD has prepared a socioeconomic report to address costs from compliance with PR 415 requirements and job losses in the region. The commenter is directed to that socioeconomic report for staff's analysis.

2. Comment: Extend the rule making process beyond the Jun 25, 2015 date.

Response: Due to comments from the Senator and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, from the original May 2015 hearing date to October 2, 2015. It is now scheduled for consideration by the SCAQMD Governing Board in November 2017.

Responses to Rio Hondo/Vernon Rotary Club Email

1. Comment: SCAQMD should pause for a conservative 8 months to listen and appreciate the willingness and desire to arrive at an acceptable process than will eliminate 100% of odors, permanently enclose wastewater, reduce holding time of incoming raw materials, reduce holding time of incoming raw material and institute and odor control system as well as refine the recordkeeping process.

Response: Due to comments from the Rio Hondo/Vernon Rotary Club and others calling for more time to work with rendering facilities, the Board hearing for PR 415 was delayed 5 months, from the original May 2015 hearing date to October 2, 2015. It is now scheduled for consideration by the SCAQMD Governing Board in November 2017.

Responses to National Renderers Association (August 11, 2014)

1. Comment: A one-size-fits all approach to odor control does not produce the best results. Allow rendering plants to adopt the optimal approach for their individual operations.

Response: Regarding the comment on a “one-size-fits-all” approach not producing the best results, please see response to Vernon Chamber of Commerce comment.

2. Comment: Additional research should occur before PR 415 is finalized. Technologies should be used to monitor the origin and range of odors in an area before prescriptive steps.

Response: Regarding the comment on the origin of odors, as stated in Chapter 1 of the staff report, due to the very long distances rendering odors can travel and the proximity of the five Vernon area facilities relative to one another, it is often not possible to pinpoint a single facility as the source of odors. For this reason, it is often not possible to verify odor complaints, and odor events from rendering facilities in the Vernon area rarely can be attributed to a specific individual facility since the facilities are located relatively close together. This is true despite the fact that unpleasant odors typical of rendering operations can often be detected miles away from the Vernon area rendering facilities, and odors are prevalent many days out of the year.

For these reasons, the approach taken for PR 415 was to research operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff determined that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment*.

*The proposed rule allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

**APPENDIX B: SUMMARY OF RENDERING FACILITY REGULATIONS
IN OTHER STATES**

Summary of Rendering Facility Regulations in Other States

Table B-1 presents a summary of the requirements imposed by 16 states on rendering facilities, without references to state regulations. It should not be taken as an exhaustive list of all requirements imposed on rendering facilities in each listed state; rather, a brief summary of the State regulations that SCAQMD staff was able to identify. Citation of the chapter for each state's regulations will be provided in subsequent versions of this staff report.

| State | Summary of State Rendering Requirements |
|----------------|---|
| Alabama | Render in a pressure tank where temperature is not lower than 220 degrees for not less than 4 hours. Use steel-bodied trucks or trucks with impervious liners for transport. Thoroughly clean and disinfect transport vehicles after each trip. Separate room with concrete floor for skinning and cutting up dead animals. Do not store grease or other tankage in room for skinning/cutting up. |
| Arizona | Note: Arizona requirements divided into: 1. Slaughter Establishments; 2. Rendering to Produce Certified Animal Fat; 3. Meat from Dead Animals used as Animal Food. Raw materials free from condemned and/or diseased material. Walls of smooth, finished Portland cement plaster, glazed tile, or other approved material impervious to moisture. Floors constructed of dense concrete or floor tile, sloped to drain. Hot and cold water connections shall be provided. No openings between an inedible products department and an edible products department. Loading dock shall be paved, drained, and of sufficient size to accommodate the largest truck used. Raw materials not certified for animal fat production separated at all times (transport, storage and rendering) from other material in separate marked containers identified as such. Hot and cold water provided (hot water at least 180° F). Drainage and plumbing system and sewage disposal system that will not serve as a breeding place for flies, constitute a hazard, or endanger public health. Floors, walls, ceilings, partitions, posts, doors, and other structures of materials capable of being thoroughly cleaned. Floors must have sufficient drainage to preclude stagnant accumulations of moisture. All outside windows and doors shall be screened. Rooms with well-distributed ventilation to prevent uncontrolled mold growth and filth or bacteria that may endanger health. Plant kept free from flies, rats, mice, and vermin. |

| State | Summary of State Rendering Requirements |
|-------------------|--|
| California | <p>Note: California requirements inclusive of renderers, collection centers, dead animal haulers and transporters of inedible kitchen grease. Vehicles used in transportation leakproof and constructed of impervious material to permit cleaning and sanitizing and to control insects and odors and prevent the spread of disease. Vehicles used to transport dead animals cleaned and sanitized at the end of each day. Rendering facilities must be physically separate from any facility with meat or meat byproducts. Rendering facilities that receive carcasses from any source other than a slaughter facility on the premises cannot operate within 1000 yards of a facility that slaughters livestock or other animals for human consumption. Rendering facilities must comply with the California Building Code (2007). Buildings of sound construction, to discourage entrance/harboring of pests. Floors, walls, ceilings, partitions and doors of material and finish as to make them readily cleanable. Unloading slab of sufficient size to contain all waste material unloaded on it; constructed of concrete and sloped to result in quick draining of fluids. Floors of rooms graded to cause runoff into drains and avoid pooling. No excessive build-up of dust and organic matter on equipment, floors, walls and ceilings or excessive accumulation of water, blood, manure, raw material, grease or organic matter on floors and passageways. Plant premises kept free of excessive junk, wood piles, debris and weeds that provide potential breeding places and harborage for rodents; excessive accumulation of raw materials, including manure piles, paunch contents, hair piles, dead animals and other places suitable for fly breeding; pooling water; and similar nuisances and potential breeding areas for insects and vermin.</p> |
| Colorado | <p>Rendering plants of sound construction and kept in good repair, to prevent the entrance into, or the harboring therein, of rodents, birds, insects, vermin, dogs, cats. Plant premises kept clean and orderly and free of strong or foul odors, smoke and other pollutants. Outside areas kept free from refuse, rubbish and waste materials, to prevent harborage of rodents, insects, vermin. Supply of running water available, adequate for operations. Water temperature not less than 180 degrees F., or a chemical sanitizing agent used for washdown. Vehicles used in the transportation of dead animal carcasses, parts, bone and raw tankage material constructed and maintained to prevent leakage of blood & tissue. Load compartment covered whenever a load is on board. Floors, walls, ceiling, partitions, posts, doors, and other parts of each plant structure shall be of material, construction, and finish to be readily and thoroughly cleaned. Floor kept water tight.</p> |

| State | Summary of State Rendering Requirements |
|-----------------|--|
| Georgia | Floors constructed of concrete or other non-absorbant material. Ample hot water supply (140 F). Adequate drainage. Drainage only into sewer. Cleaned and sanitized daily to prevent odor. Trucks used to transport carcasses or refuse on public highways must prevent seepage and residue from escaping. Carcasses/refuse not allowed to accumulate or be held except at rendering plant. Rodent/vermin control diligently practiced. Barrels used to transport carcasses/refuse marked "INEDIBLE" with letter at least 2 inches high. |
| Idaho | Rendering establishments must be constructed to protect finished product and prevent pollution of surrounding environment or creation of a nuisance to the public. Rendering material transported to the rendering establishment in covered and leak-proof vehicles, such vehicles to be used for this purpose only and to be cleaned and disinfected after delivering each load. Rendering material shall be heated to a sufficient temperature for a sufficient length of time to destroy all pathogens, and processed under sanitary procedures that prohibit the recontamination of the product after cooking. |
| Illinois | Floors constructed of concrete or other non-absorbent material. Adequate drainage. Rooms to be equipped with sufficient steam and steam hose to clean floors and trucks. Floors, walls and equipment kept in sanitary condition and cleaned with steam. Trucks and truck equipment kept in sanitary condition and cleaned with steam. |
| Kentucky | Haul carcass in covered vehicle, bed or tank which is constructed so that no drippings or seepings from carcass can escape. If driver suspects that animal died of communicable disease, vehicle must be disinfected. |

| State | Summary of State Rendering Requirements |
|-----------------|--|
| Michigan | <p>Except for approved escapes for steam, all tanks, cookers, boilers, driers, and condensers must be airtight. Steam shall be controlled in a manner that does not constitute a public or private nuisance or pose a threat to the health of the public or animals. Floors and walls constructed of a material that can be easily cleaned and disinfected. Floors have adequate surface drainage so that liquids will not collect or create standing pools. Adequate supply of running hot water for cleaning purposes. Loading and unloading docks/platforms constructed so that drainage is adequate and natural precipitation will not collect or create standing pools. Equipment necessary to maintain the facility in a clean and sanitary condition, including insect and pest control equipment. The floor space and equipment in a licensed facility shall be kept clean and free of accumulations of filth and debris.</p> <p>Accumulations of dead animals shall not create a public or private nuisance or health hazard. Odors in and around licensed facilities shall not be allowed to create a public or private nuisance. Odor control equipment available on the premises. Dead animals stored indoors on floors constructed of concrete. Contents of the digestive tract and manure not allowed to accumulate on the premises of any licensed facility for more than 6 days and disposal not allowed to create a public nuisance or health hazard or endanger the health of livestock. The contents of the digestive tract shall be stored in covered containers that do not leak.</p> |

| State | Summary of State Rendering Requirements |
|--------------------|---|
| Mississippi | <p>No new plant located or constructed within two miles of the nearest point of any municipality with a population in excess of five hundred (500) according to the latest federal census, or within one mile of the nearest boundary of lands owned or controlled in connection either with any state, county, township, city or town park, or boulevard, or of any public school or hospital, or of any charitable, religious or educational institution. Building must have four walls complete and be provided with concrete or cement floors and with good drainage and be thoroughly sanitary in construction and maintenance. Any sewage, drainage, or waste water, if of an offensive or obnoxious character or odor, not be permitted to escape until first treated. All sewage and plant wastes disposal according to recognized and accepted sanitary engineering methods which will not create a public health hazard or unsanitary situation so as to be a nuisance. Plants must be equipped and operated with steel tanks, enclosed dryers and cold water condensers. Tanks must be airtight except proper escapes for live steam, passing through the tanks during cooking, which steam shall be condensed by use of cold water condensers. All equipment for use in disposal or rendering plants constructed and maintained as to prevent any avoidable escape of odors into the air. Skinning and dismembering done within a building so that no unnecessary annoyance caused to other persons by the conditions or unsightly appearance. All such bodies/parts disposed of within 24 hours after delivery to plant.</p> |
| Ohio | <p>Floors constructed of concrete or some other nonabsorbent materials. Have adequate water supply, and be supplied with sufficient steam and steam hose to clean the floors of the plant and its trucks. All parts of building and all equipment kept in a sanitary condition and cleaned at least once each day with steam. All raw rendering material processed or disposed of within forty-eight hours after arrival at the rendering plant. Cooking vats/tanks airtight, except for proper escapes for steam. Steam disposed of so as to cause no nuisance. All skinning and dismembering of an animal body or part thereof done within a building.</p> |

| State | Summary of State Rendering Requirements |
|-----------------|---|
| Oklahoma | Floors constructed of concrete, or some other non-absorbent material, adequate drainage, be thoroughly sanitary, be provided with adequate water supply and sufficient hot water to properly and adequately clean floors and trucks. Plants separated by a permanent wall and apart from any other business operation. Maintain the facilities in such sanitary manner as to eliminate insofar as possible, all odors, insects, and vermin. Separate building or storage area shall be provided for the purpose of storing the finished products in order to avoid contamination after processing. No tools or equipment used in handling the unfinished product used in storage area, or in handling of finished product. Rodent and vermin control diligently practiced. Uncontrolled animal and birds not tolerated on premises. Buildings and surrounding grounds shall be kept clean and free from refuse, trash, or the accumulation of product or products of processing, including paunch manure. Barrels used for transporting and storage of scrap or used cooking grease and oils clearly marked "inedible" with letters not less than three inches in height. |

| State | Summary of State Rendering Requirements |
|-----------------------|---|
| Oregon | <p>All interior surfaces of impervious materials. All areas of the building and equipment used in the conduct of the business shall be maintained in a clean and sanitary condition. Areas and equipment, including storage pits and transfer augers, cleaned at the end of every work day, and a log kept. Floors, walls and ceilings shall be free of any observable raw material. Liquid not allowed to collect or pool. Sanitary drainage provided, leading to a sewage disposal system. Hot water and steam available to maintain the areas and equipment. Outside premises shall be maintained free of raw material, any dried liquid matter from animal parts and litter. Immediately after unloading for processing or into transfer pits, raw material sprayed with an odor control spray. Raw material for rendering not to remain longer than eight hours on the premises of a business without being refrigerated, processed or transferred to another processing site. If circumstances outside control of the business arise which prevent action within eight hours, business to maintain raw material in such a manner that no public annoyance is caused by the unsightly appearance or odor of the raw material. Cooking area must be separate from the storage area and the area where raw materials are skinned, butchered or dismembered. The latter two areas shall also be separate from each other. The cooking, loading and unloading areas shall be enclosed. Pressure control to be automatic, checked daily. Pressure control calibrated, and tested annually. Traps capable of preventing odor in the disposal of steam or exhaust installed on steam vents. Transport of raw material in a manner that no public annoyance is caused by the unsightly appearance of such material. Vehicles maintained to prevent drippings or seepings. Use industrial grade seals. Inspect seals regularly. Maintain seals to prevent drippings or seepings. Vehicles and containers cleaned after every work day to ensure that no raw material, liquids or scraps remain, and a log kept.</p> |
| South Carolina | <p>Be located on site zoned for use, have a potable water supply, wastewater and solid disposal; utilize buildings and partitions to prevent any contact between raw material and finished product; ensure adequate drainage and sanitation, walls, floors and ceilings constructed of nonabsorbent materials; have adequate supply of hot water and cleaning agents; operate using reasonable precautions to prevent objectionable odors from being discharged beyond the boundaries of the permittee's property; practice rodent and vermin control; mark all barrels with "INEDIBLE" in letters at least two inches in height; have a control and recontamination program that prevents cross-contamination between raw material and finished product.</p> |

| State | Summary of State Rendering Requirements |
|---------------------|--|
| South Dakota | A rendering plant must include a building or buildings provided with concrete floors with good drainage and constructed to be maintained in a sanitary condition. There must be provision to prevent entrance to the buildings of rodents or other animals. All windows, doors, and other openings must be screened unless a program for insect extermination is followed in the buildings and on the premises where the buildings are located. All skinning and dismembering of carcasses must be done in buildings constructed for that purpose. The cooking vats must be airtight except for vents for the live steam used in cooking. All steam vents must be furnished with closing mechanisms and steam valve gauges to ensure that cooking is at the required steam pressure. All carcasses and parts must be disposed of by subjecting them to a cooking and rendering procedure in vats or tanks under steam pressure. Floors and walls of the plant must be thoroughly flushed or scrubbed daily with live steam or boiling water when the plant is in operation. All floor washings and other liquid waste or accumulation of water from washing the viscera must be disposed of through disposal facilities. |
| Texas | Clean floors at the end of each day's operation. Premises kept clean and free from refuse, waste, rodents, insect breeding, & standing water. Collection containers leak-proof and sanitary. Transfer and loading of dead animals must prevent release of animal parts, spills and leaks. Construction/layout of operation must prevent development of malodorous conditions or nuisance. Floors, walls and ceilings constructed of impervious and easily cleanable materials. Exterior walls/roof and openings must protect against intrusion of insects, rodents and other vermin. Provide a paved area adequate to wash & sanitize trucks. Drain paved area to sanitary sewer system. Provide sufficient ventilation to dispel disagreeable odors, condensate and vapor. |

ATTACHMENT H

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Environmental Assessment for Proposed Rule 415 – Odors from Rendering Facilities

October 2017

SCAQMD No. 150527JI
State Clearinghouse No: 2015071030

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PREFACE

This document constitutes the Final Environmental Assessment (EA) for Proposed Rule (PR) 415 – Odors from Rendering Facilities. A Draft EA was released for a 30-day public review and comment period from July 14, 2015 to August 12, 2015. Analysis of PR 415 in the Draft EA did not result in the identification of any environmental topic areas that would be significantly adversely affected. Three comment letters were received regarding the analysis in the Draft EA. The comment letters received relative to the Draft EA and responses to individual comments are included in Appendix D of this document.

This preface includes clarifications and revisions to the Draft EA. The clarifications and revisions can be grouped into three categories: (1) additional or revised information required to prepare responses to comments received from the public; (2) applicable updated information that was not available at the time of the Draft EA publication, including modifications to PR 415 that were made after the release of the Draft EA; and (3) staff-initiated text revisions and typographic errors. Additional clarifying information has been identified in comments to the Draft EA and responded to in Appendix D of this document. The updates can be grouped into seven areas as part of the Final EA development process.

Updated Area No. 1: Global Changes

As described in Draft EA (Page 2-49) and explained in the Master Response 4 in Appendix D, the environmental analysis for PR 415 is based on a worst-case impact scenario rather than a facility- or site-specific analysis. As such, the following global change is made throughout the document:

All instances of “worst-case ~~facility~~ scenario,” “worst-case scenario ~~facility~~ analysis,” and “worst-case ~~facility~~ analysis scenario” are changed to “worst-case impact scenario.”

When an enclosure is required, the enclosure is intended to be totally, not partially, closed with exterior walls and a roof. Therefore, the following global change is made throughout the document:

All instances of “permanent enclosure” are changed to “permanent total enclosure.”

Updated Area No. 2: Modifications to the Scope of PR 415

As part of the rulemaking development process, the PR 415 rule language has been updated since the publication of the draft PR 415 rule language and Draft EA in 2015. Changes to PR 415 are summarized in Table 1 and can be grouped into five categories as follows:

- Staff-initiated text revisions to improve the readability of the proposed rule
- Existing requirements that have been removed
- Existing requirements that have been made to allow more flexibility during implementation
- New requirements that have been made to allow more flexibility during implementation
- New exemptions that limit the applicability of PR 415

It is important to note that Table P-1 is a compilation of changes to the scope of PR 415 to show good faith efforts by SCAQMD staff during the rule development process to respond to each facility’s unique operational needs and provide sufficient flexibility during implementation.

Therefore, it is not an exhaustive representation of all of the changes to PR 415, but only the changes that may affect the environmental impact analysis in the Final EA.

Table P-1: Summary of Major Changes to PR 415

| Areas of Changes | PR 415 (June 23, 2015 ¹) | PR 415 (November 3, 2017 ²) |
|---|---|---|
| Odor Best Management Practices (BMP) | <ul style="list-style-type: none"> • BMP (e)(9) Transfer of Raw or Cooked Rendering Materials between Enclosures • BMP (e)(11) Cleaning Floor Drains | <ul style="list-style-type: none"> • Limited the application of BMP (e)(9) to transfer of cooked rendering materials only at facilities with a batch cooker between permanent total enclosures while the BMP applies to transfer of raw materials at all facilities • Limited BMP (e)(11) Cleaning Floor Drains to remove accumulation of rendering materials³ to not less frequently than once per month • Added an alternative BMP, provided that it meets the same odor reduction objective as the BMP it replaces |
| Trap Grease | <ul style="list-style-type: none"> • PR 415 applied to trap grease wastewater associated with trap grease processing • Delivery Tanker Trucks BMP • Venting Delivery Tanker Vehicles to Odor Control Equipment BMP | <ul style="list-style-type: none"> • Removed trap grease from PR 415 applicability • Removed the two BMPs PR 415 (e) Odor Best Management Practices |
| Time Extension Request | <ul style="list-style-type: none"> • Not included. | <ul style="list-style-type: none"> • Provided a one-time extension for up to one year to complete construction of a permanent total enclosure and applicable ventilation and odor control systems for situations beyond the owner or operator's control (PR 415 (d)(1)(F)) |
| Ventilation System Design Standards | <ul style="list-style-type: none"> • Inward face velocity of not less than 200 feet per minute | <ul style="list-style-type: none"> • Lowered inward face velocity demonstration from 200 feet per minute (fpm) to 100 fpm when truck access doors are open • Added an alternative ventilation system design standard in lieu of inward face velocity, provided the ventilation system is greater than 15 air changes per hour |
| Alternative Standard for the Raw Materials Receiving Area | <ul style="list-style-type: none"> • Not included. | <ul style="list-style-type: none"> • Allowed an alternative standard for an unventilated permanent total enclosure for raw material receiving, provided that a secondary odor containment system is used at each opening for vehicles and equipment; such as air curtains, vestibules, or air lock systems to minimize fugitive odors escaping through enclosure openings (PR 415 (f)(5)) |

Table P-1: Summary of Major Changes to PR 415 (concluded)

| Areas of Changes | PR 415 (June 23, 2015 ¹) | PR 415 (November 3, 2017 ²) |
|---|---|---|
| Wastewater | <ul style="list-style-type: none"> • Rendering wastewater diluted with more than 40 volumes of non-rendering wastewater • Any mixed wastewater exposed to the atmosphere has a chemical oxygen demand (COD) lower than 1,500 mg/L | <ul style="list-style-type: none"> • Lowered dilution ratio of non-rendering wastewater to 30 volumes (three-year average) for a rendering facility integrated with a slaughterhouse or meat packing plant • Allowed dilution ratio of non-rendering wastewater to rendering wastewater of no less than 30:1 for a rendering facility not integrated with a slaughterhouse or meat packing plant • Increased COD to lower than 3,000 mg/L for mixed wastewater exposed to atmosphere |
| Containers | <ul style="list-style-type: none"> • Odor-tight containers | <ul style="list-style-type: none"> • Changed to covered containers |
| Equipment Breakdowns and Emergency Rendering Services | <ul style="list-style-type: none"> • Not included. | <ul style="list-style-type: none"> • Allowed a rendering facility to accept additional materials from another rendering facility that cannot conduct rendering activities for up to 7 days if PR 415 (k)(1) and (2) are met |
| Exemptions | <ul style="list-style-type: none"> • Three exemptions | <p>Added six new exemptions:</p> <ul style="list-style-type: none"> • Lower usage for small batch cookers with limited throughput are exempted • Seldom usage (25 days per year or less) of rendering facilities are exempted • Certain protein meal operations are exempted • Forklifts are not considered transportation vehicles • Certain trap grease unloading operations • Processing of used cooking oil |

NOTES:

1. The Draft EA analyzed the June 23, 2015 version of the PR 415 languages.
2. Changes to PR 415 as reflected in the November 3, 2017 version that will be submitted to the SCAQMD Governing Board for consideration and adoption were reviewed as part of the Final EA development process.
3. Raw rendering materials do not include used cooking oils that have been used for cooking or frying in the food processing industry, restaurants, and fast food establishments.

Updated Area No. 3: Modifications to Enclosure Construction Estimates

Modifications to the enclosure construction estimates became available after the release of the draft PR 415 rule language and Draft EA. Consistent with the assumptions in the Socioeconomic Impact Assessment for PR 415, the modifications reflecting more accurate estimates of enclosure sizes are summarized in Table P-2. Appendix B, *Enclosure and Control Device Estimates*, of the Final EA has been updated to reflect the modifications.

As stated in the Appendix D, SCAQMD is aware of five existing rendering facilities that may be subject to PR 415.

- Facility A uses a continuous rendering process
- Facility B uses a continuous rendering process
- Facility C uses a continuous rendering process
- Facility D uses a batch rendering process
- Facility E uses a batch rendering process

As shown in Table P-2, the modifications are expected to result in lower estimates of enclosure sizes for Facilities B, D, and E. Although enclosures are expected at Facility B and Facility D, the size of enclosures required is substantially less than what was analyzed in the Draft EA and would likely result in a decrease in the peak daily construction emissions in the Draft EA (Page 2-13) and Appendix C: CalEEMod Output to the Draft EA. The reduction in the size of enclosures for Facility B and Facility D is caused by better estimates of the areas that would be required for enclosures, while the reduction in the size of enclosures for Facility E is because that this Facility is expected to qualify for the low usage exemption under PR 415(l). Therefore, the environmental analysis disclosed in the Draft EA represents the worst-cast impact scenario for potential impacts on air quality and greenhouse gas emissions during implementation of PR 415.

Table P-2: Modifications to Construction Based on High Estimates of Enclosures By Rendering Facility

| AREA | A ¹ | B | C | D | E ⁷ |
|--|-------------------------|---|--------------------------|--|---------------------------------|
| Wastewater treatment area | N/A | 3,500 sq. ft. ² | N/A | N/A 350 sq. ft. | 2,500 sq. ft. N/A |
| Main processing plant | N/A | 40,000 0 sq. ft. ³ | N/A ⁵ | Retrofit 9,000 1,600 sq. ft. | 5,500 sq. ft. N/A |
| Secondary Processing Plant | N/A | 40,000 4,000 sq. ft. ⁴ | N/A | N/A | N/A |
| Receiving area | N/A | Included with Main processing plant <u>9,000 sq. ft.</u> | N/A sq. ft. ⁶ | 9,000 <u>625</u> sq. ft. | N/A |
| Total Enclosures Assumed in Final EA | 19,075 sq. ft. | | | | |
| Differences by Facility between Draft EA and Final EA | N/A | (37,000) sq. ft. | 0 sq. ft. | (15,425) sq. ft. | (8,000) sq. ft. |
| Total Enclosures Assumed in Draft EA | 53,500 sq. ft. | | | | |
| Differences by Total Square Footage between Draft EA and Final EA | (34,425) sq. ft. | | | | |

NOTES:

1. Facility A is already meeting (or soon will) the PR 415 requirements.
2. The Draft EA assumed 3,500 square feet of enclosure at Facility B. No changes to the assumptions for Facility B are made for the Final EA.
3. Based on the information available to SCAQMD staff, Facility B is expected to use a closed system in their main processing plant instead of building a permanent total enclosure for meeting the requirements of PR 415.
4. Enclosure is only expected for the raw materials receiving area at the secondary rendering processing plant.
5. Facility C is expected to use a closed system to meet the requirements of PR 415. No building modifications or enclosures are assumed for the cooking and processing enclosure.
6. Facility C is expected to make minor improvements to meet the alternative standard for an unventilated permanent total enclosure for the raw materials receiving area.
7. Facility E is expected to qualify for the low usage exemption under PR 415 (I).

Updated Area No. 4: Modifications to Construction Estimates with Respect to Demolition

Implementation of PR 415 will likely involve approximately 9,000 square feet of existing buildings or facilities to be demolished at one rendering facility. As shown in Table 2-3 of the Draft EA, on Page 2-13, and Page 5 of Appendix C, demolition lasting approximately 10 days was included to calculate the peak daily construction emissions. To be consistent with the modeling assumptions, the Final EA has been revised to reflect the information about demolition. Given that demolition, when added to the amount of enclosures that are no longer required as shown in Table P-2, is a *de minimus* change resulting in *changed minimus changes* to the peak daily construction emissions in the Draft EA (Page 2-13) and Appendix C. Therefore, the environmental analysis disclosed in the Draft EA represents the worst-cast impact scenario for potential impacts on air quality and greenhouse gas emissions during implementation of PR 415.

Updated Area No. 5: Modifications to Washing Activities and Water Usage Assumptions

Implementation of PR 415 will require several washing activities as part of the odor BMPs. Water usage as a direct result of PR 415 consist of scrubber makeup water, water for washing outgoing transport vehicles, water for washing drums and containers, and water for cleaning floor drains. However, since the publication of the draft PR 415 rule language and Draft EA, modifications to the rule language were made to reduce washing activities and to further minimize the potential impacts on hydrology and water quality. Consistent with the water usage assumptions in the Socioeconomic Impact Assessment for PR 415, the Final EA has been updated to reflect the changes as summarized in Table P-3.

As shown in Table P-3, a total usage of approximately 3,340 gallons per day of potable water is anticipated during the implementation of PR 415. This represents a substantial decrease from the 157,200 gallons per day that was analyzed in the Draft EA (Page 2-35). Therefore, the environmental analysis disclosed in the Draft EA represents the worst-cast impact scenario for potential impacts on hydrology and water quality during implementation of PR 415.

Table P-3: Modifications to Washing Activities and Water Usage Assumptions By Rendering Facilities¹

| Activities ² | A ⁵ | B | C | D | E |
|---|----------------------------------|-----------------------|--------------------------------|---------------------|--------------------|
| Scrubber Makeup Water | N/A | 2,940 gallons per day | 0 gallons per day ⁶ | N/A ⁷ | N/A ⁸ |
| BMP (e)(3): Washing of Outgoing Transport Vehicles ³ | 0 gallons | 0 gallons | 0 gallons | 0 gallons | 0 gallons |
| BMP (e)(4): Washing of Drums and Containers | 100 gallons per day | 100 gallons per day | N/A | 100 gallons per day | N/A ⁸ |
| BMP (e)(11): Cleaning Floor Drains ⁴ | 25 gallons per day | 25 gallons per day | 25 gallons per day | 25 gallons per day | 25 gallons per day |
| Subtotal by Facility | 125 gallons per day | 3,065 gallons per day | 25 gallons per day | 125 gallons per day | 25 gallons per day |
| Grand Total: | 3,340 gallons per day | | | | |
| Difference between Draft EA and Final EA | (153,860) gallons per day | | | | |

NOTES:

1. SCAQMD’s significance threshold is 262,820 gallons per day of potable water.
2. Washdown of receiving areas (BMP (e)(10)) is considered business as usual (i.e. - no additional water usage), since each rendering facility is currently required to wash the receiving area under their permits on the same frequency as under the proposed rule.
3. Outgoing vehicles such as trucks are already required to be washed under Title 3 of the California Code of Regulations, Section 1180.35. No additional water usage is assumed.
4. All five rendering facilities are subject to BMP (e)(11): Cleaning Floor Drains. As described in Table P-1, cleaning floor drains is limited to at least once per month. It is assumed that each rendering facility would use approximately 660 gallons of water per cleaning for one hour per month, resulting in 7,920 gallons per year per facility (660 gallons/each washing x 1 hour x 1 month x 12 months). For the ease of summation using a gallons/day unit, the amount of water that is needed for cleaning floor drains is calculated by dividing 7,920 gallons per year per facility by 312 working days. Therefore, approximately 25 gallons of potable water per day are assumed for each facility to comply with BMP (e)(11).
5. Facility A is already meeting (or soon will) the PR 415 requirements. Therefore, no scrubber makeup water is assumed for Facility A.
6. Facility C is expected to conduct minor improvements to achieve a closed system. No enclosures are assumed, and no scrubbers or associated makeup water would be required for a closed system.
7. Based on the information available to SCAQMD staff, it is assumed that Facility D will use a carbon adsorption system instead of scrubber for controlling rendering odors. Therefore, no scrubber makeup water is assumed for Facility D.
8. Facility E is expected to qualify for the low usage exemption under PR 415 (l). No scrubber makeup water or washing of drums and containers is assumed.

Updated Area No. 6: Ventilation Standards

PR 415 is intended to control and reduce odors from facilities rendering animals and animal parts by requiring enclosure of odorous operations at a rendering facility, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment¹. All permanent total enclosures (PTE) are required to be ventilated to odor control equipment, except for the raw materials receiving areas where PR 415 allows an alternative standard for the PTE. Under the alternative standard, a secondary odor containment system must be installed at all truck and equipment access openings of the PTE, as discussed in more details below in Option 3. The

¹ Based on the rule language published on October 4, 2017, PR 415 allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

purpose of this ventilation requirement is to treat fugitive odors that are generated from rendering operations and collected within the permanent total enclosure prior to being released into the environment. A ventilation system is subject to the design standards under paragraph (f)(2). Table P-1 above highlights the changes made to the design standards since the release of the Draft EA for PR 415. The following options are allowed under PR 415 to comply with the ventilation and odor control equipment standards.

Option 1: Odor Control Equipment – Scrubbers

While PR 415 does not specify a particular type of odor control, odor control equipment would be required for any PTE enclosing batch cooking operations, rendering processing equipment, and wastewater treatment processes. Wet scrubbers are commonly used in low-concentration, high flow rate applications, such as the conditions expected for control of fugitive odors in the receiving, wastewaters and processing areas of a rendering facility.

Option 2: Odor Control Equipment – Carbon Adsorption System

Since the release of the Draft EA for PR 415, SCAQMD staff has learned that Facility D may use a carbon adsorption system in lieu of scrubbers for the raw material receiving, cooking and wastewater treatment enclosures. It was assumed that carbon will be purchased in 55-gallon drums, and that the drums will be installed in parallel configuration to make up the necessary carbon volume. Replacement of the drums are expected once a year, and the spent carbon will be disposed at landfills. Since Facility D is the only rendering facility that has expressed interest in the carbon adsorption system, Table P-4 shows the breakdown of the system based on the needs for Facility D. The Final EA has been revised to reflect the usage of carbon adsorption system at Facility D. It is recognized that other rendering facilities may also choose to use the carbon adsorption system instead of scrubbers to control odors. However, since it is not foreseeable at the time of preparing the Final EA whether any other rendering facility would use a carbon adsorption system, it is important to disclose that this Final EA only analyzes the potential environmental impacts for the scenario that only Facility D is using the carbon adsorption system as odor control equipment to meet the ventilation requirement under PR 415.

Table P-4: Breakdown of Carbon Adsorption System at Facility D

| Enclosures | Amount of Carbon (in cubic feet) | | Number of Drums ¹ | |
|----------------------------------|----------------------------------|---------------|------------------------------|---------------|
| | Low Estimate | High Estimate | Low Estimate | High Estimate |
| Cooking enclosure | 86 | 115 | 10 | 13 |
| Receiving and grinding enclosure | 28.5 | 38 | 4 | 5 |
| Wastewater treatment area | 10.3 | 13.8 | 2 | 2 |
| Total Drums: | / | / | 16 | 20 |

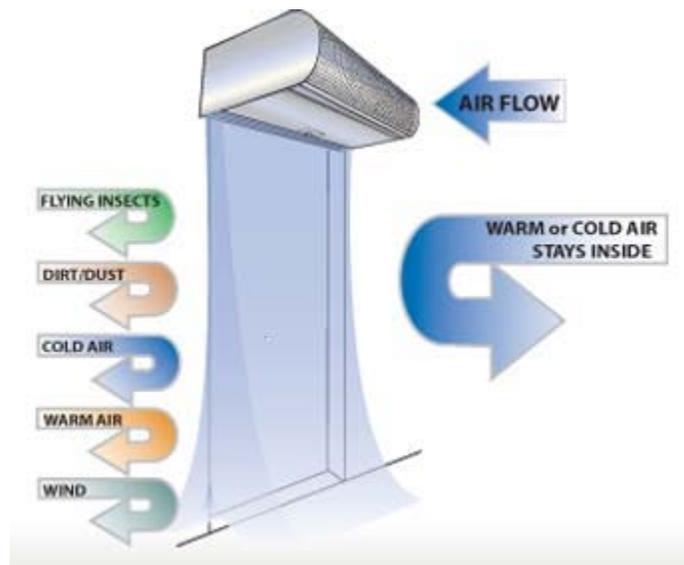
NOTE:

1. It is assumed that each drum is 55 gallons.

Option 3: Secondary Odor Containment System for the Raw Materials Receiving Enclosures

Under the alternative enclosure standard, rendering facilities may elect to install secondary odor containment systems such as air curtains, vestibules, and air lock systems at each truck or equipment access opening for the raw materials receiving areas to minimize fugitive odors escaping through enclosure opening. Based on SCAQMD staff’s observations and discussions with the affected facilities during site visits, it was assumed that multiple air curtains would be installed at the permanent total enclosures of raw materials receiving areas at Facilities B and C² (Figure P-1). Figure P-1 shows an example of air curtain. Most air curtains are used to insulate a building from heat entering or leaving the building. In this case, it will be used to keep rendering odors inside the building when the physical door is open.

Figure P-1: Example of Air Curtain



SOURCE: South Coast Air Quality Management District. October 2017.

The Final EA has been revised to reflect the usage of a secondary odor containment system and associated electricity consumption.

As an alternative to a permanent total enclosure, PR 415 allows rendering facilities the option to implement a closed system. Based on the information available to SCAQMD staff, Facility C is expected to use a closed system for meeting the requirements of PR 415. Therefore, no square footage of permanent total enclosures are assumed for Facility C in the Final EA (see Table P-2, Notes 5 and 6).

Updated Area No. 7: Electricity Consumption

The usage of ventilation and scrubbers as discussed in Updated Area No. 6 will require electrical power usages in three areas. First, electricity would be needed to operate one or more high pressure blowers that are necessary to move sufficient air through the ventilation system to achieve the assumed air changes per hour in a permanent total enclosure. Second, electricity would be needed

² Since Facility D’s raw materials receiving area is co-located with its grinding operations, this facility will be required to ventilate the permanent total enclosure to odor control equipment. The secondary odor containment system is not available for the raw materials receiving area at Facility D.

to operate one or more recirculation pumps to circulate the scrubbing solution necessary for the operation of wet scrubbers. Third, electricity would be needed to operate air curtains when the physical door(s) in raw materials receiving areas are open during ingress and egress activities³. Table P-5 summarizes the electricity usages for the rendering facilities.

Table P-5: Electricity Consumption at the Rendering Facilities

| Facility | Electricity Usage for Ventilation Blower (kW-h/year) | | Electricity Usage for Scrubber Recirculation Pumps (kW-h/year) | | Electricity Usage for Air Curtain (kW-h/year) |
|--|---|---------------|--|----------------|---|
| | Low Estimate | High Estimate | Low Estimate | High Estimate | |
| A | Facility A is already meeting (or soon will) the PR 415 requirements. | | | | |
| B | 272,204 | 362,938 | 89,667 | 119,556 | 7,448 ¹ |
| C ² | 0 | 0 | 0 | 0 | 3,529 |
| D | 17,314 | 23,086 | 0 ³ | 0 ³ | 0 |
| E | Facility E is expected to qualify for the low usage exemption under PR (I). | | | | |
| Total | Low Estimate: 390,162 kW-hr/year or 390 megawatt-hours/year High Estimate: 516,557 kW-hr/year or 517 megawatt-hours/year | | | | |
| Draft EA | 2,015 megawatt-hours/year was assumed | | | | |
| Differences between Draft EA and Final EA | Low Estimate: (1,625) megawatt-hours/year High Estimate: (1,498) megawatt-hours/year | | | | |

NOTES:

1. The permanent total enclosures for the raw material receiving areas at Facility B, both the main and secondary processing plants, are expected to elect the secondary odor containment system under PR 415 (f)(5).
2. Facility C is expected to achieve a closed system. Since no permanent total enclosure is assumed for Facility C, electricity usage for ventilation and scrubber is not assumed. However, the enclosure for the raw materials receiving area at Facility C is expected to elect the secondary odor containment system under PR 415 (f)(5). Therefore, electricity usage is assumed in the Final EA.
3. As disclosed above, Facility D is expected to use the carbon adsorption system instead of scrubbers to control and reduce rendering odors.

As shown in Table P-5, an additional 390 to 517 megawatt-hours usage is anticipated annually during the implementation of PR 415. This represents a substantial decrease from 2,015 megawatt-hours per year that was analyzed in the Draft EA (Page 2-25). Therefore, the environmental analysis disclosed in the Draft EA represents the worst-cast impact scenario for potential impacts on energy and air quality and greenhouse gas emissions from the generation of electricity during implementation of PR 415.

Conclusion

SCAQMD staff has reviewed all of the revisions that are made to the Draft EA and determined that none of the revisions constitute: 1) significant new information; 2) a substantial increase in the severity of an environmental impact; or, 3) provide new information of substantial importance

³ Facility D is assumed to use carbon systems instead of wet scrubbers as its odor control equipment. Secondary odor containment systems such as air curtains are assumed for Facilities B and C at their raw materials receiving areas but not assumed for Facility D. This is because Facility D's raw materials receiving area would be vented to odor control equipment as the area is co-located with its grinding operations.

relative to the Draft EA. Rather, the revisions are made to increase the understanding of the environmental analysis prepared for PR 415. The revisions are also intended to further support the findings or conclusions of the Draft EA that PR 415 would not have any significant or potentially significant effects on the environment as required by CEQA Guidelines Section 15252 (a)(2)(B). As a result, the revisions are not substantial revisions triggering or requiring recirculation pursuant to CEQA Guidelines Section 15073.5. Therefore, this document now constitutes the Final EA for PR 415.

To facilitate identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strikethrough~~. To avoid confusion, minor formatting changes are not shown in underline or strikethrough mode.

TABLE OF CONTENTS

CHAPTER 1 - PROJECT DESCRIPTION

| | |
|---|------|
| Introduction..... | 1-1 |
| Affected Facilities..... | 1-3 |
| California Environmental Quality Act..... | 1-4 |
| Project Location..... | 1-4 |
| Project Objective..... | 1-6 |
| Project Background..... | 1-6 |
| Rendering Process Overview..... | 1-7 |
| Project Description..... | 1-11 |

CHAPTER 2 - ENVIROMENTAL CHECKLIST

| | |
|---|-----|
| Introduction..... | 2-1 |
| General Information..... | 2-1 |
| Environmental Factors Potentially Affected..... | 2-2 |
| Determination..... | 2-3 |
| Environmental Checklist and Discussion..... | 2-4 |

FIGURES

| | |
|---|------|
| Figure 1-1 — Products and By-Products Produced by Rendering Operations..... | 1-2 |
| Figure 1-2 — Boundaries of the South Coast Air Quality Management District..... | 1-5 |
| Figure 1-3 — Location of Rendering Facilities..... | 1-6 |
| Figure 1-4 — Schematic of Typical Continuous Dry Rendering Process..... | 1-10 |

TABLES

| | |
|--|------|
| Table 2-1 — SCAQMD Air Quality Significance Thresholds..... | 2-12 |
| Table 2-2 — New Enclosures for Worst-Case <u>Impact Analysis</u> Scenario..... | 2-14 |
| Table 2-3 — Peak Construction Emissions Due to Construction of New Enclosures for Worst-Case <u>Impact Analysis</u> Scenario..... | 2-15 |
| Table 2-4 — New Control Equipment for Worst-Case <u>Impact Analysis</u> Scenario..... | 2-15 |
| Table 2-5 — Peak Construction Emissions Due to Installation of New APCDs for Worst-Case <u>Impact Analysis</u> Scenario..... | 2-16 |
| Table 2-6 — Residential Receptor Distance..... | 2-17 |
| Table 2-7 — Overall CO ₂ Equivalent (eq) Increases Due to Construction Activities for Worst-Case <u>Impact Analysis</u> Scenario (metric tons/year)..... | 2-21 |
| Table 2-8 — Additional Electricity Usage from New APCDs and Negative Pressure Air Handling Equipment for Worst-Case <u>Impact Analysis</u> Scenario..... | 2-29 |
| Table 2-9 — Total Projected Fuel Usage for Construction Activities..... | 2-31 |

APPENDIX A – PROPOSED RULE 415 – ODORS FROM RENDERING FACILITIES

APPENDIX B – PERMANENT TOTAL ENCLOSURE AND CONTROL DEVICE ESTIMATES FOR AFFECTED FACILITIES

**APPENDIX C – REVISED CONSTRUCTION EMISSIONS FOR WORST-CASE
IMPACT ANALYSIS SCENARIO**

**APPENDIX D – LETTERS RECEIVED ON THE DRAFT EA AND RESPONSES TO
COMMENTS**

CHAPTER 1

PROJECT DESCRIPTION

Introduction

Affected Facilities

California Environmental Quality Act

Project Location

Project Objective

Project Background

Technology Overview

Project Description

INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD) in 1977⁴ as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin referred to herein as the District. By statute, SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the District⁵. Furthermore, SCAQMD must adopt rules and regulations that carry out the AQMP⁶. SCAQMDs AQMP does not contain any control measures to reduce odors from rendering facilities. PR 415 is a direct result of an issue that was identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. In November 2010, the SCAQMD Governing Board approved the CCP. The CCP is an update to the 2000 Air Toxics Control Plan (ATCP) and the 2004 Addendum. The objective of the 2010 CCP is to reduce the exposure to air toxics and air-related nuisances throughout the District, with emphasis on cumulative impacts. The elements of the 2010 CCP include community exposure reduction, community participation, communication and outreach, agency coordination, monitoring and compliance, source-specific programs, and nuisance. SCAQMD staff began implementing the CCP in the pilot study area of Boyle Heights, near rendering facilities in the City of Vernon, by meeting with a stakeholder working group beginning in July 2011. The purpose of this working group was to identify air quality issues of importance to the community in Boyle Heights and surrounding communities. The prevalence of odors from rendering facilities in Vernon, directly south of Boyle Heights, was of great concern to the working group and represented a quality of life issue. As a direct result of the CCP pilot study process, SCAQMD staff commenced rulemaking to address these odors in 2014.

The District is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles" [Health and Safety Code (H&SC) §40000]. The term "air pollutant" encompasses many air contaminants, including odors [H&SC §39013]. Therefore, the District may regulate to control air pollution, including odors, from PR 415 sources. In addition, the District has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on the District by law [H&SC §40702].

The District's legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities also derives from H&SC §41700, which, in pertinent part, prohibits the discharge of air contaminants causing annoyance to the public. It further prohibits the discharge of air contaminants, such as odors, which "endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property" [H&SC §41700]. The District's authority granted by H&SC 41700 to protect the public's comfort and health and safety provides for the regulation of facilities in order to prevent the discharge of odors that cause nuisance or annoyance to the public.

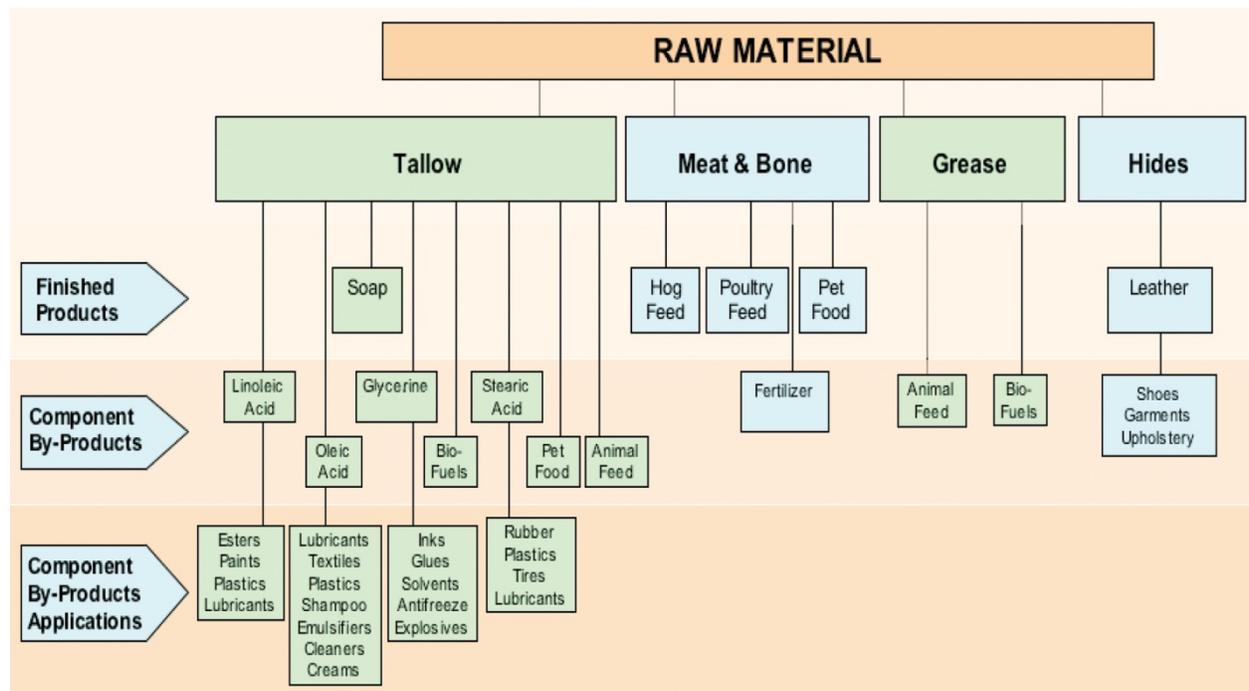
⁴ The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch 324 (codified at Health and Safety Code, §§40400-40540).

⁵ Health and Safety Code, §40460 (a).

⁶ Health and Safety Code, §40440 (a).

In addition, H&SC §40001(b) authorizes the District to adopt rules and regulations, such as PR 415, and provides, in relevant part, for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons.

Proposed Rule (PR) 415 – Odors from Rendering Facilities, is designed to reduce odors from facilities conducting rendering operations. Rendering is a process that converts waste animal tissue into stable, value-added commodities, including fat commodities such as yellow grease, choice white grease, and bleachable fancy tallow, as well as protein commodities, such as meat and bone meal and poultry byproduct meal. Figure 1-1 depicts various commodities and products produced by rendering, including animal feed, fertilizer, biofuels, and cosmetics.



http://www.sec.gov/Archives/edgar/data/916540/000091654010000031/ex99_1.htm

**Figure 1-1
Products and By-Products Produced by Rendering Operations**

Historically, SCAQMD has enforced odor nuisance complaints through SCAQMD Rule 402 – Nuisance, which states “a person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.” This rule incorporates the language of H&SC §41700. SCAQMD has previously adopted rules to address odors from specific categories of industry. For example, SCAQMD Rule 410 – Odors from Transfer Stations and Material Recovery Facilities, adopted on October 6, 2006, established odor management practices and requirements to reduce odors specifically from municipal solid waste transfer stations and material recovery facilities. Additionally, Rule 472 – Reduction of Animal Matter, adopted May 7, 1976, requires odors from rendering equipment (i.e., cookers, centrifuges, presses, etc.) to be incinerated or destroyed by an

equally effective method. However, Rule 472 does not address odors generated from fugitive sources or wastewater treatment processes associated with the rendering process.

Subsequent to release of the Draft EA in June 2015, various changes were made to the scope and requirements of PR 415 and some of the changes were made in response to verbal and written comments on the project's effects. Based on the analysis in the Final EA, none of the changes to PR 415 constitutes significant new information or a substantial increase in severity of an environmental impact, nor provide new information of substantial importance relative to the Draft EA. In addition, revisions to PR 415 in response to verbal or written comments would not create new, avoidable significant effects. As a result, these minor revisions do not require recirculation of the EA pursuant to CEQA Guidelines §15073.5.

AFFECTED FACILITIES

The proposed rule applies to new and existing facilities that cook raw rendering materials; ~~facilities that process trap grease~~ in addition to rendering, and treatment of wastewater from processes associated with rendering ~~or processing of trap grease~~ at these facilities.

Applicability is to facilities that conduct inedible rendering operations, whether or not these facilities also conduct edible rendering. If an integrated facility conducts both edible and inedible rendering operations, the edible rendering operations are not subject to the requirements of PR 415. Inedible rendering means that the products and by-products of the rendering process are not intended for human consumption.

There are five existing facilities that conduct rendering operations in the Basin. All five are located ~~in Vernon~~ in close proximity to one another. Four facilities are located in the City of Vernon and with one facility is located in the City of Los Angeles, with its garage straddling the border with the City of Los Angeles-Vernon. Three of the five facilities are independent rendering operations, one is integrated with a slaughterhouse and meat-packing plant, and one is integrated with a meat-packing plant. Integrated plants operate rendering activities in conjunction with animal slaughter and/or meat processing plants. Because a meat plant typically processes only one animal species (such as cattle, hogs, or poultry), its associated rendering operations likewise handle only the byproducts of that species.

Independent operations usually collect material from other sites using specially designed trucks. They pick up and transport fat and bone trimmings, inedible meat scraps, blood, feathers, and dead animals from meat and poultry slaughterhouses and processors (usually smaller ones without their own rendering operations), farms, ranches, feedlots, animal shelters, restaurants, butchers, and markets. As a result, the majority of independent renderers are likely to handle mixed species. Most of the resulting products of the rendering process from independent facilities are intended for nonhuman consumption (e.g., animal feeds, biofuels, industrial products).

All five facilities would be subject to PR 415. ~~In addition, one planned facility may be subject to the proposed rule if permitted, once it becomes operational.~~

CALIFORNIA ENVIRONMENTAL QUALITY ACT

PR 415 – Odors from Rendering Facilities, is a discretionary action by a public agency, which has potential for resulting in direct or indirect changes to the environment and, therefore, is considered a “project” as defined by the California Environmental Quality Act (CEQA). SCAQMD is the lead agency for the proposed project and has prepared this draft environmental assessment (EA) with no significant adverse impacts pursuant to its Certified Regulatory Program and SCAQMD Rule 110. California Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD’s regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

CEQA and Rule 110 require that potential adverse environmental impacts of proposed projects be evaluated and that feasible methods to reduce or avoid significant adverse environmental impacts of these projects be identified. To fulfill the purpose and intent of CEQA, SCAQMD has prepared this ~~draft~~ Final EA to address the potential adverse environmental impacts associated with the proposed project. The ~~draft~~ Final EA is a public disclosure document intended to: (a) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental effects of the proposed project; and, (b) be used as a tool by decision makers to facilitate decision making on the proposed project.

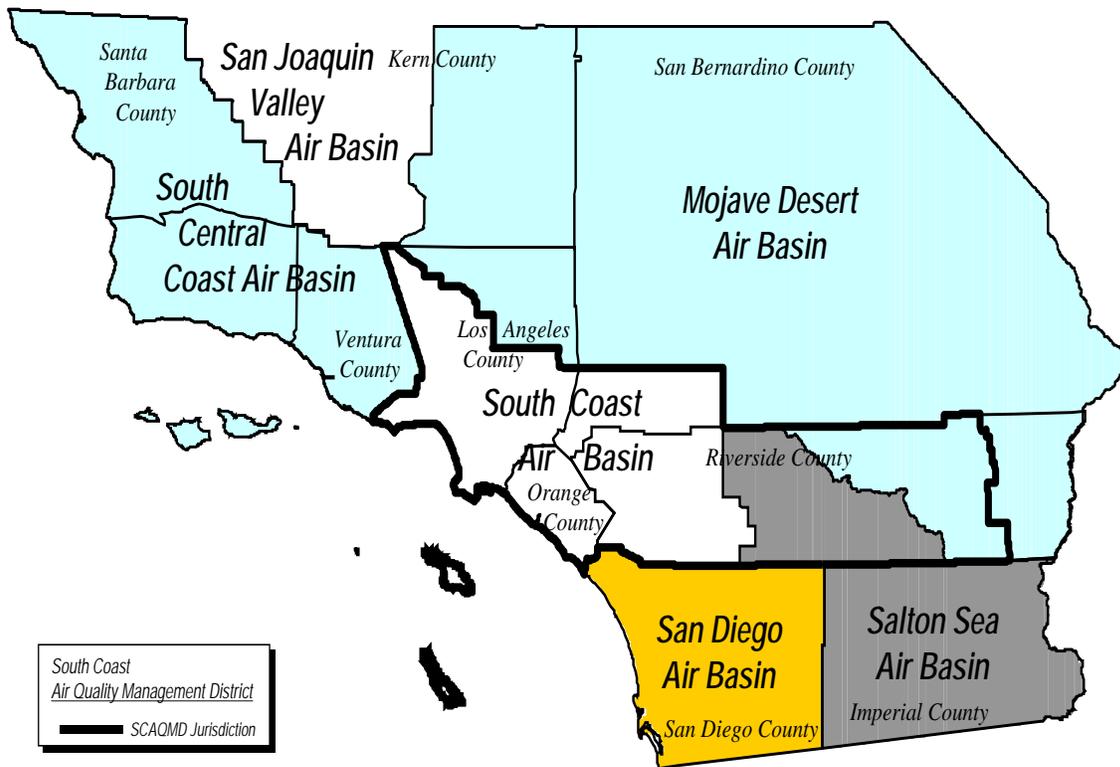
SCAQMD’s review of the proposed project shows that the proposed project would not have a significant adverse effect on the environment. Therefore, pursuant to CEQA Guidelines §15252 and 15126.6(f), no alternatives are proposed to avoid or reduce any significant effects because there are no significant adverse impacts, and pursuant to CEQA Guidelines §15126.4(a)(3), mitigation measures are not required for effects not found to be significant. The analysis in the form of the environmental checklist in Chapter 2 supports the conclusion of no significant adverse environmental impacts.

Comments received on the Draft EA during the public comment period and responses to comments ~~will be prepared and~~ are included in the Final EA Appendix D, Response to Comments, for the proposed project.

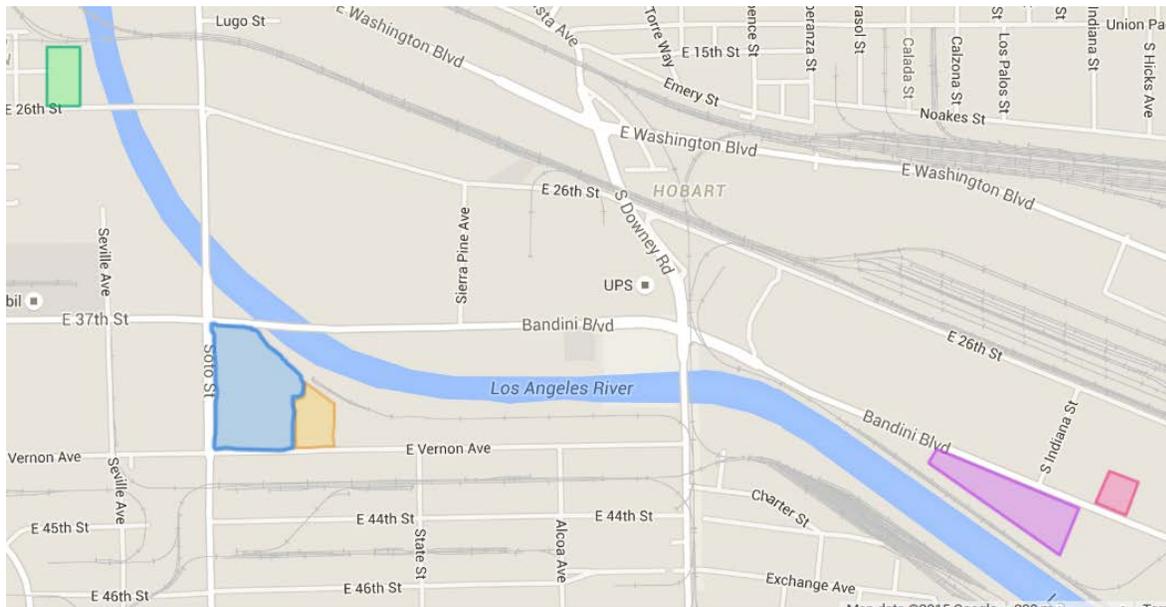
PROJECT LOCATION

The potentially affected facilities are located within the SCAQMD jurisdiction. SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county South Coast Air Basin (Basin) (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The Basin is a subarea of the SCAQMD’s jurisdiction and is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east (Figure 1-2). Figure 1-3 depicts the location of the five affected rendering facilities.

Figure 1-2
Boundaries of the South Coast Air Quality Management District



**Figure 1-3
Location of Rendering Facilities**



PROJECT OBJECTIVE

The objectives of the PR 415 are to:

- Implement near-term solutions, such as odor best management practices (BMPs) and establishment of specific cause analysis for each confirmed odor event;
- establish mid-term solutions, such as installation of odor complaint contact sign near facility entrances, covering of incoming loads of rendering material, and repairing repair of outside raw material receiving areas unloading areas; and
- establish long-term solutions, such as installation of enclosures (under negative pressure) or closed systems for certain processes, installation of odor control equipment or use alternative standards for a permanent total enclosure for raw material receiving area, and submission of Odor Mitigation Plans (OMP) for facilities if ongoing odor issues persist.

PROJECT BACKGROUND

PR 415 is the result of an issue that was identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. In November 2010, the SCAQMD Governing Board approved the CCP. The objective of the 2010 CCP is to reduce the exposure to air toxics and air-related nuisances throughout the District, with emphasis on cumulative impacts. The elements of the 2010 CCP are community exposure reduction, community participation, communication and outreach, agency coordination, monitoring and compliance, source-specific programs, and nuisance. SCAQMD staff began implementing the CCP in the pilot study area of Boyle Heights, a community near the City of Vernon rendering facilities, by meeting with a stakeholder working group beginning in July 2011. The purpose of this working group was to identify air quality issues of importance to the community in Boyle Heights and surrounding communities. The prevalence of odors from rendering facilities in Vernon, directly south of Boyle

Heights, was of great concern to the working group and represented a quality of life issue. As a direct result of the CCP pilot study process, SCAQMD staff commenced rulemaking in 2014 to address these odors.

SCAQMD is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles" [Health and Safety Code (H&SC) §40000]. The term "air pollutant" includes odors [H&SC §39013]. Therefore, SCAQMD may establish regulations to control air pollution, including odors, from PR 415 sources. In addition, SCAQMD has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on SCAQMD by law [H&SC §40702]. Rule 415 is intended to prevent and abate violations of H&SC §41700, which prohibits all pollution nuisance.

RENDERING PROCESS OVERVIEW

The Rendering Process

In most facilities, raw materials (including carcasses, slaughter byproducts, etc.) are ground to a uniform size and placed in cookers, which evaporate moisture and free fat from protein and bone. A series of conveyers, presses, and a centrifuge continue the process of separating fat from solids. The finished fat (e.g., tallow, lard, yellow grease) goes into separate tanks, and the solid protein (e.g., meat and bone meal, poultry meal) is pressed into cake for processing into animal feed, fertilizer, or other uses. Other rendering systems that consist of specialized equipment may be used, including those that recover protein solids from slaughterhouse blood or that process used cooking oil from restaurants, including trap grease. This cooking oil is recovered (often in 55-gallon drums) for use as yellow grease in non-human food products like animal feeds.



Typical conveyor system observed at a local rendering facility.

Batch Rendering

A batch cooker is designed to be loaded in discrete batches where the raw materials are processed to a target moisture content percentage. Batch processing times vary due to moisture content of the raw material, and the operator can adjust the temperature of the cooker as needed to achieve the desired moisture content at the end of the cycle. The batch is then unloaded for fat separation. A batch cooker can function as a cooker, dryer, hydrolyzer, or processor.

Continuous Rendering

Note: The numbers in the following description of a continuous rendering process correspond to process points indicated on Figure 1-3 – Schematic Diagram of a Typical Continuous Rendering Process.

In a typical continuous rendering process, raw material from receiving bins (1) is transported from the bins by a conveyor (2) and discharged across a magnet (3) that removes ferrous metal. A raw material grinder (4) then reduces the raw material to a uniform particle size for material handling and improved heat transfer during cooking. The ground raw material is then metered from a bin (5) at a constant rate into a continuous cooker operating at a constant temperature (6).



Typical grinding equipment observed at a local rendering facility.

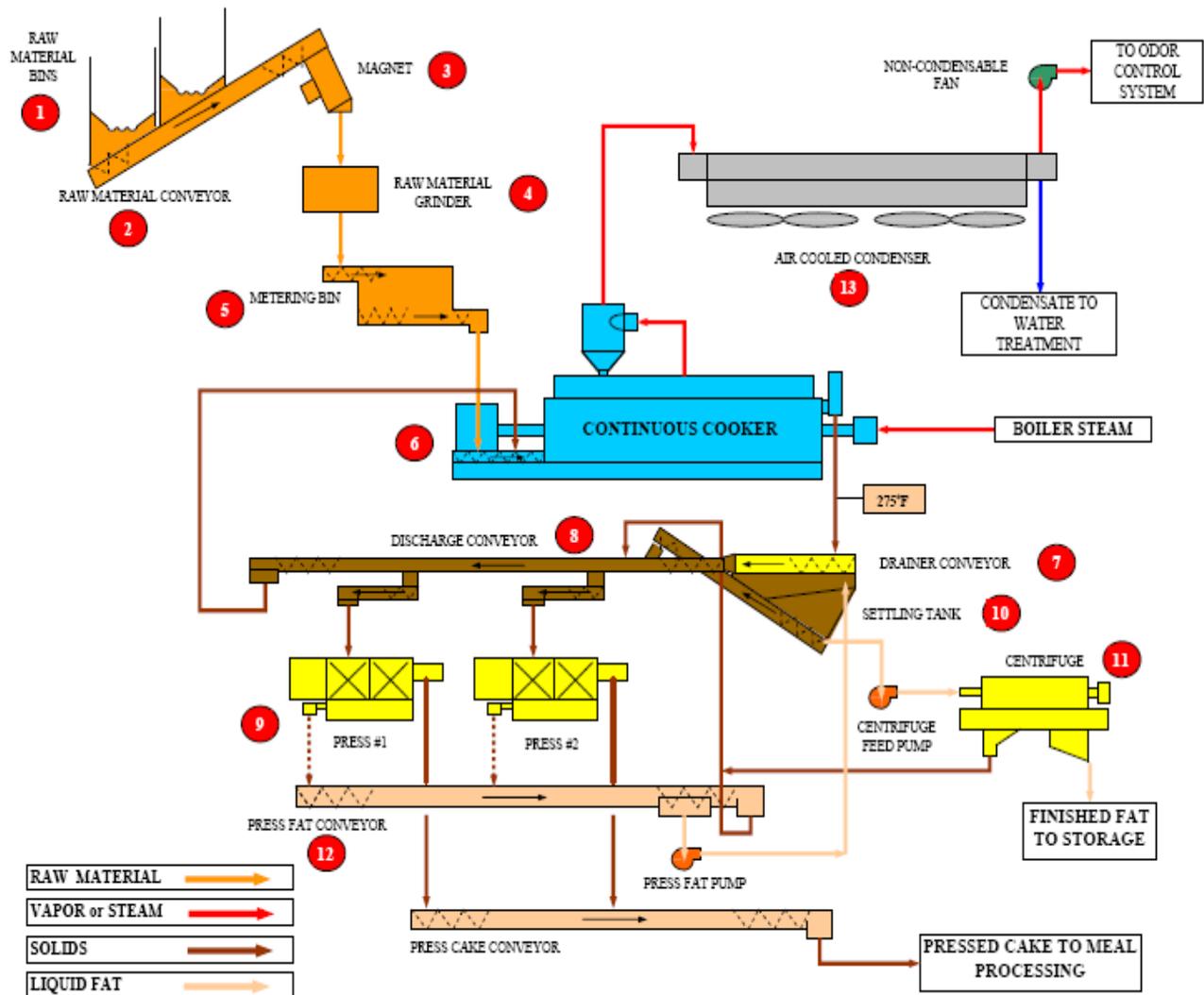
The continuous cooker is generally heated by boiler steam. The cooker brings raw material to a temperature between 240° and 290°F, evaporating moisture and freeing fat from protein and bone. A dehydrated slurry of fat and solids is discharged from the continuous cooker and transported to a drainer conveyor (7) that separates liquid fat from solids. Solids from the drainer conveyor are combined with solid discharge from the settling tank (10) and centrifuge (11) and conveyed via a discharge conveyor (8) to screw presses (9), which mechanically reduce the solids' fat content. Solids discharged from the screw presses as pressed cake (12) are further processed into meal.

The fat removed in the screw presses (9) is pumped to a settling tank (10), along with fat discharged from the drainer conveyor. In the settling tank, heavier bone and protein particles settle to the bottom. Liquid fat from the settling tank is pumped to a centrifuge (11), which removes solid impurities from the fat. The clarified fat is further processed or stored as finished fat⁷.

Water vapor exits the continuous cooker (6) through a vapor duct system that generally includes an entrainment trap to separate entrained solids and return them to the cooker. A duct system then transports vapor to a condenser (13). Non-condensable gases are removed from the condenser and routed to an odor control system (not shown). Odorous gases from other parts of the process are also routed to the odor control system through a ductwork system. Figure 1-4 presents a schematic diagram of a typical continuous dry rendering process.

⁷ *Essential Rendering – National Renderers Association, 2006, ISBN: 0-9654660-3-5*

Figure 1-4
Schematic of Typical Continuous Dry Rendering Process



From Rendering: A Proven Disposal Technology; Hamilton, R. (2003). Kansas City, Missouri: Midwest Regional Carcass Disposal Conference.

Odor control remains one of the rendering industry's greatest challenges. Research in the early 1970s indicated that untreated rendering plant emissions could be detected up to 20 miles away from rendering facilities plants⁸. As for the sheer number of odorous compounds in rendering odors, 110 volatile compounds can be identified in rendering odors, with about 25 contributing most noticeably to rendering plant odors⁹. Most of these organic compounds are generated from

⁸ "Odor Controls for Rendering Plants." Environmental Science and Technology 7 (6):504-510. Bethea, Murthy, Carey; 1973.

⁹ "Gas Chromatography/Mass Spectrometry Identification of Organic Volatiles Contributing to Rendering Odors." Environmental Science and Technology 16 (12):883-886. Van Langenhove, Van Wassenhove, Coppin, Van Acker, Schamp; 1982

the breakdown of proteins and fats during the cooking process¹⁰ or during decay of raw material prior to cooking.

Besides organic compounds, other odor compounds of concern from rendering operations include hydrogen sulfide and ammonia. Because of the wide variety of chemical compounds contributing to rendering plant odors, current strategies for odor control rely on destroying all volatile compounds being emitted. However, the most offensive odor compounds may not necessarily be the most prevalent in a mixture of volatiles¹¹.

There are several operations and processes within a rendering facility that have noticeable odors associated with them. These include, in no particular order of odor intensity; raw material receiving, raw material size reduction, cooking, fat processing, and wastewater treatment. High intensity odors from the cooker are currently required to be incinerated at 1202°F for at least 0.3 seconds under SCAQMD Rule 472 – Reduction of Animal Matter. Incineration at this temperature is a highly effective odor control method for organic compounds, the composition of most substances in rendering odors.

Since the high intensity odors emitted from the cooking process are already required to be controlled, the nature of odors that continue to be present at a rendering facility from the processes noted are fugitive in nature. There are many points both in a batch cooking process as well as in a continuous cooking process where fugitive odors can escape. Collectively, this large number of sources of fugitive odors can create odors which are emitted from a rendering facility and can travel beyond the facility's property line.

PROJECT DESCRIPTION

SCAQMD staff is developing PR 415 to reduce odors from facilities conducting rendering operations. In general, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install odor emission control equipment, and carry out best management practices (BMPs). PR 415 will allow an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening. The proposed rule will be implemented in addition to continued enforcement of public nuisances under Rule 402.

Specifically, PR 415 contains the following core requirements for applicable rendering facilities.

➤ Odor BMPs

BMPs under PR 415 that will assist in reducing odors from various points or processes within a rendering facility include:

- Covering of Incoming Transport Vehicles – cover truck bed;
- ~~Direct Transfer Delivery~~ Delivery of Raw Rendering Materials – directly into permanent total enclosure or into covered containers within 60 minutes after the end of material delivery;

¹⁰ <http://www.rendermagazine.com/articles/2012-issues/august-2012/development-of-new-odor-control-methods/>

¹¹ <http://www.rendermagazine.com/articles/2012-issues/august-2012/development-of-new-odor-control-methods/>

- Washing of Outgoing Transport Vehicles – prior to leaving facility;
- Washing of Drums and Containers – prior to leaving facility;
- Holding Time of Incoming Raw Rendering Materials – no more than 4 hours at ambient temperature, or within 6 hours after delivery for material delivered below ambient temperature;
- Repair of Outside Raw Material Receiving Area Facility Grounds (applies to receiving areas and where rendering materials come in contact with the ground) – no more than 180 days;
- Holding Time of Raw Materials after Size-reduction – no more than 1-hr after size reduction or grinding activities, for raw rendering materials at a facility utilizing a batch cooking process;
- Holding Time of Cooked Materials – no more than 1-hr after removing from batch cooker;
- Transfer of Raw or Cooked¹² Rendering Materials between Enclosures – by closed system of conveyance or odor-tight covered containers;
- ~~○ Trap Grease Delivery Trucks in a closed system;~~
- ~~○ Venting Trap Grease Delivery Vehicles to Odor Control Equipment unless truck is unloaded inside a permanent enclosure already vented to odor control equipment;~~
- Washing/Cleaning of Floor Drains – inspected and cleaned not less frequently than once per month to remove accumulation of rendering materials maintain drains to prevent accumulation of rendering materials;
- Washdown of Receiving Areas – at least once per shift each working day.
- Alternative Odor BMP – The owner or operator of a rendering facility may use an Alternative Odor BMP provided that (A) the Alternative Odor BMP meets the same objective the Odor BMP that it is replacing, (B) the owner or operator of a rendering facility submits a written request to the Executive Officer stating how the Alternative Odor BMP meets the same objective as the Odor BMP it is replacing; and (c) the Executive Officer approves the Alternative Odor BMP.

It should be noted that the last three BMPs would no longer be required after an existing facility begins operating certain processes within a permanent enclosure or closed system. Since these processes would occur within the permanent enclosure, any odors emitted from these processes would be captured by odor control equipment serving the permanent enclosure.

➤ Permanent Total Enclosure and Odor Control Standards / Operate in a Closed System

- Permanent Total Enclosure – All facilities are required to operate certain odorous processes within a permanent total enclosure or within a closed system. This requirement is applicable to new facilities upon startup and to existing facilities within approximately 3 2 to 4 years after rule adoption (allows for planning and time to obtain necessary permits). Existing facilities are required to submit a permit

¹² Cooked rendering materials at facilities with a batch cooker.

application to SCAQMD within 12 months after rule adoption for odor control equipment, to be evaluated in combination with a permanent total enclosure.

➤ Closed System

- Closed System means a system handling any combination of solids, liquids, vapor and air at a rendering facility, in which odors are contained within the system. A closed system must be maintained in a manner that minimizes leaks from occurring and prevents odors from escaping from the system, to the maximum extent possible. Material conveyors and troughs that are components of a closed system shall be completely enclosed on all sides, except for doors or panels for maintenance and personnel access. Bins and hoppers that are components of a closed system shall be completely enclosed on all sides, except for doors or panels, and maintenance and personnel access. Mating metal surfaces on doors or access panels under this paragraph shall be sealed with gasket material. Air gaps in components of a closed system shall be sealed with gasket material or with caulk or sealant. Each section of ductwork containing vapor within a closed system shall be sealed at every connection to mating components of the closed system using best industry practices and materials. Any alternative to a closed system must be approved by the Executive Officer.

➤—Odor Control Equipment

- Odor Control System – All permanent total enclosures are required to be ventilated to odor control equipment. The purpose of this requirement is to prevent release of odorous or foul air from a permanent total enclosure directly into the environment. The timing for this requirement is the same as the timing for a permanent total enclosure – upon startup for new facilities, and within 24 months after a Permit to Construct (P/C) is issued for the combined permanent total enclosure /odor control system for existing facilities. An odor control system that treats fugitive odors from inside a permanent total enclosure must be designed and operated to maintain a control efficiency of not less than 70 percent for nitrogen compounds and not less than 70 percent for sulfur compounds.
- Alternative Standards – An owner or operator may elect to meet the alternative standards for a permanent total enclosure for the raw materials receiving area provided that: all access doors shall not be open except during ingress and egress of vehicles, equipment or people; openings on opposite ends of a building where air movement can pass through both openings shall not be simultaneously open for more than 5 minutes; all routine enclosure openings for vehicles or equipment ingress and egress shall use one of the following: automatic doors with an air curtain mounted on the interior of the opening with a design velocity of 3,000 feet per minute, that is operated continuously when the door is open; vestibule; air lock system; or an alternative method to minimize release of odors from each enclosure opening of the building enclosure may be used if the owner or operator can demonstrate to the Executive Officer an equivalent or more effective method(s) to those specified in the rule.

- Wastewater Treatment
 - Certain wastewater treatment processes are required to be enclosed within a permanent total enclosure (ventilated to odor control) or operated in a closed system. This includes screens, skimmers, clarifiers (including dissolved air flotation), settling tanks, sludge dewatering equipment and the outlet of wastewater treatment to the city sewer. An exemption is provided for high dilution wastewater treatment equipment.
- Odor Complaint Contact Sign
 - All rendering facilities are required to display a sign with contact information for area residents and businesses to phone in odor complaints. This requirement is applicable upon startup for new facilities and within 6 months after rule adoption for existing facilities. The sign must list SCAQMD's 1-800-CUT-SMOG number as the first contact for odor complaints. If desired by the rendering facility owner/operator, a secondary contact at the facility may be listed on the sign.
- Odor Mitigation Plan
 - In the case of pervasive and ongoing odorous emissions from a rendering facility, the owner or operator may be required to submit an Odor Mitigation Plan (OMP). There are two situations that can trigger this requirement, as follows:
 - A Notice of Violation (NOV) is received for Public Nuisance subject to Rule 402;
 - Three or more confirmed odor events are received in a consecutive 180-day period. A confirmed odor event is an odor event that has been verified as coming from a specific source by SCAQMD Compliance personnel after an investigation. It takes at least three complaints from different physical addresses to comprise a confirmed odor event. When an investigation following three or more complaints determines that objectionable odors are being emitted from a particular facility and travelling beyond the property boundary of the facility, that event is determined to be a confirmed odor event.
- Specific Cause Analysis
 - If a facility receives a Rule 402 NOV for public nuisance, or if a confirmed odor event is declared for a facility, an analysis of the specific cause(s) surrounding the NOV (3 verified odor complaints) or odor event must be conducted. The analysis is a process used by a facility subject to this rule to investigate the cause of the confirmed odor event, identify corrective measures needed, and corrective measures taken to prevent recurrence of a similar event.
- Recordkeeping Requirements
 - The owner or operator of a rendering facility shall collect and maintain the following records: (1) readings taken by anemometer to demonstrate compliance with the inward face velocity requirement of the ventilation system; (2) written or

electronic log of all odor complaints received by the rendering facility contact person; (3) weekly records of the weight of inedible raw rendering materials, for rendering operations located at integrated rendering facilities; and (4) records of each day of operation shall be kept for low-use rendering facilities exempt under paragraph (l)(4).

➤ Equipment Breakdown and Emergency Rendering Services

- If additional time is necessary to comply with PR 415 due to the inability of another rendering facility to accept animal carcasses and parts, an owner or operator of a rendering facility shall be allowed additional time to move raw rendering materials into a permanent total enclosure, provided they comply with certain requirements outlined under subdivision (k).

CHAPTER 2

ENVIRONMENTAL CHECKLIST

Introduction

General Information

Environmental Factors Potentially Affected

Determination

Environmental Checklist and Discussion

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a project's potential adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title: Proposed Rule 415 – Odors from Rendering Facilities

Lead Agency Name: South Coast Air Quality Management District

Lead Agency Address: 21865 Copley Drive
Diamond Bar, CA 91765

CEQA Contact Person: Ms. Jillian Wong (909) 396-3176

Rule Contact Person: Mr. Bob Gottschalk (909) 396-2456

Project Sponsor's Name: South Coast Air Quality Management District

Project Sponsor's Address: 21865 Copley Drive
Diamond Bar, CA 91765

General Plan Designation: Not applicable

Zoning: Not applicable

Description of Project: SCAQMD is developing a rule to reduce odors from facilities conducting rendering operations. Proposed Rule (PR) 415 is the result of an issue that was identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. The prevalence of odors from rendering facilities in Vernon, directly south of Boyle Heights, was of great concern to the working group. PR 415 will require existing rendering facilities to ~~encløse~~ provide a permanent total enclosure or a closed system for certain rendering operations, install odor emission control equipment or use alternative standards for a permanent total enclosure for raw material receiving area and carry out best management practices (BMPs).

Surrounding Land Uses and Setting: Not applicable

Other Public Agencies Whose Approval is Required: None

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓" have the potential to be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Public Services |
| <input checked="" type="checkbox"/> Air Quality and Greenhouse Gas Emissions | <input checked="" type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Solid/Hazardous Waste |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Transportation/Traffic |
| <input checked="" type="checkbox"/> Energy | <input type="checkbox"/> Noise | <input type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION

On the basis of this initial evaluation:

- I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.
- I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.
- I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1)has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: July 10, 2015

Signature: 
Jillian Wong
Title: Program Supervisor
Telephone: (909) 396-3176

ENVIRONMENTAL CHECKLIST AND DISCUSSION

As discussed in Chapter 1, the main focus of PR 415 is to reduce odors from facilities conducting rendering operations. In general, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install odor emission control equipment or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs. The proposed rule will be implemented in addition to continued enforcement of public nuisances under Rule 402.

The objectives of the proposed rule are to:

- implement near-term solutions, such as implementation of odor BMPs and establishment of specific cause analysis for each confirmed odor event;
- establish mid-term solutions, such as installation of odor complaint contact sign near facility entrances, cover incoming truck loads, and ~~repaving of unloading areas~~ repair of the outside raw material receiving area; and
- establish long-term solutions, such as installation of enclosures (under negative pressure) or closed systems for certain processes, installation of odor control equipment or use alternative standards for a permanent total enclosure for raw material receiving area, and submission of Odor Mitigation Plans for ongoing odor issues.

In order to ensure that any potential significant adverse environmental impacts are identified and evaluated and that feasible methods to reduce or avoid any potential significant adverse environmental impacts associated with the proposed project are identified and evaluated, an environmental impact analysis was conducted based on the worst-case impact scenario one of the larger facilities in the current affected facility inventory as a basis to estimate maximum foreseeable impacts.

The estimated “worst-case” construction scenario was based on information the maximum amount of demolition and building construction provided by the facility of future construction activities/upgrades to the current infrastructure necessary at the affected facilities in order to comply with the proposed rule. The construction scenario analyzed includes demolition of up to 9,000 square feet of existing structures, the fabrication of a maximum of three six new enclosure structures (totaling a maximum of 19,075 square feet) and associated trenching/concrete activities for the footings of the new structures, paving of the receiving area, and the installation of three four new air pollution control devices (APCDs) (e.g. scrubbers or carbon adsorption systems). ~~This particular facility was chosen for the analysis because it required the most construction activities of the five facilities currently in the affected inventory.~~ Therefore, this construction estimate was used as an example for a “worst-case” impact scenario (see Appendix C).

It is expected that the demolition, installation of enclosures, APCDs and ~~paving~~ activities associated with the pavement repair of the outside raw material receiving area will generate secondary air quality impacts during construction. Newly installed APCDs may also generate potential hydrology and energy impacts from operation. The peak daily emissions vary for each pollutant depending on the construction phase (demolition, enclosure construction, paving, APCD installation), which do not overlap in time, as the enclosures would need to be constructed prior to the installation of the APCDs or the secondary odor containment system. Modeling assumes

construction at a maximum of three facilities at any one time. Specific construction phase durations are included in Appendix C.

Construction activities that require use of heavy construction equipment would only be onsite for a limited amount of time during construction of the permanent total enclosures (up to two months). Peak emissions in the air quality impact analysis is based on the worst-case day, which is dependent on the demolition volumes and new building construction anticipated during the demolition and building construction phases. Installation of other project components (e.g., APCDs) would not generate higher construction emission than that generated during the worst-case construction phase.

While the worst-case impact scenario is based on the conservative assumption that all construction activities associated with the proposed rule would overlap, Facility B would necessitate the majority of upgrades needed to comply with the proposed rule. Other facilities that are anticipated to conduct improvements/modifications as a result of the proposed project are expected to require fewer enclosures, less control devices, and less paving activities than the proposed construction scenario being evaluated. Therefore, any potential adverse impacts from the construction or operation of new modifications at the other affected facilities as a result of the proposed project are expected to be less than the potential adverse impacts for the proposed worst-case impact construction scenario being evaluated. Additionally, the five affected facilities have a total of three years to be in compliance with the proposed rule requirements. Therefore, the worst-case impact scenario provides a conservative estimate of the maximum daily construction emissions generated by implementation of the proposed rule. ~~an overlap of daily construction activities is not expected. However, based on the air quality analysis conducted, even if two facilities performed concurrent construction activities, calculated construction related emissions would still be less than significant.~~

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| I. AESTHETICS. Would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

Discussion

I. a), b), c) & d) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to enclose provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs.

The majority of the affected rendering facilities are located in the City of Vernon, CA, and one facility is located in the City of Los Angeles. The area surrounding the affected facilities which is an existing highly industrialized commercial area that does not have any known scenic vistas or scenic resources (see below). The types of enclosures required by PR 415 are not expected to be any larger or visually dissimilar to other structures on the existing facilities or neighboring properties. Since all the affected facilities are located in a highly industrialized setting, there are no scenic resources, scenic vistas, or scenic highways/corridors in the vicinity of the facilities affected by PR415. Therefore, the construction of new enclosures or buildings would not obstruct any scenic resources or degrade the existing visual character of any affected site, including but not limited to, trees, rock outcroppings, or historic buildings.

While a Landmark Wall surrounds Facility C, aerial photographs show that there are existing structures within 50 feet of the Landmark Wall that are visible from the roadway right-of-way. The new permanent total enclosure would not be located closer to the Landmark Wall than the current buildings are and would also not be taller than the current buildings are. Additionally,

proposed signage, consistent with the requirements of PR 415, would be similar in scale as the existing signage and would not have the potential to significantly alter the visual character of the Landmark Wall.

Further, the proposed project would ~~not involve the~~ require minimal (9,000 square feet under the worst-case impact scenario) ~~of demolition of any existing buildings or facilities (it would rather require enclosing specific operations)~~, require the acquisition of any new land or the surrendering of existing land, or modify any existing land use designations or zoning ordinances. All new enclosures would be developed within the existing footprints of the affected facilities. Thus, the proposed project is not expected to degrade the visual character of any site or its surroundings from the existing visual character, affect any scenic vista, or damage scenic resources. New enclosures developed at the affected facilities are still expected to comply with any local lighting ordinances for safety purposes. However, since the proposed project would primarily affect already existing developed facilities, it is not expected to create any new source of substantial light or glare.

The following pictures are typical views of the setting in which the affected rendering facilities are located:





Based upon these considerations, significant adverse aesthetics impacts are not anticipated and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant adverse aesthetics impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| II. AGRICULTURE AND FORESTRY RESOURCES. Would the project: | | | | |
| a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use, or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Project-related impacts on agriculture and forestry resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Discussion

II. a), b), c) & d) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering

facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures ~~or use alternative standards for a permanent total enclosure for raw material receiving area~~, and carry out BMPs. Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures, and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas ~~paving of receiving areas~~, and the installation of new APCDs ~~or secondary odor containment system for the raw materials receiving enclosures~~.

The affected facilities are zoned for “industrial” land use by the City of Vernon and the City of Los Angeles. None of the affected facilities are designated as agricultural land use. Construction of new enclosures or installation of new control equipment as a result of the implementation of the proposed project are expected to take place within the current footprint of existing rendering facilities, which are located within highly urbanized areas that are typically designated as commercial/industrial. Therefore, adoption of the proposed project would not result in any new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. The proposed project would not require converting farmland to non-agricultural uses because the potentially affected facilities already completely developed. For the same reasons, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use.

Based upon these considerations, significant adverse agricultural and forestry resource impacts are not anticipated and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant agriculture and forestry resource impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| III. AIR QUALITY AND GREENHOUSE GAS EMISSIONS. | | | | |
| Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Violate any air quality standard or contribute to an existing or projected air quality violation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Create objectionable odors affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Air Quality Significance Criteria

To determine whether or not air quality impacts from adopting and implementing the proposed project are significant, impacts will be evaluated and compared to the criteria in Table 2-1. The project will be considered to have significant adverse air quality impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

To determine whether or not greenhouse gas emissions from the proposed project may be significant, impacts will be evaluated and compared to the 10,000 MT CO₂/year threshold for industrial sources for SCAQMD lead agency projects.

**Table 2-1
SCAQMD Air Quality Significance Thresholds**

| Mass Daily Thresholds ^a | | |
|---|---|-------------------------------|
| Pollutant | Construction ^b | Operation ^c |
| NOx | 100 lbs/day | 55 lbs/day |
| VOC | 75 lbs/day | 55 lbs/day |
| PM10 | 150 lbs/day | 150 lbs/day |
| PM2.5 | 55 lbs/day | 55 lbs/day |
| SOx | 150 lbs/day | 150 lbs/day |
| CO | 550 lbs/day | 550 lbs/day |
| Lead | 3 lbs/day | 3 lbs/day |
| Toxic Air Contaminants (TACs), Odor, and GHG Thresholds | | |
| TACs (including carcinogens and non-carcinogens) | Maximum Incremental Cancer Risk \geq 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas \geq 1 in 1 million) Chronic & Acute Hazard Index \geq 1.0 (project increment) | |
| Odor | Project creates an odor nuisance pursuant to SCAQMD Rule 402 | |
| GHG | 10,000 MT/yr CO ₂ eq for industrial facilities | |
| Ambient Air Quality Standards for Criteria Pollutants ^d | | |
| NO₂ 1-hour average annual arithmetic mean | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal) | |
| PM10 24-hour average annual average | 10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$ | |
| PM2.5 24-hour average | 10.4 $\mu\text{g}/\text{m}^3$ (construction) ^e & 2.5 $\mu\text{g}/\text{m}^3$ (operation) | |
| SO₂ 1-hour average 24-hour average | 0.25 ppm (state) & 0.075 ppm (federal – 99 th percentile) 0.04 ppm (state) | |
| Sulfate 24-hour average | 25 $\mu\text{g}/\text{m}^3$ (state) | |
| CO 1-hour average 8-hour average | SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal) | |
| Lead 30-day Average Rolling 3-month average Quarterly average | 1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal) 1.5 $\mu\text{g}/\text{m}^3$ (federal) | |

^a Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

^b Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).

^c For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

^d Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

^e Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million $\mu\text{g}/\text{m}^3$ = microgram per cubic meter \geq = greater than or equal to
 MT/yr CO₂eq = metric tons per year of CO₂ equivalents > = greater than

III. a), b) and f) Attainment of the state and federal ambient air quality standards protects sensitive receptors and the public in general from the adverse effects of criteria pollutants which are known to have adverse human health effects. SCAQMD is required by law to prepare a comprehensive district-wide Air Quality Management Plan (AQMP) which includes strategies (e.g., control measures) to reduce emission levels to achieve and maintain state and federal ambient air quality standards, and to ensure that new sources of emissions are planned and operated to be consistent with SCAQMD's air quality goals. The AQMP's air pollution reduction strategies include control measures which target stationary, area, mobile and indirect sources. These control measures are based on feasible methods of attaining ambient air quality standards. Pursuant to the provisions of both the state and federal Clean Air Acts (CAA)s, SCAQMD is required to attain the state and federal ambient air quality standards for all criteria pollutants.

The main focus of PR 415 is to establish odor BMPs and requirements to reduce odors from facilities rendering animals and animal parts. The main requirements of the proposed project are to operate certain odorous processes within a permanent total enclosure or within a closed system, ventilate the enclosures to odor control equipment, and implement BMPs for odor control. Implementing the proposed rule amendments do not conflict or obstruct implementation of the AQMP or federal CAA.

Construction Impacts

Construction-related emissions can be distinguished as either onsite or offsite. Onsite emissions generated during construction principally consist of exhaust emissions (NO_x, SO_x, CO, VOC, and PM₁₀) from the operation of heavy-duty construction equipment, fugitive dust (as PM₁₀) from disturbed soil, and VOC emissions from asphaltic paving and painting. Offsite emissions during the construction phase normally consist of exhaust emissions and entrained paved road dust (as PM₁₀) from worker commute trips, material delivery trips, and haul truck material removal trips to and from the construction site.

Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas ~~paving of receiving areas~~, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures.

In order to ensure that any potential significant adverse air quality impacts are identified and evaluated and that feasible methods to reduce or avoid any potential significant adverse air quality impacts associated with the proposed project are identified and evaluated, an environmental impact analysis was conducted for the worst-case impact scenario based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities ~~using one of the larger facilities in the current affected facility inventory~~ as a basis for estimating maximum foreseeable impacts. The estimated construction scenario was based on information provided by the facilities and estimates based on SCAQMD research facility of future construction activities/upgrades to the current infrastructure in order to comply with the proposed rule. The construction scenario analyzed includes:

- demolition of 9,000 square feet of existing structures;

- fabrication of ~~three~~ six new enclosure structures totaling 19,075 square feet and associated trenching/concrete activities for the footings of the new structures;
- repair of the outside raw material receiving areas paving of the receiving area;
- installation of ~~three~~ four new air pollution control devices (APCDs) (e.g. scrubbers or carbon adsorption systems).

~~This particular facility was chosen for the analysis because it required the most construction activities of the five facilities currently in the affected inventory.~~ Since the five affected facilities have a total of three years to be in compliance with the proposed rule requirements (and one facility is currently close to meeting all of the rule requirements and another facility qualifies for the low use exemption), an overlap of daily construction activities is not expected. However, the worst-case impact scenario is based on the conservative assumption that all construction activities associated with the proposed rule would overlap. Therefore, this construction estimate was used as an example for a “worst-case” impact scenario.

The installation of enclosures, APCDs and paving activities will generate secondary air quality impacts during construction. Installation of other project components (e.g., APCDs) would not generate higher construction emission than that generated during the worst-case construction phase.

Enclosures – Construction Emissions

Table 2-2 depicts the estimated enclosure sizes to be added for the worst-case impact scenario facility analysis.

**Table 2-2
New Enclosures for Worst-Case Impact Analysis Scenario**

| Area | Size of Structure (sq. ft.) |
|--|---|
| Wastewater treatment area ^a | 3,500 <u>3,850</u> |
| Secondary processing plant | 10,000 <u>4,000</u> |
| Main processing plant | 40,000 <u>1,600</u> |
| Receiving area | Included with main processing plant <u>9,625</u> |
| Material handling building | Included with main processing plant |
| <u>Total</u> | <u>19,075</u> |

The CalEEMod™ emissions computer model was run to estimate emissions from the construction of the enclosures listed above. CalEEMod™ is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects. The model quantifies direct emissions from construction and operations (including vehicle use), as well as indirect emissions, such as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use. At the time of the Draft EA, CalEEMod™ Version 2013.3.2 was the latest version available. Table 2-3 summarizes the peak daily construction emissions due to the installation of the new enclosures as part of the worst-case impact scenario project. A detailed CalEEMod™ construction emissions output spreadsheet including emission estimates and assumptions used in the calculations is provided in Appendix C. Peak daily construction air quality impacts, including demolition, the fabrication of the ~~three~~ six

new structures and associated trenching/concrete activities for the footings of the new structures, as well as repair paving of the outside raw material receiving area, have been determined to not exceed any applicable significance thresholds. Since each phase must be entirely completed before the next phase can commence, there would be no overlap of construction phases for the construction of the new enclosures at the individual facilities. Additionally, the enclosures are expected to be equipped with high-speed doors and other appropriate building envelope openings in order to ensure that negative pressure is maintained.

**Table 2-3
Peak Construction Emissions Due to Construction of New
Enclosures for Worst-Case Impact Analysis Scenario**

| PEAK CONSTRUCTION | VOC | CO | NOx | SOx | PM10 | PM2.5 |
|---|-------------|--------------|--------------|-------------|-------------|-------------|
| | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day |
| Daily Emissions from Peak Construction Phase* | <u>3.48</u> | <u>27.05</u> | <u>34.99</u> | <u>0.04</u> | <u>4.79</u> | <u>2.62</u> |
| | <u>2.69</u> | <u>16.09</u> | <u>25.77</u> | <u>0.03</u> | <u>3.65</u> | <u>2.23</u> |
| SCAQMD CEQA SIGNIFICANCE THRESHOLD | 75 | 550 | 100 | 150 | 150 | 55 |
| SIGNIFICANT? | NO | NO | NO | NO | NO | NO |

*Peak phase (demolition) also lasts for approximately 10 days, substantially reducing the potential for overlapping with the peak phase from another facility in the three year compliance period.

Control Equipment (APCDs) – Construction Emissions

Construction emissions were estimated for the installation of APCDs for the worst-case impact scenario facility analysis. Table 2-4 depicts the anticipated control equipment needed to comply with the requirements of the proposed rule. The installation of these APCDs was evaluated to determine the potential for significant environmental impacts at the largest affected facility for the worst-case impact scenario facility analysis.

**Table 2-4
New Control Equipment for Worst-Case Impact Analysis Scenario**

| Area | Control Equipment |
|----------------------------|---|
| Wastewater treatment area | <u>1 scrubber and 1 carbon adsorption system</u> |
| Secondary processing plant | <u>1 scrubber N/A – Closed System</u> |
| Main processing plant | <u>2 scrubbers 1 carbon adsorption system</u> |
| Receiving area | <u>Included with Main processing plant and 1 carbon adsorption system</u> |
| Material handling building | <u>Included with Main processing plant</u> |
| <u>Total</u> | <u>1 scrubber and 3 carbon adsorption systems</u> |

The type of construction-related activities attributable to installing control equipment would consist predominantly of cutting, welding, etc., since most control equipment is manufactured off-site and brought to the location. For the purposes of this analysis, construction activities undertaken to install the APCDs are anticipated to entail the use of portable equipment (e.g., generators and compressors) and handheld equipment by small construction crews to weld, cut, and grind metal structures. Additionally, criteria pollutant emissions were calculated for all on-road vehicles transporting workers, vendors, and material removal and delivery associated with the control equipment.

To analyze the “worst-case” emissions from construction activities associated with the installation of the APCDs, SCAQMD staff assumed that two APCDs could be installed at any given time for the worst-case impact scenario facility analysis. It is expected that the facility would not completely shut down operations for the installation of APCDs at all three required locations at the same time. Therefore, it is likely that only one APCD would be installed at a time. However, to conduct a more conservative analysis, the CalEEMod™ model was run using a scenario of installing two APCDs at any given time. SCAQMD staff assumed that the maximum daily emissions from construction-related activities for each phase would all occur on the same day. Table 2-5 presents the results of SCAQMD’s construction air quality analysis. Spreadsheets with the results and assumptions used for this analysis are included in Appendices B and C.

**Table 2-5
Peak Construction Emissions Due to Installation of New APCDs
for Worst-Case Impact Analysis Scenario**

| PEAK CONSTRUCTION | VOC | CO | NOx | SOx | PM10 | PM2.5 |
|------------------------------------|---------|---------|---------|---------|---------|---------|
| | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day |
| Total Project Emissions | 3.20 | 16.37 | 20.90 | 0.026 | 1.61 | 1.43 |
| | 2.58 | 15.42 | 18.41 | 0.03 | 1.33 | 1.13 |
| SCAQMD CEQA SIGNIFICANCE THRESHOLD | 75 | 550 | 100 | 150 | 150 | 55 |
| SIGNIFICANT? | NO | NO | NO | NO | NO | NO |

Construction activities that require use of heavy construction equipment would only be onsite for a limited amount of time during construction of the permanent total enclosures. The air quality impact analysis is based on the worst-case day, which is dependent on the demolition volumes and new building construction anticipated during the demolition and building construction phases. The assumption that construction may take up to two months does not represent the total length of time required for other interior and exterior renovations needed to comply with PR 415, because installation of other project components would not generate higher construction emission than that generated during the worst-case construction phase.

It should be noted that the analysis of construction air quality impacts was a “worst-case” analysis because it assumes that the peak construction would occur from the worst-case impact scenario facility that had based on the largest footprint and size of enclosures to construct and the most APCDs to install at the affected facilities in order to comply with PR 415. There are a number of factors that would preclude concurrent construction activities including: availability of construction crews, type and size of control equipment to be constructed, engineering time necessary to plan and design the control equipment, permitting constraints, etc. Furthermore, as a “worst-case,” SCAQMD’s air quality impacts analysis assumes that construction that utilizes use of heavy construction equipment could take up to two months to complete. Depending on the actual enclosure construction schedule and the type and size of the control equipment to be constructed, ~~actual~~ construction time could be substantially less than two months. Construction emissions ~~at associated with the worst-case impact analysis scenario facility~~ would not exceed any of the significance thresholds identified in Tables 2-3 and 2-5. Finally, once construction is complete, construction air quality impacts would cease. Moreover, since peak-day emissions are substantially smaller than SCAQMD significance thresholds, impacts will still not be significant even if more than one facility were under construction at the same time.

The peak daily emissions vary for each pollutant depending on the construction phase, which do not overlap in time, as the enclosures would need to be constructed prior to the installation of the APCDs. Those peaks are presented in Appendix C. The significance determination for the construction is based on the peak daily emissions during any construction phase. Therefore, all of the construction impacts from the project are not significant for criteria pollutant emissions.

Localized Significance Thresholds for Construction

The localized significance threshold (LST) methodology was developed to be used as a tool to assist lead agencies to analyze localized impacts associated with proposed projects. A search was conducted for any potential sensitive receptors that may be located within 1/4-mile of any currently known affected facility.

**Table 2-6
Residential Receptor Distance**

| Affected Facility Address | Residential Receptor Distance (feet) |
|---------------------------|--------------------------------------|
| 4020 Bandini Boulevard | 2,500 |
| 2626 E. 25th Street | 3,300 |
| 3049 E. Vernon Avenue | 4,800 |
| 4105 Bandini Boulevard | 3,100 |
| 3275 E. Vernon Avenue | 4,800 |

There are no sensitive receptors within 1/4-mile of the currently affected facilities, and therefore, no further LST analysis is needed.

Additionally, a screening health risk analysis using the most recent guidance from the state Office of Environmental Health Hazard Assessment (OEHHA) was prepared based on the total amount of diesel particulate matter for the facility with the highest estimated construction emissions. Based on this analysis, the health risk from construction diesel exhaust particulate matter is estimated to be less than SCAQMD health risk significance thresholds for both residential and worker receptors. Therefore, health risk impacts from construction are not expected to be significant from this project. Further analysis may be required on a case by case basis once site-specific details are available from each individual project as they are implemented pursuant to this rule.

Operational Impacts- Criteria Pollutants

PR 415 will require existing rendering facilities to enclose certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs. The worst-case impact scenario facility analysis would require the installation and operation of four new APCDs. For the purposes of this analysis, it was assumed that scrubbers would be the most reasonably appropriate control equipment to be installed at the new enclosures at Facility B due to the low concentration and high flow rate of the effluent air. The analysis assumes that carbon adsorption systems would be used for the raw receiving area, the main processing plant (cooking area), and wastewater enclosure for Facility D according to its proposed enclosure design. In addition, all facilities would be required to operate negative pressure in the new enclosures which would require a fan or blower to ensure effectiveness.

Wet scrubbers remove both particulate matter and gases from industrial process gas streams. In rendering operations, wet scrubbers are typically used to remove residual airborne organic particulates from rendering processes. Wet scrubbers are capable of 98 percent collection efficiencies for particles as small as 5 microns in size. Two types of scrubbers designed to remove small particulates are the ionizing wet scrubber and the venturi scrubber. In an ionizing wet scrubber, the gas stream first enters a chamber where a high voltage is used to ionize the gas stream. The second chamber is a wet scrubbing chamber, where the ionized particles and gases are attracted to the surface of the chamber and the scrubbing liquid. Larger size particles are removed by water through inertial impaction. A venturi scrubber is another type in which the exhaust stream is passed through a constriction (the venturi) where the scrubbing liquid is sprayed in. The turbulence of the gases at and after the venturi promotes contact of particles with the scrubbing liquid droplets. High particulate matter removal efficiencies for small particles can be achieved with this type of scrubber.

For the facility that would utilize the carbon adsorption equipment in lieu of scrubbers for the raw material receiving, cooking and wastewater treatment enclosures, it is assumed that the carbon will be purchased in 55 gallon drums (up to 20 drums total), and that the drums will be installed in parallel configuration to make up the necessary carbon volume. Replacement of the drums are expected once a year, and the spent carbon will be disposed at landfills.

The modified air handling systems (fans/blowers) needed to maintain negative pressure in the new enclosures, as well as the new APCDs, are expected to be powered by electricity, so no new combustion emissions would be generated. Therefore, the implementation of the proposed project is not expected to result in any significant adverse operational air quality impacts.

The worst-case impact scenario assumes rendering facilities in the local vicinity can accept animal carcasses and parts in the unlikely event the affected facility could not continue operations. Additionally, in the unlikely event that it is not economically feasible for an affected facility to continue current operations, a facility could close down and While the product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport.—~~However~~, the affected facilities are located very close to each other, and any additional trips generated would likely be less than a few miles. The closure procedures and possible demolition of a facility could not be predicted at this time since the subsequent operation of the site would be unknown. Thus, attempting to predict impacts from the closure and any subsequent operation of the facility would be speculative. Moreover, staff has not received evidence demonstrating that compliance would be infeasible for any facility.

Operational Impacts- Toxic Air Contaminants

In assessing potential impacts from the adoption of proposed rules and amendments, SCAQMD staff not only evaluates the potential air quality benefits, but also determines potential health risks associated with implementation of the proposed rules and amendments.

Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to enclose certain rendering operations, install APCDs for the enclosures or the secondary odor containment system for the raw material receiving enclosures, and carry out BMPs. There are no provisions in the rule that would generate any toxic emissions. As a result, there will be no increase in toxic air contaminant emissions due to the proposed project.

III. c) As Lead Agency, SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR. Projects that exceed the project-specific significance thresholds are considered by SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant¹³.

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the San Diego Air Pollution Control District's (SDAPCD) established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria..." "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the District has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established SCAQMD significance thresholds. A similar ruling was found in another case, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the lead agency's approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the Project will not cause a significant unavoidable cumulative contribution to an air quality impact.

Based on the foregoing analysis, project-specific air quality impacts from implementing the proposed project would not exceed air quality significance thresholds (Table 2-1); therefore, based on the above discussion, cumulative impacts are not expected to be significant for air quality. Therefore, potential adverse impacts from the proposed project would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulative considerable.

III. d) Affected facilities are not expected to increase exposure by sensitive receptors to substantial pollutant concentrations from the implementation of the proposed project for the following reasons: 1) criteria pollutant emissions increases during construction are well below significance thresholds and would not cause localized impacts; 2) there are no provisions in the proposed rule that would cause an affected facility to generate any toxic emissions; and 3) there will be no additional electrical generation facilities needed as a result of the adoption of the proposed project

¹³ SCAQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, <http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf?sfvrsn=4>.

(note: there will be a minimal additional need for power, but the demand, according to the power generators, can be met with existing systems). Therefore, significant adverse air quality impacts to sensitive receptors are not expected from implementing the proposed project.

III. e) The main objective of the proposed rule is to reduce odors from facilities conducting rendering operations. Therefore, no significant odor impacts are expected to result from implementing the proposed project.

III. g) & h) Changes in global climate patterns have been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, recently attributed to accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated with global warming.¹⁴ State law defines GHG to include the following: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) (HSC §38505(g)). The most common GHG that results from human activity is CO₂, followed by CH₄ and N₂O.

GHGs and other global warming pollutants are often perceived as solely global in their impacts because increasing emissions anywhere in the world contributes to climate change anywhere in the world. However, a study conducted on the health impacts of CO₂ "domes" that form over urban areas shows they can cause increases in local temperatures and local criteria pollutants, which have adverse health effects¹⁵.

The analysis of GHGs is a different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, the significance thresholds are based on daily emissions because attainment or non-attainment is primarily based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects on human health (e.g., one-hour and eight-hour standards). Since the half-life of CO₂ is approximately 100 years, for example, the effects of GHGs occur over a longer term which means they affect the global climate over a relatively long timeframe. As a result, SCAQMD's current position is to evaluate the effects of GHGs over a longer timeframe than a single day (e.g., annual emissions). GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects.

On December 5, 2008, SCAQMD adopted an interim CEQA GHG Significance Threshold for projects where SCAQMD is the lead agency (SCAQMD, 2008). This interim threshold is set at 10,000 metric tons of CO₂ equivalent emissions (MTCO₂eq) per year. Projects with incremental increases below this threshold will not be deemed to be cumulatively considerable.

¹⁴ Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.). 2007. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, 2007. Cambridge University Press. http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html

¹⁵ Jacobsen, Mark Z. "Enhancement of Local Air Pollution by Urban CO₂ Domes," Environmental Science and Technology, as describe in Stanford University press release on March 16, 2010 available at: <http://news.stanford.edu/news/2010/march/urban-carbon-domes-031610.html>.

Construction emission calculations were conducted for the worst-case impact scenario ~~one of the larger facilities in the current affected facility inventory. This particular facility was chosen for the analysis because it required the most construction activities of the five facilities currently in the affected inventory.~~ Therefore, this construction estimate was used as an example for a “worst-case” impact scenario. Table 2-7 provides the total construction CO₂E emissions that could occur from the installation of enclosures, APCDs and paving activities at for the worst-case impact facility scenario. Detailed GHG calculations can be found in Appendix C. As shown in Table 2-7, GHG emissions generated by construction activities are expected to be relatively small, much less than 10,000 metric tons per year (SCAQMD’s GHG significance threshold), and, therefore, not significant.

**Table 2-7
Overall CO₂ Equivalent (eq) Increases Due to Construction Activities
for Worst-Case Impact Analysis Scenario
(metric tons/year)**

| | CO ₂ | CH ₄ | CO ₂ eq |
|---|----------------------------------|--------------------------------|-----------------------------|
| Annual CO₂eq Emission Increases Due to: | lb/day | lb/day | MT/year |
| Installing New Enclosures and Paving Activities | 4,448 <u>2,913</u> | 0.65 <u>0.64</u> | 2 <u>45</u> |
| Installing New APCDs | 2,470 <u>2,608</u> | 0.39 <u>0.35</u> | 1.1 <u>6</u> |
| | | Total | 3.2 <u>51</u> |

¹ 1 metric ton = 2,205 pounds

Since the proposed project is not expected to generate significant construction-related GHG emissions, and the operational phase of the proposed project is not expected to generate any additional GHG emissions, cumulative GHG adverse impacts from the proposed project are not considered significant or cumulatively considerable.

Indirect GHG and Criteria Pollutant Emissions from Electricity Consumption

Indirect GHG and criteria pollutant emissions are expected from the generation of electricity to operate new equipment that occurs off-site at electricity generating facilities (EGFs). Emissions from electricity generating facilities at their maximum permitted capacity are already evaluated in the CEQA documents for those projects when they are built or modified. The analysis in Section VI. Energy- b), c) and d) demonstrated that there is sufficient capacity from power providers for the minimal increased electricity consumption from the proposed rule. Based on the analysis in Section VI, a maximum of 1,415 kWh per day or 517 MWh per year would be needed to power the APCDs and the secondary odor containment system for the raw material receiving enclosures. Based on the carbon intensity of Vernon’s electricity of 761 lbs/MWh, as reported in the CalEEMod 2016 User’s Guide, PR 415 would result in 180 MTCO₂ annually.

~~Under the SCAQMD Regional Clean Air Incentives Market (RECLAIM) program (that regulates NO_x and SO_x emissions), EGFs were provided annual allocations of NO_x and SO_x emissions that typically decline annually. However, the proposed project does require an increase in energy generation and that any increase in emissions from generating additional energy (See Section VI.~~

Energy for impacts) from the EGFs would be required to offset any potential NOx and SOx emission increases under the RECLAIM program and other pollutants under the New Source Review Project. Thus, air quality impacts from energy generation are anticipated to be less than significant impacts.

Conclusion

Based on the preceding evaluation of potential air quality impacts, SCAQMD staff has concluded that the proposed project does not have the potential to generate significant adverse air quality impacts. Since no significant adverse air quality and greenhouse gases impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| IV. BIOLOGICAL RESOURCES. | | | | |
| Would the project: | | | | |
| a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts on biological resources will be considered significant if any of the following criteria apply:

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

Discussion

IV. a), b), c), & d) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs. Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas paving of receiving areas, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures. All construction activities are expected to take place at existing facilities that are already developed. The biological resources have already been disturbed or removed at the existing facilities. Thus, there are no sensitive biological resources at the affected facilities that would be disturbed as a result of implementation of the proposed rule. As a result, the proposed project would not directly or indirectly affect any new or existing species identified as a candidate, sensitive or special status species, riparian habitat, federally protected wetlands, or migratory corridors. For this same reason, the proposed project is not expected to adversely affect special status plants, animals, or natural communities.

IV. e) & f) The proposed project would not conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans because there are no such plans in the areas the facilities are located in, which are subject to the proposed rule it would not cause new development. All construction activities are expected to take place at existing facilities that are already developed. Additionally, the proposed project would not conflict with any Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan for the same reason identified in Item IV. a), b), c), and d) above. Likewise, the proposed project would not in any way impact wildlife or wildlife habitat.

Based upon these considerations, significant adverse biological resources impacts are not anticipated and will not be further analyzed in this ~~Draft~~ Final EA. Since no significant adverse biological resources impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| V. CULTURAL RESOURCES. Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Directly or indirectly destroy a unique paleontological resource, site, or feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Disturb any human remains, including those interred outside formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic, cultural significance, or tribal cultural significance to a community or ethnic or social group or a California Native American tribe.
- Unique paleontological resources or objects with cultural value to a California Native American tribe are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

Discussion

V. a), b), c), & d) Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas paving of receiving areas, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures. However, all construction activities are expected to take place at existing facilities that are already developed. Any construction of new facilities would not be caused by this rule. Therefore, the construction activities are expected to occur in previously disturbed soils and would not require disturbing native soils that may contain cultural resources.

While a Landmark Wall surrounds Facility C, aerial photographs show that there are existing structures within 50 feet of the Landmark Wall that are visible from the roadway right-of-way. The new permanent total enclosure would not be located closer to the Landmark Wall than the current buildings and would also not be taller than the current buildings. Additionally, proposed signage, consistent with the requirements of PR 415, would be similar in scale as the existing signage and would not have the potential to significantly alter the historic value of the Landmark Wall.

Since no construction-related activities requiring native soil disturbance would be associated with the implementation of the proposed project, no impacts to historical or cultural resources are anticipated to occur. Further, the proposed project is not expected to require any major physical changes to the environment, which may disturb paleontological or archaeological resources or disturb human remains interred outside of formal cemeteries.

V. e) There are no tribal cultural resources in the areas the facilities are located in, which are subject to PR 415. The proposed project is not expected to require physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe. Furthermore, the proposed project is not expected to result in a physical change to a resource determined to be eligible for inclusion or listed in the California Register of Historical Resources or included in a local register of historical resources. For these reasons, the proposed project is not expected to cause any substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074.

It is important to note that as part of releasing this CEQA document for public review and comment, SCAQMD also provided a formal notice of the proposed project to all California Native American Tribes (Tribes) that requested to be on the Native American Heritage Commission's (NAHC) notification list per Public Resources Code §21080.3.1 (b)(1). The NAHC notification list provides a 30-day period during which a Tribe may respond to the formal notice, in writing, requesting consultation on the proposed project.

The Notice of Completion (NOC) for the Draft EA for PR 415 was provided to all California Native American Tribes (Tribe) that requested to be on the NAHC's notification list. SCAQMD did not receive a consultation request from a Tribe prior to the release of the Draft EA or during the 30-day public review and comment period. Moreover, no Tribes responded to the NOC to request a consultation on PR 415 and the associated Draft EA.

In the event that a Tribe submits a written request for consultation during this 30-day period, SCAQMD will initiate a consultation with the Tribe within 30 days of receiving the request in accordance with Public Resources Code §21080.3.1 (b). Consultation ends when either: 1) both parties agree to measures to avoid or mitigate a significant effect on a Tribal Cultural Resource and agreed upon mitigation measures shall be recommended for inclusion in the environmental document [see Public Resources Code §21082.3 (a)]; or, 2) either party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached [see Public Resources Code §21080.3.2 (b)(1)-(2) and §21080.3.1 (b)(1)].

Based upon these considerations, significant adverse cultural resources impacts are not expected from implementing the proposed project and will not be further assessed in this ~~Draft~~ Final EA.

Since no significant cultural resources impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|-------------------------------------|--------------------------|
| VI. ENERGY. Would the project: | | | | |
| a) Conflict with adopted energy conservation plans? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Result in the need for new or substantially altered power or natural gas utility systems? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Create any significant effects on local or regional energy supplies and on requirements for additional energy? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create any significant effects on peak and base period demands for electricity and other forms of energy? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Comply with existing energy standards? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Significance Criteria

Impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

Discussion

VI. a) & e) The proposed project does not require any action which would result in any conflict with an adopted energy conservation plan or violation of any energy conservation standard. PR 415 is not expected to conflict with adopted energy conservation plans because existing affected facilities would be expected to continue implementing any existing energy conservation plans.

The proposed project is not expected to cause new development outside of the footprint of the affected facilities. The local jurisdiction or energy utility sets standards (including energy conservation) and zoning guidelines regarding new development and will approve or deny applications for building new equipment at the affected facility.

As a result, the proposed project would not conflict with energy conservation plans, use non-renewable resources in a wasteful manner, or result in the need for new or substantially altered power or natural gas systems.

VI. b), c) & d) There may be an increase in electricity consumption associated with the new APCDs required for enclosures or the secondary odor containment system for the raw material receiving enclosures. Diesel fuel would be consumed by construction equipment and gasoline fuel

would be consumed by the construction workers vehicles. The following sections evaluate the various forms of energy sources affected by the proposed project.

Electricity: The modified air handling systems (fans/blowers) needed to maintain negative pressure in the new enclosures, as well as the new APCDs, are expected to be powered by electricity, so no new combustion emissions would be generated. However, additional electricity would be required by the operation of this new equipment. The worst-case impact scenario facility analysis would require the installation and operation of four new APCDs, as well as ~~three~~one new fans/blowers. For the purposes of this analysis, it was assumed that scrubbers would be the most reasonably appropriate control equipment to be installed at the new enclosures due to the low concentration and high flow rate of the effluent air. The estimated horsepower ratings of this new equipment are presented in Table 2-8.

**Table 2-8
Additional Electricity Usage from New APCDs and Negative Pressure Air Handling
Equipment for Worst-Case Impact Analysis Scenario**

| Area | Control Equipment | Estimated Horsepower Rating |
|--|-------------------------------------|------------------------------------|
| Wastewater treatment area (3,500 sq. ft.) | 1 scrubber | 2 |
| | 1 fan/blower | 25 |
| Secondary Processing Plant (10,000 sq. ft.) | 1 scrubber | 6 |
| | 1 fan/blower | 50 |
| Main processing plant (40,000 sq. ft.) | 2 scrubbers | 20 |
| | 1 fan/blower | 200 |
| Receiving area | Included with Main processing plant | N/A |
| Material handling building | Included with Main processing plant | N/A |
| TOTAL | | 303 |

| <u>Equipment</u> | <u>Electricity Usage</u> (kW-h/year) |
|-------------------------------------|---|
| <u>Ventilation Blower</u> | <u>386,024</u> |
| <u>Scrubber Recirculation Pumps</u> | <u>119,556</u> |
| <u>Air Curtain</u> | <u>10,977</u> |
| <u>TOTAL</u> | <u>516,557</u> |

Based on the estimated ratings of the new control and air handling equipment expected to be installed, approximately 0.23 megawatt/hour or (303 horsepower x megawatt/1,341 horsepower) 2,015 517 megawatt-hours per year (0.23 megawatt/hour x 24 hour/day x 365 day/year) would be required by the proposed worst-case impact facility analysis scenario. It should be noted that these electricity usage estimates are based on all of the new control and air handling equipment for this worst-case impact facility analysis scenario running 24-hours a day, seven days a week, which is considered a conservative worst-case impact scenario.

City of Vernon Gas & Electric and the Los Angeles Department of Water and Power (LADWP) supply electricity to the facilities in the affected inventory. The California Energy Commission (CEC) staff reports that LADWP consumed 25,921 total gigawatt-hours (GWh) in 2008, with a peak hourly consumption of 5,717 megawatt-hours in 2008. ~~No consumption information was available for City of Vernon Gas & Electric. According to the City of Vernon Utility's 2015 Renewable Portfolio (RPS) Compliance Report¹⁶, the Vernon Gas & Electricity Utility had a retail load of 1,120.89 GWh in 2014. The additional 2,015 517 megawatt-hours annually required to operate the new APCDs, secondary odor containment system, and air handling equipment at the worst-case impact facility analysis scenario would represent less than 0.02 percent of Vernon's electricity demand or be 0.008 percent of the LADWP demand the 2008 consumption of 25,921 gigawatts and the peak consumption of 0.23 megawatt hours would be 0.00004 percent of the peak 5,717 megawatt hours consumption. Moreover, if all five facilities operated the same amount of air handling and control equipment as the worst case impact scenario facility, the additional 10,075 megawatt hours (2,015 megawatt hours x 5 facilities) annually required would be 0.04 percent of the 2008 consumption of 25,921 gigawatts and the peak consumption of 1.15 megawatt hours (0.23 megawatt hours x 5 facilities) would be 0.0002 percent of the peak 5,717 megawatt hours consumption.~~ Therefore, SCAQMD staff concludes that the amount of electricity required to meet the incremental energy demand associated with the proposed rule requirements would not result in a significant adverse electricity energy impact.

Petroleum Fuels: During the construction phases, diesel and gasoline fuel will be consumed in construction equipment and portable construction equipment (e.g., generators and compressors) used to weld, cut, and grind metal structures and by construction workers' vehicles traveling to and from construction sites. To estimate "worst-case" energy impacts associated with the construction phases of the "~~worst case~~" facility worst-case impact scenario analyzed for the proposed project, SCAQMD staff assumed that off-road construction equipment (including portable equipment used to weld, cut, and grind metal structures and heavy equipment used during the demolition, construction phases, and installation of APCDs) would be operated up to ~~500~~ 2,025 hours in a year (~~8 hours per day for 60 days~~ see Appendix C).

~~To estimate construction workers' fuel usage per commute round trip, SCAQMD staff estimated construction worker fuel usage based on the worst-case impact scenario (see Appendix C). Modeling assumes assumed that workers' vehicles would get 20-21.7 miles to the gallon and would travel 40 approximately 30 miles¹⁷ round trip to and from the construction site in one day. Off-road construction equipment diesel fuel use is based fuel consumption in OFFROAD.~~ Table 2-9 lists the projected energy impacts associated with the construction and installation at the two affected facilities at any given time.

¹⁶ Vernon Utility. 2015, January 20. Renewable Portfolio Standard Annual Status Report for Calendar Year 2014. Staff Report, Vernon Gas & Electricity Department. http://www.cityofvernon.org/images/light-and-power/rps/RPS_Annual_Report_for_Calendar_Year_2014_1_20_15.pdf

¹⁷ Based on the worker commute distance for Los Angeles County in CalEEMod 2016.3.2.

Table 2-9
Total Projected Fuel Usage for Construction Activities

| Fuel Type | Year 2012 Projected Basin Fuel Demand ^a (mmgal/yr) | Fuel Usage ^b (mmgal/yr) | Total % Above Baseline | Significant? |
|-----------|---|------------------------------------|---------------------------|--------------|
| Diesel | 524 | 0.0014 0.0019 | 3.0E-10 3.7E-6 | No |
| Gasoline | 5,589 | 0.012 0.0017 | 2.1E-12 3.0E-7 | No |

^a Figures taken from Table 3.3-3 of the 2012 AQMP Final EIR

^b Estimated peak fuel usage from the implementation of the proposed amendments. Diesel usage estimates are based on ~~portable construction equipment operation~~ off-road equipment use and vendor and haul vehicle trips. Gasoline usage estimates are derived from workers' vehicle daily trips to and from work.

Once construction is complete, there will not be a need for additional workers or truck trips during operation on a daily basis. However, the carbon adsorption systems would require disposal of the drums at the local landfill once a year (approximately 60 miles round trip). Consequently, ~~so~~ there will be ~~no~~ a nominal increased fuel demand during operation.

Based on the above information, the proposed project is not expected to generate significant adverse energy resources impacts and will not be discussed further in this ~~Draft~~ Final EA. Since no significant energy impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| VII. GEOLOGY AND SOILS. Would the project: | | | | |
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| • Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts on the geological environment will be considered significant if any of the following criteria apply:

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.

- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Discussion

VII. a) Southern California is an area of known seismic activity. Structures must be designed to comply with the ~~Uniform~~ California Building Code Zone 4 requirements if they are located in a seismically active area. The local city or county is responsible for assuring that a proposed project complies with the ~~Uniform~~ California Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The ~~Uniform~~ California Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage but with some non-structural damage; and 3) resist major earthquakes without collapse but with some structural and non-structural damage.

The ~~Uniform~~ California Building Code bases seismic design on minimum lateral seismic forces (“ground shaking”). The ~~Uniform~~ California Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the ~~Uniform~~ California Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site. Accordingly, buildings and equipment at existing facilities affected by PR 415 are likely to conform with the ~~Uniform~~ California Building Code and all other applicable state codes in effect at the time they were constructed.

PR 415 will require existing rendering facilities to enclose certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs. Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas ~~paving of receiving areas~~, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures. However, all construction activities are expected to take place at existing facilities that are already developed. Therefore, no major change in geological existing setting is expected. In addition, any new enclosure installed as a result of PR 415 will be expected to comply with any applicable ~~Uniform~~ California Building Code requirements. Consequently, the proposed project is not expected to expose persons or property to new geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structure to the risk of loss, injury, or death involving seismic-related activities is not anticipated and will not be further analyzed in this ~~draft~~ Final EA.

VII. b), c), d) & e) Since the proposed project would affect primarily existing facilities, it is expected that the soil types present at the affected facilities that are susceptible to expansion or liquefaction would be considered part of the existing setting. Implementation of the proposed rule would require construction activities such as demolition the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside

raw material receiving areas paving of receiving areas, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures. New subsidence impacts are not anticipated since no major excavation or fill activities are expected to occur at affected facilities. Further, the proposed project does not involve the removal of underground products (e.g., water, crude oil, et cetera) that could produce new, or make worse existing subsidence effects. Additionally, the affected areas are not envisioned to be prone to new risks from landslides or have unique geologic features, since the affected facilities are located in highly industrial/commercial areas where such features have already been altered or removed. Finally, since adoption of the proposed project would be expected to affect operations at primarily existing facilities, the proposed project is not expected to alter or make worse any existing potential for subsidence, liquefaction, etc. Any new facilities that are constructed would not be caused by the proposed rule.

Based on the above discussion, the proposed project is not expected to have an adverse impact on geology or soils. Since no significant adverse impacts are anticipated, this environmental topic will not be further analyzed in the ~~draft~~ Final EA. No mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project: | | | | |
| a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Significantly increased fire hazard in areas with flammable materials? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:

- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

Discussion

VIII. a, b) & c) The use of wet scrubbers as an APCDs for the proposed enclosure requirement may involve the use of chemical reagents in the make-up water utilized within the unit. Typical chemical reagents used in wet scrubbers include sodium hypochlorite (NaOCl), sodium hydroxide (NaOH), NaOH plus either NaOCl or chlorine (Cl₂) gas, and chlorine dioxide (ClO₂). These reagents are expected to be added periodically to the unit's make-up water in small quantities. The limited amount of chemical reagents (expected to be under response management plan (RMP) thresholds) required by the new APCD's are expected to be temporarily stored in the affected facilities hazardous materials storage areas until they are needed for use in the wet scrubber units. This limited amount of chemical usage and storage associated with the newly required APCDs are not expected to create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials, due to the fact that limited amounts of hazardous materials are currently already utilized at the affected facilities, and the limited use of chemical reagents in the required wet scrubber units is not expected to create a significant new hazard. Additionally, based on the above information, the proposed project will not create a significant hazard to the public or environment through a reasonably foreseeable release of these materials into the environment. Furthermore, any water that is discharged from the wet scrubber units will be required to comply with the facilities' already existing sanitary sewer system discharge requirements.

Build-ups of biological growth in the packed bed sections of wet scrubbers could adversely affect the performance of scrubbers. However, there is a general provision in the proposed rule (as well as most equipment permits) requiring all equipment to be maintained according to manufacturer's specifications, which would eliminate any potential hazards associated with the build-up of biological material.

Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to enclose provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures or the secondary odor containment system for the raw material receiving enclosures, and carry out BMPs. The proposed project is expected to affect primarily existing facilities that are already developed and are currently operating. Therefore, there is little likelihood that affected facilities will emit new hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school as a result of implementing the proposed project.

VIII. d) It is not anticipated that the proposed project will alter in any way how operators of facilities who are affected by PR 415 manage their hazardous wastes. Government Code §65962.5

typically refers to a list of facilities that may be subject to Resource Conservation and Recovery Act (RCRA) permits. The facilities are designated on hazardous materials lists per Government Code §65962.5. For any facilities affected by the proposed project that are on the Government Code §65962.5 list, it is anticipated that they would continue to manage any and all hazardous materials and hazardous waste, in accordance with federal, state and local regulations.

VIII. e) Since the proposed project would establish procedures to reduce odors from facilities conducting rendering operations and, implementation of the proposed project is not expected to increase or create any new hazardous emissions in general, public/private airports located in close proximity to any affected facility will not be adversely affected. Any new enclosures required by the proposed rule will be constructed at the affected facilities, and therefore, are not expected to be located in any existing flight path. Implementation of the proposed project is not expected to create any additional safety hazards for people residing or working in the project area.

VIII. f) The proposed project will not impair implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan. Any existing facilities affected by the proposed project will typically have their own emergency response plans. Any potential new facilities will be required to prepare emergency response and evacuation plans as part of the land use permit review and approval process conducted by local jurisdictions for new development. Emergency response plans are typically prepared in coordination with the local city or county emergency plans to ensure the safety of not only the public (surrounding local communities), but the facility employees as well. Since the proposed project does not involve the change in current uses of any hazardous materials, or generate any new hazardous waste, no changes to emergency response plans are anticipated.

Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

1. Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
2. Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
3. Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
4. Procedures to notify the necessary persons who can respond to an emergency within the facility;
5. Details of evacuation plans and procedures;
6. Descriptions of the emergency equipment available in the facility;
7. Identification of local emergency medical assistance; and
8. Training (initial and refresher) programs for employees in:
 - a. The safe handling of hazardous materials used by the business;
 - b. Methods of working with the local public emergency response agencies;

- c. The use of emergency response resources under control of the handler; and
- d. Other procedures and resources that will increase public safety and prevent or mitigate a release of hazardous materials.

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area. Operation of a permanent total enclosure or closed system and installation of APCDs may necessitate an update to the facilities hazardous materials business plan. However, adopting the proposed project is not expected to hinder in any way with the above business emergency response plan requirements.

VIII. g) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. The proposed project has no provisions that dictate the use of, or generate any new hazardous material. Since the affected facilities are primarily located in established industrial/commercial workplace areas where wildlands are typically not prevalent, risk of loss or injury associated with wildland fires is not expected as a result of implementing the proposed project.

VIII. h) Affected facilities must comply with all local and county requirements for fire prevention and safety. Operation of a closed system, installation of APCDs or the secondary odor containment system for the raw material receiving enclosures, and implementation of BMPs are not expected to result in any physical changes that would cause or increase fire hazards. Construction of permanent total enclosures is subject to review by the local jurisdiction and Fire Marshall. Based on correspondence with the Fire Marshall, enclosures are expected to be equipped with an adequate fire suppression system. The proposed project does not require any activities which would be in conflict with fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities.

Pursuant to local and county fire prevention and safety requirements, facilities are required to maintain appropriate site management practices to prevent fire hazards. The proposed project will not interfere with fire prevention practices.

In conclusion, potentially significant adverse hazard or hazardous material impacts resulting from adopting and implementing the proposed project are not expected and will not be considered further. No mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| IX. HYDROLOGY AND WATER QUALITY. Would the project: | | | | |
| a) Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| e) Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|-------------------------------------|-------------------------------------|
| f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| h) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| i) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for total water by more than five million gallons per day.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.
- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.

- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

Discussion

Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures, and carry out BMPs. Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas ~~paving of receiving areas~~, and the installation of new APCDs. However, all construction activities are expected to take place at existing facilities that are already developed.

~~The proposed BMPs do require several washing activities, including the washdown of receiving areas and the washing of outgoing transport vehicles, drums and containers. However, BMP [(e)(4)] for washing of drums and containers has been limited such that only drums and containers that contained raw rendering materials that are open upon exiting the facility are required to be washed. Outgoing trucks are currently required to be washed under 3 CCR §1180.35. Therefore, the minimal amount of water required for the washdown of the receiving areas and of any open drums and containers leaving the facilities is not expected to be near the water demand significance threshold; and therefore, would not interfere with any California water policies.~~

Additional water usage and additional wastewater generation would be associated with ~~the four new~~ scrubbers utilized in the worst-case impact scenario facility analysis (please see page 2-4 for a description and the rationale of the worst-case impact scenario facility analysis). The worst-case impact scenario assumes that one facility would utilize a scrubber.¹⁸ The size of the scrubbers expected to be utilized is not known at this time. However, based on permit conditions for an existing scrubber currently being utilized by one of the facilities in the affected facility inventory, this currently utilized scrubber has an influent and effluent rate of ~~five (5) two (2)~~ two (2) gallons per minute. Therefore, ~~four (4) the new scrubbers of this size at the worst case facility analysis scenario would use an additional 20 gallons per minute, or 28,800 2,940 gallons per day.~~ This new amount of expected water usage is well below the significance threshold of 262,820 gallons per day of potable water. ~~Moreover, if all five facilities operated the same amount of scrubbers as the worst case scenario facility, an additional 144,000 gallons per day would be used, which is still well below the 262,820 gallons per day single facility significance threshold.~~ Therefore, sufficient water supplies are expected to be available to serve the proposed project from existing entitlements and resources without the need for new or expanded entitlements, and the proposed worst-case impact facility analysis scenario is not expected to be significant for operational water demand.

The proposed BMPs also require several washing activities, including: the washdown of receiving areas (BMP (e)(10)), the washing of outgoing transport vehicles (BMP (e)(3)), the washing of drums and containers (BMP (e)(4)), and cleaning the floor drains (BMP (e)(11). Outgoing trucks are currently required to be washed under Title 3 California Code of Regulations (CCR), §1180.35; and therefore, considered business as usual (i.e., no additional water usage). Additionally, washdown of the receiving area is also considered business as usual, since each facility is currently

¹⁸ The worst-case impact scenario assumes use of a carbon adsorption system instead of a scrubber for the APCD.

required to wash the receiving area under their permit on the same frequency as under the proposed rule.

An estimate for additional water usage and wastewater generated was also calculated for the worst-case impact scenario ~~an affected facility to complying with BMPs [(e)(3)] Washing of Outgoing Trucks, (e)(4)- Washing of Drums and Containers, and (e)(13 11)- Cleaning Floor Drains . Please note the assumption for [(e)(12)] Washdown of Receiving Area, is considered business as usual (i.e. no additional water usage), since each facility is currently required to wash the receiving area under their permit on the same frequency as under the proposed rule.~~ The following assumptions were used in the estimate:

- Facility personnel will wash continuously for four hours per day at least once per working day to comply with BMPs [(e)(3)], (e)(4) and [(e)(13)].
- Facility personnel will inspect and clean not less frequently than once per month to comply with BMP (e)(11).
- Hose operates continuously for entire four hour period without ceasing Washing of drums is 100 gal/day for three facilities.
- Cleaning of floor drains is required for 5 facilities and assumes 660 gal per cleaning for 1 hour, once per month.
- The ratio of non-rendering, process (not potable) wastewater to rendering wastewater is 30:1.
- Line pressure is 60 pounds per square inch (psi).
- Hose length is 200 feet
- Hose diameter is nominal 3/4-inch.

Using these parameters, ~~the flow rate was calculated to be 11 gallons per minute (gpm). Therefore, the amount of water used and the additional amount of wastewater generated by these three BMPs would be 2,640 approximately 400 gallons per day, per facility (60 minutes/hour and four hours/day). Furthermore, the total amount of amount of water used and the additional amount of wastewater generated by these three BMPs by all five affected facilities would be 13,200 gallons (2,640 gallons x 5).~~

If added to the expected amount of water usage from the additional required APCDs (conservatively estimated to be ~~144,000~~ 2,940 gallons per day), this new amount of expected water usage (~~157,200~~ 3,340 gallons per day) is well below the significance threshold of 262,820 gallons per day of potable water.

Based on the above information, amount of additional wastewater is not expected to be a significant increase in the amount that any affected facility is currently permitted to discharge. It is expected that this additional wastewater generation would not be a significant impact on the current wastewater infrastructure.

PR 415 will require existing rendering facilities to ~~enclose~~ construct a permanent total enclosure or a closed system for certain rendering operations, therefore, potentially causing the installation of new enclosures at affected facilities. The permanent total enclosures are expected to be built within the existing footprints of the affected facilities, which are already completely developed with existing ~~storm water~~ sewer collection systems. The addition of one or several enclosures and/or paved areas at the already highly developed affected facilities is not expected to generate a

substantial amount of new storm water runoff, and existing storm water collection systems are likely to easily be able to handle the minimal increase in storm water runoff that the newly developed enclosures may generate.

The affected facilities are already currently subject to specific California Regional Water Quality Control Board (RWQCB) and National Pollutant Discharge Elimination System (NPDES) wastewater discharge requirements. Further, the proposed project has no provision that would require the construction of additional water resource facilities, increase the need for new or expanded water entitlements, or alter existing drainage patterns in a substantial manner. The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff. Based on data from Los Angeles County Sanitation Districts (LACSD)¹⁹, the wastewater treatment capacities from regional plants range from 0.2 million gallons per day (mgd) to 400 mgd. The additional wastewater discharge that would be generated from the increased water usage of 3,340 gallons per day is approximately 1.7 percent of the lowest treatment capacity. Therefore, PR 415 is not expected to cause any significant adverse impacts on hydrology and water quality with respect to the amount of wastewater generation. Further, since the BMPs for washing activities involve equipment/containers/surfaces that currently come into contact with rendering materials, there would be no change in the composition of existing wastewater streams from the potentially affected facilities.

Additionally, discharge quantities and concentrations would continue to be limited by Los Angeles County Sanitation District LACSD requirements. Construction of new buildings at the affected facilities may be considered redevelopment projects; and would therefore, require the implementation of Low Impact Design (LID) principals where the stormwater runoff from these project areas would be required to be captured and treated or infiltrated. According to the RWQCB, LID is “sustainable practice that benefits water supply and contributes to water quality protection” and takes a different approach, compared to the traditional stormwater management, “by using site design and storm water management to maintain the site’s pre-development runoff rates and volumes. The goal of LID is to mimic a site’s predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall.”²⁰ The techniques used as part of LID are often conducive to reducing the amount of pollutants in discharged water. “LID practices result in less disturbance of the development area, conservation of natural features, and less expensive than traditional storm water controls. [...] LID provides multiple opportunities to retrofit existing highly urbanized areas and can be applied to a range of lot sizes.”²¹ Therefore, implementation of LID is intended to minimize impacts to the development areas within the existing footprint and disturbance of the rendering facilities. Since Order No. R4-2012-0175 NPDES permit No. CAS004001 for the Los Angeles Region, including the City of Vernon, has been effective since December 28, 2012²², the rendering facilities are already subject

¹⁹ Sanitation Districts of Los Angeles County. Accessed on October 16, 2017. Available at: <http://www.lacsd.org/wastewater/wwfacilities/#map>.

²⁰ California Regional Water Quality Control Board. Updated July 18, 2013. *Low Impact Development – Sustainable Storm Water Management*. Accessed at: http://www.swrcb.ca.gov/water_issues/programs/low_impact_development/index.shtml.

²¹ Ibid.

²² California Regional Water Quality Control Board. Accessed on September 22, 2017. *ORDER NO. R4-2012-0175. NPDES PERMIT NO. CAS004001*. Accessed at: http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf.

to the LID requirements, and any new structure as a result of PR 415 can use the existing LID materials and infrastructure at the rendering facilities, thereby resulting in no or minimal impacts on stormwater treatment systems.

Therefore, the proposed project is not expected to require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality.

IX. a) & f) An additional amount of wastewater generation is expected from the washing activities required by the proposed BMPs and the operation of new APCDs for the newly required enclosures (3,340 gallons per day). However, this amount of additional wastewater generation is not expected to be a significant increase in the amount that the worst-case facility impact scenario analyzed is currently permitted to discharge. It is expected that this additional wastewater generation would not be a significant impact on the current wastewater infrastructure. To qualify for the exemption for enclosure requirements for wastewater operations at non-integrated rendering facilities, the owner/operator must demonstrate a dilution ratio of at least 30:1 and ensure that process water from other parts of the facility is used to dilute rendering wastewater, rather than clean water (potable) being used for dilution. Further, since the BMPs for washing activities involve equipment/containers/surfaces that currently come into contact with rendering materials, there would be no change in the composition of existing wastewater streams from the potentially affected facilities. Based on the above information, the proposed project is not expected to cause potentially affected facilities to violate any water quality standard or wastewater discharge requirements. The adoption of the proposed project is not expected to have significant adverse water demand or water quality impacts for the following reasons:

- The proposed project does not increase total demand for water by more than 5,000,000 gallons per day year (or 262,820 gallons per day of potable water).
- The proposed project does not require construction of new water conveyance infrastructure.
- The proposed project does not create a substantial increase in mass inflow of effluents to public wastewater treatment facilities.
- The proposed project does not result in a substantial degradation of surface water or groundwater quality.
- The proposed project does not result in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The proposed project does not result in alterations to the course or flow of floodwaters.

IX. b) The proposed BMPs do require several washing activities, including the washdown of receiving areas, and the washing of outgoing transport vehicles, drums and containers. However, BMP (e)(4) for washing of drums and containers has been limited such that only open drums and containers that contained raw rendering materials ~~that are open upon exiting the facility~~ are required to be washed prior to leaving a facility. Outgoing trucks are currently required to be washed under Title 3 CCR §1180.35. Additional water usage could also potentially be associated

with the installation of new APCDs; however, based on the water demand analysis presented above in the Discussion section, this new potential water demand is expected to be minimal (proposed BMPs and the operation of new APCDs for the newly required enclosures would result in a maximum of 3,340 gallons per day). Additionally, the ratio of non-rendering, process wastewater to rendering wastewater is 30:1 and would be diluted using process water rather than potable water resources. Therefore, no significant increase to any affected facilities' existing water demand is expected. Because the potential increase in water demand generated by the proposed BMPs and the operation of additional APCDs is expected to be minimal, implementation of the proposed project will not increase demand for, or otherwise affect groundwater supplies or interfere with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. In addition, implementation of the proposed project will not require new or expanded entitlements. Because the construction activities associated with the proposed project will occur at already existing developed facilities, any additional paving that is required is expected to occur within the footprint of the facilities, and further limited to repair of the outside raw receiving area, and is not expected to interfere with groundwater recharge. Therefore, no water demand impacts are expected as the result of implementing the proposed project.

IX. c), d), & e) Implementation of the proposed project will occur at primarily existing facilities that are paved and have drainage infrastructure in place. The permanent total enclosures required by PR 415 are expected to be built within the existing footprints of the affected facilities, which are already completely developed with existing storm water collection systems. The addition of one or several enclosures at the already highly developed affected facilities is not expected to generate a substantial amount of new storm water runoff, and existing storm water collection systems are likely to easily be able to handle the minimal increase in storm water runoff that the newly developed enclosures may generate. The ratio of non-rendering, process wastewater to rendering wastewater is 30:1 and would be diluted using process water rather than potable water resources. Therefore, no change to existing storm water runoff, drainage patterns, groundwater characteristics, or flow are expected.

IX. g), h), & i) The proposed project will not require construction of new housing, and all construction activities associated with PR 415 are expected to take place at existing facilities that are already developed. Therefore, the proposed project is not expected to generate construction of any new structures in 100-year flood areas as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood delineation map. Further, the proposed project is not expected to require additional operational workers at affected facilities. As a result, the proposed project is not expected to expose people or structures to significant new flooding risks, or make worse any existing flooding risks. Finally, the proposed project will not affect in any way any potential flood hazards inundation by seiche, tsunami, or mud flow that may already exist relative to existing facilities or create new hazards at existing facilities.

The addition of one or several enclosures at the already highly developed affected facilities is not expected to generate a substantial amount of new storm water runoff, and existing storm water collection systems are likely to easily be able to handle the minimal increase in storm water runoff that the newly developed enclosures may generate. Therefore, no new storm water discharge treatment facilities or modifications to existing facilities will be required due to the implementation of the proposed project. Accordingly, the proposed project is not expected to generate significant adverse impacts relative to construction of new storm water drainage facilities.

Based upon these considerations, significant hydrology and water quality impacts are not expected from the implementation of the proposed project and will not be further analyzed in this ~~Draft~~-Final EA. Since no significant hydrology and water quality impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| X. LAND USE AND PLANNING. | | | | |
| Would the project: | | | | |
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by local jurisdictions.

Discussion

X. a) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs. Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas ~~paving of receiving areas~~, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures. However, since all construction activities are expected to take place at existing facilities that are already developed, implementation of the proposed project will not require or result in physically dividing an established community.

X. b) There are no provisions in the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements would be altered by the proposed project. Affected facilities would have to comply with local ordinances and land use requirements. Therefore, as already noted in the discussion under “Biological Resources,” the proposed project would not affect any habitat conservation or natural community conservation plans, or agricultural resources or operations, and would not create divisions in any existing communities. Present or planned land uses in the region would not be significantly adversely affected as a result of implementing the proposed project.

Based upon these considerations, significant adverse land use and planning impacts are not expected from the implementation of the proposed project and will not be further analyzed in this

~~Draft~~ Final EA. Since no significant land use and planning impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| XI. MINERAL RESOURCES. Would the project: | | | | |
| a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion

XI. a) & b) There are no provisions in the proposed project that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Some examples of mineral resources are gravel, asphalt, bauxite, and gypsum, which are commonly used for construction activities or industrial processes. Since the proposed project only affects existing rendering facilities, the proposed project does not require and would not have any effects on the use of important minerals, such as those described above (with the exception of the use of a minimal amount of gravel and asphalt for limited repair of the outside raw material receiving areas paving activities), nor would the project result in covering over or otherwise making mineral resources unrecoverable. Subparagraph (f)(2)(D) identifies acceptable materials for the enclosure (e.g., masonry, sheet metal, sheet plastic, wood, metal or aluminum siding, industrial overlapping plastic flap curtains), which are standard building materials. Therefore, no new demand for mineral resources is expected to occur and no significant adverse mineral resources impacts from implementing the proposed project are anticipated.

Based upon these aforementioned considerations, significant mineral resources impacts are not expected from the implementation of the proposed project. Since no significant mineral resources impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| XII. NOISE. Would the project result in: | | | | |
| a) Exposure of persons to or generation of permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Noise impact will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

Discussion

XII. a) Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas paving of receiving areas, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures at already existing rendering facilities. Any construction activities associated with the proposed project that would generate noise are expected to be temporary and would be expected to comply with all applicable local noise ordinances. Construction activities that require use of heavy construction equipment and would generate the highest noise levels would only be onsite for a limited amount of time during construction of the permanent total enclosures (up to two months). Any operational requirements imposed by the

proposed project would not be expected to generate noise above the existing setting. All of the affected activities are expected to occur at existing facilities. Thus, the proposed project is not expected to expose persons to the generation of excessive noise levels above current levels because no change in current operations is expected to occur as a result of the proposed project. It is expected that any facility affected by the proposed project would continue complying with all existing local noise control laws or ordinances.

XII. b) The proposed project is not anticipated to expose people to or generate excessive groundborne vibration or groundborne noise levels since the construction activities are expected to occur at existing facilities. Based on the type of construction equipment needed, any noise generated by the associated construction activities are expected to be temporary and minor.

XII. c) A permanent increase in ambient noise levels at the affected locations above existing levels is not expected because the proposed project does not contain any operational requirements that would generate additional noise beyond existing levels. Therefore, the existing noise levels are unlikely to change and raise ambient noise levels in the vicinities of affected facilities to above a level of significance in response to implementing the proposed project.

XII. d) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Even if affected locations are located near a public/private airport, there are no new noise impacts expected from any of the existing facilities as a result of the proposed project to affect the operations of the airport. Therefore, the proposed project is not expected to expose people residing or working in the affected facilities vicinities to excessive noise levels. See also the response to item XII.a).

Based upon these considerations, significant adverse noise impacts are not expected from the implementation of the proposed project and are not further evaluated in this ~~Draft~~ Final EA. Since no significant noise impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| XIII. POPULATION AND HOUSING. | | | | |
| Would the project: | | | | |
| a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

Discussion

XIII. a) Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas paving of receiving areas, and the installation of new APCDs or the secondary odor containment system for the raw material receiving enclosures. However, it is expected that workers can be drawn from the existing labor pool in southern California. Further, the proposed project is not anticipated to generate any significant effects, either direct or indirect, on the District's population or population distribution as no additional operational workers are anticipated to be required at the affected facilities because additional enclosures and APCDs or the secondary odor containment system do not require additional personnel to operate. Human population within the jurisdiction of SCAQMD is anticipated to grow regardless of implementing the proposed project. As such, implementation of the proposed project will not result in changes in population densities or induce significant growth in population.

XIII. b) Because the proposed project is primarily located in existing industrial/commercial areas, the proposed project is not expected to result in the creation of any industry that would affect population growth, directly or indirectly induce the construction of single- or multiple-family units, or require the displacement of people elsewhere.

Based upon these considerations, significant adverse population and housing impacts are not expected from the implementation of the proposed project and are not further evaluated in this ~~Draft~~ Final EA. Since no significant population and housing impacts were identified, no mitigation measures are necessary or required.

| Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--------------------------------------|--|------------------------------------|-----------|
|--------------------------------------|--|------------------------------------|-----------|

XIV. PUBLIC SERVICES. Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

| | | | | |
|-----------------------------|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Discussion

XIV. a) & b) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs. Physical changes that are expected to occur because of the proposed project (e.g. installation of enclosures and control equipment) will be located at already existing facilities. All newly installed enclosures and control equipment would be expected to be compliant with fire department standards, therefore, they would not increase the risk of fire to occur. Operation of a closed system, installation of APCDs or the secondary odor containment system, and implementation of BMPs are not expected to result in any physical changes that would cause or increase fire hazards. Construction of permanent total enclosures is subject to review by the local jurisdiction and Fire Marshall. All buildings in California are required to meet the standards set forth in the California Fire Code of Regulations, Title 24, Part 9. Thus, any new permanent total enclosure constructed as a result of PR 415 would need to meet the standards set forth in this code, per state law. Compliance with the California Fire

Code of Regulations would minimize potential fire hazards associated with the facility. Based on one of five existing rendering facilities' current setup, which would satisfy the proposed permanent total enclosure or closed system requirements, it is foreseeable that the water sprinkler-type fire suppression system would be sufficient to meet the fire code requirements. Thus, enclosures are expected to be equipped with an adequate fire suppression system, approved by the Fire Department. No other physical modifications or changes associated with the proposed project are expected and no flammable substances are necessary to operate rendering equipment. As such, the proposed project will not increase the chances for fires or explosions that could affect local fire departments. Finally, PR 415 is not expected to increase the need for security at affected facilities, which could adversely affect local police departments. Because the proposed project does not require or involve the use of new hazardous materials or generate new hazardous waste, it will not generate an emergency situation that would require additional fire or police protection, or impact acceptable service ratios or response times.

XIV. c), d), & e) As indicated in discussion under item XIII. Population and Housing, implementing the proposed project would not induce population growth or dispersion because no additional operational workers are expected to be needed at the existing affected facilities and construction workers will be temporary, not permanent, and drawn from the local labor pool. Therefore, with no increase in local population anticipated as a result of adopting and implementing the proposed project, additional demand for new or expanded schools or parks is also not anticipated. As a result, no significant adverse impacts are expected to local schools or parks.

Based upon these considerations, significant adverse public services impacts are not expected from the implementation of the proposed project and are not further evaluated in this ~~Draft~~ Final EA. Since no significant public services impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|---|--|---|-------------------------------------|
| XV. RECREATION. | | | | |
| a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment or recreational services? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

Discussion

XV. a) & b) As discussed under “Land Use and Planning” (Section X) above, there are no provisions in the proposed project that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments. No land use or planning requirements would be altered by the adoption of the proposed project, which only affects already developed rendering facilities. Further, the proposed project would not affect District population growth or distribution (see “Population and Housing”- Section XIII) in ways that could increase the demand for or use of existing neighborhood and regional parks or other recreational facilities or require the construction of new or expansion of existing recreational facilities that might have an adverse physical effect on the environment because it would not directly or indirectly increase or redistribute population.

Based upon these considerations, significant recreation impacts are not expected from the implementation of the proposed project. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| XVI. SOLID/HAZARDOUS WASTE. | | | | |
| Would the project: | | | | |
| a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occurs:

- The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

Discussion

XVI. a) & b) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to ~~enclose~~ provide a permanent total enclosure or a closed system for certain rendering operations, install APCDs for the enclosures or the secondary odor containment system for the raw material receiving enclosures, and carry out BMPs. The intent of the proposed rule is to capture and control odors from rendering operations, not cease rendering operations. Rendering operations within the basin are not expected to cease and animal carcasses and parts ~~waste~~ is not expected to be diverted to landfills because of the requirements included in PR 415. Disposal at landfills is only recommended if rendering capacity is exceeded or suspended. Only the Kettleman Hills facility in Kern County accepts disposal of carcasses and self-haul is not permitted. If a rendering facility is not able to meet the requirements of PR 415, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal carcasses and parts ~~waste~~. Staff has not received evidence demonstrating that any facility will be unable to meet the requirements of PR 415. Therefore, it is not expected that rendering material will be diverted to landfills as a result of the proposed project.

All new enclosures and control equipment are expected to be installed within the currently developed footprint at already existing facilities. Because the newly installed control equipment has a finite lifetime (approximately 20 years), it will ultimately have to be replaced at the end of its useful life. Affected equipment may be refurbished and used elsewhere or the scrap metal or other materials from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with the proposed project are expected to be minor. As a result, no substantial change in the amount or character of solid or hazardous waste streams is expected to occur.

Sanitation districts forecast future landfill capacity and encourage recycling. Any portions of spent control equipment in the future that cannot be recycled are expected to be able to be disposed of in the available landfill capacity. Additionally, any waste generated by construction activities associated with the installation of new enclosures or control equipment is expected to be minor. The proposed project is not expected to increase the volume of solid or hazardous wastes from affected facilities, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations.

Based upon these considerations, the proposed project is not expected to increase the volume of solid or hazardous wastes that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing the proposed project is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations. Since no solid/hazardous waste impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|---|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| XVII. TRANSPORTATION/TRAFFIC. | | | | |
| Would the project: | | | | |
| a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Significance Criteria

Impacts on transportation/traffic will be considered significant if any of the following criteria apply:

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day
- Increase customer traffic by more than 700 visits per day.

Discussion

XVII. a) & b) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. Specifically, PR 415 will require existing rendering facilities to enclose certain rendering operations, install APCDs for the enclosures or use alternative standards for a permanent total enclosure for raw material receiving area, and carry out BMPs.

There are ~~13~~ 12 BMPs currently proposed in PR 415 that will assist in reducing odors from various points or processes within a rendering facility. Only ~~four~~ two of these BMPs involve delivery trucks that could have the potential to adversely affect traffic:

1. Covering of Incoming Transport Vehicles

Transport vehicles delivering raw rendering materials to a rendering facility from offsite locations are not permitted to enter the rendering facility beyond the first point of contact (ex: guard shack or weigh station) unless the cargo area of the vehicle is completely enclosed or fully covered with a tarp.

There is no change to traffic/transportation due to covering the open beds of trucks. Because this requirement only affects the type of trucks that are allowed to enter rendering facilities and not the number of trips, this BMP is not expected to increase the demand for on-site truck parking facilities in any way. Additionally, all of the affected facilities are knowledgeable of where their animal carcasses and parts ~~wastes~~ are delivered from and have standing contracts

with many of the delivering entities. It is reasonably foreseeable that affected facilities can notify delivering parties of the tarping BMP requirement prior to the actual delivery of animal carcasses and parts waste product, therefore, eliminating the need for a return trip to their original location to be tarped.

2. Washing of Outgoing Transport Vehicles

Where raw rendering materials come directly into contact with a delivery truck, the cargo area of any vehicle exiting the rendering facility must be thoroughly washed prior to the truck leaving the facility.

This requirement is expected to be a quick process that consists of hosing down the cargo area of the delivery trucks prior to exiting and is not expected to slow down the delivery/exiting process creating the need for extended on-site truck parking facilities.

3. ~~Trap Grease Delivery Trucks~~

~~Trap grease from delivery trucks must be delivered to tankage at the facility and transferred within the trap grease storage and processing area(s) within a closed system, inside of a permanent total enclosure, or through a system vented to odor control equipment.~~

~~Since this BMP only outlines specific areas that trap grease delivery trucks can be unloaded, this BMP is not expected to delay normal trap grease unloading operations, and therefore does not create the need for extended on-site truck parking facilities or cause any increase in the number of delivery trucks.~~

4. ~~Venting Trap Grease Delivery Vehicles to Odor Control Equipment~~

~~The pressure relief valve on trap grease delivery trucks fitted with an internal vacuum or pressure pump must be vented to odor control equipment operating in good condition prior to unloading of trap grease, unless the truck is unloaded inside of a permanent total enclosure.~~

~~Since this BMP only requires that trap grease delivery trucks must be vented to odor control equipment prior to unloading, this BMP is not expected to delay normal trap grease unloading operations, and therefore does not create the need for extended on-site truck parking facilities.~~

Additionally, implementation of the proposed project would not result in a net change or cause additional transportation demands or services. Similarly, the implementation of the proposed project is not expected to adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities.

Implementation of the proposed rule would require construction activities such as demolition, the installation of new enclosures and associated trenching/concrete activities for the footings of the new enclosures, repair of the outside raw material receiving areas ~~paving of receiving areas~~, and the installation of new APCDs or the secondary odor containment system.

To evaluate any potential environmental impacts from construction activities associated with the proposed project, an environmental impact analysis was conducted for the worst-case impact

scenario based on the improvements necessary at the affected facilities to comply with the proposed rule using one of the larger facilities in the current affected facility inventory as a basis for estimating foreseeable construction impacts. The estimated worst-case impact construction scenario was based on information provided by the facility of future construction activities/upgrades to current infrastructure in order to comply with the proposed rule. The construction scenario analyzed includes demolition, the fabrication of ~~three~~ six new structures and associated trenching/concrete activities for the footings of the new structures, repair of the outside raw material receiving areas ~~paving of the receiving area~~, and the installation of ~~three~~ four new APCDs. ~~This particular facility was chosen for the analysis because it required the most construction activities of the five facilities currently in the affected inventory. Therefore, this construction estimate was used as an example for a “worst case” impact scenario. Due to the large project size, this known project was used as an example for a “worst case” impact scenario.~~ The environmental analysis concluded that construction required by this proposed project would not generate any significant adverse air quality environmental impacts. The detailed results of this air quality analysis are presented in Appendix C – Construction Emissions for Worst-Case Impact Scenario.

Since a limited amount of construction-related trips (see Appendix C) and no additional operational-related trips per facility are anticipated, the adoption of the proposed project is not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities. Since the construction activities required as a result of PR 415 at the affected facilities are not expected to overlap because of the 3-year compliance timeframe, no significant construction traffic impacts are anticipated based on the analysis conducted. Based on the worst-case impact scenario, which considers overlap of construction activities at the rendering facilities, construction would generate a maximum of 24 vehicle trips per day. Even if all five facilities performed construction at the same time, this would not be Implementation of the proposed rule is not expected to generate 350 employees or truck trips.

XVII. c) Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations. The proposed project will not require operators of existing facilities to construct buildings or other structures that could interfere with flight patterns, so the height and appearance of the existing structures are not expected to change. Therefore, implementation of the proposed project is not expected to adversely affect air traffic patterns. Further, the proposed project will not affect in any way air traffic in the region because it will not require transport of any materials by air.

XVII. d) No physical modifications to roadways are expected to occur by implementing the proposed project. Therefore, no offsite modifications to roadways are anticipated for the proposed project that would result in an additional design hazard or new incompatible uses.

XVII. e) All potential physical changes caused by implementation of the proposed project are expected to occur within the existing boundaries of the affected facilities. As a result, the proposed project is not expected to adversely impact existing emergency access.

XVII. f) All potential physical changes caused by implementation of the proposed project are expected to occur within the existing boundaries of the affected facilities. In the event that a rendering facility chooses to enclose the operation, new enclosures are expected to comply with City of Vernon development standards including parking, loading, maneuvering, and setback

requirements, as these are legally required. Implementation of PR 415 would not result in a conflict with the development standards for parking because the proposed enclosures would be located where operations are currently taking place, and enclosures are not expected to change the existing rendering operations in a way that would generate more employees. PR 415 may necessitate coordination with the City of Vernon to comply with local zoning regulations regarding parking for the new enclosures. Based on the City of Vernon's parking standard of 1 parking space for every 1,000 square feet, the new structures would require restriping of paved areas onsite to provide a maximum of 20 parking spaces (17 at Facility B and 3 at Facility D) to comply with this standard unless the City grants a variance. However, PR 415 would not generate the demand for the additional parking spaces because providing an enclosure for the existing operations would not result in an increase in employees. No changes to the parking capacity at or in the vicinity of the affected facilities are expected. Therefore, no shortage of parking spaces is expected. Further, the proposed project is not expected to require additional operational workers, so additional parking capacity will not be required. Therefore, the proposed project is not expected to adversely impact on- or off-site parking capacity. The proposed project has no provisions that would conflict with alternative transportation, such as bus turnouts, bicycle racks, et cetera.

Based upon these considerations, the proposed project is not expected to generate significant adverse project-specific or cumulative transportation/traffic impacts and, therefore, this topic will not be considered further. Since no significant transportation/traffic impacts were identified, no mitigation measures are necessary or required.

| | Potentially Significant Impact | Less Than Significant With Mitigation | Less Than Significant Impact | No Impact |
|--|--------------------------------|---------------------------------------|------------------------------|-------------------------------------|
| XVIII. MANDATORY FINDINGS OF SIGNIFICANCE. | | | | |
| a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

XVIII. a) As discussed in the “Biological Resources” section, the proposed project is not expected to significantly adversely affect plant or animal species or the habitat on which they rely because any physical modifications that occur as a result of the proposed project are expected to occur at existing rendering facilities that are located in industrial/commercial areas which have already been greatly disturbed and that currently do not support such habitats. Additionally, special status plants, animals, or natural communities are not expected to be found within close proximity to the facilities potentially affected by the proposed project.

XVIII. b) Based on the foregoing analyses, cumulative impacts in conjunction with other projects that may occur concurrently with or subsequent to the proposed project are not expected to adversely impact any environmental topic. Related projects to the currently proposed project include existing and proposed amended rules and regulations, as well as AQMP control measures, which produce emission reductions from most industrial and commercial sectors. Furthermore, because the proposed project does not generate significant project-specific impacts, cumulative

impacts are not considered to be "cumulatively considerable" as defined by CEQA guidelines §15065(a)(3). For example, the environmental topics checked 'No Impact' (e.g., aesthetics, agriculture resources, biological resources, cultural resources, geology and soils, hazards and hazardous materials, land use and planning, mineral resources, noise, population and housing, public services, recreation, solid/hazardous waste and transportation and traffic) would not be expected to make any contribution to potential cumulative impacts whatsoever. Also, in the case of air quality impacts, the net effect of implementing the proposed project with other proposed amended rules and regulations, and AQMP control measures is an overall reduction in District-wide emissions, thus, contributing to the attainment of state and national ambient air quality standards. Therefore, it is concluded that the proposed project has no potential for significant cumulative or cumulatively considerable impacts in any environmental areas.

XVIII. c) Based on the foregoing analyses, the proposed project is not expected to cause significant adverse effects to human beings. Significant adverse air quality impacts are not expected from the implementation of the proposed project. Based on the preceding analyses, no significant adverse impacts to aesthetics, agriculture resources, air quality, biological resources, cultural resources, energy, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, solid/hazardous waste and transportation and traffic are expected as a result of the implementation of the proposed project.

As discussed in items I through XVIII above, the proposed project would have no potential to cause significant adverse environmental effects.

APPENDIX A

Proposed Rule 415 – Odors From Rendering Facilities

In order to save space and avoid repetition, please refer to the latest version of Proposed Rule 415 located elsewhere in the Governing Board Package. The version of Proposed Rule 415 that was circulated with the Draft EA and released on July 14, 2015 for a 30-day public review and comment period ending on August 12, 2015 was identified as “Proposed Rule 415 (June 23, 2015)”.

Original hard copies of the Draft EA, which include the draft version of the proposed rule listed above, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by contacting Fabian Wesson, Public Advisor at the SCAQMD’s Public Information Center by phone at (909) 396-2039 or by email at PICrequests@aqmd.gov.

APPENDIX B

Permanent Total Enclosure and Control Estimates for Affected Facilities

| Facility | Enclosure Size (ft ²) | Notes on Enclosure | Demolition Size (ft ²) | Number of Odor Control Equipment | Operating Schedule | | | Scrubber Makeup Water (gal/yr) | Scrubber Makeup Water (gal/day) | Electricity Usage for Ventilation Blower (kW-h/yr) | Electricity Usage for Scrubber Recirculation Pumps (kW-h/yr) | Electricity Usage for Air Curtain (kW-h/yr) | BMP (e)(4): Washing of Drums | | BMP (e)(11): Cleaning Floor Drains | |
|--------------------|---|---|------------------------------------|----------------------------------|--------------------|-----------|----------|--|-------------------------------------|--|--|---|------------------------------|---------------|------------------------------------|---------------|
| | | | | | (hrs/day) | (days/yr) | (hrs/yr) | | | | | | (gal/day) | (gal/year) | (gal/day) | (gal/year) |
| Facility | High Estimate | | High Estimate | | | | | High Estimate | High Estimate | High Estimate | High Estimate | | | | | |
| Facility A | Facility A filed for permit applications to modernize facility prior to PR 415 requirements becoming effective. | | | | | | | | | | | | 100 | 31,200 | | 7,920 |
| Facility B | Facility B Plant - closed system | Both high and low enclosure estimates for raw material receiving assume facility will opt to turn processing equipment in main building into a <i>closed system</i> , rather than constructing a new main building, as this is the lower cost option. | 0 | 0 | 24 | 312 | 7,488 | 0 | 0 | 0 | 0 | 0 | | | | |
| | Facility B Plant - Raw Materials Receiving | | 0 | 0 | 24 | 312 | 7,488 | 0 | 0 | 0 | 0 | 3,724 | | | | |
| | Main Plant - closed system | Both high and low enclosure estimates for raw material receiving assume facility will opt to turn processing equipment in main building into a <i>closed system</i> , rather than constructing a new main building, as this is the lower cost option. | 0 | 0 | 16 | 312 | 4,992 | 0 | 0 | 0 | 0 | 0 | 100 | 31,200 | | 7,920 |
| | Wastewater Enclosure | Low enclosure estimate provided by Facility D. | 0 | 0 | 1 | 24 | 365 | 8,760 | 1,073,100 | 2,940 | 362,939 | 119,556 | | | | |
| | Main processing plant - Raw Materials Receiving | | 9,000 | 9,000 | 0 | 16 | 312 | 4,992 | 0 | 0 | 0 | 3,724 | | | | |
| | SUBTOTAL | 16,500 | 9,000 | | | | | | | | | | 100 | 31,200 | | |
| Facility C | Receiving / Grinding | Minor improvements to achieve a closed system. No modifications to existing building structures. | 0 | 0 | 8 | 312 | 2,496 | 0 | 0 | 0 | 0 | 3,259 | 0 | 0 | | 7,920 |
| Facility D | Receiving/Shredding Enclosure | Low enclosure estimate provided by Facility D. | 0 | 1 | 24 | 312 | 7,488 | Facility D is assumed to use Carbon | Facility D is assumed to use Carbon | 6,727 | Facility D is assumed to use Carbon | 0 | | | | |
| | Wastewater Enclosure | Low enclosure estimate provided by Facility D. | 0 | 1 | 24 | 365 | 8,760 | Carbon | Carbon | 2,852 | Carbon | 0 | | | | |
| Facility D | Cooking Area | Low enclosure estimate provided by Facility D. | 0 | 1 | 16 | 312 | 4,992 | Adsorption | Adsorption | 13,507 | Adsorption | 0 | 100 | 31,200 | | 7,920 |
| Facility E | | Expected to be qualified for the Low Usage Exemption | | | | | | Expected to be qualified for the Low Usage Exemption | | | | | | | | 7,920 |
| GRAND TOTAL | | 19,075 | 9,000 | 4 | | | | 1,073,100 | 2,940 | 386,024 | 119,556 | 10,707 | 300 | 93,600 | | 39,600 |

Assumptions:
Calculate power usage for ventilation blower motor:
kVA = 0.00173*V*A*motor load 135.286
kW = kVA*PF*0.01 101.4645
Assume: constant motor load under steady state conditions
Assume: full load current of 170 amps (A) @ 460 Volts (V) for 125 hp motor
Assume: motor load of 95%
Assume: power factor (PF) of 75%

Calculate electrical power usage for scrubber recirculation pump motor(s):
Assume: constant motor load under steady state conditions
Assume: full load current of 35 amps (A) @ 460 Volts (V) for each 25 hp motor
Assume: motor load of 95%
Assume: power factor (PF) of 60%
Assume: scrubber operates 16 hrs/day, 6 days/wk = 4992 hrs/yr
Calculate power usage for scrubber recirculation pump motor(s):
kVA = 0.00173*V*A*motor load 27.853
kW = kVA*PF*0.01 16.7118

Other Assumptions
Water fire suppression system for enclosure
Receiving area currently required to be washed once/day under facility permits.
BMP e3: Trucks are currently required to be washed under 3CCR §1180.35. It is BAU for BMP (e)(3) washing of outgoing trucks
BMP e4: Washing of drums is 100 gal/day for three facilities: Facility B, Facility D and Facility A
BMP e10: Washing of receiving areas is 0 water usage because the facilities are already washing the areas
BMP e11: cleaning of floor drains is required for 5 facilities. It is assumed that 660 gal per cleaning for 1 hour, and it is 1 cleaning per month = Facility D proposed the use of carbon systems, and the main costs of which are carbon drums.

APPENDIX C

Revised Construction Emissions for Worst Case Impact Analysis Scenario

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|-------|----------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 9.00 | 1000sqft | 0.21 | 9,000.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 19.07 | 1000sqft | 0.44 | 19,075.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 11 | | | Operational Year | 2018 |
| Utility Company | City of Vernon | | | | |
| CO2 Intensity (lb/MWhr) | 760.86 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EA assumed 53,500 square feet of new enclosures

Construction Phase - Draft EA included demolition of existing structures and enclosure construction. Schedule reflects conservative estimate of construction of the enclosure per PR 415.

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for repavement rather than pavement repair)

Grading -

Demolition - 9,000 square feet of demolition (53,500 assumed in the Draft EA)

Construction Off-road Equipment Mitigation -

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------|---------------|---------------------|
| tblConstructionPhase | NumDays | 100.00 | 20.00 |
| tblConstructionPhase | NumDays | 2.00 | 5.00 |
| tblConstructionPhase | NumDays | 1.00 | 5.00 |
| tblConstructionPhase | PhaseEndDate | 6/6/2018 | 2/23/2018 |
| tblConstructionPhase | PhaseEndDate | 1/17/2018 | 1/26/2018 |
| tblConstructionPhase | PhaseEndDate | 6/13/2018 | 3/2/2018 |
| tblConstructionPhase | PhaseEndDate | 1/15/2018 | 1/19/2018 |
| tblConstructionPhase | PhaseStartDate | 1/18/2018 | 1/27/2018 |
| tblConstructionPhase | PhaseStartDate | 1/16/2018 | 1/20/2018 |
| tblConstructionPhase | PhaseStartDate | 6/7/2018 | 2/24/2018 |
| tblLandUse | LandUseSquareFeet | 19,070.00 | 19,075.00 |
| tblOffRoadEquipment | OffRoadEquipmentType | | Rubber Tired Dozers |
| tblOffRoadEquipment | OffRoadEquipmentType | | Graders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Generator Sets |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

| | | | |
|---------------------|----------------------------|------|------------------|
| tblOffRoadEquipment | OffRoadEquipmentType | | Welders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Paving Equipment |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 4.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 7.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2018 | 0.0513 | 0.4311 | 0.2902 | 5.1000e-004 | 0.0347 | 0.0238 | 0.0585 | 0.0153 | 0.0224 | 0.0378 | 0.0000 | 45.1663 | 45.1663 | 9.9200e-003 | 0.0000 | 45.4144 |
| Maximum | 0.0513 | 0.4311 | 0.2902 | 5.1000e-004 | 0.0347 | 0.0238 | 0.0585 | 0.0153 | 0.0224 | 0.0378 | 0.0000 | 45.1663 | 45.1663 | 9.9200e-003 | 0.0000 | 45.4144 |

Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2018 | 0.0513 | 0.4311 | 0.2902 | 5.1000e-004 | 0.0175 | 0.0238 | 0.0413 | 7.4000e-003 | 0.0224 | 0.0299 | 0.0000 | 45.1663 | 45.1663 | 9.9200e-003 | 0.0000 | 45.4144 |
| Maximum | 0.0513 | 0.4311 | 0.2902 | 5.1000e-004 | 0.0175 | 0.0238 | 0.0413 | 7.4000e-003 | 0.0224 | 0.0299 | 0.0000 | 45.1663 | 45.1663 | 9.9200e-003 | 0.0000 | 45.4144 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------------------|-------------|-------------|-------------|-------------|---------------|--------------|--------------|----------------|---------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 49.47 | 0.00 | 29.36 | 51.67 | 0.00 | 20.93 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|----------------|--|--|
| 1 | 1-1-2018 | 3-31-2018 | 0.4620 | 0.4620 |
| | | Highest | 0.4620 | 0.4620 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Demolition | Demolition | 1/1/2018 | 1/12/2018 | 5 | 10 | |
| 2 | Site Preparation | Site Preparation | 1/13/2018 | 1/19/2018 | 5 | 5 | |
| 3 | Grading | Grading | 1/20/2018 | 1/26/2018 | 5 | 5 | |
| 4 | Building Construction | Building Construction | 1/27/2018 | 2/23/2018 | 5 | 20 | |
| 5 | Paving | Paving | 2/24/2018 | 3/2/2018 | 5 | 5 | |

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 1.88

Acres of Paving: 0.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers | 1 | 7.00 | 247 | 0.40 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Grading | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Building Construction | Cranes | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Paving | Pavers | 1 | 6.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Graders | 1 | 6.00 | 187 | 0.41 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 5 | 13.00 | 0.00 | 41.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 3 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 12.00 | 5.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 13.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 4.4300e-003 | 0.0000 | 4.4300e-003 | 6.7000e-004 | 0.0000 | 6.7000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0124 | 0.1218 | 0.0756 | 1.2000e-004 | | 7.1800e-003 | 7.1800e-003 | | 6.7100e-003 | 6.7100e-003 | 0.0000 | 10.8462 | 10.8462 | 2.7500e-003 | 0.0000 | 10.9148 |
| Total | 0.0124 | 0.1218 | 0.0756 | 1.2000e-004 | 4.4300e-003 | 7.1800e-003 | 0.0116 | 6.7000e-004 | 6.7100e-003 | 7.3800e-003 | 0.0000 | 10.8462 | 10.8462 | 2.7500e-003 | 0.0000 | 10.9148 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 2.1000e-004 | 6.8500e-003 | 1.4100e-003 | 2.0000e-005 | 3.5000e-004 | 3.0000e-005 | 3.8000e-004 | 1.0000e-004 | 2.0000e-005 | 1.2000e-004 | 0.0000 | 1.6170 | 1.6170 | 1.1000e-004 | 0.0000 | 1.6198 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.6000e-004 | 3.1000e-004 | 3.3100e-003 | 1.0000e-005 | 7.1000e-004 | 1.0000e-005 | 7.2000e-004 | 1.9000e-004 | 1.0000e-005 | 2.0000e-004 | 0.0000 | 0.7077 | 0.7077 | 3.0000e-005 | 0.0000 | 0.7084 |
| Total | 5.7000e-004 | 7.1600e-003 | 4.7200e-003 | 3.0000e-005 | 1.0600e-003 | 4.0000e-005 | 1.1000e-003 | 2.9000e-004 | 3.0000e-005 | 3.2000e-004 | 0.0000 | 2.3247 | 2.3247 | 1.4000e-004 | 0.0000 | 2.3282 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 1.9900e-003 | 0.0000 | 1.9900e-003 | 3.0000e-004 | 0.0000 | 3.0000e-004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0124 | 0.1218 | 0.0756 | 1.2000e-004 | | 7.1800e-003 | 7.1800e-003 | | 6.7100e-003 | 6.7100e-003 | 0.0000 | 10.8461 | 10.8461 | 2.7500e-003 | 0.0000 | 10.9148 |
| Total | 0.0124 | 0.1218 | 0.0756 | 1.2000e-004 | 1.9900e-003 | 7.1800e-003 | 9.1700e-003 | 3.0000e-004 | 6.7100e-003 | 7.0100e-003 | 0.0000 | 10.8461 | 10.8461 | 2.7500e-003 | 0.0000 | 10.9148 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 2.1000e-004 | 6.8500e-003 | 1.4100e-003 | 2.0000e-005 | 3.5000e-004 | 3.0000e-005 | 3.8000e-004 | 1.0000e-004 | 2.0000e-005 | 1.2000e-004 | 0.0000 | 1.6170 | 1.6170 | 1.1000e-004 | 0.0000 | 1.6198 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 3.6000e-004 | 3.1000e-004 | 3.3100e-003 | 1.0000e-005 | 7.1000e-004 | 1.0000e-005 | 7.2000e-004 | 1.9000e-004 | 1.0000e-005 | 2.0000e-004 | 0.0000 | 0.7077 | 0.7077 | 3.0000e-005 | 0.0000 | 0.7084 |
| Total | 5.7000e-004 | 7.1600e-003 | 4.7200e-003 | 3.0000e-005 | 1.0600e-003 | 4.0000e-005 | 1.1000e-003 | 2.9000e-004 | 3.0000e-005 | 3.2000e-004 | 0.0000 | 2.3247 | 2.3247 | 1.4000e-004 | 0.0000 | 2.3282 |

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 0.0145 | 0.0000 | 0.0145 | 7.3800e-003 | 0.0000 | 7.3800e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.5200e-003 | 0.0519 | 0.0202 | 4.0000e-005 | | 2.3800e-003 | 2.3800e-003 | | 2.1900e-003 | 2.1900e-003 | 0.0000 | 3.9357 | 3.9357 | 1.2300e-003 | 0.0000 | 3.9664 |
| Total | 4.5200e-003 | 0.0519 | 0.0202 | 4.0000e-005 | 0.0145 | 2.3800e-003 | 0.0169 | 7.3800e-003 | 2.1900e-003 | 9.5700e-003 | 0.0000 | 3.9357 | 3.9357 | 1.2300e-003 | 0.0000 | 3.9664 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |
| Total | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 6.5200e-003 | 0.0000 | 6.5200e-003 | 3.3200e-003 | 0.0000 | 3.3200e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.5200e-003 | 0.0519 | 0.0202 | 4.0000e-005 | | 2.3800e-003 | 2.3800e-003 | | 2.1900e-003 | 2.1900e-003 | 0.0000 | 3.9357 | 3.9357 | 1.2300e-003 | 0.0000 | 3.9664 |
| Total | 4.5200e-003 | 0.0519 | 0.0202 | 4.0000e-005 | 6.5200e-003 | 2.3800e-003 | 8.9000e-003 | 3.3200e-003 | 2.1900e-003 | 5.5100e-003 | 0.0000 | 3.9357 | 3.9357 | 1.2300e-003 | 0.0000 | 3.9664 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |
| Total | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |

PR15_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR15_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

3.4 Grading - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e | |
|---------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|--------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | | |
| Fugitive Dust | | | | | 0.0123 | 0.0000 | 0.0123 | 6.3100e-003 | 0.0000 | 6.3100e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 3.7400e-003 | 0.0427 | 0.0169 | 4.0000e-005 | | 1.9900e-003 | 1.9900e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 3.2234 | 3.2234 | 1.0000e-003 | 0.0000 | 3.2485 | |
| Total | 3.7400e-003 | 0.0427 | 0.0169 | 4.0000e-005 | 0.0123 | 1.9900e-003 | 0.0143 | 6.3100e-003 | 1.8300e-003 | 8.1400e-003 | 0.0000 | 3.2234 | 3.2234 | 1.0000e-003 | 0.0000 | 3.2485 | |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |
| Total | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|--------------------|---------------|---------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Fugitive Dust | | | | | 5.5300e-003 | 0.0000 | 5.5300e-003 | 2.8400e-003 | 0.0000 | 2.8400e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 3.7400e-003 | 0.0427 | 0.0169 | 4.0000e-005 | | 1.9900e-003 | 1.9900e-003 | | 1.8300e-003 | 1.8300e-003 | 0.0000 | 3.2234 | 3.2234 | 1.0000e-003 | 0.0000 | 3.2485 |
| Total | 3.7400e-003 | 0.0427 | 0.0169 | 4.0000e-005 | 5.5300e-003 | 1.9900e-003 | 7.5200e-003 | 2.8400e-003 | 1.8300e-003 | 4.6700e-003 | 0.0000 | 3.2234 | 3.2234 | 1.0000e-003 | 0.0000 | 3.2485 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |
| Total | 1.1000e-004 | 9.0000e-005 | 1.0200e-003 | 0.0000 | 2.2000e-004 | 0.0000 | 2.2000e-004 | 6.0000e-005 | 0.0000 | 6.0000e-005 | 0.0000 | 0.2178 | 0.2178 | 1.0000e-005 | 0.0000 | 0.2180 |

3.5 Building Construction - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0259 | 0.1743 | 0.1388 | 2.2000e-004 | | 0.0106 | 0.0106 | | 0.0102 | 0.0102 | 0.0000 | 18.4235 | 18.4235 | 3.7100e-003 | 0.0000 | 18.5162 |
| Total | 0.0259 | 0.1743 | 0.1388 | 2.2000e-004 | | 0.0106 | 0.0106 | | 0.0102 | 0.0102 | 0.0000 | 18.4235 | 18.4235 | 3.7100e-003 | 0.0000 | 18.5162 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.3000e-004 | 6.2600e-003 | 1.7600e-003 | 1.0000e-005 | 3.1000e-004 | 4.0000e-005 | 3.6000e-004 | 9.0000e-005 | 4.0000e-005 | 1.3000e-004 | 0.0000 | 1.2633 | 1.2633 | 9.0000e-005 | 0.0000 | 1.2655 |
| Worker | 6.6000e-004 | 5.7000e-004 | 6.1200e-003 | 1.0000e-005 | 1.3100e-003 | 1.0000e-005 | 1.3300e-003 | 3.5000e-004 | 1.0000e-005 | 3.6000e-004 | 0.0000 | 1.3066 | 1.3066 | 5.0000e-005 | 0.0000 | 1.3078 |
| Total | 8.9000e-004 | 6.8300e-003 | 7.8800e-003 | 2.0000e-005 | 1.6200e-003 | 5.0000e-005 | 1.6900e-003 | 4.4000e-004 | 5.0000e-005 | 4.9000e-004 | 0.0000 | 2.5699 | 2.5699 | 1.4000e-004 | 0.0000 | 2.5733 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|----------------|----------------|--------------------|---------------|----------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 0.0259 | 0.1743 | 0.1388 | 2.2000e-004 | | 0.0106 | 0.0106 | | 0.0102 | 0.0102 | 0.0000 | 18.4234 | 18.4234 | 3.7100e-003 | 0.0000 | 18.5162 |
| Total | 0.0259 | 0.1743 | 0.1388 | 2.2000e-004 | | 0.0106 | 0.0106 | | 0.0102 | 0.0102 | 0.0000 | 18.4234 | 18.4234 | 3.7100e-003 | 0.0000 | 18.5162 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 2.3000e-004 | 6.2600e-003 | 1.7600e-003 | 1.0000e-005 | 3.1000e-004 | 4.0000e-005 | 3.6000e-004 | 9.0000e-005 | 4.0000e-005 | 1.3000e-004 | 0.0000 | 1.2633 | 1.2633 | 9.0000e-005 | 0.0000 | 1.2655 |
| Worker | 6.6000e-004 | 5.7000e-004 | 6.1200e-003 | 1.0000e-005 | 1.3100e-003 | 1.0000e-005 | 1.3300e-003 | 3.5000e-004 | 1.0000e-005 | 3.6000e-004 | 0.0000 | 1.3066 | 1.3066 | 5.0000e-005 | 0.0000 | 1.3078 |
| Total | 8.9000e-004 | 6.8300e-003 | 7.8800e-003 | 2.0000e-005 | 1.6200e-003 | 5.0000e-005 | 1.6900e-003 | 4.4000e-004 | 5.0000e-005 | 4.9000e-004 | 0.0000 | 2.5699 | 2.5699 | 1.4000e-004 | 0.0000 | 2.5733 |

3.6 Paving - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 2.5500e-003 | 0.0261 | 0.0225 | 3.0000e-005 | | 1.5200e-003 | 1.5200e-003 | | 1.4000e-003 | 1.4000e-003 | 0.0000 | 3.0537 | 3.0537 | 9.3000e-004 | 0.0000 | 3.0770 |
| Paving | 2.8000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 2.8300e-003 | 0.0261 | 0.0225 | 3.0000e-005 | | 1.5200e-003 | 1.5200e-003 | | 1.4000e-003 | 1.4000e-003 | 0.0000 | 3.0537 | 3.0537 | 9.3000e-004 | 0.0000 | 3.0770 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Annual

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Annual

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.8000e-004 | 1.5000e-004 | 1.6600e-003 | 0.0000 | 3.6000e-004 | 0.0000 | 3.6000e-004 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3539 | 0.3539 | 1.0000e-005 | 0.0000 | 0.3542 |
| Total | 1.8000e-004 | 1.5000e-004 | 1.6600e-003 | 0.0000 | 3.6000e-004 | 0.0000 | 3.6000e-004 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3539 | 0.3539 | 1.0000e-005 | 0.0000 | 0.3542 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 2.5500e-003 | 0.0261 | 0.0225 | 3.0000e-005 | | 1.5200e-003 | 1.5200e-003 | | 1.4000e-003 | 1.4000e-003 | 0.0000 | 3.0537 | 3.0537 | 9.3000e-004 | 0.0000 | 3.0770 |
| Paving | 2.8000e-004 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Total | 2.8300e-003 | 0.0261 | 0.0225 | 3.0000e-005 | | 1.5200e-003 | 1.5200e-003 | | 1.4000e-003 | 1.4000e-003 | 0.0000 | 3.0537 | 3.0537 | 9.3000e-004 | 0.0000 | 3.0770 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------|---------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Worker | 1.8000e-004 | 1.5000e-004 | 1.6600e-003 | 0.0000 | 3.6000e-004 | 0.0000 | 3.6000e-004 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3539 | 0.3539 | 1.0000e-005 | 0.0000 | 0.3542 |
| Total | 1.8000e-004 | 1.5000e-004 | 1.6600e-003 | 0.0000 | 3.6000e-004 | 0.0000 | 3.6000e-004 | 9.0000e-005 | 0.0000 | 1.0000e-004 | 0.0000 | 0.3539 | 0.3539 | 1.0000e-005 | 0.0000 | 0.3542 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|-------|----------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 9.00 | 1000sqft | 0.21 | 9,000.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 19.07 | 1000sqft | 0.44 | 19,075.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 11 | | | Operational Year | 2018 |
| Utility Company | City of Vernon | | | | |
| CO2 Intensity (lb/MWhr) | 760.86 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EA assumed 53,500 square feet of new enclosures

Construction Phase - Draft EA included demolition of existing structures and enclosure construction. Schedule reflects conservative estimate of construction of the enclosure per PR 415.

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for repavement rather than pavement repair)

Grading -

Demolition - 9,000 square feet of demolition (53,500 assumed in the Draft EA)

Construction Off-road Equipment Mitigation -

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|---------------------|
| tblConstructionPhase | NumDays | 100.00 | 20.00 |
| tblConstructionPhase | NumDays | 2.00 | 5.00 |
| tblConstructionPhase | NumDays | 1.00 | 5.00 |
| tblConstructionPhase | PhaseEndDate | 6/6/2018 | 2/23/2018 |
| tblConstructionPhase | PhaseEndDate | 1/17/2018 | 1/26/2018 |
| tblConstructionPhase | PhaseEndDate | 6/13/2018 | 3/2/2018 |
| tblConstructionPhase | PhaseEndDate | 1/15/2018 | 1/19/2018 |
| tblConstructionPhase | PhaseStartDate | 1/18/2018 | 1/27/2018 |
| tblConstructionPhase | PhaseStartDate | 1/16/2018 | 1/20/2018 |
| tblConstructionPhase | PhaseStartDate | 6/7/2018 | 2/24/2018 |
| tblLandUse | LandUseSquareFeet | 19,070.00 | 19,075.00 |
| tblOffRoadEquipment | OffRoadEquipmentType | | Rubber Tired Dozers |
| tblOffRoadEquipment | OffRoadEquipmentType | | Graders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Generator Sets |
| tblOffRoadEquipment | OffRoadEquipmentType | | Welders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Paving Equipment |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 4.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 7.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Demolition | Demolition | 1/1/2018 | 1/12/2018 | 5 | 10 | |
| 2 | Site Preparation | Site Preparation | 1/13/2018 | 1/19/2018 | 5 | 5 | |
| 3 | Grading | Grading | 1/20/2018 | 1/26/2018 | 5 | 5 | |
| 4 | Building Construction | Building Construction | 1/27/2018 | 2/23/2018 | 5 | 20 | |
| 5 | Paving | Paving | 2/24/2018 | 3/2/2018 | 5 | 5 | |

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 1.88

Acres of Paving: 0.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers | 1 | 7.00 | 247 | 0.40 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Grading | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Building Construction | Cranes | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Paving | Pavers | 1 | 6.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Graders | 1 | 6.00 | 187 | 0.41 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 5 | 13.00 | 0.00 | 41.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 3 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 12.00 | 5.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 13.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.8859 | 0.0000 | 0.8859 | 0.1341 | 0.0000 | 0.1341 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4838 | 24.3641 | 15.1107 | 0.0241 | | 1.4365 | 1.4365 | | 1.3429 | 1.3429 | | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |
| Total | 2.4838 | 24.3641 | 15.1107 | 0.0241 | 0.8859 | 1.4365 | 2.3224 | 0.1341 | 1.3429 | 1.4770 | | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0407 | 1.3246 | 0.2741 | 3.3200e-003 | 0.0717 | 5.0400e-003 | 0.0767 | 0.0197 | 4.8200e-003 | 0.0245 | | 359.0020 | 359.0020 | 0.0247 | | 359.6198 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0718 | 0.0542 | 0.7021 | 1.6400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 162.9797 | 162.9797 | 6.1100e-003 | | 163.1325 |
| Total | 0.1125 | 1.3788 | 0.9762 | 4.9600e-003 | 0.2170 | 6.3400e-003 | 0.2233 | 0.0582 | 6.0100e-003 | 0.0642 | | 521.9817 | 521.9817 | 0.0308 | | 522.7523 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.3987 | 0.0000 | 0.3987 | 0.0604 | 0.0000 | 0.0604 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4838 | 24.3641 | 15.1107 | 0.0241 | | 1.4365 | 1.4365 | | 1.3429 | 1.3429 | 0.0000 | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |
| Total | 2.4838 | 24.3641 | 15.1107 | 0.0241 | 0.3987 | 1.4365 | 1.8351 | 0.0604 | 1.3429 | 1.4033 | 0.0000 | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0407 | 1.3246 | 0.2741 | 3.3200e-003 | 0.0717 | 5.0400e-003 | 0.0767 | 0.0197 | 4.8200e-003 | 0.0245 | | 359.0020 | 359.0020 | 0.0247 | | 359.6198 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0718 | 0.0542 | 0.7021 | 1.6400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 162.9797 | 162.9797 | 6.1100e-003 | | 163.1325 |
| Total | 0.1125 | 1.3788 | 0.9762 | 4.9600e-003 | 0.2170 | 6.3400e-003 | 0.2233 | 0.0582 | 6.0100e-003 | 0.0642 | | 521.9817 | 521.9817 | 0.0308 | | 522.7523 |

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 5.7996 | 0.0000 | 5.7996 | 2.9537 | 0.0000 | 2.9537 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.8061 | 20.7472 | 8.0808 | 0.0172 | | 0.9523 | 0.9523 | | 0.8761 | 0.8761 | | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |
| Total | 1.8061 | 20.7472 | 8.0808 | 0.0172 | 5.7996 | 0.9523 | 6.7518 | 2.9537 | 0.8761 | 3.8298 | | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |
| Total | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.6098 | 0.0000 | 2.6098 | 1.3292 | 0.0000 | 1.3292 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.8061 | 20.7472 | 8.0808 | 0.0172 | | 0.9523 | 0.9523 | | 0.8761 | 0.8761 | 0.0000 | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |
| Total | 1.8061 | 20.7472 | 8.0808 | 0.0172 | 2.6098 | 0.9523 | 3.5621 | 1.3292 | 0.8761 | 2.2052 | 0.0000 | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |
| Total | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

3.4 Grading - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 4.9153 | 0.0000 | 4.9153 | 2.5257 | 0.0000 | 2.5257 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4972 | 17.0666 | 6.7630 | 0.0141 | | 0.7947 | 0.7947 | | 0.7311 | 0.7311 | | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |
| Total | 1.4972 | 17.0666 | 6.7630 | 0.0141 | 4.9153 | 0.7947 | 5.7100 | 2.5257 | 0.7311 | 3.2569 | | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |
| Total | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.2119 | 0.0000 | 2.2119 | 1.1366 | 0.0000 | 1.1366 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4972 | 17.0666 | 6.7630 | 0.0141 | | 0.7947 | 0.7947 | | 0.7311 | 0.7311 | 0.0000 | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |
| Total | 1.4972 | 17.0666 | 6.7630 | 0.0141 | 2.2119 | 0.7947 | 3.0066 | 1.1366 | 0.7311 | 1.8677 | 0.0000 | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |
| Total | 0.0442 | 0.0334 | 0.4321 | 1.0100e-003 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 100.2952 | 100.2952 | 3.7600e-003 | | 100.3892 |

3.5 Building Construction - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | | 2,030.8389 | 2,030.8389 | 0.4088 | | 2,041.0596 |
| Total | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | | 2,030.8389 | 2,030.8389 | 0.4088 | | 2,041.0596 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0230 | 0.6128 | 0.1676 | 1.3200e-003 | 0.0320 | 4.3200e-003 | 0.0363 | 9.2200e-003 | 4.1300e-003 | 0.0134 | | 140.8397 | 140.8397 | 9.2700e-003 | | 141.0716 |
| Worker | 0.0663 | 0.0500 | 0.6481 | 1.5100e-003 | 0.1341 | 1.2000e-003 | 0.1353 | 0.0356 | 1.1000e-003 | 0.0367 | | 150.4428 | 150.4428 | 5.6400e-003 | | 150.5839 |
| Total | 0.0893 | 0.6628 | 0.8156 | 2.8300e-003 | 0.1661 | 5.5200e-003 | 0.1717 | 0.0448 | 5.2300e-003 | 0.0500 | | 291.2825 | 291.2825 | 0.0149 | | 291.6554 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e | |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|------|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | | |
| Off-Road | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | 0.0000 | 2,030.8389 | 2,030.8389 | 0.4088 | | | 2,041.0596 |
| Total | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | 0.0000 | 2,030.8389 | 2,030.8389 | 0.4088 | | | 2,041.0596 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e | |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|------|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | | 0.0000 |
| Vendor | 0.0230 | 0.6128 | 0.1676 | 1.3200e-003 | 0.0320 | 4.3200e-003 | 0.0363 | 9.2200e-003 | 4.1300e-003 | 0.0134 | | 140.8397 | 140.8397 | 9.2700e-003 | | | 141.0716 |
| Worker | 0.0663 | 0.0500 | 0.6481 | 1.5100e-003 | 0.1341 | 1.2000e-003 | 0.1353 | 0.0356 | 1.1000e-003 | 0.0367 | | 150.4428 | 150.4428 | 5.6400e-003 | | | 150.5839 |
| Total | 0.0893 | 0.6628 | 0.8156 | 2.8300e-003 | 0.1661 | 5.5200e-003 | 0.1717 | 0.0448 | 5.2300e-003 | 0.0500 | | 291.2825 | 291.2825 | 0.0149 | | | 291.6554 |

3.6 Paving - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e | |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|------|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | | |
| Off-Road | 1.0182 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | | 1,346.4360 | 1,346.4360 | 0.4113 | | | 1,356.7186 |
| Paving | 0.1100 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | | 0.0000 |
| Total | 1.1283 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | | 1,346.4360 | 1,346.4360 | 0.4113 | | | 1,356.7186 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Summer

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Summer

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0718 | 0.0542 | 0.7021 | 1.6400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 162.9797 | 162.9797 | 6.1100e-003 | | 163.1325 |
| Total | 0.0718 | 0.0542 | 0.7021 | 1.6400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 162.9797 | 162.9797 | 6.1100e-003 | | 163.1325 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0182 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | 0.0000 | 1,346.4360 | 1,346.4360 | 0.4113 | | 1,356.7186 |
| Paving | 0.1100 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.1283 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | 0.0000 | 1,346.4360 | 1,346.4360 | 0.4113 | | 1,356.7186 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0718 | 0.0542 | 0.7021 | 1.6400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 162.9797 | 162.9797 | 6.1100e-003 | | 163.1325 |
| Total | 0.0718 | 0.0542 | 0.7021 | 1.6400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 162.9797 | 162.9797 | 6.1100e-003 | | 163.1325 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|----------------------------------|-------|----------|-------------|--------------------|------------|
| Other Asphalt Surfaces | 9.00 | 1000sqft | 0.21 | 9,000.00 | 0 |
| Unrefrigerated Warehouse-No Rail | 19.07 | 1000sqft | 0.44 | 19,075.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 11 | | | Operational Year | 2018 |
| Utility Company | City of Vernon | | | | |
| CO2 Intensity (lb/MWhr) | 760.86 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Draft EA assumed 53,500 square feet of new enclosures

Construction Phase - Draft EA included demolition of existing structures and enclosure construction. Schedule reflects conservative estimate of construction of the enclosure per PR 415.

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for the larger enclosures)

Off-road Equipment - Assumes conservative equipment (as modeled in the Draft EA for repavement rather than pavement repair)

Grading -

Demolition - 9,000 square feet of demolition (53,500 assumed in the Draft EA)

Construction Off-road Equipment Mitigation -

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|---------------------|
| tblConstructionPhase | NumDays | 100.00 | 20.00 |
| tblConstructionPhase | NumDays | 2.00 | 5.00 |
| tblConstructionPhase | NumDays | 1.00 | 5.00 |
| tblConstructionPhase | PhaseEndDate | 6/6/2018 | 2/23/2018 |
| tblConstructionPhase | PhaseEndDate | 1/17/2018 | 1/26/2018 |
| tblConstructionPhase | PhaseEndDate | 6/13/2018 | 3/2/2018 |
| tblConstructionPhase | PhaseEndDate | 1/15/2018 | 1/19/2018 |
| tblConstructionPhase | PhaseStartDate | 1/18/2018 | 1/27/2018 |
| tblConstructionPhase | PhaseStartDate | 1/16/2018 | 1/20/2018 |
| tblConstructionPhase | PhaseStartDate | 6/7/2018 | 2/24/2018 |
| tblLandUse | LandUseSquareFeet | 19,070.00 | 19,075.00 |
| tblOffRoadEquipment | OffRoadEquipmentType | | Rubber Tired Dozers |
| tblOffRoadEquipment | OffRoadEquipmentType | | Graders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Generator Sets |
| tblOffRoadEquipment | OffRoadEquipmentType | | Welders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Paving Equipment |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 1.00 | 0.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 3.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 1.00 |
| tblOffRoadEquipment | UsageHours | 4.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 1.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 8.00 | 6.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 8.00 |
| tblOffRoadEquipment | UsageHours | 6.00 | 7.00 |
| tblOffRoadEquipment | UsageHours | 7.00 | 8.00 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Demolition | Demolition | 1/1/2018 | 1/12/2018 | 5 | 10 | |
| 2 | Site Preparation | Site Preparation | 1/13/2018 | 1/19/2018 | 5 | 5 | |
| 3 | Grading | Grading | 1/20/2018 | 1/26/2018 | 5 | 5 | |
| 4 | Building Construction | Building Construction | 1/27/2018 | 2/23/2018 | 5 | 20 | |
| 5 | Paving | Paving | 2/24/2018 | 3/2/2018 | 5 | 5 | |

Acres of Grading (Site Preparation Phase): 2.5

Acres of Grading (Grading Phase): 1.88

Acres of Paving: 0.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Site Preparation | Rubber Tired Dozers | 1 | 7.00 | 247 | 0.40 |
| Paving | Cement and Mortar Mixers | 1 | 6.00 | 9 | 0.56 |
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Grading | Concrete/Industrial Saws | 0 | 8.00 | 81 | 0.73 |
| Building Construction | Cranes | 1 | 6.00 | 231 | 0.29 |
| Building Construction | Forklifts | 1 | 6.00 | 89 | 0.20 |
| Site Preparation | Graders | 1 | 8.00 | 187 | 0.41 |
| Paving | Pavers | 1 | 6.00 | 130 | 0.42 |
| Paving | Rollers | 1 | 7.00 | 80 | 0.38 |
| Demolition | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Rubber Tired Dozers | 1 | 6.00 | 247 | 0.40 |
| Building Construction | Tractors/Loaders/Backhoes | 1 | 6.00 | 97 | 0.37 |
| Demolition | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Grading | Tractors/Loaders/Backhoes | 1 | 7.00 | 97 | 0.37 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Site Preparation | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Grading | Graders | 1 | 6.00 | 187 | 0.41 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Welders | 3 | 8.00 | 46 | 0.45 |
| Paving | Paving Equipment | 1 | 8.00 | 132 | 0.36 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Demolition | 5 | 13.00 | 0.00 | 41.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 3 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 3 | 8.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 7 | 12.00 | 5.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 5 | 13.00 | 0.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.8859 | 0.0000 | 0.8859 | 0.1341 | 0.0000 | 0.1341 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4838 | 24.3641 | 15.1107 | 0.0241 | | 1.4365 | 1.4365 | | 1.3429 | 1.3429 | | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |
| Total | 2.4838 | 24.3641 | 15.1107 | 0.0241 | 0.8859 | 1.4365 | 2.3224 | 0.1341 | 1.3429 | 1.4770 | | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0417 | 1.3427 | 0.2932 | 3.2700e-003 | 0.0717 | 5.1400e-003 | 0.0768 | 0.0197 | 4.9100e-003 | 0.0246 | | 352.9949 | 352.9949 | 0.0257 | | 353.6369 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0795 | 0.0600 | 0.6465 | 1.5400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 153.4749 | 153.4749 | 5.7800e-003 | | 153.6193 |
| Total | 0.1212 | 1.4027 | 0.9397 | 4.8100e-003 | 0.2170 | 6.4400e-003 | 0.2234 | 0.0582 | 6.1000e-003 | 0.0643 | | 506.4698 | 506.4698 | 0.0315 | | 507.2561 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.3987 | 0.0000 | 0.3987 | 0.0604 | 0.0000 | 0.0604 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.4838 | 24.3641 | 15.1107 | 0.0241 | | 1.4365 | 1.4365 | | 1.3429 | 1.3429 | 0.0000 | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |
| Total | 2.4838 | 24.3641 | 15.1107 | 0.0241 | 0.3987 | 1.4365 | 1.8351 | 0.0604 | 1.3429 | 1.4033 | 0.0000 | 2,391.1659 | 2,391.1659 | 0.6058 | | 2,406.3105 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0417 | 1.3427 | 0.2932 | 3.2700e-003 | 0.0717 | 5.1400e-003 | 0.0768 | 0.0197 | 4.9100e-003 | 0.0246 | | 352.9949 | 352.9949 | 0.0257 | | 353.6369 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0795 | 0.0600 | 0.6465 | 1.5400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 153.4749 | 153.4749 | 5.7800e-003 | | 153.6193 |
| Total | 0.1212 | 1.4027 | 0.9397 | 4.8100e-003 | 0.2170 | 6.4400e-003 | 0.2234 | 0.0582 | 6.1000e-003 | 0.0643 | | 506.4698 | 506.4698 | 0.0315 | | 507.2561 |

3.3 Site Preparation - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 5.7996 | 0.0000 | 5.7996 | 2.9537 | 0.0000 | 2.9537 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.8061 | 20.7472 | 8.0808 | 0.0172 | | 0.9523 | 0.9523 | | 0.8761 | 0.8761 | | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |
| Total | 1.8061 | 20.7472 | 8.0808 | 0.0172 | 5.7996 | 0.9523 | 6.7518 | 2.9537 | 0.8761 | 3.8298 | | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |
| Total | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.6098 | 0.0000 | 2.6098 | 1.3292 | 0.0000 | 1.3292 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.8061 | 20.7472 | 8.0808 | 0.0172 | | 0.9523 | 0.9523 | | 0.8761 | 0.8761 | 0.0000 | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |
| Total | 1.8061 | 20.7472 | 8.0808 | 0.0172 | 2.6098 | 0.9523 | 3.5621 | 1.3292 | 0.8761 | 2.2052 | 0.0000 | 1,735.3630 | 1,735.3630 | 0.5402 | | 1,748.8690 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |
| Total | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

3.4 Grading - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 4.9153 | 0.0000 | 4.9153 | 2.5257 | 0.0000 | 2.5257 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4972 | 17.0666 | 6.7630 | 0.0141 | | 0.7947 | 0.7947 | | 0.7311 | 0.7311 | | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |
| Total | 1.4972 | 17.0666 | 6.7630 | 0.0141 | 4.9153 | 0.7947 | 5.7100 | 2.5257 | 0.7311 | 3.2569 | | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |
| Total | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.2119 | 0.0000 | 2.2119 | 1.1366 | 0.0000 | 1.1366 | | | 0.0000 | | | 0.0000 |
| Off-Road | 1.4972 | 17.0666 | 6.7630 | 0.0141 | | 0.7947 | 0.7947 | | 0.7311 | 0.7311 | 0.0000 | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |
| Total | 1.4972 | 17.0666 | 6.7630 | 0.0141 | 2.2119 | 0.7947 | 3.0066 | 1.1366 | 0.7311 | 1.8677 | 0.0000 | 1,421.2605 | 1,421.2605 | 0.4425 | | 1,432.3219 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|----------------|----------------|--------------------|-----|----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |
| Total | 0.0489 | 0.0369 | 0.3978 | 9.5000e-004 | 0.0894 | 8.0000e-004 | 0.0902 | 0.0237 | 7.4000e-004 | 0.0245 | | 94.4461 | 94.4461 | 3.5500e-003 | | 94.5349 |

3.5 Building Construction - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | | 2,030.8389 | 2,030.8389 | 0.4088 | | 2,041.0596 |
| Total | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | | 2,030.8389 | 2,030.8389 | 0.4088 | | 2,041.0596 |

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0240 | 0.6142 | 0.1842 | 1.2900e-003 | 0.0320 | 4.3900e-003 | 0.0364 | 9.2200e-003 | 4.2000e-003 | 0.0134 | | 137.0749 | 137.0749 | 9.8900e-003 | | 137.3222 |
| Worker | 0.0734 | 0.0554 | 0.5967 | 1.4200e-003 | 0.1341 | 1.2000e-003 | 0.1353 | 0.0356 | 1.1000e-003 | 0.0367 | | 141.6691 | 141.6691 | 5.3300e-003 | | 141.8024 |
| Total | 0.0974 | 0.6696 | 0.7809 | 2.7100e-003 | 0.1661 | 5.5900e-003 | 0.1717 | 0.0448 | 5.3000e-003 | 0.0501 | | 278.7441 | 278.7441 | 0.0152 | | 279.1246 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | 0.0000 | 2,030.8389 | 2,030.8389 | 0.4088 | | 2,041.0596 |
| Total | 2.5919 | 17.4280 | 13.8766 | 0.0220 | | 1.0580 | 1.0580 | | 1.0216 | 1.0216 | 0.0000 | 2,030.8389 | 2,030.8389 | 0.4088 | | 2,041.0596 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0240 | 0.6142 | 0.1842 | 1.2900e-003 | 0.0320 | 4.3900e-003 | 0.0364 | 9.2200e-003 | 4.2000e-003 | 0.0134 | | 137.0749 | 137.0749 | 9.8900e-003 | | 137.3222 |
| Worker | 0.0734 | 0.0554 | 0.5967 | 1.4200e-003 | 0.1341 | 1.2000e-003 | 0.1353 | 0.0356 | 1.1000e-003 | 0.0367 | | 141.6691 | 141.6691 | 5.3300e-003 | | 141.8024 |
| Total | 0.0974 | 0.6696 | 0.7809 | 2.7100e-003 | 0.1661 | 5.5900e-003 | 0.1717 | 0.0448 | 5.3000e-003 | 0.0501 | | 278.7441 | 278.7441 | 0.0152 | | 279.1246 |

3.6 Paving - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|----------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0182 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | | 1,346.4360 | 1,346.4360 | 0.4113 | | 1,356.7186 |
| Paving | 0.1100 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.1283 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | | 1,346.4360 | 1,346.4360 | 0.4113 | | 1,356.7186 |

PR415_WorstCaseImpactScenario - Los Angeles-South Coast County, Winter

PR415_WorstCaseImpactScenario
Los Angeles-South Coast County, Winter

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0795 | 0.0600 | 0.6465 | 1.5400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 153.4749 | 153.4749 | 5.7800e-003 | | 153.6193 |
| Total | 0.0795 | 0.0600 | 0.6465 | 1.5400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 153.4749 | 153.4749 | 5.7800e-003 | | 153.6193 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.0182 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | 0.0000 | 1,346.4360 | 1,346.4360 | 0.4113 | | 1,356.7186 |
| Paving | 0.1100 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Total | 1.1283 | 10.4525 | 8.9926 | 0.0135 | | 0.6097 | 0.6097 | | 0.5618 | 0.5618 | 0.0000 | 1,346.4360 | 1,346.4360 | 0.4113 | | 1,356.7186 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|--------------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Worker | 0.0795 | 0.0600 | 0.6465 | 1.5400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 153.4749 | 153.4749 | 5.7800e-003 | | 153.6193 |
| Total | 0.0795 | 0.0600 | 0.6465 | 1.5400e-003 | 0.1453 | 1.3000e-003 | 0.1466 | 0.0385 | 1.1900e-003 | 0.0397 | | 153.4749 | 153.4749 | 5.7800e-003 | | 153.6193 |

PR415_APCDInstallation - Los Angeles-South Coast County, Annual

PR415_APCDInstallation
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|------|----------|-------------|--------------------|------------|
| General Heavy Industry | 1.00 | 1000sqft | 0.02 | 1,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 11 | | | Operational Year | 2019 |
| Utility Company | City of Vernon | | | | |
| CO2 Intensity (lb/MWhr) | 760.86 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - APCD Installation

Off-road Equipment - APCD equipment install list

Trips and VMT - APCD installation (8 worker). Worst-Case Impact Scenario 4 APCDS delivered

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|-----------|
| tblConstructionPhase | NumDays | 100.00 | 5.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 8.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 16.00 |

PR415_APCDInstallation - Los Angeles-South Coast County, Annual

PR415_APCDInstallation
Los Angeles-South Coast County, Annual

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|----------|-----------|-------------|--------|--------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2018 | 6.4300e-003 | 0.0461 | 0.0385 | 7.0000e-005 | 5.6000e-004 | 2.7400e-003 | 3.3000e-003 | 1.5000e-004 | 2.6700e-003 | 2.8200e-003 | 0.0000 | 5.8896 | 5.8896 | 8.0000e-004 | 0.0000 | 5.9096 |
| Maximum | 6.4300e-003 | 0.0461 | 0.0385 | 7.0000e-005 | 5.6000e-004 | 2.7400e-003 | 3.3000e-003 | 1.5000e-004 | 2.6700e-003 | 2.8200e-003 | 0.0000 | 5.8896 | 5.8896 | 8.0000e-004 | 0.0000 | 5.9096 |

Mitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|---------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|----------|-----------|-------------|--------|--------|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2018 | 6.4300e-003 | 0.0461 | 0.0385 | 7.0000e-005 | 5.6000e-004 | 2.7400e-003 | 3.3000e-003 | 1.5000e-004 | 2.6700e-003 | 2.8200e-003 | 0.0000 | 5.8896 | 5.8896 | 8.0000e-004 | 0.0000 | 5.9096 |
| Maximum | 6.4300e-003 | 0.0461 | 0.0385 | 7.0000e-005 | 5.6000e-004 | 2.7400e-003 | 3.3000e-003 | 1.5000e-004 | 2.6700e-003 | 2.8200e-003 | 0.0000 | 5.8896 | 5.8896 | 8.0000e-004 | 0.0000 | 5.9096 |

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio-CO2 | Total CO2 | CH4 | N2O | CO2e |
|-------------------|------|------|------|------|---------------|--------------|------------|----------------|---------------|-------------|----------|----------|-----------|------|------|------|
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---------|------------|-----------|--|--|
| 1 | 3-12-2018 | 6-11-2018 | 0.0525 | 0.0525 |
| | | Highest | 0.0525 | 0.0525 |

PR415_APCDInstallation - Los Angeles-South Coast County, Annual

PR415_APCDInstallation
Los Angeles-South Coast County, Annual

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Building Construction | Building Construction | 3/15/2018 | 3/21/2018 | 5 | 5 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 2 | 8.00 | 46 | 0.45 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Building Construction | 7 | 16.00 | 8.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

3.2 Building Construction - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|-------------|--------|--------|-------------|---------------|--------------|-------------|----------------|---------------|-------------|----------|-----------|-----------|-------------|--------|--------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 6.1200e-003 | 0.0434 | 0.0357 | 6.0000e-005 | | 2.7200e-003 | 2.7200e-003 | | 2.6500e-003 | 2.6500e-003 | 0.0000 | 4.9487 | 4.9487 | 7.5000e-004 | 0.0000 | 4.9675 |
| Total | 6.1200e-003 | 0.0434 | 0.0357 | 6.0000e-005 | | 2.7200e-003 | 2.7200e-003 | | 2.6500e-003 | 2.6500e-003 | 0.0000 | 4.9487 | 4.9487 | 7.5000e-004 | 0.0000 | 4.9675 |

PR415_APCDInstallation - Los Angeles-South Coast County, Annual

PR415_APCDInstallation
Los Angeles-South Coast County, Annual

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 9.0000e-005 | 2.5000e-003 | 7.0000e-004 | 1.0000e-005 | 1.3000e-004 | 2.0000e-005 | 1.4000e-004 | 4.0000e-005 | 2.0000e-005 | 5.0000e-005 | 0.0000 | 0.5053 | 0.5053 | 3.0000e-005 | 0.0000 | 0.5062 |
| Worker | 2.2000e-004 | 1.9000e-004 | 2.0400e-003 | 0.0000 | 4.4000e-004 | 0.0000 | 4.4000e-004 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 0.4355 | 0.4355 | 2.0000e-005 | 0.0000 | 0.4359 |
| Total | 3.1000e-004 | 2.6900e-003 | 2.7400e-003 | 1.0000e-005 | 5.7000e-004 | 2.0000e-005 | 5.8000e-004 | 1.6000e-004 | 2.0000e-005 | 1.7000e-004 | 0.0000 | 0.9409 | 0.9409 | 5.0000e-005 | 0.0000 | 0.9421 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|---------------|---------------|--------------------|---------------|--------------------|--------------------|----------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Off-Road | 6.1200e-003 | 0.0434 | 0.0357 | 6.0000e-005 | | 2.7200e-003 | 2.7200e-003 | | 2.6500e-003 | 2.6500e-003 | 0.0000 | 4.9487 | 4.9487 | 7.5000e-004 | 0.0000 | 4.9675 |
| Total | 6.1200e-003 | 0.0434 | 0.0357 | 6.0000e-005 | | 2.7200e-003 | 2.7200e-003 | | 2.6500e-003 | 2.6500e-003 | 0.0000 | 4.9487 | 4.9487 | 7.5000e-004 | 0.0000 | 4.9675 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------|---------------|---------------|--------------------|---------------|---------------|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Vendor | 9.0000e-005 | 2.5000e-003 | 7.0000e-004 | 1.0000e-005 | 1.3000e-004 | 2.0000e-005 | 1.4000e-004 | 4.0000e-005 | 2.0000e-005 | 5.0000e-005 | 0.0000 | 0.5053 | 0.5053 | 3.0000e-005 | 0.0000 | 0.5062 |
| Worker | 2.2000e-004 | 1.9000e-004 | 2.0400e-003 | 0.0000 | 4.4000e-004 | 0.0000 | 4.4000e-004 | 1.2000e-004 | 0.0000 | 1.2000e-004 | 0.0000 | 0.4355 | 0.4355 | 2.0000e-005 | 0.0000 | 0.4359 |
| Total | 3.1000e-004 | 2.6900e-003 | 2.7400e-003 | 1.0000e-005 | 5.7000e-004 | 2.0000e-005 | 5.8000e-004 | 1.6000e-004 | 2.0000e-005 | 1.7000e-004 | 0.0000 | 0.9409 | 0.9409 | 5.0000e-005 | 0.0000 | 0.9421 |

PR415_APCDInstallation - Los Angeles-South Coast County, Summer

PR415_APCDInstallation
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|------|----------|-------------|--------------------|------------|
| General Heavy Industry | 1.00 | 1000sqft | 0.02 | 1,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|----------------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 11 | | | Operational Year | 2019 |
| Utility Company | City of Vernon | | | | |
| CO2 Intensity (lb/MWhr) | 760.86 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - APCD Installation
- Off-road Equipment - APCD equipment install list
- Trips and VMT - APCD installation (8 worker). Worst-Case Impact Scenario 4 APCDS delivered

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|----------------|
| tblConstructionPhase | NumDays | 100.00 | 5.00 |
| tblConstructionPhase | PhaseEndDate | 8/15/2018 | 3/21/2018 |
| tblConstructionPhase | PhaseStartDate | 3/29/2018 | 3/15/2018 |
| tblOffRoadEquipment | OffRoadEquipmentType | | Welders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Generator Sets |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 8.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 16.00 |

PR415_APCDInstallation - Los Angeles-South Coast County, Summer

PR415_APCDInstallation
Los Angeles-South Coast County, Summer

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Building Construction | Building Construction | 3/15/2018 | 3/21/2018 | 5 | 5 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Building Construction | Welders | 2 | 8.00 | 46 | 0.45 |
| Building Construction | Generator Sets | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Building Construction | 7 | 16.00 | 8.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

3.2 Building Construction - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|--------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|-----|------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |
| Total | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |

PR415_APCDInstallation - Los Angeles-South Coast County, Summer

PR415_APCDInstallation
Los Angeles-South Coast County, Summer

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0368 | 0.9805 | 0.2681 | 2.1100e-003 | 0.0512 | 6.9100e-003 | 0.0581 | 0.0148 | 6.6100e-003 | 0.0214 | | 225.3435 | 225.3435 | 0.0148 | | 225.7145 |
| Worker | 0.0884 | 0.0667 | 0.8641 | 2.0200e-003 | 0.1788 | 1.5900e-003 | 0.1804 | 0.0474 | 1.4700e-003 | 0.0489 | | 200.5904 | 200.5904 | 7.5200e-003 | | 200.7785 |
| Total | 0.1252 | 1.0472 | 1.1322 | 4.1300e-003 | 0.2301 | 8.5000e-003 | 0.2386 | 0.0622 | 8.0800e-003 | 0.0703 | | 425.9339 | 425.9339 | 0.0224 | | 426.4929 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | 0.0000 | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |
| Total | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | 0.0000 | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0368 | 0.9805 | 0.2681 | 2.1100e-003 | 0.0512 | 6.9100e-003 | 0.0581 | 0.0148 | 6.6100e-003 | 0.0214 | | 225.3435 | 225.3435 | 0.0148 | | 225.7145 |
| Worker | 0.0884 | 0.0667 | 0.8641 | 2.0200e-003 | 0.1788 | 1.5900e-003 | 0.1804 | 0.0474 | 1.4700e-003 | 0.0489 | | 200.5904 | 200.5904 | 7.5200e-003 | | 200.7785 |
| Total | 0.1252 | 1.0472 | 1.1322 | 4.1300e-003 | 0.2301 | 8.5000e-003 | 0.2386 | 0.0622 | 8.0800e-003 | 0.0703 | | 425.9339 | 425.9339 | 0.0224 | | 426.4929 |

PR415_APCDInstallation - Los Angeles-South Coast County, Winter

PR415_APCDInstallation
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|------------------------|------|----------|-------------|--------------------|------------|
| General Heavy Industry | 1.00 | 1000sqft | 0.02 | 1,000.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|---------------------------------|----------------|---------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 33 |
| Climate Zone | 11 | | | Operational Year | 2019 |
| Utility Company | City of Vernon | | | | |
| CO2 Intensity (lb/MW hr) | 760.86 | CH4 Intensity (lb/MW hr) | 0.029 | N2O Intensity (lb/MW hr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use -
- Construction Phase - APCD Installation
- Off-road Equipment - APCD equipment install list
- Trips and VMT - APCD installation (8 worker). Worst-Case Impact Scenario 4 APCDS delivered

| Table Name | Column Name | Default Value | New Value |
|----------------------|----------------------------|---------------|----------------|
| tblConstructionPhase | NumDays | 100.00 | 5.00 |
| tblConstructionPhase | PhaseEndDate | 8/15/2018 | 3/21/2018 |
| tblConstructionPhase | PhaseStartDate | 3/29/2018 | 3/15/2018 |
| tblOffRoadEquipment | OffRoadEquipmentType | | Welders |
| tblOffRoadEquipment | OffRoadEquipmentType | | Generator Sets |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 0.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 8.00 |
| tblTripsAndVMT | WorkerTripNumber | 0.00 | 16.00 |

PR415_APCDInstallation - Los Angeles-South Coast County, Winter

PR415_APCDInstallation
Los Angeles-South Coast County, Winter

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|-----------------------|-----------------------|------------|-----------|---------------|----------|-------------------|
| 1 | Building Construction | Building Construction | 3/15/2018 | 3/21/2018 | 5 | 5 | |

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|-----------------------|---------------------------|--------|-------------|-------------|-------------|
| Building Construction | Welders | 2 | 8.00 | 46 | 0.45 |
| Building Construction | Generator Sets | 2 | 8.00 | 84 | 0.74 |
| Building Construction | Cranes | 1 | 4.00 | 231 | 0.29 |
| Building Construction | Forklifts | 2 | 6.00 | 89 | 0.20 |
| Building Construction | Tractors/Loaders/Backhoes | 0 | 8.00 | 97 | 0.37 |

Trips and VMT

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|-----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Building Construction | 7 | 16.00 | 8.00 | 0.00 | 14.70 | 6.90 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

3.2 Building Construction - 2018

Unmitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|----------|--------|---------|---------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|------------|------------|--------|-----|------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |
| Total | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |

PR415_APCDInstallation - Los Angeles-South Coast County, Winter

PR415_APCDInstallation
Los Angeles-South Coast County, Winter

Unmitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0384 | 0.9827 | 0.2947 | 2.0600e-003 | 0.0512 | 7.0200e-003 | 0.0582 | 0.0148 | 6.7200e-003 | 0.0215 | | 219.3199 | 219.3199 | 0.0158 | | 219.7155 |
| Worker | 0.0978 | 0.0739 | 0.7956 | 1.9000e-003 | 0.1788 | 1.5900e-003 | 0.1804 | 0.0474 | 1.4700e-003 | 0.0489 | | 188.8922 | 188.8922 | 7.1100e-003 | | 189.0699 |
| Total | 0.1362 | 1.0566 | 1.0903 | 3.9600e-003 | 0.2301 | 8.6100e-003 | 0.2387 | 0.0622 | 8.1900e-003 | 0.0704 | | 408.2120 | 408.2120 | 0.0229 | | 408.7854 |

Mitigated Construction On-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|---------------|-------------------|-------------------|---------------|-----|-------------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | 0.0000 | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |
| Total | 2.4469 | 17.3628 | 14.2902 | 0.0234 | | 1.0872 | 1.0872 | | 1.0603 | 1.0603 | 0.0000 | 2,182.0049 | 2,182.0049 | 0.3317 | | 2,190.2968 |

Mitigated Construction Off-Site

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|--------------|---------------|---------------|---------------|--------------------|---------------|--------------------|---------------|----------------|--------------------|---------------|----------|-----------------|-----------------|---------------|-----|-----------------|
| Category | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Vendor | 0.0384 | 0.9827 | 0.2947 | 2.0600e-003 | 0.0512 | 7.0200e-003 | 0.0582 | 0.0148 | 6.7200e-003 | 0.0215 | | 219.3199 | 219.3199 | 0.0158 | | 219.7155 |
| Worker | 0.0978 | 0.0739 | 0.7956 | 1.9000e-003 | 0.1788 | 1.5900e-003 | 0.1804 | 0.0474 | 1.4700e-003 | 0.0489 | | 188.8922 | 188.8922 | 7.1100e-003 | | 189.0699 |
| Total | 0.1362 | 1.0566 | 1.0903 | 3.9600e-003 | 0.2301 | 8.6100e-003 | 0.2387 | 0.0622 | 8.1900e-003 | 0.0704 | | 408.2120 | 408.2120 | 0.0229 | | 408.7854 |

Worst-Case Impact Scenario - Fuel Use

Worst-Case Impact Scenario - On-Road Fuel Use

| PhaseName | Phase Duration | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Trips/ Day | Worker Trip Length | Vendor Trip Length | Hauling Trip Length |
|----------------------------|----------------|--------------------|--------------------|---------------------|------------|--------------------|--------------------|---------------------|
| Demolition | 10 | 13 | 0 | 41 | 17 | 14.7 | 6.9 | 20 |
| Site Preparation | 5 | 8 | 0 | 0 | 8 | 14.7 | 6.9 | 20 |
| Grading | 5 | 8 | 0 | 0 | 8 | 14.7 | 6.9 | 20 |
| Building Construction | 20 | 12 | 5 | 0 | 17 | 14.7 | 6.9 | 20 |
| Paving | 5 | 13 | 0 | 0 | 13 | 14.7 | 6.9 | 20 |
| Building Construction APCD | 5 | 16 | 8 | 0 | 24 | 14.7 | 6.9 | 20 |

Source: CalEEMod 2016 Version 3.2.2 - Worst Case Impact Scenario

| PhaseName | Worker VMT | Vendor VMT | Haul VMT | Total VMT | Gasoline Fuel (Gal) | Diesel Fuel (Gal) |
|----------------------------|------------|------------|----------|-----------|---------------------|-------------------|
| Demolition | 1,911 | 0 | 820 | 2,731 | 88 | 143 |
| Site Preparation | 588 | 0 | 0 | 588 | 27 | 0 |
| Grading | 588 | 0 | 0 | 588 | 27 | 0 |
| Building Construction | 3,528 | 690 | 0 | 4,218 | 163 | 121 |
| Paving | 956 | 0 | 0 | 956 | 44 | 0 |
| Building Construction APCD | 1,176 | 276 | 0 | 1,452 | 54 | 48 |
| TOTAL | 8,747 | 966 | 820 | 10,533 | 403 | 312 |

Fuel Efficiency (Gal/Mile)

| | |
|-----------------------------|---------------|
| Worker = Passenger Vehicles | 21.7 gasoline |
| Vendor = Trucks | 5.7 diesel |
| Haul = Trucks | 5.7 diesel |

Source: EMFAC2014 - Calendar Year 2016

Summary - Off-Road + On-Road Fuel

| | Annual Gasoline Fuel | Annual Diesel Fuel | |
|-------------------------------|----------------------|--------------------|------------|
| Total On- and Off-Road | 1663 | 1923 | gallons/yr |
| Total On- and Off-Road | 0.0017 | 0.0019 | mmgal/yr |
| Basin-Wide Fuel Demand | 5,589 | 524 | mmgal |
| Project as a Percent of Basin | 3.0E-07 | 3.7E-06 | |

Worst-Case Impact Scenario - Off-Road Equipment Fuel Use

Permanent Total Enclosures

| PhaseName | Phase Duration | OffRoad Equipment Type | OffRoad Equipment Unit Amount | Usage Hours | Horse Power | Hours Of Equipment Use Total | Fuel Consumption (gallons/hr) | Diesel Fuel Use (Gallons) | Gasoline Fuel Use (Gallons) |
|-----------------------|----------------|---------------------------|-------------------------------|-------------|-------------|------------------------------|-------------------------------|---------------------------|-----------------------------|
| Demolition | 10 | Concrete/Industrial Saws | 1 | 8 | 81 | 80 | 2.77 | | 222 |
| Demolition | 10 | Rubber Tired Dozers | 1 | 8 | 247 | 80 | 3.11 | 249 | |
| Demolition | 10 | Tractors/Loaders/Backhoes | 3 | 8 | 97 | 240 | 0.81 | 194 | |
| Site Preparation | 5 | Graders | 1 | 8 | 187 | 40 | 3.24 | 129 | |
| Site Preparation | 5 | Rubber Tired Dozers | 1 | 7 | 247 | 35 | 3.11 | 109 | |
| Site Preparation | 5 | Tractors/Loaders/Backhoes | 1 | 8 | 97 | 40 | 0.81 | 32 | |
| Grading | 5 | Graders | 1 | 6 | 187 | 30 | 3.24 | 97 | |
| Grading | 5 | Rubber Tired Dozers | 1 | 6 | 247 | 30 | 3.11 | 93 | |
| Grading | 5 | Tractors/Loaders/Backhoes | 1 | 7 | 97 | 35 | 0.81 | 28 | |
| Building Construction | 20 | Cranes | 1 | 6 | 231 | 120 | 2.25 | 270 | |
| Building Construction | 20 | Forklifts | 1 | 6 | 89 | 120 | 0.50 | 60 | |
| Building Construction | 20 | Generator Sets | 1 | 8 | 84 | 160 | 2.26 | | 361 |
| Building Construction | 20 | Tractors/Loaders/Backhoes | 1 | 6 | 97 | 120 | 0.81 | 97 | |
| Building Construction | 20 | Welders | 3 | 8 | 46 | 480 | 0.87 | | 419 |
| Paving | 5 | Cement and Mortar Mixers | 1 | 6 | 9 | 30 | 0.25 | | 8 |
| Paving | 5 | Pavers | 1 | 6 | 130 | 30 | 1.72 | 52 | |
| Paving | 5 | Paving Equipment | 1 | 8 | 132 | 40 | 1.66 | 66 | |
| Paving | 5 | Rollers | 1 | 7 | 80 | 35 | 0.78 | 27 | |
| Paving | 5 | Tractors/Loaders/Backhoes | 1 | 8 | 97 | 40 | 0.81 | 32 | |
| | | | | | | TOTAL | 1785 | 1,537 | 1,010 |

APCD Installation

| PhaseName | Phase Duration | OffRoad Equipment Type | OffRoad Equipment Unit Amount | Usage Hours | Horse Power | Hours Of Equipment Use Total | Fuel Consumption (gallons/hr) | Diesel Fuel Use (Gallons) | Gasoline Fuel Use (Gallons) |
|-----------------------|----------------|------------------------|-------------------------------|-------------|-------------|------------------------------|-------------------------------|---------------------------|-----------------------------|
| Building Construction | 5 | Cranes | 1 | 4 | 231 | 20 | 2.25 | 45 | |
| Building Construction | 5 | Forklifts | 2 | 6 | 89 | 60 | 0.50 | 30 | |
| Building Construction | 5 | Generator Sets | 2 | 8 | 84 | 80 | 2.26 | | 180 |
| Building Construction | 5 | Welders | 2 | 8 | 46 | 80 | 0.87 | | 70 |
| | | | | | | TOTAL | 240 | 75 | 250 |
| | | | | | | TOTAL | 2025 | 1611 | 1260 |

Source: OFFROAD2011 (diesel) and OFFROAD2007 (gasoline)

EMFAC 2014 - Calendar Year 2016 Fuel Efficiency

| calendar year | season month | sub area | vehicle class | Fuel Type | Fuel Use (1000 gallons) | vmt | Gallons/ Mile | Fleet Mix | Fuel Efficiency |
|---------------|--------------|------------------|-------------------------|-----------|----------------------------|-------------|------------------|-----------|-----------------|
| 2016 | Annual | Los Angeles (SC) | LDA | Gas | 5042.2516 | 120114912.4 | 23.8 | 60% | 21.7 |
| 2016 | Annual | Los Angeles (SC) | LDT1 | Gas | 518.04016 | 10559434.2 | 20.4 | 10% | |
| 2016 | Annual | Los Angeles (SC) | LDT2 | Gas | 2473.776 | 44165838.08 | 17.9 | 30% | |
| 2016 | Annual | Los Angeles (SC) | T7 Tractor Construction | Dsl | 26.936082 | 154236.9728 | 5.7 | 100.0% | 5.7 |

Source: EMFAC2014

OFFROAD 2011 - Calendar Year 2016 Fuel Efficiency

| Calendar Year | AirBasin | Equipment Class | Equipment Type | Horsepower Bin | Base BSFC | Base Activity | Base Avg HP | Gallons/ Yr | Fuel Consumption (Gallons/Hr) |
|---------------|----------|-------------------------|---------------------------|----------------|-------------|---------------|-------------|-------------|-------------------------------|
| 2016 | SC | Construction and Mining | Cranes | 175 | 2299086.164 | 146225.5334 | 148 | 328,441 | 2.25 |
| 2016 | SC | Construction and Mining | Graders | 175 | 7377323.667 | 325632.9025 | 148 | 1,053,903 | 3.24 |
| 2016 | SC | Construction and Mining | Pavers | 120 | 1182171.602 | 97936.19184 | 80 | 168,882 | 1.72 |
| 2016 | SC | Construction and Mining | Paving Equipment | 120 | 691214.1234 | 59641.1498 | 89 | 98,745 | 1.66 |
| 2016 | SC | Construction and Mining | Rollers | 50 | 2507266.677 | 458098.762 | 36 | 358,181 | 0.78 |
| 2016 | SC | Construction and Mining | Rubber Tired Dozers | 175 | 439374.1172 | 20168.63905 | 150 | 62,768 | 3.11 |
| 2016 | SC | Construction and Mining | Tractors/Loaders/Backhoes | 50 | 3754621.4 | 663156.3115 | 38 | 536,374 | 0.81 |
| 2016 | SC | Industrial | Forklifts | 50 | 1749947.773 | 502491.5459 | 42 | 249,993 | 0.50 |

During warm weather, diesel fuel weighs between 6.9 and 7.1 pounds per gallon. During colder weather it will weigh between 7.2 and 7.4 pounds per gallon.

Assume an average of 7 lbs in a gallon of fuel.

OFFROAD 2007 - Average Fuel Efficiency

| CY | Season | AvgDays | Equipment | Fuel | MaxHP | Class | County | Air Basin | Air Dist. | Activity | Consumption | Fuel Use (Gallons/Hr) |
|------|--------|---------|--------------------------|------|-------|-----------------------------------|-------------|-----------|-----------|-----------|-------------|--------------------------|
| 2016 | Annual | Mon-Sun | Generator Sets | G4 | 50 | Light Commercial Equipment | Los Angeles | SC | SC | 1,239.655 | 2,796.047 | 2.26 |
| 2016 | Annual | Mon-Sun | Cement and Mortar Mixers | G4 | 5 | Construction and Mining Equipment | Los Angeles | SC | SC | 610.876 | 155.177 | 0.25 |
| 2016 | Annual | Mon-Sun | Concrete/Industrial Saws | G4 | 50 | Construction and Mining Equipment | Los Angeles | SC | SC | 30.591 | 84.838 | 2.77 |
| 2016 | Annual | Mon-Sun | Welders | G4 | 25 | Light Commercial Equipment | Los Angeles | SC | SC | 4,134.450 | 3,613.018 | 0.87 |

APPENDIX D

Letters Received on the Draft EA and Responses to Comments

Table of Contents

| Section | Page |
|---|-------------|
| D0 INTRODUCTION..... | 0-1 |
| D0-1.0 INTRODUCTION | 0-1 |
| D0-2.0 OVERVIEW | 0-1 |
| D0-3.0 CEQA REQUIREMENTS REGARDING COMMENTS AND RESPONSES .. | 0-3 |
| D1 RESPONSE TO COMMENTS..... | 1-1 |
| D1-1.0 MASTER RESPONSES | 1-1 |
| D1-1.1 Master Response 1 – Legal Authority to Adopt and Enforce | 1-2 |
| D1-1.2 Master Response 2 – Facility Shutdown..... | 1-3 |
| D1-1.3 Master Response 3 – Odor Control Measures | 1-5 |
| D1-1.4 Master Response 4 – Worst-Case Scenario..... | 1-8 |
| D1-1.5 Master Response 5 – Nuisance Odors | 1-13 |
| D1-1.6 Master Response 6 – Methodology..... | 1-24 |
| D1-1.7 Master Response 7 – Building Codes | 1-25 |
| D1-1.8 Master Response 8 – Agricultural Preemption | 1-27 |
| D1-2.0 INDIVIDUAL RESPONSES..... | 1-29 |
| D1-2.1 LETTER 1 – City of Vernon..... | 1-29 |
| D1-2.2 LETTER 2 – Farmer John..... | 1-47 |
| D1-2.3 LETTER 3 – Jackson, DeMarco, Tidus, Peckenpaugh..... | 1-123 |

APPENDICES

Appendix D1. Darling Ingredients Modernization Permit

Appendix D2 Odor Complaints

Appendix D3 2015 Boyle Heights-Vernon Odor Surveillance Survey

Appendix D4 Historic Aerial Photographs

Appendix D5 Landmark Wall Viewshed Photographs

Table of Contents

LIST OF FIGURES

| Figure | | Page |
|---------------|--|-------------|
| Figure D1-1 | Odor Complaint Locations during 5-year Period: 2006 - 2011 | 1-19 |
| Figure D1-2 | Odor Footprints of Rendering Facilities Identified During Field Odor Survey for South Regional High School No. 8..... | 1-21 |

LIST OF TABLES

| Table | | Page |
|--------------|---|-------------|
| Table D0-1 | List of Commenters on the Draft EA | 0-2 |
| Table D1-1 | Master Responses..... | 1-1 |
| Table D1-2 | Character of Odors from Rendering Operations..... | 1-15 |

D0 Introduction

D0-1.0 INTRODUCTION

This document has been prepared in accordance with the California Environmental Quality Act (CEQA) and the South Coast Air Quality Management District's (SCAQMD) Certified Regulatory Program Guidelines. Public Resources Code Section 21080.5(d)(2)(D) and SCAQMD's Certified Regulatory Program (Codified under Rule 110) require that the final action on PR 415 include written responses to issues raised during the public process.

The comment period for the Draft EA for PR 415 – Odors from Rendering Facilities started on July 14, 2015 and ended on August 12, 2015. A Notice of Completion (NOC) was forwarded to the Governor's Office of Planning and Research (OPR) (State Clearinghouse [SCH] #2015071030) and posted with the County Clerks for the four-county South Coast Air Basin. The NOC was distributed primarily using electronic mail to various government agencies and other interested agencies, organizations, and individuals, and was provided to all California Native American Tribes (Tribes) that requested to be on the Native American Heritage Commission's (NAHC) notification list per Public Resources Code Section 21080.3.1 (b)(1). The NAHC notification list provides a 30-day period during which a Tribe may respond to the formal notice, in writing, requesting consultation on the Draft EA. Additionally, the NOC was published in the Los Angeles Times on July 14, 2015. Hard copies of the Draft EA were available at SCAQMD Headquarters, located at 21865 Copley Drive, Diamond Bar, California 91765, for public review and posted on SCAQMD's website¹.

D0-2.0 OVERVIEW

The Draft EA for PR 415 was made available for a 30-day public review period from July 14, 2015 to August 12, 2015. A total of three comment letters were received by SCAQMD during the public review period. This appendix (D) contains responses to those comments received on the Draft EA.

This subsection contains a list of the parties that provided comments during the public review period. The respondents have been divided into the following categories:

¹ South Coast Air Quality Management District. July 2015. Accessed at: <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects/aqmd-projects---year-2015>.

DO. Introduction

1. Public Agency
2. Organizations and Individuals

Table D0-1, List of Commenters on the Draft EA, Table D0-1, List of Commenters on the Draft EA, provides a list of the comment letters and associated comments received in response to the Draft EA. SCAQMD staff has reviewed this material and determined that none of this material constitutes the type of significant new information that requires recirculation of the Draft EA for further public comment under CEQA Guidelines Section 15073.5. None of this new material indicates that the project will result in a significant new environmental impact not previously disclosed in the Draft EA. Additionally, none of this material indicates that there would be a substantial increase in the severity of a previously identified environmental impact that will not be mitigated, or that there would be any of the other circumstances requiring recirculation described in Section 15073.5.

Table D0-1 List of Commenters on the Draft EA

| Reference Number | Commenting Person/Agency | Comment Number | Page No. |
|--------------------------------------|--|--|----------|
| Public Agency | | | |
| 1 | City of Vernon – Public Works, Water & Development Services | Letter: 1.0-1 to 1.0-13 | D1-29 |
| Organizations and Individuals | | | |
| 2 | Farmer John (Mr. Terry Hadden, Vice President of Operations) | Letter: 2.0-1 to 2.0-10 Appendix A: 2.1-1 to 2.1-68 Appendix B: 2.2-1 | D1-47 |
| 3 | Jackson, DeMarco, Tidus, Peckenpaugh, a Law Corporation on behalf of Baker Commodities, Inc. | Letter: 3.0-1 to 3.0-26 Attachment 1: 3.1-1 to 3.1-41 Attachment 2: 3.2-1 to 3.2-12 Attachment 3: 3.3-1 to 3.3-42 Attachment 4: 3.4-1 to 3.4-10 Attachment 5: 3.5-1 to 3.5-21 Attachment 6: 3.6-1 to 3.6-9 Attachment 7: 3.7-1 Attachment 8: 3.8-1 Attachment 9: 3.9-1 Attachment 10: 3.10-1 Attachment 11: 3.11-1 Attachment 12: 3.12-1 Attachment 13: 13.13-1 Attachment 14: 14.14-1 | D1-123 |

Comment letters are also available online along with the rest of the EA at: <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects>.

For the purposes of identifying and responding to comments on the Draft EA, comment letters are assigned a number (top left-hand corner of the first page of each letter) and each comment within each letter is assigned a bracketed comment number. (For example, the first comment received by City of Vernon – Public Works, Water & Development Services is labeled **Comment 1.0-1**).

Comment Letter 1 indicated in the subject line of the letter that the City of Vernon was providing comments on PR 415, and Comment Letters 2 and 3 indicated in the subject line of their letters that they were providing comments only on the Draft EA. However, the substance of the three letters included comments on both PR 415’s rule language and the Draft EA.

SCAQMD staff initiated the rulemaking process for PR 415 in Spring 2014. Since then, extensive public comments were received. Responses to those comments have been prepared and are available for review at: <http://www.aqmd.gov/home/library/documents-support-material/lead-agency-scaqmd-projects>.

D0-3.0 CEQA REQUIREMENTS REGARDING COMMENTS AND RESPONSES

CEQA Guidelines Section 15204 (b) outlines parameters for submitting comments, and reminds persons and public agencies that the focus of review and comment of the Draft EA should be “on the proposed finding that the project will not have a significant effect on the environment.” If persons and public agencies believe that the project may have a significant effect, they should (1) identify the specific effect, (2) explain why they believe the effect would occur, and (3) explain why they believe the effect would be significant. Comments are most helpful when they are as specific as possible. At the same time, reviewers should be aware that CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters.

CEQA Guidelines Section 15204 (c) further advises, “Reviewers should explain the basis for their comments, and should submit data or references offering facts, reasonable assumptions based on facts, or expert opinion supported by facts in support of the comments. Pursuant to Section 15064, an effect shall not be considered significant in the absence of substantial evidence.” Section 15204 (e) also states, “This section shall not be used to restrict the ability of reviewers to comment on the general adequacy of a document or of the lead agency to reject comments not focused as recommended by this section.”

DO. Introduction

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D1 Response to Comments

D1-1.0 MASTER RESPONSES

Some of the comments received on the Draft EA recurred in more than one comment letter and associated appendices. To efficiently address multiple comments on a recurring issue, this subsection of the response to comments includes “Master Responses” for each of those issues. **Table D1-1, Master Responses**, lists Master Responses that were developed that summarize responses to issues raised by the public during the comment period for the Draft EA. The Master Responses provide a comprehensive response as well as additional information that may have been requested by any individual comment. The responses to the individual comments cite the Master Responses as appropriate.

Table D1-1 Master Responses

| Section | Master Response Number | Master Comment Title |
|---------|------------------------|--------------------------------------|
| D1-1.1 | 1 | Legal Authority to Adopt and Enforce |
| D1-1.2 | 2 | Facility Shutdown |
| D1-1.3 | 3 | Odor Control Measures |
| D1-1.4 | 4 | Worst-Case Scenario |
| D1-1.5 | 5 | Nuisance Odors |
| D1-1.6 | 6 | Methodology |
| D1-1.7 | 7 | Building Codes |
| D1-1.8 | 8 | Agricultural Preemption |

D1. Response to Comments

D1-1.1 Master Response 1 – Legal Authority to Adopt and Enforce

Several comments have suggested that SCAQMD does not have the legal authority to adopt PR 415. SCAQMD has the legal authority to adopt and enforce PR 415.

As described in Chapter 1 of the Draft EA and the Final Staff Report for PR 415, SCAQMD has the legal authority to adopt and enforce PR 415. SCAQMD is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) Section 40000. The term "air pollutant" includes odors (H&SC Section 39013). Therefore, SCAQMD may regulate to control air pollution, including odors, from PR 415 sources. In addition, SCAQMD has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on SCAQMD by law (H&SC Section 40702).

SCAQMD's legal authority to adopt and enforce PR 415, establishing best management practices (BMPs) and requirements to reduce odors from rendering facilities, including requirements for wastewater associated with rendering processing, also derives from H&SC Section 41700, which, in pertinent part, prohibits the discharge of air contaminants causing annoyance to the public. It further prohibits the discharge of air contaminants, such as odors, which "endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property" (H&SC Section 41700). SCAQMD's authority granted by H&SC Section 41700 to protect the public's comfort and health and safety includes the regulation of facilities to prevent the discharge of odors before they cause nuisance or annoyance to the public. SCAQMD is authorized under H&SC Section 41508 to adopt rules imposing requirements that are stricter than those set forth in state law, including Section 41700 or Civil Code Section 3482.6 (e). City and county agencies such as the Los Angeles Sanitation Districts may adopt air pollution rules that are stricter than those adopted by SCAQMD (H&SC Section 40449) but otherwise do not have authority or effect on SCAQMD's authority to adopt and enforce air pollution control rules such as PR 415 (H&SC Section 40450).

In addition, H&SC Section 40001(b) authorizes SCAQMD to adopt rules and regulations, such as PR 415, and provides, in relevant part, for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons. This statute, which is phrased very similarly to Section 41700, allows rules to prevent air pollution episodes caused by any type of pollutant, not just criteria air pollutants. PR 415 serves to prevent or at least reduce the likelihood of the occurrence of a nuisance through imposing reasonable and accepted practices for odor control measures. Therefore, PR 415 is a reasonable and proper use of SCAQMD's regulatory authority.

D1. Response to Comments

D1-1.2 Master Response 2 – Facility Shutdown

Several comments have suggested that implementation of PR 415 would result in one or more facilities shutting down. There is no information consisting of facts, rather than unsubstantiated opinion, speculation, and argument that implementation of PR 415 requirements will cause the existing rendering facilities to shut down. Absence of rendering operations within SCAQMD's jurisdiction is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. Based on SCAQMD's research, such a scenario is not foreseeable based on the requirements of PR 415 or the impacts on rendering facilities.

The rendering industry provides a unique and beneficial service to society. PR 415 is intended to reduce the potential for nuisance-level rendering odors. While PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made during the rule development process to accommodate each existing facility's unique needs and provide sufficient flexibility. This has resulted in substantial changes to the original scope of PR 415 and several public versions of the rule language while meeting the same objective of reducing rendering odors. For example, one facility reported that it would have difficulties constructing a receiving enclosure tall enough to accommodate trucks that tilt up to dump raw materials. A change in the requirement was made in PR 415 subdivision (e)(2) to allow this facility to continue to use its current material delivery configuration, as long as continuous effort is made to move this material into an enclosure within 60 minutes after the end of material delivery. Other examples of changes that were made in PR 415 to provide flexibility include:

- (1) allowing cooking and processing operations to be considered a closed system, without a requirement for building a permanent total enclosure, provided that some modest changes are made;
- (2) limiting repaving and repair to only outside raw material receiving areas;
- (3) allowing facilities to deposit incoming raw rendering materials outside of an enclosure within a specific time period;
- (4) allowing temporary storage of raw materials at integrated rendering facilities;
- (5) allowing the use of covered instead of sealed, odor-tight containers;
- (6) limiting cleaning of floor drains to at least once a month as long as accumulation of rendering materials from accessible interior and exterior floor drains are removed;
- (7) allowing the use of an alternative qualified BMP;
- (8) providing alternatives to the odor ventilation system standard;

D1. Response to Comments

- (9) allowing a one-time time extension for up to one year to complete construction of a permanent total enclosure and applicable ventilation and odor control system;
- (10) providing alternative permanent total enclosure requirements for any raw materials receiving area other than installation of a permanent total enclosure with ventilation; and
- (11) allowing a rendering facility to accept additional materials from another rendering facility in the event that rendering equipment is broken down or for performing emergency rendering services.

Furthermore, PR 415 optimizes flexibility for implementation by allowing the use of existing non-rendering wastewater within the same facility for diluting rendering wastewater and exempting low usage facilities, blood meal processing, and meat and bone operations. Those changes are solutions built into the rule requirements that are intended to minimize or eliminate potential challenges during implementation.

Staff has prepared a Socioeconomic Impact Assessment for PR 415 which has been released for public review and comment in conjunction with the Staff Report and PR 415 for a 30-day public review and comment period prior to the SCAQMD Governing Board hearing which is currently scheduled for November 3, 2017. The Socioeconomic Impact Assessment identifies affected facilities and presents the capital costs of new enclosures (specific to each affected facility, as applicable) and the capital and operating costs of ventilation systems and odor control equipment. In addition, the Socioeconomic Impact Assessment presents the potential costs of best management practices, such as signage, covering of incoming trucks, and repair of rendering material receiving areas. The Socioeconomic Impact Assessment also evaluates the employment impacts of PR 415 on the regional economy, including the potential impacts on small businesses.

As outlined above, with the changes to the rule language, based on SCAQMD research, rendering facilities subject to the requirements of PR 415 will continue to operate as they currently do. As evidence of this conclusion, one facility has already submitted permit applications for an enclosure and odor control equipment that will meet the permanent total enclosure, ventilation system, and odor control equipment standards in PR 415 (see Appendix D1, Darling Modernization Permit). It is also important to note that rendering facilities will have approximately two to four years after rule adoption to comply with the permanent total enclosure and applicable ventilation and odor control system required under PR 415 subdivision (f) with the option to request a one-time extension for up to one year to complete the construction. For these reasons, it is not expected that the requirements of PR 415 will cause rendering facilities to shut down, and the CEQA analysis conducted for PR 415 does not consider the environmental impacts from the shutdown scenario.

D1. Response to Comments

D1-1.3 Master Response 3 – Odor Control Measures

Several comments have suggested that SCAQMD has not substantiated the need to adopt PR 415 because SCAQMD already regulates nuisance odors under Rule 402. PR 415's odor control measures are acceptable practices for operating rendering facilities or operations in an urban area.

The goal of PR 415 is to establish standards for odor control. SCAQMD is concerned that rendering odors are affecting the residents of Boyle Heights. There are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public workshops on PR 415 where residents of Commerce, Maywood, Bell, Vernon and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering facilities.

Under Rule 402, enforcement action can only be taken after SCAQMD receives and verifies a sufficient number of complaints. Moreover, because there are several rendering facilities located within a relatively small area², in some cases the odors cannot be ascribed to one specific facility and indeed are likely contributed to by several of the facilities. As a result, it is often not possible to pinpoint a single facility as the source of rendering odors. Additionally, there could be multiple sources of odor that originate from rendering facilities such as raw rendering material, cooking of meat, non-condensable vapors from cooker condensate, wastewater, and therefore multiple odor profiles from the various fugitive odors at each facility. Odors may also be different at the same facility depending on the materials being processed at the time and other factors. Processed materials may also change over time based on market demands. For these reasons, it is often not possible to verify odor complaints, and rendering odor events from facilities in the Vernon area rarely can be attributed to a specific individual rendering facility.

Current science and technology does not allow direct measurement or air dispersion modeling of all the chemical compounds that make up rendering odors. As described in the Final Staff Report for PR 415, modeling requires an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not have established methods for collection, speciation, and analysis. Many do not have established odor detection thresholds. For these reasons, it is not currently feasible to establish proper parameters for modeling or set minimum odor standards based on the existing science and technology.

² Draft EA. Project Location. Page 1-4

D1. Response to Comments

Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they come to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred. The difficulty in tracing the odors to a specific facility does not mean there is not a problem. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near one another. In many cases, it is likely that more than one facility is contributing to the odor. This creates the need to require all facilities to take reasonable measures to reduce odors emanating from their operations.

The approach taken for PR 415 is based on research of existing rendering operations to determine the current and accepted practices for operating a rendering facility within an urban area. The accepted practices include enclosure of odorous operations within a closed system or total enclosure (such as a building), maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. The Final Staff Report for PR 415 discusses that one of the five rendering facilities in the City of Vernon has a rendering facility under the San Joaquin Air Pollution Control District's (SJAPCD) jurisdiction. Since 2011, that facility has been conducting rendering operations inside an enclosure under negative pressure and with a ventilation system to scrubbers. Another Vernon facility also operates a rendering facility in Penfield, NY where rendering operations are conducted within an enclosure, ventilated to odor control scrubbers. Therefore, the odor control measures required by PR 415³ are demonstrated to be feasible and are consistent with the current industry practices for rendering operations in urban areas.

PR 415 is the direct result of a quality of life issue that was identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. The need to address odors from the Vernon rendering facilities is a key air quality priority for the CCP stakeholders in the communities where they live, work, and breathe. The impacts of odors vary for each individual, but can lead to serious health impacts. The cumulative impacts from the facilities on the surrounding communities is unacceptable and needs to be addressed. PR 415 seeks to require reasonable controls to prevent or minimize public nuisance odors from rendering operations. PR 415 is consistent with existing technology and BMP-based requirements in other states and countries that were implemented to protect the public health from odors. In addition, it is reflective of existing industry practices to mitigate against fugitive odors and is a balanced approach given the nature of the existing local rendering facility operations.

³ Ibid. Project Objectives. Page 1-6.

D1. Response to Comments

PR 415 would not bypass Rule 402. Both would be tools and approaches that would be available to SCAQMD staff. The rules would not be duplicative because Rule 402 does not require specific actions of the facility, and is reactive when there is a problem. PR 415 would require specific requirements that are designed to be proactive in nature, to reduce or prevent the potential for off-site odors.

D1. Response to Comments

D1-1.4 Master Response 4 – Worst-Case Scenario

Several comments suggest that the analysis in the Draft EA did not evaluate the worst-case scenario. The EA uses an appropriate worst-case scenario for analysis.

One of the basic purposes of CEQA is to inform government decision makers and the public about the potential, significant environmental effects of proposed activities (CEQA Guidelines Section 15002(a)(1)). CEQA does not require technical perfection or call for speculation, but rather adequacy, completeness, and a good-faith effort at full disclosure (CEQA Guidelines Sections 15003 and 15145). The degree of specificity should correspond to the degree of specificity involved in the underlying activity that is analyzed in the CEQA process (CEQA Guidelines Section 15146). For example, “an EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan or comprehensive zoning ordinance because the effects of the construction can be predicted with greater accuracy” (Ibid). While a precise estimate of construction or operations as a result of the implementation of PR 415 may not be easy to predict during the rule development phase when the CEQA process occurs, the CEQA document should analyze a reasonably foreseeable worst-case scenario. However, pursuant to Section 15187(d) of the CEQA Guidelines, the Draft EA should not engage in speculation or conjecture. Preparing the CEQA analysis “necessarily involves some degree of forecasting. While foreseeing the unforeseeable is not possible, an agency must use its best efforts to find out and disclose all that it reasonably can” (CEQA Guidelines Section 15144). As identified in Section 15187(e), a facility-specific analysis is not required.

PR 415 is a discretionary action by a public agency, which has potential for resulting in direct or indirect changes to the environment and, therefore, is considered a “project” as defined by CEQA. SCAQMD is the lead agency for PR 415 and has found that implementation of PR 415, once approved by the SCAQMD’s Governing Board, would not cause any significant adverse impacts pursuant to its Certified Regulatory Program and SCAQMD Rule 110. California Public Resources Code Section 21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program. SCAQMD’s regulatory program was certified by the Secretary of the Resources Agency on March 1, 1989, and is codified as SCAQMD Rule 110.

Seventeen CEQA resource areas were analyzed in the Draft EA. Please see Chapter 2, *Environmental Checklist*, of the Draft EA for more information. Environmental impacts for PR 415 were determined by applying the thresholds of significance which compared future conditions with implementation of odor control measures in PR 415 to the existing conditions

D1. Response to Comments

without PR 415. The existing conditions in the Draft EA represented the most recent conditions at the time of the publication of the Draft EA for PR 415, and assumed that all of the five affected rendering facilities would need to enclose rendering operations or construct a closed system, install odor emission control equipment, and carry out BMPs. After the Draft EA was published, one rendering facility filed SCAQMD permit applications to modernize the facility prior to PR 415 requirements becoming effective (see Appendix D1, Darling Modernization Permit). However, this does not change the existing conditions assumed in the Draft EA since it represents the worst-case scenario for the existing conditions that were used for environmental analysis.

It is important to emphasize that the EA focuses on potential environmental impacts of PR 415 as a whole. The EA is not a facility or site-specific CEQA document. The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios. To analyze the potential environmental impacts of PR 415, assumptions were developed. Key assumptions that were relevant to the air quality, greenhouse gas (GHG), energy, hydrology and water quality, and transportation and traffic included enclosure size, number of air pollution control devices (APCDs) such as scrubbers, construction workers' fuel usage, and water usage. As explained in the Draft EA⁴, the environmental analysis was conducted based on one of the larger facilities in the current affected facility inventory. Choosing a larger facility for the impact analysis was reasonable because it required the most construction activities (e.g., the largest enclosure area in terms of square footage) of the five facilities and provided a reasonable basis that was predicated upon facility-provided facts to estimate maximum foreseeable impacts. As such, the methodology used in the EA represents SCAQMD's best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415.

Construction Emissions

Air quality and GHG emissions were revised based on the worst-case impact scenario in the Final EA. Modernization of the facility could take approximately one year. However, construction activities that require use of heavy construction equipment would only be on-site for a limited amount of time during construction of the permanent total enclosures. The air quality impact analysis is based on the worst-case day, which is dependent on the demolition volumes and new building construction anticipated during the demolition and building construction phases and not the total length of time required for other interior and exterior renovations needed to comply with PR 415, because installation of other project components would not generate higher construction emission than that generated during the worst-case construction phase.

⁴ *Ibid.* Chapter 2, *Environmental Checklist*. Page 2-4.

D1. Response to Comments

The CalEEMod™ emissions computer model was used to quantify the construction and operational emissions required as part of PR 415, as well as GHG emissions from energy use, solid waste disposal, vegetation planting and/or removal, and water use.⁵ The CalEEMod™ model incorporates up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. The CalEEMod™ model is the only model maintained by the California Air Pollution Control Officers Association (CAPCOA) and is recommended by SCAQMD for use to estimate construction and operation air quality impacts under CEQA.

The likelihood of overlapping construction activities was contemplated as part of the worst-case impact scenario and was disclosed in the Draft EA. PR 415 requires a permanent total enclosure be installed with a ventilation system. On Page 2-14, the Draft EA explained that construction activities from building an enclosure and installing APCDs within each facility were not expected, since the enclosures would need to be constructed prior to the installation of the ventilation system.⁶ The construction emissions in the Draft EA were estimated based on a worst-case impact scenario assuming that construction that utilizes use of heavy construction equipment would take up to two months to complete.⁷ However, construction time could be substantially less than two months, resulting in less than significant air quality impacts.

Fuel Usage

Additionally, the potential energy impacts from fuel usage for construction activities were based on “two affected facilities at any given time,”⁸ representing a worst-case impact scenario. The transportation and traffic impact analysis in the Draft EA also assumed a worst-case impact scenario. On Page 2-50 of the Draft EA, it stated that “[S]ince the construction activities required as a result of PR 415 at the affected facilities are not expected to overlap because of the three-year compliance timeframe, no significant construction traffic impacts are anticipated based on the analysis conducted. Even if all five facilities performed construction at the same time, this would not be expected to generate 350 employees or truck trips.” Based on the worst-case impact scenario, construction activities would generate a maximum of 24 vehicle trips on the worst-case day. For these reasons, the Draft EA for PR 415 utilized a conservative analysis to disclose a reasonable, worst-case impact scenario to the public.

⁵ *Ibid.* Page 2-14.

⁶ *Ibid.*

⁷ *Ibid.*

⁸ *Ibid.* Page 2-25.

D1. Response to Comments

Land Use and Planning Considerations

Finally, it is important to note that land use and planning considerations are determined by local governments. There are many factors that local governments must consider when making local planning, land use, and permitting decisions. Affected facilities would need to comply with local ordinances and land use requirements.⁹ In the event that a rendering facility that is affected by implementation of PR 415 chooses to tier from this EA for subsequent land use-related permitting applications with the City of Vernon (City), the City has the sole authority to review and approve (or disapprove) the applications and the responsibility as a lead agency under CEQA to determine if this EA is appropriate for tiering or whether a separate CEQA document would be required.

Carbon Adsorption Systems

Since the publication of the draft PR 415 rule language in June 2015 and the Draft EA in 2015, various changes to the scope and requirements of PR 415 have been made. One of the changes is the use of an alternative rendering odor control system. Based on the information available to SCAQMD staff, it is assumed that one existing rendering facility will use a carbon adsorption system instead of scrubbers for controlling rendering odors for the facility's raw material receiving, cooking and wastewater treatment enclosures. As discussed in the Final EA, carbon will be purchased in 55 -gallon drums, and approximately 16 to 20 drums would be required (refer to Table P-4 in the Final EA). The drums would likely be installed in parallel configuration to make up the necessary carbon volume. Replacement of the drums are expected once a year, and the spent carbon will be disposed at landfills.

The Final EA has been revised to reflect the usage of a carbon adsorption system at one existing rendering facility. It is recognized that other rendering facilities may also choose to use the carbon adsorption system instead of scrubbers to control odors. However, since it is not foreseeable at the time of preparing the Final EA that any other rendering facility would use a carbon adsorption system, this Final EA only analyzes the potential environmental impacts for the worst-case impact scenario that only one rendering facility is using the carbon adsorption system as odor control equipment to meet the ventilation requirement under PR 415.

Potential environmental impacts from the installation, usage, and replacement of drums for the carbon adsorption system have been evaluated in the Final EA. Since the rendering facility that will use the carbon adsorption system is located in a heavy industrial setting with ongoing rendering operations and equipment in the existing environment, the carbon adsorption system is expected to cause no impacts on aesthetics, agriculture and forestry resources, biological

⁹ *Ibid.* Page 2-39.

D1. Response to Comments

resources, cultural resources, hazards and hazardous materials, land use and planning, noise, population and housing, and recreation.

The use of a carbon adsorption system is expected to cause no impacts to geology and soils since no geological disturbance is expected, and topographic alterations where the drums are located are expected to be minimal. It is also reasonable to expect that the drums will be installed in a manner that will not expose people or structures to any work safety hazards.

The use of carbon to control rendering odors is expected to cause no impacts to hydrology and water quality, including water demand and wastewater treatment because it does not require any water or generate any wastewater. It is also not expected to cause any impacts on mineral resources because carbon is not a known mineral resource.

The use of carbon adsorption system is not expected to cause any physical modifications that will increase the chances for fires or the need for security at the rendering facility. The drums need to be replaced once a year, and the replacement may require additional workers. However, the replacement occurs only once a year, it would not likely cause additional operational workers at the facility. Therefore, the use of carbon adsorption system is not expected to induce population growth or dispersion. With no increase in local population anticipated, additional demand for new or expanded schools or parks is also not anticipated.

The use of carbon adsorption system may generate some impacts on air quality and GHG emissions, energy, solid/hazardous waste, and transportation and traffic because the carbon in the drums need to be replaced. The replacement is expected to generate truck trips. Truck trips will likely generate additional air and GHG emissions and require more petroleum or diesel fuels. The spent carbon is expected to generate additional wastes because it needs to be disposed at landfills. The delivery and disposal of the drums for the carbon adsorption systems would require a maximum of two truck trips once a year based on the worst-case impact scenario. Emissions from two truck trips once a year traveling to the Sunshine Canyon Landfill (vehicle miles traveled of approximately 60 miles roundtrip, once a year) would be nominal. Therefore, impacts on air quality and GHG emissions, energy, solid/hazardous waste, and transportation and traffic from the carbon adsorption system will likely be intermittent, and thus are expected to be less than significant.

D1. Response to Comments

D1-1.5 Master Response 5 – Nuisance Odors

Several comments have suggested that odors identified did not originate from the facilities affected by PR 415. Additionally, several comments have stated that not every odor constitutes a public nuisance, that a normal person must find the odor to be substantial and unreasonable, and that rendering odor, even if it is substantial and unreasonable, is not toxic; therefore, SCAQMD has not substantiated that odors from rendering facilities are objectionable.

Rendering odors are very distinctive. Based on SCAQMD's observations, odors created by rendering facilities are not attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive and offensive to many in the communities surrounding the City of Vernon (see *Potential for Odors*).

SCAMQD staff has been present at complainants' locations and found that, in many cases, reasonable persons would be annoyed or disturbed by the odors. Additionally, staff has experienced substantial and unreasonable odors in the vicinity of the rendering facility operations (see *Potential Odor Violations and Known Odor Complaints*).

POTENTIAL FOR ODORS

Known Odors from Rendering Facilities

A discussion on odors from rendering operations is also included in the Final Staff Report. Odor control remains one of the rendering industry's greatest challenges. Research in the early 1970s indicated that untreated rendering facility emissions could be detected up to 20 miles away from rendering facilities¹⁰. There are a large number of odorous compounds in rendering odors. 110 volatile compounds have been identified in rendering facility emissions, with about 25 contributing most noticeably to rendering facility odors¹¹. Most of these organic compounds are generated from the breakdown of proteins and fats during the cooking process¹² or during decay of raw material prior to cooking.

Besides organic compounds, other odor compounds of concern from rendering operations include reduced sulfur and nitrogen compounds; for example, hydrogen sulfide and ammonia.

¹⁰ "Odor Controls for Rendering facilities." *Environmental Science and Technology* 7 (6):504-510. Bethea, Murthy, Carey; 1973.

¹¹ "Gas Chromatography/Mass Spectrometry Identification of Organic Volatiles Contributing to Rendering Odors." *Environmental Science and Technology* 16 (12):883-886. Van Langenhove, Van Wassenhove, Coppin, Van Acker, Schamp; 1982

¹² Greene, Annel K. PhD, Center Director Clemson University Animal Co-Products Research and Education Center. 2012, August. *Development of New Odor Control Methods*. Render International Magazine of Reading. <http://www.rendermagazine.com/articles/2012-issues/august-2012/development-of-new-odor-control-methods/>

D1. Response to Comments

Because of the wide variety of chemical compounds contributing to rendering facility odors, current strategies for odor control rely on controlling all volatile compounds being emitted¹³.

Table D1-2, Character of Odors from Rendering Operations, shows 25 common chemical compounds that contribute noticeably to rendering facility odors, and includes the odor detection threshold for each, if known. The odor detection threshold is a measure of the lowest concentration of an odorant that is perceptible by an average human sense of smell. This threshold is given in parts per billion (PPB). As evident from Table D1-2, some of these compounds can be detected by the human nose at very low concentrations; 1 PPB or lower.

Sources of Odors from Rendering Operations

There are several operations and processes within a rendering facility that have noticeable odors associated with them. These include, in order of process flow but not necessarily odor intensity; raw material receiving, raw material size reduction, cooking, fat processing, non-condensable vapors from the condenser following the cooker, and wastewater treatment. High intensity odors from the cooker, presses and centrifuges are currently required to be incinerated at 1202°F for at least 0.3 seconds under SCAQMD Rule 472 – Reduction of Animal Matter. Incineration at this temperature is a highly effective odor control method for organic compounds making up the majority of the composition of rendering odors.

Since the high intensity odors emitted from the cooking process are already required to be controlled, the nature of odors that continue to be present at rendering facilities from the processes noted are fugitive in nature. There are many points both in a batch cooking process as well as in a continuous cooking process where fugitive odors can escape. Collectively, this large number of sources of fugitive odors can create odors which are emitted from a rendering facility and can travel beyond the facility's property line into affected communities.

SCAQMD is aware of the following plant operators that may be subject to PR 415.

- Darling Ingredients, Los Angeles (uses a continuous rendering process)
- Baker Commodities Inc., Vernon (uses a continuous rendering process)
- Farmer John (Smithfields), Vernon (uses a continuous rendering process)
- D&D Disposal, Vernon (uses a batch rendering process)
- Coast Packing, Vernon (uses a batch rendering process)

¹³ Ibid.

D1. Response to Comments

Table D1-2 Character of Odors from Rendering Operations

| Chemical Abstract Service (CAS) No. | Odorant | Chemical Formula | Comments | Odor Threshold (ppb) | Odor Character | Odor Threshold References |
|-------------------------------------|---|--|---|----------------------|------------------------------------|---------------------------|
| Aldehydes and Ketones | | | | | | |
| 75-07-0 | acetaldehyde | CH ₃ CHO | Occurs naturally in coffee, bread, and ripe fruit, and is produced by plants | 50 | lemon, alcohol | 1 |
| 16423-19-1 | geosmin (trans-1,10-dimethyl-trans-9-decalol) | C ₁₂ H ₂₂ O | Earthy odor contaminant in fish, beans and water | 0.1 | earthy-muddy odor | 2 |
| 623-37-0 | 3-hexenal | C ₆ H ₁₂ O | Eye irritant | 0.25 | horseradish, fruity, fishy, sweaty | 3 |
| 557-48-2 | 2,6-nonadienal | C ₉ H ₁₄ O | Used to flavor water. | 0.01 | powerful cucumber | 3 |
| 18829-56-6 | 2-nonenal | C ₉ H ₁₆ O | Odor is perceived as orris, fat and cucumber. Has been associated with human body odor alterations during aging. | 0.1 | paper odor | 3 |
| 4312-99-6 | 1-octene-3-one | C ₈ H ₁₄ O | Odorant responsible for the typical metallic smell of metals and blood coming into contact with skin. Strong metallic mushroom-like odor with a low odor detection threshold | 0.005 | mushroom and musky | 3 |
| Amines (Nitrogen Compounds) | | | | | | |
| 7664-41-7 | ammonia | NH ₃ | Trace quantities in the atmosphere; produced from the putrefaction (decay process) of nitrogenous animal and vegetable matter. | 17 | very sharp, pungent | 4 |
| multiple | butyl amine | C ₄ H ₁₁ N | One of four isomeric amines of butane. Liquid having the fishy, ammonia-like odor common to amines. | 1,800 | fishy | 5 |
| 124-40-3 | dimethyl amine | (CH ₃) ₂ NH | Found widely in animals and plants; present in many foods at the level of a few mg/kg. Ammonia-like odor. | 37 | pungent fishy | 4 |
| 75-04-7 | ethyl amine | C ₂ H ₇ N | Strong ammonia-like odor. | 950 | fishy | 6 |
| 74-89-5 | methyl amine | CH ₃ NH ₂ | Simplest primary amine. Has a strong odor similar to fish. | 2.1 | pungent fishy | 4 |
| 462-94-2 | cadaverine (1,5-diaminopentane) | C ₅ H ₁₂ N ₂ | Toxic in large doses. Can be produced by bacteria as a degradation product of the amino acid tryptophan. Occurs naturally in human feces and has an intense fecal odor. | N/A | cadaver | N/A |
| 120-72-9 | indole (2,3-benzopyrrole) | C ₈ H ₇ N | Toxic in large doses. | 1.0 | fecal | 4 |
| 110-60-1 | putracene (1,4-diaminobutane) | C ₄ H ₁₂ N ₂ | Mildly toxic organic compound belonging to indole family. Occurs naturally in feces (produced from tryptophan in the digestive tract); strong fecal odor | N/A | putrid | N/A |
| 83-34-1 | skatole (3-Methyl-1H-indole) | C ₉ H ₉ N | Mildly toxic organic compound belonging to indole family. Occurs naturally in feces (produced from tryptophan in the digestive tract); strong fecal odor | 1.2 | putrid, fecal | 4 |
| 121-44-8 | triethylamine | N(CH ₂ CH ₃) ₃ | Strong fishy odor reminiscent of ammonia; smell of the hawthorn plant. | 480 | strong fishy | 7 |
| 75-50-3 | trimethylamine | N(CH ₃) ₃ | Product of decomposition of plants and animals. Odor associated with rotting fish, some infections, bad breath | 0.8 | pungent, fishy, saline odor | 8 |
| Organic Acids | | | | | | |
| 107-92-6 | butyric acid (butanoic acid) | C ₄ H ₈ O ₂ | Product of anaerobic fermentation (including in the colon and as body odor). It has an unpleasant smell and acid taste. Distinctive smell of human vomit. | 1.0 | sour milk, rancid butter | 4 |
| Sulfur Compounds | | | | | | |
| 109-79-5 | butyl mercaptan | C ₄ H ₁₀ S | Fetid (extremely foul-smelling) odor, commonly described as "skunk" odor. | 1.0 | ode to skunk | 9 |
| 624-92-0 | dimethyl disulfide | C ₂ H ₆ S ₂ | Flammable liquid with an unpleasant, garlic-like odor. | 12 | sour, onion like odor | 10 |
| 75-18-3 | dimethyl sulfide | C ₂ H ₆ S | Becomes highly disagreeable at even quite low concentrations. | 1.0 | cabbage like | 3 |
| 75-08-1 | ethyl mercaptan | C ₂ H ₆ S | Strongly disagreeable odor that humans can detect in minute concentrations. Intentionally added to butane and propane to impart an easily noticed smell to these normally odorless fuels. | 1.0 | sour, garlic odor | 11 |
| 7783-06-4 | hydrogen sulfide | H ₂ S | Often results from the bacterial breakdown of organic matter in the absence of oxygen gas, such as in swamps and sewers; process is known as anaerobic digestion. | 4.7 | rotten eggs | 4 |
| 74-93-1 | methyl mercaptan | CH ₄ S | Released from decaying organic matter. | 2.2 | sour, garlic odor | 12 |
| Other Compounds | | | | | | |
| 2371-42-8 | 2-methyl-iso-borneol | C ₁₁ H ₂₀ O | Odor detection threshold is very low. One of the chemicals with major influence on the quality of drinking water | N/A | camphoraceous odor | N/A |
| 123-92-2 | iso-amyl acetate (3-methylbutyl acetate) | C ₇ H ₁₄ O ₂ | Used to confer banana flavor in foods. | 25 | banana-like odor | 13 |

a. Reference: 1999 Proceeding of the Georgia Department of Agriculture Odor Control Program for Rendering Plants

N/A = Not Available

Odor Threshold References

- Lakes Environmental Software, Air Toxics Index
<http://www.lakes-environmental.com/toxic/ACETALDEHYDE.HTML>
- Off-flavor in Catfish Home Page, The Home Page of Dr. Peter Perschbacher
<http://www.geocities.com/CapeCanaveral/5824/geosmin.html>
- Leffingwell & Associates
<http://www.leffingwell.com/odor.htm>
- "Measuring Farmstead Odors", Oklahoma Cooperative Extension Services
<http://www.agweb.okstate.edu/pearl/biosystems/general/f1740.htm>
- NIOSH OCCUPATIONAL SAFETY AND HEALTH GUIDELINES FOR CHEMICAL HAZARDS; Supplement III-OHG 1995 DHHS (NIOSH) Publication No. 95-110
<http://www.cdc.gov/niosh/pdfs/0079-rev.pdf>
- NIOSH/OSHA/DOE Health Guidelines
<http://www.osha-slc.gov/SLTC/healthguidelines/ethylamine/recognition.html - healthhazard>
- Lakes Environmental Software, Air Toxics Index
<http://www.lakes-environmental.com/toxic/TRIETHYLAMINE.HTML>
- NIOSH/OSHA/DOE Health Guidelines
<http://www.osha-slc.gov/SLTC/healthguidelines/trimethylamine/recognition.html>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/ButylMercaptan.htm>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/DimethylSulfide.html>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/EthylMercaptan.htm>
- Matheson Tri-Gas, Inc. Material Safety Data Sheet
<http://www.mathesongas.com/msds/MethylMercaptan.htm>
- NIOSH/OSHA/DOE Health Guidelines
<http://www.osha-slc.gov/SLTC/healthguidelines/Isoamylacetate/recognition.html>

D1. Response to Comments

Since PR 415 development, one rendering facility now qualifies for the low-use rendering facilities exemption (PR 415(1)(3)). Additionally, another facility has filed a permit application for their plant modernization in anticipation of PR 415 (see Appendix D1, Darling Modernization Permit).

POTENTIAL ODOR VIOLATIONS AND KNOWN ODOR COMPLAINTS

Potential Odor Violations and Known Odor Complaints

SCAQMD has conducted multiple on-site inspections of the affected rendering facilities in SCAQMD and has observed through these inspections that rendering operations, cooking, leaving unsealed and rendering materials out in the open, the wastewater treatment systems, and trucks transporting animal parts at the plants are a significant source of odors, especially when combined with odors from other rendering operations and from nearby rendering facilities (see also the Staff Report section entitled, “Site Visits”). Site visits to the rendering facilities in Vernon/Los Angeles by SCAQMD staff occurred on the following dates, but is not intended to be an exhaustive list:

- 10/22/2013 (Baker Commodities, D&D Disposal)
- 10/23/2013 (Baker Commodities, West Coast Packing)
- 10/26/2013 (D&D Disposal, West Coast Packing)
- 11/6/2013 (Baker Commodities, Darling Ingredients, Farmer John)
- 1/24/2014 (Baker Commodities)
- 3/4/2014 (Farmer John, Darling Ingredients)
- 12/18/2014 (Baker Commodities, Others)
- 3/13/2015 (Farmer John)
- 4/6/2015 (Baker Commodities)
- 8/7/2015 (Rendering Facilities)
- 10/26/20 (Baker Commodities, D&D Disposal, West Coast Packing)
- 7/4/2017 (SCAQMD Executive Officers Visit: Farmer John, Baker Commodities)
- 9/28/2017 (Baker Commodities, Farmer John d)
- 10/5/2017 (Darling Ingredients)

Odor Compliance Inspection Procedures

SCAQMD compliance inspectors are trained to follow standard surveillance procedures to identify the source of an odor. Prior to conducting odor surveillance, inspectors attempt to gather information about the community impacted by the alleged emissions, along with any available information about potential odor sources in the general vicinity. The information gathering activities often involve interviews with individuals who have reported air quality complaints to

D1. Response to Comments

SCAQMD, during which inspectors typically inquire about the character, intensity, frequency, timing, and duration of odors reported by the complainants.

During odor surveillance, the inspector periodically measures wind speed and direction using a SCAQMD-issued wind meter, noting and documenting information about the character and intensity of any detectable odors at each location where such measurements have been taken. Based on this information and/or on information from previous surveillance activities, the inspector follows a surveillance route that begins downwind of, and traces detectable odors, if any, to their apparent source. The inspector continues along the surveillance route to a point upwind of the apparent source where the odors are no longer detectable, then returns to a downwind location and performs repeated surveillance activities in this manner, from downwind to upwind locations, ruling out all other possible sources, until a probable odor source can be identified. The inspector documents these findings, and may prepare a table or map that shows the surveillance route(s) taken, wind data collected, and the character and intensity of odor emissions detected at key locations along the route. Once a probable source has been determined, the inspector typically enters to verify whether the emissions detected at that source match those described by the complainant(s) and/or detected by the inspector at locations downwind of that location, and to identify the particular equipment and/or process from which the emissions emanate.

Verified Odor Complaints

For an odor complaint to be verified by an SCAQMD inspector, the inspector performs several sequential steps, which include: respond to the odor complaint; interview the complainant; detect the same odor as the complainant describes; and trace the odor back to a specific facility. It is often difficult to complete this process during a temporary odor event as the odors may not still be present when the inspector arrives. Even if rendering odors are detected, due to the long distances rendering odors can travel and the proximity of the facilities relative to one another, it is often difficult to confirm an individual facility as the source of odors. If a specific facility cannot be identified as the source, no violation under Rule 402 can be issued.

Odor events from rendering facilities in the Vernon are have rarely resulted in violations under Rule 402 and H&SC Section 41700. However, based on a long complaint history, comments from community members, and odor observations by SCAQMD inspectors, objectionable odors typical of rendering operations can often be detected miles away from the Vernon area rendering facilities many days out of the year. Therefore, given the difficulties of making a finding of violation under Rule 402, the low number of Notice of Violations (NOVs) does not necessarily indicate that there is no impact on the surrounding residences and business.

D1. Response to Comments

Odor Complaints in the Surrounding Community

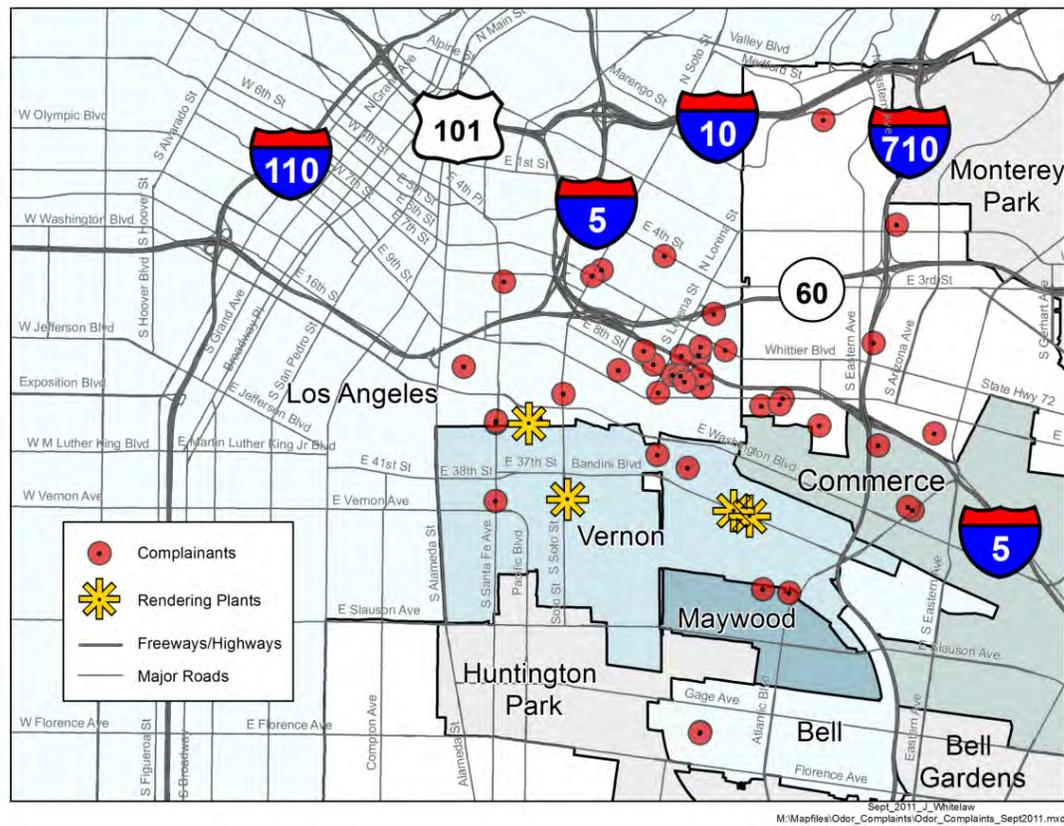
Odor complaints in the communities surrounding the Vernon rendering facilities were evaluated over a ten-year period. Complaints and NOVs were evaluated from January 2002 through October 2011. An average of 35 odor complaints per year alleged to be rendering odors were received by SCAQMD during this ten-year period. Many of these complaints were not verified by an SCAQMD inspector or tracked back to a specific facility. A more recent representation of odor complaints was obtained for the time period from January 2015 through September 2017. During this 21-month period, 193 odor complaints were alleged by complainants in Vernon, Commerce, Maywood, Bell, Boyle Heights, and Los Angeles, about odors from a rendering facility or slaughterhouse. Some complainants named a rendering facility and some complained about the odor of dead animals, rotting flesh, or putrid smells without naming a rendering facility. Many of these complaints were not verified.

Figure D1-1, Odor Complaint Locations during 5-year Period: 2006 – 2011, shows locations where odor complaints identifying rendering odors were received during the five-year period from January 2006 through September 2011.¹⁴ The data show that the odor complaints correlate with windrose data from the Central Los Angeles meteorological station—the closest meteorological station to the Vernon rendering facilities—and show that the predominant wind direction (prevailing winds originate from the west and south) correlates with the clusters of complaints located to the north and east of the facilities. These complaints all identified the odors as being rendering-type odors.

Appendix D2, *Odor Complaints*, provides an updated list of odor complaints that have occurred between January 2015 and September 2017 in the Vernon, Boyle Heights, East Los Angeles, and Commerce area. As identified in the Appendix D2, the vast majority are complaints associated with odors that may originate from the aforementioned rendering facilities.

¹⁴ Note that Figure 2-1 only shows locations for four of the five rendering facilities. The fifth facility is located immediately adjacent to the facility at the corner of Soto Street and Bandini Boulevard.

D1. Response to Comments

Figure D1-1 Odor Complaint Locations during 5-year Period: 2006 - 2011*2015 Boyle Heights-Vernon Odor Surveillance Survey*

Between July 28, 2015 and August 28, 2015, SCAQMD staff investigated potential odor violations in the City of Vernon. A complete record of where odors were detected by SCAQMD inspectors during the Boyle Heights – Vernon Odor Surveillance Study can be found in Appendix D3, 2015 Boyle Heights-Vernon Odor Surveillance Survey. Odor verification requires that inspectors first confirm that the qualitative character of the odor they themselves detect matches that of the odor perceived and described by a complainant. Once the odor character is confirmed, the odor is traced to its origin through a process of upwind/downwind surveillance that rules out other possible sources. Inspectors also ask complainants to rank the intensity of the odor they detect on an ordinal scale from 1-5. Scaled odor intensity also appears to represent the hedonic quality of the odor perceived by the complainant; in general, odors ranked higher on the scale evoke a more negative response and are a surrogate for the level of annoyance or discomfort the odor creates for the complainant. Scaled intensity values also provide a means by which complainants can indicate the relative intensities of odors perceived at different times. This

D1. Response to Comments

information coupled with meteorological data can also help the inspector locate the likely or actual source of odors.

As shown in the Table in the Appendix D3, observations of a constant moderate/very distinguishable odors associated with cooking of meat and/or fat, decayed/dead matter, process meal/dry dog food, rendering odors, and other odors associated with rendering operations were frequently observed by SCAQMD staff through the study area.

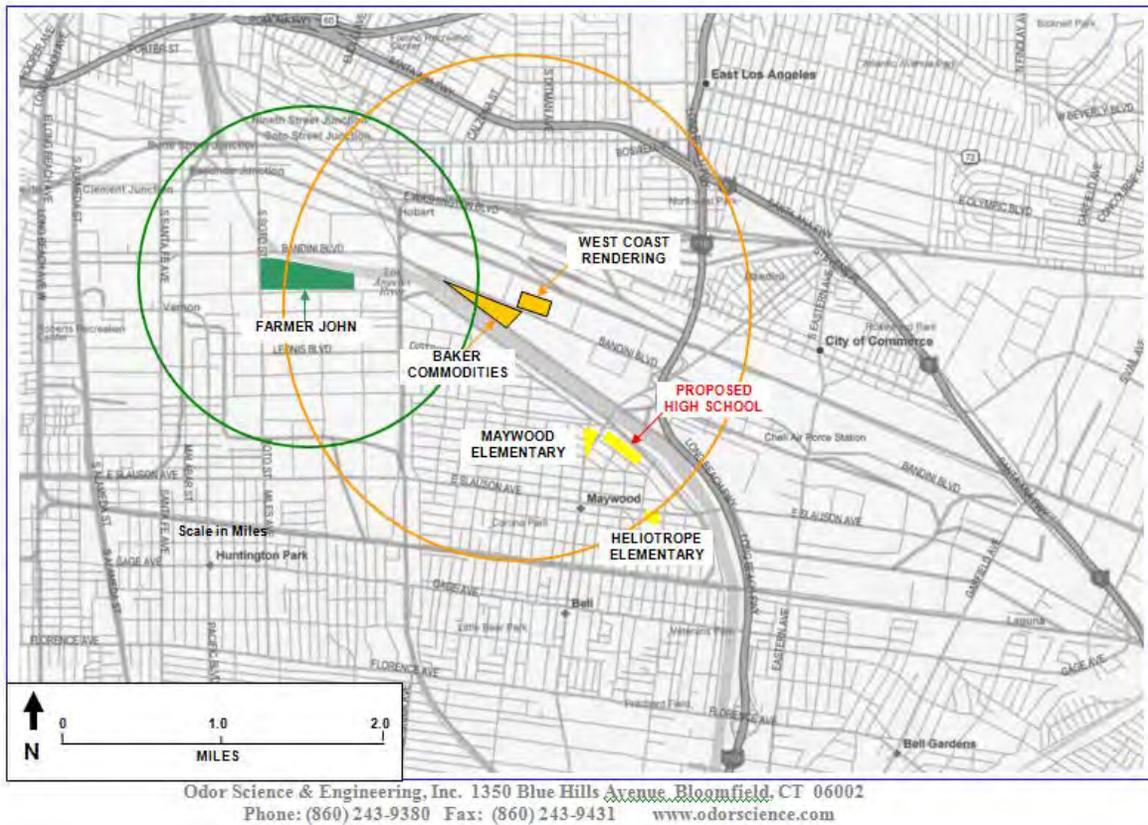
Field Odor Survey for South Region High School

In 2006, Odor Science and Engineering (OS&E) conducted an “Assessment of Potential Odor Impacts at the Proposed Site for the South Regional High School No. 8”.¹⁵ The assessment was conducted in the vicinity of the recently Maywood Elementary School in the City of Maywood, California to address concerns regarding odor impacts prompted by odor complaints from the School. As part of the assessment, a field odor survey was conducted. During November 2006, OS&E conducted a series of odor surveys to document the odors in the area. The “odor footprints” for several rendering facilities are shown in **Figure D1-2, Odor Footprints of Rendering Facilities Identified During Field Odor Survey for South Regional High School No. 8**. The footprints shown in this Figure correspond to an intensity level of 3 on the n-butanol odor intensity scale (American Section of the International Association for Testing Materials E544). Odors of that intensity are likely to be considered objectionable. Detectable odors would likely extend beyond the footprints shown.

¹⁵ Ostijic, 2006. Assessment of Potential Odor Impacts at the Proposed Site for the South Regional High School No. 8, OS&E Project No. 1582-M-00. Los Angeles Unified School District.

D1. Response to Comments

Figure D1-2 Odor Footprints of Rendering Facilities Identified During Field Odor Survey for South Regional High School No. 8



Odor Complaints During the June 30, 2015 Public Meeting

In general, odor complaints identified during the PR 415 Workshops have originated from the communities of Boyle Heights, Commerce, Maywood, and areas of East Los Angeles (outside Boyle Heights). During the public meeting held on June 30, 2015, in East Los Angeles, SCAQMD received the following comments documenting odors from rendering facility operations:

- “Odor migrates into Boyle Heights from the direction of Vernon as early as 3:00 a.m. and is the smell of blood. Staff should research to control the odors. No one has done anything in the past and it affects the community. We deserve to breathe clean air.”
- “When on the way to summer school in Commerce, you can smell the odors as early as 5:00 a.m. and I have to hold my breath. Please stop the odors.”

D1. Response to Comments

- “In the last 10 years, I don’t hear about complaints about the freeways, but I do hear about the complaints of smells from rendering facilities. It smells like dead cows and these animals can be diseased. The community has complaint fatigue. Please do something.”
- “As a resident of East Los Angeles, you can smell the odors at about 4:00 to 5:00 p.m. and in the early morning. What can be done, what technologies can be added to control the smell?”
- “As a 40-year community member, the stench from rendering facilities is the worst from 1:00 to 4:00 a.m. and may represent criminal activity. When awakened by the odors, I have to shut the windows and am deprived of sleep, which is affecting my health. The rendering facilities are not being good neighbors. People are afraid to call, afraid of deportation due to the language barrier. We are unfairly being punished by the facilities.”
- “As a resident of Huntington Park, we experience the smells early in the morning and the odor stays for a long time. The industry is important; however the odors need to be reduced and this represents a lack of ownership by the facilities. We cannot identify a particular facility, but can smell the odors. It is an insult to the community for the facilities to say there is no smell there. The majority of the community does not have air conditioners and must keep their windows open. The community is thankful for the approach and rule.”
- “I was born and raised in Boyle Heights and built my retirement home there in 1965. I cannot enjoy the gardens in my backyard because of the rendering odors. My family goes to another city for get together. Why are the companies making excuses? They should take responsibility and not say it is too much money. What about the money I have lost because I cannot enjoy my home? The city of Vernon is not a responsible city and SCAQMD should therefore do more. Residents should be able to sue for air conditioning in all homes. Don’t listen to the companies that it costs too much, we have spent a lot of money to live here too.”

History Regarding the Number and Frequency of Odor Complaints

SCAQMD staff has received comments in PR 415 working group meetings from the regulated industry that the relatively modest number of odor complaints from areas surrounding the rendering facilities indicates that rendering odors in the community are not an issue and that therefore, the rule is unnecessary. However, given the comments SCAQMD staff has received from community members, the number of complaints may not be fully indicative of the odor impact in these areas for several reasons. First, stockyards, meat packing houses and slaughterhouses that supplied animal carcasses to rendering facilities have existed in the Vernon area for nearly one hundred years. As a result, odors from rendered animal carcasses have long been part of the landscape in the communities surrounding Vernon, impacting the quality of life

D1. Response to Comments

for area residents. Furthermore, SCAQMD staff has learned from conducting community meetings in the area that proactive complainants didn't perceive a reduction in odors after repeated complaints, and became discouraged, resulting in a general sense from community members that reporting odors does not yield results. This may occur because SCAQMD staff is unable to pinpoint an individual facility as the source of the odor being complained of, as the facilities are relatively near one another and two are extremely close to each other. During SCAQMD public workshops on PR 415, residents and workers from the housing and commercial development areas surrounding the rendering facilities have also stated that they were not aware of whom they should call if they smelled odors they believed were coming from the rendering facilities. Staff has also heard in community meetings that given the demographics of the surrounding areas, residents may be reluctant to file complaints or may be unaware of the complaint process.

D1. Response to Comments

D1-1.6 Master Response 6 – Methodology

Several comments have stated that SCAQMD applied an incorrect methodology to evaluating the proposed project. Pursuant to Section 15187(c) of the CEQA Guidelines and SCAQMD Certified Regulatory Program requirements, the Draft EA evaluated the reasonably foreseeable environmental impacts associated with PR 415 compliance.

Implementation of PR 415 would require rendering facilities to implement Best Management Practices (BMP) and would require processes with the greatest potential for generation of off-site odors to be enclosed. The odor BMPs in the proposal are achieved in practice and reasonable measures that would result in odor reductions from rendering facilities. Implementation of PR 415 would minimize odors from rendering facilities through a combination of odor capture by enclosing odor-generating processes or in a closed system, odor control by venting odorous air from within enclosures to odor control equipment, and BMPs. Requiring affected facilities to submit a permit application for the combination of enclosure and odor control to be analyzed as a single permit unit will give a measure of assurance regarding the efficacy of an enclosure/control combination proposed by a rendering facility to effectively capture and treat odors.

See also the Staff Report section regarding “Two Approaches to Regulating Odors” and “Alternatives Analysis”. It is not necessary to identify baseline odor levels to establish the baseline for nuisance odors at rendering facilities. As identified in Master Response 5, *Nuisance Odors*. Rendering odors are a complex mixture of many compounds. There are no currently available objective measures to measure ‘objectionable’ odors. Therefore, in this rule development effort, staff focused on identifying the current and accepted practices around the state of California and the nation for operating a rendering facility within an urban area. In doing so, staff was unable to find even a single example of a rendering facility in an urban area operating an open-air rendering process such as several of the rendering facilities currently operate within SCAQMD’s jurisdiction. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations or operating certain rendering processes in a closed system, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. This same standard of operation is used in other areas by at least two of the companies that operate rendering facilities within Vernon. For these reasons, direct measurement of all the chemical compounds that make up odors is not necessary to the rulemaking efforts of PR 415.

D1. Response to Comments

D1-1.7 Master Response 7 – Building Codes

Several comments were concerned that the proposed enclosures would not be able to be constructed because they would not be able to meet the state and local building codes.

Based on review of similar facilities in jurisdictions in California and other states, SCAQMD staff found that the standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. Thus, other rendering facilities have navigated through the regulatory process to obtain approvals from local jurisdictions. Modifications have been made to PR 415 to provide for a one-time time extension for up to one year to complete construction of a permanent total enclosure and applicable ventilation and odor control system. This subsection is added as a result of staff's good faith efforts to account for unforeseeable circumstances that delay the construction of permanent total enclosures which may be outside the facilities' control, such as that which may be encountered as a result of needed approval from local jurisdictions.

Fire Safety

All cities and counties are required to adopt the California Building Standards Code (also referred to as the California Building Standards Code), which is the California Code of Regulations, (CCR) Title 24. Rendering facilities, collection centers, and facilities that store animal carcasses and parts of dead animals must already conform to the standards listed in section 1241, Title 24, CCR. Any new building or structures constructed as a result of PR 415 would be required to conform to these standards as well. Compliance with the California Building Standards Code is not a new requirement and would ensure that structural and fire hazards associated with building operation are minimized and would not result in environmental impacts not analyzed in the EA. Enclosures constructed under the requirements of PR 415 will need to meet all appropriate fire and safety codes and would not undermine worker safety.

Furthermore, the City of Vernon has allowed at least one facility that SCAQMD staff is aware of to operate grease generating processes within an enclosure. The City of Vernon has not presented any evidence as to why this practice is acceptable in current situations, but the Fire Marshall has objections to enclosure of operations that would be subject to the requirements of PR 415. In discussions with personnel at another facility subject to the requirements of PR 415, staff learned that the Fire Marshall was not concerned with enclosure of operations where grease is present, per se, but with the type of fire suppression system used. In any case, the Fire Marshall has not commented on this aspect of rulemaking for PR 415.

D1. Response to Comments

Low Impact Development (LID) Requirements

Along with the City of Vernon, each of the affected facilities are already currently subject to specific California Regional Water Quality Control Board (RWQCB) and National Pollutant Discharge Elimination System (NPDES) wastewater discharge requirements. Compliance with PR 415 would not impact any facility's obligation to adhere to these already existing requirements.

Construction of new buildings or structures on the sites may be considered redevelopment projects and would therefore, require the implementation of Low Impact Design (LID) principals where the stormwater runoff from these project areas would be required to be captured and treated or infiltrated. The techniques used as part of LID are often conducive to reducing the amount of pollutants in discharged water. Additionally, the use of LID often requires a reexamination of the use and sizing of existing traditional infrastructure, which are sometimes inadequate to meet the natural resource protection objectives.

Any permanent total enclosures constructed as a result of PR 415 would be built within the existing development footprint of the affected facilities. Therefore, any additional enclosures at the affected facilities are not expected to drastically change the existing drainage patterns, change the composition of the storm water, nor increase the volume of stormwater to the drainage systems. It is expected that if new stormdrains are needed on-site, they could be installed and tied into the existing stormwater collection systems at the facilities.

D1. Response to Comments

D1-1.8 Master Response 8 – Agricultural Preemption

Several comments stated that they believe they are exempt from nuisance odor complaints because of the agricultural exemptions under Health and Safety Code section 41705(a)(1), Section 2449(c), Title 13, California Code of Regulations, California Civil Code Section 3482.6, and/or the California Government Code Section 51201. SCAQMD is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) Section 40000.

Under California Civil Code Section 3482, agricultural processing activities are not considered nuisances if they have been in continuous operation for more than three years, if it was not a nuisance at the time it began. However, under Section 3482.6(d), this exemption is pre-empted by the regulations adopted under Section 41700 of the Health and Safety Code (Section 3482.6(d) if the area was surrounded by commercial development prior to 1993. The facilities within Vernon and Los Angeles have been surrounded by urban uses well before 1993 (see Appendix D4, Historic Aerial Photographs); and therefore, there is no immunity from nuisance complaints for the affected rendering facilities under Section 3482 of the California Civil Code.

Health and Safety Code section 41705(a)(1) exempts odors emanating from agricultural operations that are necessary for the raising of animals. Health and Safety Code section 39011.5 states in pertinent part, "Agricultural source of air pollution" or "agricultural source" means a source of air pollution or a group of sources used in the raising of animals located on contiguous property under common ownership or control that is a confined animal facility, including, but not limited to, any structure, building, feed storage area, or system for the collection, storage, treatment, and distribution of liquid and solid manure, if domesticated animals, including, swine are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing. The rendering facilities are not operating rendering processes at the same location they are raising animals to be able to claim that odors from their rendering operations are exempt from Health and Safety Code section 41700.

Furthermore, the purpose of Section 2449(c), Title 13, California Code of Regulations, is to reduce oxides of nitrogen (NO_x), diesel particulate matter (PM), and other criteria pollutant emissions from in-use off-road diesel-fueled vehicles. Equipment or vehicles used exclusively in agricultural operations are not subject to this regulation. PR 415 does not regulate off-road diesel-fueled vehicles. PR 415's regulation of odors from rendering facilities is not in conflict with State laws Health and Safety Code section 41705(a)(1) and Section 2449(c), Title 13, California Code of Regulations, and is within SCAQMD's authority under Health and Safety Code section 40440(a).

D1. Response to Comments

The rendering facilities are also not subject to Government Code Section 51201 related to the California Land Conservation Act of 1965 (The Williamson Act). While the City of Vernon (City) has an agricultural history between 1874 and the earlier years of the twentieth century, the City incorporated in 1905 as an “exclusively industrial” city. In the following years, the City has established diverse industries with major facilities.¹⁶ Based on a review of City’s zoning map¹⁷, there is no agricultural land use zoned within the City’s jurisdiction. Therefore, the rendering facilities are not under a Williamson Act contract, and PR 415 would not result in cancellation of Williamson Act contract.

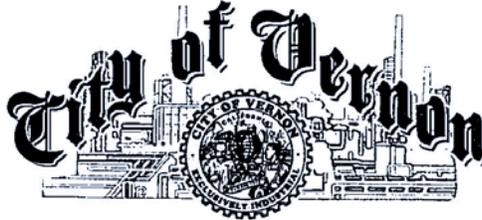
¹⁶ City of Vernon General Plan. Resources Element. Last Amended in 2013. Accessed at: <http://www.cityofvernon.org/images/community-services/Zoning/Resources%20Element%202015.pdf>.

¹⁷ City of Vernon Zoning Map. Accessed on September 28, 2017. Available at: http://www.cityofvernon.org/images/community-00services/Planning/side-menu/Zoning_Map.pdf.

D1. Response to Comments

D1-2.0 INDIVIDUAL RESPONSES

D1-2.1 LETTER 1 – City of Vernon



PUBLIC WORKS, WATER & DEVELOPMENT SERVICES
 4305 Santa Fe Avenue, Vernon, California 90058
 Telephone (323) 583-8811 Fax (323) 826-1435

S-11

August 3, 2015

South Coast Air Quality Management District
 Mr. Jeff Inabinet
 c/o Office of Planning, Rule Development, and Area Sources
 21865 Copley Drive
 Diamond Bar, CA 91765-4178

Re: Proposed Rule 415 – Odors From Rendering Facilities

Dear Mr. Inabinet:

The City of Vernon has reviewed the Draft Environmental Assessment prepared to study the environmental impacts that would result from the adoption of Rule 415 – Odors from rendering facilities. We would like to thank the District for the opportunity to comment on the assessment and its potential impacts on the environment. In speaking with our business community we believe it is quite possible that this new rule will cause some of the businesses in our community to stop their rendering operations. As such we believe it is imperative that the District study this strong possibility as part of its Environmental Assessment. Below are the City of Vernon’s comments on the Environmental Assessment.

1.0-1

- First and foremost, the District must consider the environmental impacts that will occur if a facility is caused to shut down due to the implementation of Rule 415. The City has been advised by certain businesses that will be affected by the rule that they will be required to shut down operations because of financial impacts and or inability to meet the proposed rule requirements without totally reconstructing the existing plant. Certain businesses handle product that cannot be managed by other renderers in the area. Therefore, it may require the product to be shipped outside of the South Coast Air Quality Management Districts Area.
- On page 1-3 in the Affected Facilities section of the assessment, it states that all five of the facilities are located in Vernon. In actuality only four rendering operations are located in Vernon. The City knows of a fifth operation that is located in the City of Los Angeles, on the boundary of Vernon. All rendering operations at this location are located within the City of Los Angeles with some ancillary uses to the rendering operation located in Vernon.
- On page 2-15 under Operational Impacts-Criteria Pollutants, the fourth paragraph states, “In the unlikely event that it is not economically feasible for an affected facility to continue operations, a facility close down and the product normally processed would need to be transported to another

1.0-2

1.0-3

1.0-4

Exclusively Industrial

D1. Response to Comments

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| <p>facility, thus generating additional vehicle emissions from the transport.” Again the City of Vernon sees the shutdown of a facility as a likely alternative. Again some of the nearby facilities either may not have the capacity to accept the additional quantity or are not set up to accept the incoming materials (dead animal stock) of the shutdown facility. As such, the District must study the impacts of the product being transported outside of the District’s area.</p> | <p>1.0-4 Cont'd</p> |
| <ul style="list-style-type: none"> • On page 2-27 under the discussion of VII. a) the Uniform Building Code is referenced. The Uniform Building Code is no longer published and has been replaced by the International Building Code. In the State of California all cities and or counties are required to adopt the California Building Code. Therefore all references should be made to the California Building Code and not the Uniform Building Code. Additionally there is an assumption that all new construction can comply with California Building Code requirements. A complete analysis must be performed to determine if these facilities can be constructed in compliance with the California Building Code. The California Building and Fire codes contain fire access, allowable size, height, fire resistance and construction type requirements, based on the uses contained within the structure. These are just a few of the thousands of code requirements contained in the Building and Fire codes. A blanket statement that the facility is expected to meet the Building code requirements is not helpful when it may be impossible for an existing facility to meet these requirements without fully reconstructing the facility to meet the building code requirements. A thorough analysis should be conducted to determine if the enclosure of these facilities will be permissible under the California Building and Fire Codes. | <p>1.0-5</p> |
| <ul style="list-style-type: none"> • The discussion on page 2-37 Section IX. g), h) & i) are to address impacts to storm water treatment systems. The City of Vernon along with other Coastal Cities in Los Angeles County are subject to California Regional Water Quality Control Board, Los Angeles Region, Order No R4-2012-0175 NPDES permit No. CAS004001. Section 7 of this permit sets forth requirements for new development and redevelopment projects. The construction of new buildings on the site would be considered a redevelopment project under the permit and would require the implementation of Low Impact Development (LID) design principals where the storm water runoff from these project areas would be required to be captured and treated or infiltrated. These LID’s will take up additional area outside the footprint of the structures and can be expensive to construct. Some of the rendering facilities will be challenged to find the additional area to construct these LID improvements. A discussion of the LID requirements should be incorporated in the environmental assessment discussion. | <p>1.0-6</p> |
| <ul style="list-style-type: none"> • In Section b) of X. Land Use Planning the Environmental Assessment is required to discuss conflicts with any applicable land use plans or regulations. The City of Vernon has adopted a General Plan and Zoning Ordinance. The Zoning Ordinance establishes certain development standards including setback and parking requirements. The number of loading and parking spaces are established on the basis of floor area of buildings on a property. The controls established in Rule 415 will require the enclosure of certain facilities. These enclosures will be required to comply with City of Vernon development standards including parking, loading, maneuvering and setback requirements. For some facilities it may not be possible to comply with the City of Vernon’s development standards if floor area is added to the property. What are the consequences if a Rule 415 requires enclosure of facilities however cannot be implemented because they are in direct conflict with local zoning requirements? | <p>1.0-7</p> |
| <ul style="list-style-type: none"> • In Section XIV a) Fire Protection, it should be noted that the enclosure of certain operations of a rendering facility could create fire protection issues. It will be much more difficult to extinguish a fire in an enclosed facility rather than one that is open to the atmosphere which allows much easier access for fire suppression. This could potentially impact performance objectives of the Fire Department. | <p>1.0-8</p> |
| <ul style="list-style-type: none"> • In Section XIV e) a discussion of impacts to other public facilities is required. One of the rendering facilities in Vernon serves numerous animal shelters and zoos in the area along with | <p>1.0-9</p> |

D1. Response to Comments

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| <p>private veterinary clinics. If this renderer's operation is shutdown, these public facilities will be required to find another location where the dead stock can be processed or buried. This could have a tremendous impact on the operations of these public facilities. There should be a full discussion of how the shutdown of the rendering facility serving these facilities will impact their operations. In addition there should be a discussion on the effect that Rule 415 may have on landfills if the product that is currently processed by the rendering facilities must be placed in a landfill because of a shutdown of the rendering facilities.</p> | <p>1.0-9 Cont'd</p> |
| <ul style="list-style-type: none"> • In Section XVI it is again assumed that the adoption of Rule 415 will not result in the ceasing operations of any rendering facilities. Again this assumption does not appear to be accurate. Therefore, the City of Vernon believes that the environmental assessment must assume that the Rule 415 will cause the shutdown of facilities and must contemplate the consequences including impacts to landfills. The diversion of rendering product to a landfill could create both odor and capacity issues at the landfill both of which need to be thoroughly discussed in the environmental assessment. | <p>1.0-10</p> |
| <ul style="list-style-type: none"> • In Section XVII it is again assumed that Rule 415 will not cause the closure of any rendering facilities or if it does cause a closure of a facility, another facility in close proximity can take the additional material therefore not resulting in a net change or cause for additional transportation demands or services. Again the City of Vernon believes these assumptions are false and that Rule 415 will cause some rendering operations to cease which will require certain product to be transferred outside of the District's boundaries. The impacts to the transportation system caused by the shutdown of certain rendering facilities should be evaluated. | <p>1.0-11</p> |
| <ul style="list-style-type: none"> • Until all of the above concerns are studied the XVIII Mandatory Findings of Significance cannot be determined and it is quite probable that potentially significant impacts to the environment will result from adoption of Rule 415. | <p>1.0-12</p> |
| <p>Again the City of Vernon appreciates the opportunity to comment on the Draft Environmental Assessment prepared for Rule 415 and requests that further studies be conducted prior to the adoption of the analysis to ensure that the Rule will not have a significant effect on the environment.</p> | <p>1.0-13</p> |

Very Truly Yours



Samuel Kevin Wilson
 Director of Public Works, Water, and Development Services

cc: City Administrator

D1. Response to Comments

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D1. Response to Comments

1. Response to Comments from Samuel Kevin Wilson, Director of Public Works, Water and Development Services, City of Vernon, dated August 3, 2015.

The City of Vernon has reviewed the Draft Environmental Assessment prepared to study the environmental impacts that would result from the adoption of Rule 415 – Odors from rendering facilities. We would like to thank the District for the opportunity to comment on the assessment and its potential impacts on the environment. In speaking with our business community we believe it is quite possible that this new rule will cause some of the businesses in our community to stop their rendering operations. As such we believe it is imperative that the District study this strong possibility as part of its Environmental Assessment. Below are the City of Vernon’s comments on the Environmental Assessment.

1.0-1

Response 1.0-1

Master Response 2, *Facility Shutdown*, describes that it is not anticipated that implementation of PR 415 would result in facility closure. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering facilities. The rule approach for PR 415 considers differences in operation at each facility. While PR 415 requirements seek a permanent total enclosure or a closed system for certain odorous rendering operation (raw rendering material receiving area, wastewater treatment, and rendering processing equipment), SCAQMD staff has worked in good faith with the rendering facilities during the rule development process to accommodate each facility’s needs by modifying the rule requirements. For example, one facility reported they would have difficulties constructing a receiving enclosure tall enough to accommodate trucks that tilt up to dump raw materials. PR 415 was modified to allow this facility to continue to use its current material delivery configuration, as long as continuous effort is made to move this material into an enclosure within 60 minutes after the end of material delivery (see PR 415(e)(2)). The same facility conducts cooking and processing operations in a large building that would be very expensive to demolish and reconstruct. The rule requirements were further refined to allow the cooking and processing operations to be considered a closed system, provided that modest changes are made to certain bins, hoppers and conveyors.

Another example of the flexibility of PR 415’s approach involves the wastewater treatment plant at an integrated rendering facility. This facility processes wastewater from several areas of the facility, where rendering wastewater is currently diluted by a large volume of less-odorous water. An exemption for the wastewater enclosure for this facility was included in PR 415 (1)(2), with the help of the Sanitation Districts of Los Angeles County (LACSD), to allow the use of existing non-rendering wastewater from other sources within the same facility. The rulemaking process for PR 415 was meaningful and responsive to the needs of rendering facilities in the City of Vernon. PR 415 fulfills

D1. Response to Comments

SCAQMD's responsibilities for control of air pollution from rendering facilities; distinguishes between SCAQMD's commitments to communities and rendering facility's responsibilities; and optimizes flexibility during implementation. For these reasons, PR 415 will not cause the rendering facilities to stop operation. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

Individual responses to the City of Vernon's comments are provided in Responses 1.0-2 through 1.0-12

- First and foremost, the District must consider the environmental impacts that will occur if a facility is caused to shut down due to the implementation of Rule 415. The City has been advised by certain businesses that will be affected by the rule that they will be required to shut down operations because of financial impacts and or inability to meet the proposed rule requirements without totally reconstructing the existing plant. Certain businesses handle product that cannot be managed by other renderers in the area. Therefore, it may require the product to be shipped outside of the South Coast Air Quality Management Districts Area.

1.0-2

Response 1.0-2

See Response 1.0-1 and Master Response 2, *Facility Shutdown*. The intent of PR 415 is to capture and control odors from rendering operations, not cease rendering operations. It is not anticipated that implementation of PR 415 would result in facility closure. Implementation of PR 415 would require rendering facilities to carry out best management practices, enclose certain rendering operations, and install odor emission control equipment, resulting in improvements at existing rendering operations. The comment does not provide evidence on which specific provisions of PR 415 would cause a rendering facility to shut down. With or without PR 415, a rendering facility makes its own business decisions. If a rendering facility is not able to meet the requirements of PR 415, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities within the City of Vernon would have the ability or would generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal carcasses and parts. In the event of equipment breakdowns or if emergency rendering services are needed, PR 415 allows a rendering facility to accept additional materials from another rendering facility that cannot conduct rendering activities for up to 7 days, provided certain requirements are met. This provision will further reduce the probability of excess build-up of rendering materials or animal carcasses and parts.

D1. Response to Comments

PR 415 applies to the rendering facilities or the rendering operation of an integrated facility. The environmental document for PR 415 analyzes the potential construction impacts on the rendering facilities from PR 415. Please see Chapter 2, *Air Quality and Greenhouse Gas Emissions*, of the Final EA. Furthermore, a total reconstruction of an existing plant would not be warranted to implement PR 415 since a permanent total enclosure is only required for, and limited to, a small portion of the existing plants such as the raw material receiving area and wastewater treatment. To meet the needs of rendering facilities, PR 415 has a provision to allow certain exemptions (PR 415 (I)). SCAQMD staff has prepared an update to the estimated enclosure sizes in the Final EA. Based on that analysis, it is not anticipated that facility closure, total reconstruction of the existing plants, or the need to ship rendering products outside SCAQMD's area would result from implementation of PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

- On page 1-3 in the Affected Facilities section of the assessment, it states that all five of the facilities are located in Vernon. In actuality only four rendering operations are located in Vernon. The City knows of a fifth operation that is located in the City of Los Angeles, on the boundary of Vernon. All rendering operations at this location are located within the City of Los Angeles with some ancillary uses to the rendering operation located in Vernon.

1.0-3

Response 1.0-3

It will be clarified in the Final EA that four facilities are located in Vernon and one facility is located in the City of Los Angeles, on the boundary of Vernon, with some ancillary uses to the rendering operation located in Vernon. Refer to Master Response 3, *Methodology*.

On page 2-15 under Operational Impacts-Criteria Pollutants, the fourth paragraph states, "In the unlikely event that it is not economically feasible for an affected facility to continue operations, a facility close down and the product normally processed would need to be transported to another

1.0-4

facility, thus generating additional vehicle emissions from the transport." Again the City of Vernon sees the shutdown of a facility as a likely alternative. Again some of the nearby facilities either may not have the capacity to accept the additional quantity or are not set up to accept the incoming materials (dead animal stock) of the shutdown facility. As such, the District must study the impacts of the product being transported outside of the District's area.

1.0-4
Cont'd

D1. Response to Comments

Response 1.0-4

Refer to Master Response 2, *Facility Shutdown*. PR 415 is intended to capture and control odors from rendering operations, not cease rendering operations. As stated above, existing rendering operations are not expected to cease, and animal carcasses and parts are not expected to be diverted because of the requirements included in PR 415. The comment does not provide evidence as to which specific provisions of PR 415 would cause a facility to shut down.

SCAQMD staff has worked in good faith with the affected rendering facilities to minimize potential operational impacts, including making various changes to the scope and requirements of PR 415 from early versions of the draft rule language. There are very few rendering facilities in California, and animal carcasses currently travel long distances to reach the existing facilities since rendering, as a means of animal disposal, offers a relatively safe way to comply with the State's environmental quality and disease control standards. Although not anticipated, if a rendering facility is not able to meet the requirements of PR 415 through the various compliance options, it would be reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or would generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal carcasses and parts. However, compliance with PR 415 can be achieved by various alternatives, including an option to request a one-time time extension for up to one year for the enclosure construction requirement, and is not anticipated that PR 415 will result in facility shutdown. Consequently, it is speculative to assume that product would potentially need to be shipped outside of SCAQMD's jurisdiction since facility shutdown is not foreseeable.

As described in Master Response 3, *Methodology* and Response 1.0-2, while best management practices (BMPs) would help to reduce odors, BMPs by themselves do not represent the best control that can reasonably be achieved for rendering odors. More effective controls for odors from rendering facilities are to enclose the operations that generate odors within a permanent total enclosure, keep the enclosure under negative pressure to contain odors within the enclosure, and vent those odors to control equipment, or operating rendering processes in a closed system. As such, PR 415 requires existing rendering facilities to enclose certain rendering operations, install odor emission control equipment and carry out best management practices, and PR 415 would not require reconstruction of existing facilities to meet the odor reduction objective. PR 415 also allows an alternative standard for a raw material receiving permanent total enclosure

D1. Response to Comments

(PTE), where the PTE does not need to be vented to odor control equipment, provided certain conditions are met.

The environmental analysis for PR 415 considered the potential impacts from complying with the requirements of PR 415. The EA has analyzed and disclosed the potential impacts on air quality and transportation as a result of implementation of PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

- On page 2-27 under the discussion of VII. a) the Uniform Building Code is referenced. The Uniform Building Code is no longer published and has been replaced by the International Building Code. In the State of California all cities and or counties are required to adopt the California Building Code. Therefore all references should be made to the California Building Code and not the Uniform Building Code. Additionally there is an assumption that all new construction can comply with California Building Code requirements. A complete analysis must be performed to determine if these facilities can be constructed in compliance with the California Building Code. The California Building and Fire codes contain fire access, allowable size, height, fire resistance and construction type requirements, based on the uses contained within the structure. These are just a few of the thousands of code requirements contained in the Building and Fire codes. A blanket statement that the facility is expected to meet the Building code requirements is not helpful when it may be impossible for an existing facility to meet these requirements without fully reconstructing the facility to meet the building code requirements. A thorough analysis should be conducted to determine if the enclosure of these facilities will be permissible under the California Building and Fire Codes.

1.0-5

Response 1.0-5

The Final EA will reference the California Building Code rather than the Uniform or International Building Code.

Refer to Master Response 7, *Building Codes*. All cities and counties are required to adopt the California Building Standards Code (also referred to as the California Building Standards Code), Title 24, California Code of Regulations (CCR). Rendering facilities, collection centers, and facilities that store animal carcasses and parts of dead animals must already conform to the standards listed in Section 1241, Title 24, CCR. Any new building or structure constructed as a result of PR 415 would be required to conform to these standards as well. Compliance with the California Building Standards Code is not a new requirement and would ensure that structural and fire hazards associated with building operation are minimized and would not result in new or more severe environmental impacts than those analyzed in the EA. Enclosures constructed under the requirements of PR 415 will need to meet all appropriate fire and safety codes and would not undermine worker safety. As stated above, the environmental analysis for PR 415

D1. Response to Comments

considers the potential impacts from complying with the requirements of PR 415 and relies on compliance with all existing laws, regulations, and standards. Compliance with the requirements of PR 415 does not relieve the rendering facilities from complying with existing laws, regulations, or requirements including the California Building Code and the City building and/or fire codes. The City of Vernon has the authority and the opportunity to review site or architectural plans and request any changes to ensure that all of the City building and fire codes are met by the rendering facilities before the City issues a Certificate of Occupancy. The Building Permit Application is available at: https://www.vernon.ca/sites/default/files/docs/building-planning/permits-applications/building_permit_app.pdf. Therefore, it is reasonable to expect that the rendering facilities will construct a PTE that meets the California Building Code.

Furthermore, SCAQMD staff is aware that an integrated rendering facility in the City of Vernon is operating grease generating processes within an enclosure. This demonstrates that a PTE can and should meet the California Building Standards Code or the Title 24, CCR, since it is already existing in the City. Additionally, the City of Vernon has not presented any evidence to substantiate why an enclosure cannot meet the building code or provided information about the Fire Marshall's objections to enclosure as result of PR 415. As described in Section D0-1.1, SCAQMD received three comment letters on the Draft EA during the 30-day public review and comment period. The Fire Marshall did not provide comments on this aspect for PR 415 within that 30-day period.

The Final EA includes an evaluation of the potential environmental effects associated with adoption of PR 415. As identified in Master Response 4, *Worst-Case Scenario*, the EA is not required to provide a facility- or site-specific evaluation of each individual rendering facility subject to PR 415, rather the analysis views the requirements of PR 415 as a whole for all affected facilities and evaluates the potential environmental consequence from compliance with this rule throughout SCAQMD's jurisdiction. After adoption of PR 415, rendering facilities will have approximately two to four years to comply with the PTE and applicable ventilation and odor control system requirements under PR 415 subdivision (f), and have the option of requesting a one-time extension for up to one year to complete construction. In the unlikely event that local zoning ordinances would prohibit the type of enclosure evaluated in the EA, based SCAQMD research, a closed system of cooking and processing equipment is an acceptable alternative to a PTE, provided fugitive odors from that closed system do not continue to cause verified odor complaints.

The discussion on Page 2-27, Section VII.a) of the Draft EA is related to Geology and Soil impacts. The EA has analyzed and disclosed the potential impacts on geology and

D1. Response to Comments

soils as a result of the implementation of PR 415 and the comment does not provide evidence to the contrary.

- The discussion on page 2-37 Section IX. g), h) & i) are to address impacts to storm water treatment systems. The City of Vernon along with other Coastal Cities in Los Angeles County are subject to California Regional Water Quality Control Board, Los Angeles Region, Order No R4-2012-0175 NPDES permit No. CAS004001. Section 7 of this permit sets forth requirements for new development and redevelopment projects. The construction of new buildings on the site would be considered a redevelopment project under the permit and would require the implementation of Low Impact Development (LID) design principals where the storm water runoff from these project areas would be required to be captured and treated or infiltrated. These LID's will take up additional area outside the footprint of the structures and can be expensive to construct. Some of the rendering facilities will be challenged to find the additional area to construct these LID improvements. A discussion of the LID requirements should be incorporated in the environmental assessment discussion.

1.0-6

Response 1.0-6

As identified in Master Response 4, *Worst-Case Scenario*, the EA is not required to provide a facility or site-specific evaluation of for each individual facility subject to PR 415, rather the analysis views the requirements of PR 415 as a whole for all affected rendering facilities and evaluates the potential environmental consequence from compliance with PR 415 throughout SCAQMD's jurisdiction.

Along with the City of Vernon, each of the affected facilities are already currently subject to specific California Regional Water Quality Control Board (RWQCB) and National Pollutant Discharge Elimination System (NPDES) wastewater discharge requirements. Compliance with PR 415 would not impact any facility's obligation to adhere to these already existing requirements.

Construction of new buildings at the affected facilities may be considered redevelopment projects; and would therefore, require the implementation of Low Impact Design (LID) principals where the stormwater runoff from these project areas would be required to be captured and treated or infiltrated. According to the RWQCB, LID is "sustainable practice that benefits water supply and contributes to water quality protection" and takes a different approach, compared to the traditional stormwater management, "by using site design and storm water management to maintain the site's pre-development runoff rates and volumes. The goal of LID is to mimic a site's predevelopment hydrology by using design techniques that infiltrate, filter, store, evaporate, and detain runoff close to the source of rainfall."¹⁸ The techniques used as part of LID are often conducive to reducing

¹⁸ California Regional Water Quality Control Board. Updated July 18, 2013. *Low Impact Development – Sustainable Storm Water Management*. Accessed at: http://www.swrcb.ca.gov/water_issues/programs/low_impact_development/index.shtml.

D1. Response to Comments

the amount of pollutants in discharged water. “LID practices result in less disturbance of the development area, conservation of natural features, and less expensive than traditional storm water controls. [...] LID provides multiple opportunities to retrofit existing highly urbanized areas and can be applied to a range of lot sizes.”¹⁹ Therefore, implementation of LID is intended to minimize impacts to the development areas within the existing footprint and disturbance of the rendering facilities. Since Order No. R4-2012-0175 NPDES permit No. CAS004001 for the Los Angeles Region, including the City of Vernon, has been effective since December 28, 2012²⁰, the rendering facilities are already subject to the LID requirements, and any new structure as a result of PR 415 can use the existing LID materials and infrastructure at the rendering facilities, thereby resulting in no or minimal impacts on stormwater treatment systems.

Furthermore, any PTE constructed as a result of PR 415 would be built within the existing development footprint of the affected facilities. Therefore, any enclosures at the affected facilities are not expected to drastically change the existing drainage patterns, change the composition of the storm water, nor increase the volume of stormwater to the drainage systems. It is expected that new storm drains that are needed on-site could be installed and tied into the existing stormwater collection systems at the facilities, resulting in no or minimal impacts on the stormwater infrastructure.

- In Section b) of X. Land Use Planning the Environmental Assessment is required to discuss conflicts with any applicable land use plans or regulations. The City of Vernon has adopted a General Plan and Zoning Ordinance. The Zoning Ordinance establishes certain development standards including setback and parking requirements. The number of loading and parking spaces are established on the basis of floor area of buildings on a property. The controls established in Rule 415 will require the enclosure of certain facilities. These enclosures will be required to comply with City of Vernon development standards including parking, loading, maneuvering and setback requirements. For some facilities it may not be possible to comply with the City of Vernon’s development standards if floor area is added to the property. What are the consequences if a Rule 415 requires enclosure of facilities however cannot be implemented because they are in direct conflict with local zoning requirements?

1.0-7

Response 1.0-7

Refer to Response 1.0-4. PR 415 is not expected to conflict with any applicable land use plans or regulations. PR 415 is intended to capture and control odors from rendering operations by enclosure with odor control equipment or operation of a closed system. In

¹⁹ Ibid.

²⁰ California Regional Water Quality Control Board. Accessed on September 22, 2017. *ORDER NO. R4-2012-0175. NPDES PERMIT NO. CAS004001.* Accessed at: http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/la_ms4/2012/Order%20R4-2012-0175%20-%20A%20Final%20Order%20revised.pdf.

D1. Response to Comments

the event that a rendering facility chooses to enclose the operation, new enclosures are expected to comply with City of Vernon development standards including parking, loading, maneuvering, and setback requirements, as these are legally required. Implementation of PR 415 would not result in a conflict with the development standards for parking because the proposed enclosures would be located where operations are currently taking place, and enclosures are not expected to change the existing rendering operations in a way that would generate more employees (Draft EA, Page 2-42).

The proposed rule may necessitate coordination with the City of Vernon to comply with local zoning regulations regarding parking for the new enclosures. Based on the City of Vernon's parking standard of 1 parking space for every 1,000 square feet, the new structures would require restriping of paved areas on-site to provide a maximum of 20 parking spaces (17 at Facility B and 3 at Facility D) to comply with this standard unless the City grants a variance. However, the proposed rule would not generate the demand for the additional parking spaces because providing an enclosure for the existing operations would not result in an increase in employees. Therefore, the proposed rule would not result in a decrease in parking.

It is important to recognize that the requirements for enclosures are limited to raw material receiving areas and wastewater treatment, which are already existing within the heavily industrialized areas and are currently located within the footprint and boundaries of existing rendering facilities (Aerial Photograph). In the unlikely event that local zoning ordinances/development codes would prohibit the type, location, or size of enclosure evaluated in the EA, PR 415 contains other compliance options. For example, a closed system of cooking and processing equipment is an acceptable alternative to a PTE, provided fugitive odors from that closed system do not cause verified odor complaints. A facility may also consider requesting a time extension to complete a PTE or elect to be exempted from PR 415 under the subsection (l), if applicable.

The environmental analysis for PR 415 considered the potential environmental impacts from PR 415 if adopted and implemented. As analyzed in the Draft EA (Page 2-39), "land use and other planning considerations are determined by local governments," and PR 415 does not include any requirement that would alter the City's land use authority or planning requirements. The City of Vernon has the authority to review development site or architectural plans and request modifications. If applicable, a variance may be filed, subject to the approval by the City. Therefore, it is not expected that PR 415 will cause a direct conflict with local zoning requirements.

D1. Response to Comments

- In Section XIV a) Fire Protection, it should be noted that the enclosure of certain operations of a rendering facility could create fire protection issues. It will be much more difficult to extinguish a fire in an enclosed facility rather than one that is open to the atmosphere which allows much easier access for fire suppression. This could potentially impact performance objectives of the Fire Department.

1.0-8

Response 1.0-8

Refer to Master Response 7, *Building Codes*, and Response 1.0-5. All buildings in California are required to meet the standards set forth in the California Fire Code, Title 24, CCR, Part 9. Thus, any new enclosure constructed as a result of PR 415 would need to meet the standards set forth in this code, as per state law. Compliance with the California Fire Code would minimize potential fire hazards associated with the facility.

The intent of PR 415 is to capture and control odors from rendering operations. The environmental analysis for PR 415 considered the potential environmental impacts if PR 415 is adopted and implemented. The Draft EA for PR 415 analyzed PR 415's potential impacts on emergency access under Transportation/Traffic. Under PR 415, an enclosure is only required for, and limited to, a small portion of the existing plants such as the raw material receiving area and wastewater treatment. The City of Vernon is approximately 5.2 square miles in size. The City has its own Class 1 Fire Department and four fire stations with a response time of less than three minutes.²¹ These four fire stations that are currently serving the existing rendering facilities are expected to continue to provide fire protection services to these facilities. There are enclosed rendering operations in many jurisdictions around the country, including within the City of Los Angeles immediately adjacent to the City of Vernon. In all of these jurisdictions, the fire protection authority is obligated to fight grease fires that occur within an enclosure. The comment does not substantiate the reasons that the City of Vernon Fire Department is incapable of providing fire protection services within an enclosure, when dozens of other fire departments have that capability.

Consistent with the assumptions in the Socioeconomic Impact Assessment for PR 415, all PTEs would be required to install a fire suppression system, and it was assumed that water sprinkler-type fire suppression systems would be sufficient for the enclosed areas to meet the municipal fire code requirements.

It is important to note that emergency access for fire suppression is part of site plan reviews by the City. Based on a review of the Building Permit Application that is

²¹ City of Vernon Fire Department. Accessed on September 22, 2017. Accessed at: <http://www.cityofvernon.org/departments/fire-department>.

D1. Response to Comments

available at: https://www.vernon.ca/sites/default/files/docs/building-planning/permits-applications/building_permit_app.pdf, various City Departments, including the Fire Department, will have opportunities to review site or architectural plans and request any modifications, if needed, to ensure that all of the City building and fire codes and access to fire suppression are met by the rendering facilities. Therefore, it is reasonable to expect that requirements under PR 415 would not impact performance objectives of the Fire Department.

- In Section XIV e) a discussion of impacts to other public facilities is required. One of the rendering facilities in Vernon serves numerous animal shelters and zoos in the area along with

1.0-9

private veterinary clinics. If this renderer's operation is shutdown, these public facilities will be required to find another location where the dead stock can be processed or buried. This could have a tremendous impact on the operations of these public facilities. There should be a full discussion of how the shutdown of the rendering facility serving these facilities will impact their operations. In addition there should be a discussion on the effect that Rule 415 may have on landfills if the product that is currently processed by the rendering facilities must be placed in a landfill because of a shutdown of the rendering facilities.

1.0-9
Cont'd**Response 1.0-9**

Refer to Master Response 2, *Facility Shutdown*, and Response 1.0-4. The rendering industry provides an important and beneficial service. PR 415 is developed to capture and control odors from rendering operations, not cease rendering operations. The comment accurately states that one of the affected facilities in Vernon provides an important service by handling material from numerous animal shelters and zoos, as well as private veterinary clinics. Recognizing their beneficial service, SCAQMD staff has worked in good faith with that rendering facility to minimize potential operational impacts, including making various changes to the scope and requirements of PR 415 from early versions of draft rule language (refer to Table P-1 in the Final EA). Pursuant to Health and Safety Code Section 40728.5, a Socioeconomic Impact Assessment for PR 415 is being prepared to describe the economic impacts of PR 415 that the SCAQMD Governing Board must consider when considering the adoption of PR 415. It is not expected that existing rendering operations would cease as a result of PR 415, and animal carcasses and parts are not expected to be diverted because of the requirements included in PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

D1. Response to Comments

- In Section XVI it is again assumed that the adoption of Rule 415 will not result in the ceasing operations of any rendering facilities. Again this assumption does not appear to be accurate. Therefore, the City of Vernon believes that the environmental assessment must assume that the Rule 415 will cause the shutdown of facilities and must contemplate the consequences including impacts to landfills. The diversion of rendering product to a landfill could create both odor and capacity issues at the landfill both of which need to be thoroughly discussed in the environmental assessment.

1.0-10

Response 1.0-10

Refer to Master Response Comment 2, *Facility Shutdown*, Response 1.0-4, and Response 1.0-9. PR 415 would require existing rendering facilities, unless exempted under PR 415 (l), to enclose certain rendering operations, install odor emission control equipment, or operate the rendering process within a closed system, and carry out BMPs. If a rendering facility is not able to meet the requirements of PR 415 through various compliance options, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or would generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal carcasses and parts.

Section 20890, Title 27, California Code of Regulations, provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. In 2006, the Southern San Joaquin Valley experienced a larger-than-normal number of dairy and other animal mortalities due to extreme temperatures. In response to the heat event and the intermittent operation of key rendering facilities in the valley, a series of recommendations were developed and approved by CalEPA and the California Department of Food and Agriculture (CDFA). Disposal at landfills is only recommended if rendering capacity is exceeded or suspended. Only the Kettleman Hills facility in Kern County accepts disposal of carcasses and self-haul is not permitted. In the event that rendering equipment is broken down or needs to conduct emergency rendering services, PR 415 allows a rendering facility to accept materials from another rendering facility that cannot conduct rendering activities for up to 7 days if the accepting rendering facility meets the requirements under subdivision (k). Therefore, built into the rule language, PR 415 has a provision to prevent diversion of animal carcasses and parts to landfills. Since PR 415 is not expected to cease existing rendering operations, it would be speculative to assume that animal carcasses and parts would be diverted to landfills. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

D1. Response to Comments

- In Section XVII it is again assumed that Rule 415 will not cause the closure of any rendering facilities or if it does cause a closure of a facility, another facility in close proximity can take the additional material therefore not resulting in a net change or cause for additional transportation demands or services. Again the City of Vernon believes these assumptions are false and that Rule 415 will cause some rendering operations to cease which will require certain product to be transferred outside of the District's boundaries. The impacts to the transportation system caused by the shutdown of certain rendering facilities should be evaluated.

1.0-11

Response 1.0-11

Refer to Master Response Comment 2, *Facility Shutdown*, Response 1.0-4, Response 1.0-9, and Response 1.0-10. The comment does not provide substantial evidence that compliance with PR 415 would result in facility closure or that one or more existing rendering facilities is not able to accept the rendering materials. The EA has analyzed and disclosed the potential impacts on transportation/traffic as a result of the implementation of PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

- Until all of the above concerns are studied the XVIII Mandatory Findings of Significance cannot be determined and it is quite probable that potentially significant impacts to the environment will result from adoption of Rule 415.

1.0-12

Response 1.0-12

Refer to Master Response 2, *Facility Shutdown*, and Responses 1.0-2 through 1.0-11. Based on the analysis conducted in the EA, PR 415 is not expected to cause any significant adverse environmental impacts. This comment does not include substantial evidence that provisions of PR 415 would require facilities to shut down, divert rendering product outside of SCAQMD's jurisdiction, adversely affect storm water collection systems, conflict with applicable land use, zoning, or fire code regulations, or cause any other adverse environmental impacts. The comment does not include any specific evidence that would alter any of the conclusions reached in the EA. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

D1. Response to Comments

Again the City of Vernon appreciates the opportunity to comment on the Draft Environmental Assessment prepared for Rule 415 and requests that further studies be conducted prior to the adoption of the analysis to ensure that the Rule will not have a significant effect on the environment.

1.0-13

Response 1.0-13

See Master Response 3, *Odor Control Measures*, and Responses 1.0-2 through 1.0-12. SCAQMD staff has worked in good faith with the affected rendering facilities to minimize potential operational impacts. During the PR 415 rulemaking process, research was done to determine the current and industry accepted practices to control rendering odors in urban areas. As a result of the extensive outreach efforts to the rendering facilities, various changes to the scope and requirements of PR 415 have been made. These changes are intended to provide rendering facilities flexibility during implementation of the odor control measures. SCAQMD staff has reviewed the changes, and no significant adverse environmental impacts were identified. Since existing rendering operations are not expected to cease, animal carcasses and parts are not expected to be diverted because of the requirements included in PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

D1. Response to Comments

D1-2.2 LETTER 2 – Farmer John



August 12, 2015

SENT VIA EMAIL

South Coast Air Quality Management District
 21865 S. Copley Dr.
 Diamond Bar, CA
 Attn: Jeffrey Inabinet
 c/o Office of Planning, Rule Development and Area Sources

**RE: Comments Regarding June 25, 2015 California Environmental Quality Act (CEQA) Environmental Assessment (EA) for Proposed Rule 415 (PR415) - Odors from Rendering Facilities
 Clougherty Packing, LLC
 ID 16978
 3049 E. Vernon Ave., Vernon, CA 90058**

Jeff:

On June 25, 2015, South Coast Air Quality Management District (SCAQMD) published the CEQA EA for Proposed Rule 415 (PR 415) - Odors from Rendering Facilities. This letter includes a discussion of Clougherty Packing's regulatory oversight and commitment to the surrounding community, an overview of the important issues with the currently proposed EA, and detailed comments, questions and suggested revisions to the EA.

2.0-1

Background

Clougherty Packing, LLC is a food processing facility that has been in its current location since 1931 and currently employs more than 1,500 people in the City of Vernon. The facility includes an integrated rendering and pretreatment wastewater operations. The rendering operation is covered in our Title V permit and employs Best Available Control Technology (BACT) ensuring that emissions are below permitted limits. The facility operates under various Federal, State and local environmental permits including our Title V Air Permit and Permit for Industrial Wastewater Discharge from the County Sanitation Districts of Los Angeles County. In addition, our facility also operates under the U.S. Department of Agriculture and Food Safety and Inspection Services inspection and processing standards.

2.0-2

D1. Response to Comments

South Coast Air Quality Management District
 Proposed Rule 415
 California Environmental Quality Act
 Mr. Jeff Inabinet
 Page No. 2 of 5

Clougherty Packing, LLC seeks to promote responsible rendering practices to the extent feasible in order to live peaceably with our neighbors. Approximately 90% of the 1,500 Clougherty Packing, LLC rendering operations employees live within 10 miles of the facility, therefore, Clougherty Packing, LLC has a vested interest in ensuring that the rule's purpose is fulfilled. We commend the AQMD for asking for feedback from the stakeholders to this proposed rulemaking and implementation.

2.0-2
 Cont'd

Clougherty Packing, LLC recognizes the shift in regulatory philosophy PR 415 represents in terms of placing the principal focus on prevention of odors that can pose a nuisance to neighbors. We have a long history of using preventive measures to limit odors and we recognize that we have a corporate responsibility towards the community.

Important Issues

The following section describes in more detail the important issues that Clougherty Packing, LLC with the PR415 CEQA EA. An overview is as follows:

1. SCAQMD underestimated the magnitude of construction needed to comply with the currently proposed PR415. 2.0-4
2. SCAQMD overestimated the ability of nearby rendering facility to accept rendering materials if a facility were to stop operations as a result of PR415's compliance requirements. 2.0-5
3. The EA doesn't adequately address the additional requirements from existing regulations as a result of PR415 compliance (ex - California Fire Codes). 2.0-6

1. Underestimated Magnitude of Construction

The estimated construction surface area for new enclosures within EA's Table 2-2 (53,500 ft²) grossly underestimated the worst-case scenario. Clougherty Packing, LLC (an integrated rendering plant) will require roughly 221,000 ft² for six new structures and associated trenching/concrete activities for the footings of the new structures, as well as paving of the receiving area as a result of compliance with PR415. The updated worst-case construction scenario increases the daily emissions from Peak Construction Phase for nitrogen oxides (NO_x) from 34.99 lb/day to 144.54 lb/day, which is greater than the 100 lb/day CEQA NO_x Significance Threshold. Clougherty Packing, LLC suggests that SCAQMD revise the worst case scenario to represent Clougherty Packing, LLC's compliance requirements. Refer to Appendix A for additional information.

2.0-7

D1. Response to Comments

South Coast Air Quality Management District
 Proposed Rule 415
 California Environmental Quality Act
 Mr. Jeff Inabinet
 Page No. 3 of 5

2. Overestimated Surrounding Facilities Raw Rendering Material Capabilities
 Page 2-15 of the EA states "in the unlikely event that it is not economically feasible for an affected facility to continue current operations, a facility could close down and the product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport." Clougherty Packing, LLC believes that SCAQMD is overestimating the surrounding facilities' ability to accept additional raw rendering material. Increasing an existing rendering facility's permitted capacity requires various permit revisions and favorable market conditions. Therefore, Clougherty Packing, LLC suggests that SCAQMD revise the EA to include a worst-case scenario of disposing of the permitted raw rendering material capacity of a facility that would not continue current operations as a result of PR415 compliance requirements. Clougherty Packing, LLC conducted a preliminary worst-case analysis by calculating the lifetime social cost of carbon (\$9,400,000) from the additional greenhouse gas (GHG) emissions (191,000 tons) from shipping and decomposition of one year of Clougherty Packing, LLC permitted capacity (300 tons/day) within a landfill. The analysis was conducted using 40 CFR 98 Subpart C and TT emission calculation methodologies and the Environmental Protection Agency's "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis" and has been included in Appendix B.

2.0-8

3. Additional Compliance Requirements From Existing Regulations
 Clougherty Packing, LLC believes that SCAQMD did not adequately discuss the additional regulatory requirements that would be applicable due to PR415 compliance. Page 2-32 of the EA states "The proposed project does not require any activities which would be in conflict with fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities." Inedible rendering material has high amounts of fats and oils and greases and the material meets the definition of Class IIIB combustible liquid, therefore, the new enclosures must meet specific building code, California Fire Code, and Occupational Safety and Health Act (OSHA) requirements.

2.0-9

Detailed Comments

Clougherty Packing assembled a list of detailed comments and suggested revisions to PR415 CEQA EA, which are included within Appendix A.

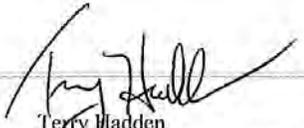
2.0-10

D1. Response to Comments

South Coast Air Quality Management District
Proposed Rule 415
California Environmental Quality Act
Mr. Jeff Inabinet
Page No. 4 of 5

We appreciate your consideration of our comments and suggested revisions to PR415 CEQA EA.
Please call me at (323) 583-4621 x457 if you have any comments or questions.

Sincerely,



Terry Madden
Vice President of Operations

Enclosure:
Appendix A - PR415 CEQA EA - Detailed Comments and Suggested Revisions
Appendix B - Social Cost of Carbon - Worst-case Rendering Material Landfill Analysis

D1. Response to Comments

Appendix A
PR415 CEQA EA - Detailed Comments and Suggested Revision

D1. Response to Comments

- | | |
|--|--------------|
| <p>1. Page 1-1. In the event that a new version(s) of Proposed Rule 415 is developed and/or introduced, that an updated CEQA would also be required including but not limited to project description, project objective, etc.</p> | <p>2.1-1</p> |
| <p>2. Page 2-4. "In order to ensure that any potential significant adverse environmental impacts are identified and evaluated and that feasible methods to reduce or avoid any potential significant adverse environmental impacts associated with the proposed project are identified and evaluated, an environmental impact analysis was conducted based on one of the larger facilities in the current affected facility inventory as a basis to estimate maximum foreseeable impacts."</p> <p>Proposed Rule 415 captures both rendering facilities and integrated rendering facilities. As a result, Clougherty believes that SCAQMD did not accurately assess the unintended impacts on operations at integrated facilities. For example, an odor mitigation plan ((h)(F)(ii)) requires that all sources be identified that can cause odors and subsequently be met through best management practices including closed systems and permanent enclosures. This is important since Clougherty Packing, LLC is the largest integrated renderer captured under this rule and may require additional equipment to be in compliance. Was it the intent of SCAQMD to include agricultural operations, including hog and food processing operations, within the scope of this proposed rule as well?</p> | <p>2.1-2</p> |
| <p>3. "The affected rendering facilities are located in the City of Vernon, CA," - Pg.2-5 Clougherty Packing, LLC believes that SCAQMD incorrectly listed a rendering facility in the City of Vernon. This facility operates its rendering operations in the City of Los Angeles. Proposed Rule 415 identifies rendering operations. Currently there are more than five rendering facilities in the SCAQMD jurisdiction that exist beyond these two cities; and would mean that these facilities would be subject to this rule as well. The Environmental Assessment for PR415 must identify and include its analysis the proposed impacts from these other rendering facilities.</p> | <p>2.1-3</p> |
| <p>4. "...[P]roposed project would not involve the demolition of any existing buildings or facilities..."-Pg. 2-5 Clougherty Packing, LLC believes that SCAQMD did not accurately assess the need for demolition of existing equipment or possibly portion of buildings because of the highly industrialized areas surrounding the rendering activities. These demolition activities need to be included in the Environmental Assessment for PR415. For example, to allow egress for the City of Vernon Fire Department, certain structures would need to be moved or relocated. For H-1 rated buildings such as the one PR415 is proposing, typical wood construction would be allowed as long as there 60 yards of separation. However, since these facilities have been in operation for over 50 years substantial modifications and improvements have occurred (e.g. piping on walls) in and around their footprint as a result of compliance measures or other requirements. As a result, these improvements are going to have to be removed, restructured and retrofitted so as to be in compliance with existing California Building Code regulations since they will be required to be enclosed.</p> | <p>2.1-4</p> |

D1. Response to Comments

5. **Page 2-5,6. "The proposed project is not expected to degrade the visual character of any site or its surrounding from the existing visual character, affect any scenic vista or damage scenic resources."**

2.1-5

The 2007 General Plan for City of Vernon identified the Clougherty Packing, LLC murals as a "notable landmark surrounding the company's meat processing facility on Vernon Ave."-Pg. 133. Also, a concern exists that the contact information will be misused in the event of a demonstration at the facility. This may place people in harm's way as a result. Any new structure built within 50 feet from the entrance or new signage located in or around its wall would need to be addressed.



6. **Page 2-22. "The proposed project is not expected to require physical changes to a site, feature, place, cultural landscape...."**

2.1-6

The Clougherty Packing, LLC Facility's iconic artwork on the outside walls of the facility has been featured in various movies, parodied in television, used in documentaries, and has been included on various tours, and is featured on various social media sites including TripAdvisor due to its artwork murals on its walls. As a result, Clougherty Packing, LLC feels that SCAQMD incorrectly assessed the impact of placing signage.

7. **Page 2-7. "The proposed project conflicts with existing zoning for agricultural use...."**

2.1-7

Clougherty Packing, LLC believes that SCAQMD incorrectly assessed the agricultural operations that occur. The facility has hog operations, meat packing operations and rendering operations. The facility is the last hog conversion operations in the west coast. The facility operates under the California Department of Food and Agriculture. The 2015 City of Vernon Ordinance allows for rendering operations and slaughterhouse operations. Operations at Clougherty Packing, LLC has occurred for more than 80 years in its current location. The Ordinance is consistent with Section 3482.6 of the California Civil Code and Health and Safety Code 41704. Both identify that meat packing and rendering operations as "agricultural use" under Government Code Section 51201. These operations that occur in an area that is specifically zoned where further "development" is in direct conflict with Proposed Rule 415

8. **Page 2-8. "Adoption of the proposed project would not result in any new construction of buildings... [that is in] conflict with zoning for agricultural use...."**

2.1-8

Clougherty Packing, LLC believes that SCAQMD incorrectly assessed the agricultural operations that occur, and that further development under Government Code 65567 would be in direct conflict with Proposed Rule 415 (See Comment No. 9). The City of Vernon has been identified as having facilities in a "highly industrialized setting"(Pg. 2-5). The City of Vernon's 2007 Zoning and Planning stated that open spaces do exist in the City, but are limited to privately owned areas that are not needed for recreational purposes due to the industrial nature of a company. (pg. 128) "Open space does provide visual relief from hard urban surfaces."-Ibid. Under Government Code Section 65560(a) (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted

D1. Response to Comments

pursuant to Section 65563. Under Government Code Section 65560(a) (a) (2) Open space used for the managed production of resources, including but not limited to... areas of economic importance for the production of food... Then Government Code 65567 states that "No building permit may be issued, no subdivision map approved, and no open-space zoning ordinance adopted, unless the proposed construction, subdivision or ordinance is consistent with the local open-space plan." Therefore, Proposed Rule 415 would be in direct violation with Government Code 65567.

2.1-8
Cont'd

9. **Pg. 2-12. Table 2-2 depicts the estimated enclosure sizes to be added for the worst case scenario facility analysis.**

Please see Comment No. 4. If the Proposed Rule 415 was intended to capture agricultural operations, including hog and food processing operations, within the scope of this proposed rule as well, therefore the worst case scenario would be for an integrated facility since rendering operations would constitute a small amount of its operations. The worst-case construction emissions evaluated in the PR415 Environmental Assessment needs to be revised as it would not include the construction of all enclosures expected to be required at Clougherty Packing, LLC. In Lieu of Table 2-2, the following table depicts the estimated enclosure sizes to be added for the worst-case scenario facility analysis for an integrated rendering facility:

2.1-9

| Area | Size of Structure (sq. ft.) |
|---|-----------------------------|
| Wastewater Treatment Area and Blood Meal Rendering Operations (new) | 18,000 |
| Secondary processing plant (existing) | 3,000 |
| Secondary Processing Plant (Meat and Bone Meal) (new) | 6,000 |
| Receiving Area (existing) | 1,600 |
| Material Handling Building (existing) | 1,600 |
| Outside Storage Building for Material (new) | 3,500 |
| Hog Pens Unloading / Trucking Area | 110,000 |
| Hog Pens (new) | 83,500 |

10. **Page 2-12. "Additionally, the enclosures are expected to be equipped with high-speed doors and other appropriate building envelope openings in order to ensure that negative pressure is maintained."**

The PR415 EA needs to evaluate whether a permanent enclosure made of "overlapping plastic flap curtains" according to Proposed Rule 415 (f)(3)(D), would be sufficient to reducing odors if other appropriate building envelope openings have different requirements.

2.1-10

11. **Page 2-12 to 2-13. "Peak daily construction air quality impacts... have been determined to not exceed any applicable significance thresholds."**

Clougherty Packing believes that SCAQMD underestimated the emissions due to not taking into account the worst-case scenario for an integrated renderer's compliance with Proposed Rule 415. The previous "worst-case" scenario was based on 53,500 square feet, the actual "worst-case" scenario (i.e., closures that are expected to be required at Clougherty Packing, LLC) is 221,000 square feet for six new structures and associated trenching / concrete activities for the footings of the new structures, as well as paving of the receiving area. As a result, it is estimated that the NOx significance threshold would be exceeded.

2.1-11

D1. Response to Comments

| PEAK CONSTRUCTION | vOC | CO | NOx | SOx | PM10 | PM2.5 |
|---|---------|---------|---------|---------|---------|---------|
| | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day |
| Daily Emissions from Peak Construction Phase* | 14.38 | 111.74 | 144.54 | 0.17 | 19.79 | 10.82 |
| SCAQMD CEQA SIGNIFICANCE THRESHOLD | 75 | 550 | 100 | 150 | 150 | 55 |
| SIGNIFICANT? | NO | NO | YES | NO | NO | NO |

2.1-11
Cont'd

12. Page 2-13. "The installation of these APCDs was evaluated to determine the potential for significant environmental impacts at the largest affected facility for the worst- case scenario facility analysis."

Clougherty Packing, LLC believes that SCAQMD underestimated the amount of scrubbers needed in the event of that Proposed Rule 415 intended to capture other agricultural operations from an integrated rendering plant. In order to properly size an APCD scrubber system, one would need the following:

- a. Size of the entrance
- b. The amount of doors needed.
- c. 200 fpm of velocity through any openings
- d. Ammonia and Hydrogen Sulfide reduction requirements of 70%. e. Worst Case Scenario: Every door is open.

2.1-12

Since material will be loaded and unloaded, the largest door opening would have to fit a forklift. Based on current size estimates, this would be a door approximately 12 feet x 12 feet x 1 feet. Each building would require at least two service doors and one entrance door. Therefore, the cubic feet per minute would be:

- 1. Forklift Service Door: (12 feet x 12 feet) x 200 FPM = 28,800 CFM.
- 2. Entrance Door: (6.7 feet x 3 feet) x 200 FPM = 4,020 CFM
- 3. Truck Service Door: (14 feet x 20 feet) x 200 FPM = 56,000 CFM

| Area | Doors | Control Equipment |
|---|--------------------------------------|-------------------|
| Wastewater Treatment Area and Blood Meal Rendering Operations (new) | • 2 Service Doors • 2 Entry Doors | 3 Scrubbers |
| Secondary processing plant (existing) | • 2 Service Doors • 1 Entry Door | 2 Scrubbers |
| Secondary Processing Plant (Meat and Bone Meal) (new) | • 2 Service Doors • 1 Entry Door | 2 Scrubbers |
| Receiving Area (existing) | • 2 Service Doors • 1 Entry Door | 2 Scrubbers |
| Material Handling Building (existing) | • 1 Service Doors • 1 Entry Door | 1 Scrubber |
| Outside Storage Building for Material (new) | • 1 Service Doors • 1 Entry Door | 1 Scrubber |
| Hog Pens Unloading / Trucking Area (new) | • 2 Service Doors • 1 Entry Door | 4 Scrubbers |
| Hog Pens (new) | • 3 Service Doors • 3 Entry Doors | 5 Scrubbers |
| Food Processing Activities (e.g. Bacon, hot dogs, sausages, etc.) | N/A | 10 Scrubbers |

13. Page 2-24. "To analyze the "worst-case" emissions from construction activities associated with the installation of the APCDs, SCAQMD staff assumed that two APCDs could be installed at any given time for the worst-case scenario facility analysis. It is expected that the facility would not completely shut down operations for the installation of APCDs at all three required locations at the same time."

Clougherty Packing, LLC believes that SCAQMD underestimated the amount of "worst-case emissions" in the event of that Proposed Rule 415 intended to capture other agricultural operations from an integrated rendering plant resulting in NOx significant threshold exceedance. The previous "worst-case" scenario analyzed in the PR415 EA

2.1-13

D1. Response to Comments

was based on four scrubbers, the actual "worst-case scenario (i.e., APCD's expected to be required at Clougherty Packing, LLC) is 30 scrubbers for six new structures. Also, because (h)(1)(i) Odor Mitigation Plan, The Peak Construction Emissions Due to Installation of New APCDs for Worst-Case Analysis Scenario would result in the SCAQMD NOx significance threshold being exceeded if the assumption was that only two APCDs were installed at any given time. The following table shows the expected construction emissions.

2.1-13
Cont'd

| PEAK CONSTRUCTION | vOC | CO | NOx | SOx | PM10 | PM2.5 |
|------------------------------------|---------|---------|---------|---------|---------|---------|
| | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day |
| Total Project Emissions | 24.00 | 122.78 | 156.75 | 0.20 | 12.08 | 10.73 |
| SCAQMD CEQA SIGNIFICANCE THRESHOLD | 75 | 550 | 100 | 150 | 150 | 55 |
| SIGNIFICANT? | No | No | Yes | No | No | No |

14. **Page 2-14. "Furthermore, as a "worst-case," the SCAQMD's air quality impacts analysis assumes that construction could take up to two months to complete."**
Clougherty Packing, LLC believes that SCAQMD underestimated the amount of time construction would take because SCAQMD's "worst-case" facility did not take into account Proposed Rule 415's unintended impacts on integrated rendering facilities. Construction would more than likely last longer than the two months, because SCAQMD's "worst-case" facility did not take into account integrated rendering facilities that would need to construct up to 30 scrubbers and additional enclosures. The EA for PR415 needs to be revised to include the appropriate assumptions for a "worst-case" facility..
15. **Page 2-14. "All of the construction impacts from the project are not significant for criteria pollutant emissions."**
Clougherty Packing, LLC believes that construction emissions exceeded NOx significance threshold due to SCAQMD's underestimation caused by the improper selection of a "worst-case" facility.
16. **Page 2-14. "Construction emissions at the worst-case analysis scenario facility would not exceed any of the significance thresholds identified in Tables 2-3 and 2-5."**
Construction emissions would exceed the NOx significance threshold; therefore, the EA for PR415 should be revised to include the appropriate assumptions and recirculated for public review.
17. **Page 2-15. "A screening health risk analysis ... was prepared based on... the facility with the highest estimated construction emissions."**
Clougherty Packing, LLC believes that SCAQMD underestimated the emissions because SCAQMD's "worst-case" facility did not take into account Proposed Rule 415's unintended impacts on integrated rendering facilities. The screening health risk analysis was not prepared based on the facility with the highest estimated construction emissions; therefore, this analysis needs to be revised.
18. **Page 2-15. "Additionally, in the unlikely event that it is not economically feasible for an affected facility to continue current operations, a facility could close down and the product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport. However, the affected facilities are located very close to each other, and any additional trips generated would**

2.1-14

2.1-15

2.1-16

2.1-17

2.1-18

D1. Response to Comments

likely be less than a few miles. The closure procedures and possible demolition of a facility could not be predicted at this time since the subsequent operation of the site would be unknown. Thus, attempting to predict impacts from the closure and any subsequent operation of the facility would be speculative. Moreover, staff has not received evidence demonstrating that compliance would be infeasible for any facility." The scenario assumes that all three dedicated rendering facilities are operating after Proposed Rule 415 has passed. Acceptance of hog rendering material or any type of meat used in the preparation of food products by an outside firm is usually dependent on availability. The worst case scenario for risk management is that two rendering facilities no longer exist here in Vernon because of Proposed Rule 415, and the third remaining facility cannot take anymore material for whatever reason (e.g. meeting its daily throughput permit limit, breakdown, etc.). As a result, a facility is left with determining options on where this material would need to go. Additional rendering facilities in the SCAQMD jurisdiction would face the same issue as Vernon Rendering facilities under Proposed Rule 415 which means that they would not be able to operate.

2.1-18
Cont'd

Under the worst case scenario, the "product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport." Under Title 3, California Code of Regulations, Section 1180.39 states that "any parts or products of animals disposed of by inspected establishments, retail stores, custom slaughterers and custom processors and which are not intended for use as human food shall be disposed of through licensed renderers, licensed pet food processors, licensed collection centers or other method approved by the Director. As a result, California Landfills would not be able to take rendered materials. Cal-EPA has developed Emergency Animal

Disposal guidelines which include: Temporary Storage for transport to rendering materials, Disposal at permitted landfills, and On-Site Composting. However, none of those options are currently available within the District at this time without substantial cost or would not be approved under current USDA regulations. Clougherty Packing, LLC and anyone dependent on rendering operations would need to send out material to the nearest disposal landfill, which would be either Kettleman Hills, California or Yuma, Arizona.

19. Page 2-18. "Overall CO2 Equivalent (eq) Increases for Worst-Case Analysis Scenario (metric tons/year)."

Clougherty Packing, LLC's daily rendering throughput limit is 300 Tons. An 80 yard truck can hold a maximum of 28 Tons. Approximately 11 trucks would be needed to ship material to a landfill. Since Yuma Landfill is the farthest, then the worst case scenario would be almost 600 miles round trip. Vehicle mile per gallon rating is approximately 8 mpg. Therefore, for one day's trip to calculate Greenhouse Gas Emissions under 40 CFR 98 Subpart TT - Industrial Waste Landfills Equation TT-1, 40 CFR 98 Subpart C Table C-1 Distillate Fuel Oil No. 2 Default CO2 Emission Factor and 40 CFR 98 Subpart C Table C-1 Distillate Fuel Oil No. 2 Default High Heat Value:

2.1-19

| | Diesel Combustion GHG Emissions (CO2e metric tons) | Yearly GHG Emissions (CO2e metric tons) | Lifetime Landfill CH4 Emissions (CH4 metric tons) | Lifetime Landfill GHG Emissions (CO2e metric tons) |
|----------|--|---|---|--|
| Annually | 2,280.5 | 31,093 | 7,541.93 | 188,548 |

The landfilled rendering material will decompose in its first year releasing the majority of its GHG emissions. If Clougherty Packing, LLC had to send one day's maximum total to landfill, this would amount to 119.6 CO2e metric tons per year. In the worst case scenario,

D1. Response to Comments

if Clougherty Packing, LLC decided to send all of its rendering material to landfill, it is estimated that approximately 31,093 Waste GHG (m.t.CO2e) would be generated in its first year.

2.1-19
Cont'd

20. **Page 2-18. "Construction emission calculations were conducted for one of the larger facilities in the current affected facility inventory. This particular facility was chosen for the analysis because it required the most construction activities of the five facilities currently in the affected inventory. Therefore, this construction estimate was used as an example for a "worst-case" impact scenario"**
Because additional scrubbers may be needed as well as additional construction activities required to be in compliance with Proposed Rule 415, the actual estimate for Greenhouse Gases are:

2.1-20

| Annual CO2eq Emission Increases Due to: | CO2 | CH4 | CO2eq |
|---|--------|--------|---------|
| | lb/day | lb/day | MT/year |
| Installing New Enclosures and Paving Activities | 18,374 | 2.69 | 8.26 |
| Installing New APCDs | 18,325 | 2.93 | 8.25 |
| | TOTAL: | | 16.51 |

In addition, Table 2-7 of the Draft EA must include the GHG emissions from the construction and operation of additional equipment at all facilities affect by PR415.

21. **Page 2-16. "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same."**
Project-specific air quality impacts from implementing the proposed project would exceed air quality significance thresholds (Table 2-1) for NOx and GHG for construction of enclosures, APCDs, and sending material to Landfill. As a result, SCAQMD is required under CEQA Guideline §15064.7, to determine potential adverse impacts from the proposed project that are "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. While construction impacts under Proposed Rule 415 may differentiate throughout the various rendering facilities throughout the SCAQMD jurisdiction, GHG impacts resulting from the loss of rendering facilities must be evaluated.

2.1-21

22. **Page 2-18. "Indirect GHG and criteria pollutant emissions are expected from the generation of electricity to operate new equipment that occurs off-site at electricity generating facilities (EGFs)."**
It is estimated that from four Vernon Facilities, there will be 75 GWs of electricity to be used. The EA for PR415 needs to be revised to include the revised GHG emissions associated with the increase in electricity use.

2.1-22

23. **Page 2-19. "Under the SCAQMD Regional Clean Air Incentives Market (RECLAIM) program (that regulates NOx and SOx emissions)..."**
Clougherty Packing, LLC is a RECLAIM facility. As such it is required to report RECLAIM emissions under its Title VIRECLAIM permit Rule 109 emissions, including equipment from construction activities (e.g. small generators, etc.) From Construction activities and APCD installation, it is estimated that approximately 300 lbs/NOx would be generated. As a result additional recordkeeping measures along with credits would have to be purchased.

2.1-23

D1. Response to Comments

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| 24. As discussion in Comment #20, the 2007 General Plan for City of Vernon identified the Clougherty Packing, LLC murals as a "notable landmark surrounding the company's meat processing facility on Vernon Ave."-Pg. 133. The potential impacts to this historic building should be included in the Draft EA for PR415. | 2.1-24 |
| 25. Page 2-22, last 2 paragraphs. Not the notification to the Native American Tribes under AB52 is required PRIOR to the release of a Negative Declaration or EA. | 2.1-25 |
| 26. Page 2-24 last paragraph and 1st paragraph of 2-25. Data used for electricity consumption was based on 2008 data. More recent data from electrical use in Los Angeles should be provided. LADWP published its 2014 Integrated Resource Plan (IRP) which provides more recent information on electricity use in Los Angeles. | 2.1-26 |
| 27. Page 2-24. "...[A]additional electricity would be required by the operation of this new equipment." Because the SCAQMD assessment did not include the worst-case scenario for a facility, there will be significantly more scrubbers needed than what was anticipated. Further, industry estimates peg the usage to be approximately 75 horsepower rating to operate each scrubber. As a result for the expected four facilities, there will approximately 2,850 KWH used annually, a five-fold usage estimate. | 2.1-27 |
| 28. Page 2-24. "No consumption information was available for City of Vernon Gas & Electric." In 2008, Carlos Fandino, provided this information. | 2.1-28 |
| 29. Page 2-25. "SCAQMD staff concludes that the amount of electricity required to meet the incremental energy demand associated with the proposed rule requirements would not result in a significant adverse electricity energy impact." As discussed above in the above comments, Clougherty Packing, LLC expects to require up to 30 new scrubbers. The electricity demand in the EA for PR415 needs to be revised to include the increase electricity demand. The additional 2,015 megawatt-hours annually required to operate the new APCDs and air handling equipment at the worst-case facility analysis scenario would be 0.008 percent of the 2008 consumption of 25,921 gigawatts and the peak consumption of 0.23 megawatt-hours would be 0.00004 percent of the peak 5,717 megawatt-hours consumption. Moreover, if all five facilities operated the same amount of air handling and control equipment as the worst-case scenario facility, the additional 10,075 megawatt-hours (2,015 megawatt-hours x 5 facilities) annually required would be 0.04 percent of the 2008 consumption of 25,921 gigawatts and the peak consumption of 1.15 megawatt-hours (0.23 megawatt-hours x 5 facilities) would be 0.0002 percent of the peak 5,717 megawatt-hours consumption. | 2.1-29 |
| 30. Page 2-25. "To estimate construction workers' fuel usage per commute round trip, the SCAQMD staff assumed that workers' vehicles would get 20 miles to the gallon and would travel 40 miles round trip to and from the construction site in one day. " Table 2-9, page 2-25. The fuel usage for construction activities at all facilities should be included in Table 2-9. The worker's fuel usage must be revised to account for the increase in construction activities expected to occur at Clougherty Packing, LLC. | 2.1-30 |
| 31. Table 2-9, page 2-25. The fuel usage for construction activities at all facilities should be included in Table 2-9. | 2.1-31 |
| 32. Page 2-27, under Discussion VII.a: The Uniform Building Code has been replaced with the California Building Code. | 2.1-32 |

D1. Response to Comments

33. **Page 2-32. "Affected facilities must comply with all local and county requirements for fire prevention and safety. The proposed project does not require any activities which would be in conflict with fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities."** 2.1-33
- a. Inedible rendering material has high amounts of fats and oils and greases, especially when raw. This material is a class IIIB combustible liquid. Based on the California Fire Code, Table 5003.1.1(1) for the storage of Class IIIB you can have up to 13,200 gallons, for a closed use system. For an open use system you can have up to 3,300 gallons. There is also a footnote (f) Quantities shall not be limited in a building equipped throughout with an approved sprinkler system in accordance with section 903.3.1.1 (H-1 Building Rating). 2.1-34
- b. The equipment that is used to process rendering material that is housed under a permanent enclosure can cause grease fires. 2.1-35
- c. Because some rendering equipment identified in Proposed Rule 415 will have combustible liquid that is heated (e.g. dupps cooker, heated tanks in wastewater), the type of building required will not be suitable for wood, or plastic under Chapter 26 of the Building Code. The 'H' use is limited in size and cannot exceed 10% of the floor area. There are size limitations if the H use is not located along the perimeter of the building. Occupancy separations would be required. Typical wood construction is not permitted for an H-1 use. Depending on the H classification, the square footage area needed for the H use however appears to be over the allowable area for wood construction. Therefore, the preliminary assessment is that H use may limit construction to a type I or II, which is a totally non-combustible construction. This requirement could require additional demolition and construction activities not included in the EA for PR415. 2.1-36
- d. Because of the City of Vernon Fire Department and its Class 1 Rating, equipment will need access to all areas of the facility, many of the structures proposed under PR415 will provide access challenges as they encroach onto current existing emergency pathways. In order to have access through these emergency pathways, facilities will have to accommodate fire trucks and all other equipment in the City's vast arsenal of Class 1 equipment. Therefore, any new structure proposed will need to meet these requirements. Since Vernon rendering facilities have been existence for more than 50 years, and we have been operating as an open process, changes proposed by Rule 415 will be an expensive challenge to meet these new regulations and would require additional construction/demolition activities that were not evaluated in the EA for PR415. 2.1-37
- e. Because there are workers assigned to wastewater treatment and others identified and regulated in Proposed Rule 415, additional precautions in the closed system, ventilation or building requirements will be needed per California Code of Regulations Title 8, General Industry Safety Orders and/or the federal Occupational Safety and Health Act (OSH Act) includes, in Section 5(a)(1). Here are some but not all of the requirements associated with converting once open processes to closed systems, permanent enclosures with ventilation and odor control requirements. 2.1-38
- f. Because the proposed rule requires permanent enclosures for heated equipment (e.g. continuous cooker room and waste water treatment system) this will require compliance with California Code of Regulations and Subchapter 7. General Industry Safety Orders 2.1-39

D1. Response to Comments

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| <p>Group 20. Flammable Liquids, Gases and Vapors "Heating equipment may be installed in a special room separated from an area classified as Division 1 or Division 2 in Table FL-9 by walls having a fire-resistance rating of at least one hour and without any openings in the walls within 8 feet of the floor into an area classified as Division 1 or Division 2 in Table FL-9. This room shall not be used for combustible storage, and all air for combustion purposes shall come from outside the building."</p> | <p>2.1-39 Cont'd</p> |
| <p>g. Because additional equipment is identified as part of the rendering process under the facility's permits including but not limited to singeing equipment, blood dryer, and hair hydrolyzer, the proposed rule does not rule out the analysis and inclusion of these systems in the event that the Odor Mitigation Plan is triggered. If these heated systems are required to be in an enclosed system or under a permanent enclosure, then they will require H-1 status.</p> | <p>2.1-40</p> |
| <p>h. Systems and/or equipment that is heated would require additional ventilation to meet Title 8 §3395. Heat Illness Prevention requirements.</p> | <p>2.1-41</p> |
| <p>i. Because equipment will be in a closed system or a permanent enclosure it would need to meet Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors Article 142. Industrial Plants.</p> | <p>2.1-42</p> |
| <p>j. Because equipment will be in a closed system or a permanent enclosure it would need to meet Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors Article 145. Tank Storage §5603. Sources of Ignition. "In locations where flammable vapors may be present, precautions shall be taken to prevent ignition by eliminating or controlling sources of ignition. Sources of ignition may include open flames, lightning, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical and mechanical), spontaneous ignition, chemical and physical-chemical reactions and radiant heat."</p> | <p>2.1-43</p> |
| <p>k. Because blood drying (and other rendering equipment) equipment uses a direct fire, it will be in violation of Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors §5476. Special Rooms, where:</p> | <p>2.1-44</p> |
| <p>(a) Floor, walls, and ceiling shall have a fire-resistance rating of at least two hours. Walls or partitions shall be continuous from floor to ceiling and shall be securely anchored. At least one wall shall be an exterior wall. Openings to other parts of the building shall not be permitted. Windows and doors shall be in exterior walls and shall be located so as to be readily accessible in case of emergency. Windows shall be of glass or plastic in metal frames.</p> <p>(b) Ventilation shall be as provided in 5475(b).</p> <p>(c) Explosion venting shall be as provided in 5475(c).</p> <p>(d) There shall be no sources of ignition from open flames, electrical equipment, or heating equipment.</p> <p>(e) Electrical equipment shall be in accordance with the California Electrical Safety Orders for Class I, Division 2 locations.</p> <p>(f) Heating, if provided, shall be by steam, hot water, or indirect means. (Title 24, T8-5476)</p> | <p>2.1-44</p> |
| <p>l. Because equipment will be in a closed system and/or in a permanent enclosure it will need to comply with Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors §5475. Separate Buildings. In which:</p> | <p>2.1-45</p> |

D1. Response to Comments

- (a) Separate buildings shall be built of at least noncombustible construction. Windows and doors shall be located so as to be readily accessible in case of emergency. Windows shall be of glass or plastic in metal frames.

2.1-45
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D1. Response to Comments

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| <p>(b) Adequate ventilation to the outdoors shall be provided. Inlet openings shall be located near the floor in exterior walls only. Outlet openings shall be located at the high point of the room in exterior walls or roof. Inlet and outlet openings shall each have a minimum total area of one (1) square foot per 1,000 cubic feet of room volume. Discharge from outlet openings shall be directed or conducted to a safe location.</p> <p>(c) Explosion venting shall be provided in exterior walls or roof only. The venting area shall be equal to not less than one square foot per 30 cubic feet of room volume and may consist of any one or any combination of the following: walls of light, noncombustible material, preferably single thickness, single strength glass; lightly fastened hatch covers; lightly fastened swinging doors in exterior walls opening outward; lightly fastened walls or roof designed to relieve at a maximum pressure of 25 lb. per sq. ft.</p> <p>(d) There shall be no sources of ignition from open flames, electrical equipment, or heating equipment.</p> <p>(e) Electrical equipment shall be in accordance with the California Electrical Safety Orders for Class I, Division 2 locations.</p> <p>(f) Heating, if provided, shall be by steam, hot water, or other indirect means. (Title 24, T8-5475)</p> | <p>2.1-45 Cont'd</p> |
| <p>m. Because equipment (including tanks) will be in a closed system or permanent enclosure it would need to California Code of Regulations Title 8 and Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors Article 142. Industrial Plants where the use and handling of flammable or combustible liquids is only incidental to the principal business (e.g. food processing) include distance requirements, fire resistance requirements and no open flames,</p> | <p>2.1-46</p> |
| <p>n. Because equipment will be in a permanent enclosure it would need to meet Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors requiring: (a) Vapor areas shall be limited to the smallest practical space by maintaining a properly designed system of mechanical ventilation arranged to move air from all directions towards the vapor origin area to a safe outside location. Ventilating systems shall conform to Section 5154.</p> <p>(b) Required ventilating systems shall be so arranged that the failure of any ventilating fan shall automatically stop any dipping conveyor system.</p> <p>(c) When a required ventilating system serves associated drying operations utilizing a heating system which may be a source of ignition, means shall be provided for pre-ventilation before heating system can be started; the failure of any ventilating fan shall automatically shut down the heating system; and the installation shall otherwise conform to NFPA Standard for Ovens and Furnaces (NFPA No. 86A1977). NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code. o.</p> | <p>2.1-47</p> |
| <p>o. Whether plastic, used as part of the permanent enclosure could become brittle and break off thereby posing a hazard since the hogs could eat these pieces which are indigestible, violate 9 CFR Ch. 3 Section 313.1(a) where "livestock pens, driveways and ramps shall be maintained in good repair, would be including the California Gull, another concern are the hogs .</p> | <p>2.1-48</p> |
| <p>34. Page 2-30, VIII.d: The Draft EA should have included whether the facilities affect by Rule 415 were included on the §65962.5 list.</p> | <p>2.1-49</p> |

D1. Response to Comments

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| 35. Pages 2-34 and 2-35. The estimated increase in water demand should include water required for the washdown of receiving areas and or any open drums and containers. | 2.1-50 |
| 36. Page 2-34. "Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations." Because current definitions in proposed rule 415 do not clearly exempt odor sources from operations other than rendering in integrated rendering facilities, the draft report discusses hog operations odors, as well as public comments on hog operations and health concerns, then it is assumed that the proposed rule's intent is to capture the odors from agricultural operations. Therefore, this assessment will be based on current requirements for rendering facilities as they apply to the facility. | 2.1-51 |
| a. What is the estimated amount of rinsing (e.g. triple rinsing) that would be required for BMP (e)(4) for washing of drums and containers (e.g. so that odors do not travel beyond the facility boundary)? The water associated with the rinsing activities must be included in the Draft EA. | 2.1-52 |
| b. Is washing outgoing trucks requirement that are currently required to be cleaned under 3 CCR §1180.35 for rendering facilities, intended for integrated rendering plants since they do not accept rendering materials from other facilities under Proposed Rule 415? | 2.1-53 |
| c. Pages 2-34 and 2-35. The estimated increase in water demand should include water required for the washdown of receiving areas and or any open drums and containers. | 2.1-54 |
| 37. Page 2-35. "The size of the scrubbers expected to be utilized is not known at this time." | |
| a. "Some types of scrubbers are mainly designed to remove particulate pollutants (e.g. venturi scrubbers)." -Pg. 9-1, (Section 9.0 Wet Scrubbers--EPA). Therefore a venturi scrubber would not necessarily work for a system trying to eliminate hydrogen sulfide and ammonia. | 2.1-55 |
| b. A 1976 EPA Study "Odor Control by Scrubbing in the Rendering Industry" concluded that "reductions of 80-90% were achieved with water for highly soluble odorants such as amines and acids. | 2.1-56 |
| c. SCAQMD assumes that hydrogen sulfide and ammonia are being released as fugitive emissions PR415 (f)(5). If this is correct, then if facilities are required to use just a water scrubber, then the chemical reactions associated would produce sulfuric acid ("sour" water) and ammonium, which is a base. These two reactions would create a precipitate that would eventually plug up the pipe. As a result sufficient amount of water is needed to ensure that there is a conversion as well as be able to flush the pipes accordingly. | 2.1-57 |
| d. Using this, a worst case scenario calculated by Clean Air Technologies resulted in a quick estimate for a packed or a tray tower for obtaining based on 20,000 CFM at ambient conditions with a 10 wt% NH ₃ max as a starting point, a venturi scrubber with a 36" gas inlet and 36" discharge will use 1,200 gpm of water, once through. (McLeod, 2015). | 2.1-58 |
| e. For one scrubber operating at a worst case scenario for one day will be over 1,700,000 gallons. This is considerably higher than then 262,820 gallons per day single facility significance threshold. The Draft EA for PR415 must be revised and recirculated to account for the estimated increase in water use. | 2.1-59 |

D1. Response to Comments

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| <p>f. Page 2-36. "Based on the above information, amount of additional wastewater is not expected to be a significant increase in the amount that any affected facility is currently permitted to discharge. It is expected that this additional wastewater generation would not be a significant impact on the current wastewater infrastructure"</p> <p>LACSD industrial waste water permits require a change to permit conditions if there is an increase of water by 25%. Further approval is needed by the City of Vernon for increase in peak flow rates. The Draft EA for PR415 must be revised and recirculate to account for the estimate increase in wastewater discharge.</p> | 2.1-60 |
| <p>38. Page 2-41, XII a and c). The conclusions regarding the increase in noise associated with the proposed project does not have requisite data to support the claim that noise associated with construction and operation are less than significant. Wet gas scrubbers are new equipment at industrial facilities that will generate additional noise. The estimate of the increase in noise levels associated with the use of wet gas scrubbers must be provided in order to make the conclusion that there would be no increase in noise levels.</p> | 2.1-61 |
| <p>39. Page 2-43. "All newly installed enclosures and control equipment would be expected to be compliant with fire department standards, therefore they would not increase the risk of fire to occur." Please see comment number 32.</p> | 2.1-62 |
| <p>40. Page 2-43. "No flammable substances are necessary to operate rendering equipment." Blood rendering system uses natural gas to operate the dryer and natural gas is a flammable material. Other systems labeled under "Rendering" in air permits include singeing equipment which also uses natural gas.</p> | 2.1-63 |
| <p>41. Page 2-43. "As such, the proposed project will not increase the chances for fires or explosions that could affect local fire departments." Please see comment number 32.</p> | 2.1-64 |
| <p>42. Page 2-49, last paragraph. The estimated number of construction workers and the related trips should be included in this paragraph in order to justify the conclusion that no significant traffic impacts would occur.</p> | 2.1-65 |
| <p>43. Page 2-45. "Rendering operations within the basin are not expected to cease and animal waste is not expected to be diverted to landfills because of the requirements included in PR 415. If a rendering facility is not able to meet the requirements of PR 415, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal waste."</p> <p>Please see comment number 19. Clougherty Packing, LLC believes that SCAQMD has underestimated the throughput limits of existing rendering facilities that would be able to take in all the rendering material in its jurisdiction. Currently, there is insufficient capacity at rendering plants that would be able to handle all the material. In the event that the rendering material cannot be processed, there will be an increase in both odor and health related concerns. The impact to Clougherty Packing, LLC would be severe if our rendering material is not able to be accepted by rendering plants; and if an alternative (e.g. landfills) are not able to take the material in a timely manner. This will have a negative impact on</p> | 2.1-66 |

D1. Response to Comments

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| <p>our operations. The impacts from this and all other industries who depend on rendering must be evaluated in the Draft EA.</p> | <p>2.1-66 Cont'd</p> |
| <p>44. Page 2-46. "Affected equipment may be refurbished and used elsewhere or the scrap metal or other materials from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with the proposed project are expected to be minor."</p> <p>The Draft EA for PR415 does not include the demolition activities required to construct permanent enclosures around processes. Demolition activities may include removing structures due compliance with current building codes including H-1 rated sprinkler system, ceiling supports for new APCD equipment, and fire access requirements to all areas of the facility. The impacts of these additional construction activities must be evaluated in the Draft EA.</p> | <p>2.1-67</p> |
| <p>45. Page 2-41, XII a and c). The conclusions regarding the increase in noise associated with the proposed project are conclusory with no data to back up the claim that noise associated with construction and operation are less than significant. Wet gas scrubbers are new equipment at industrial facilities that will generate additional noise. The estimate of the increase in noise levels associated with the use of wet gas scrubbers must be provided in order to make the conclusion that there would be no increase in noise levels.</p> | <p>2.1-68</p> |
| <p>46. Page 2-49, last paragraph. The estimated number of construction workers and the related trips should be included in this paragraph in order to justify the conclusion that no significant traffic impacts would occur.</p> | <p>2.1-69</p> |

D1. Response to Comments

Appendix B
Social Cost of Carbon - Worst-case Rendering Material Landfill Analysis

D1. Response to Comments

Cougherty Packing Landfill Waste GHG Emission Reduction Calculations

| Daily Landfill Waste GHG | | | | | | | | | | |
|------------------------------|---------------------------------|----------------------|-------------------|--------------------------------|-------------|--------------------|------------------------------|--|--|--|
| Landfill Location | Landfill Address | One-Way Trip (miles) | Roundtrip (miles) | Roundtrip Fuel Usage (gallons) | Total Trips | Total Waste (tons) | Emissions (CO2e metric tons) | Lifetime Landfill CH4 Emissions (CO2e metric tons) | Lifetime Landfill GHG Emissions (CO2e metric tons) | Total GHG Emissions (CO2e metric tons) |
| Cattelman / Yuma County Land | 19336 S Ave #1E, Yuma, AZ 85305 | 284 | 567 | 70.0 | 11 | 300 | 8.0 | 22.0 | 728.0 | 734.0 |
| TOTAL | | | | | | | 8.0 | 22.0 | 728.0 | 734.0 |

| Annual Landfill Waste GHG | | | | | | | | | | |
|------------------------------|---------------------------------|----------------------|-------------------|--------------------------------|-------------|--------------------------|------------------------------|--|--|--|
| Landfill Location | Landfill Address | One-Way Trip (miles) | Roundtrip (miles) | Roundtrip Fuel Usage (gallons) | Total Trips | Total Waste (short tons) | Emissions (CO2e metric tons) | Lifetime Landfill CH4 Emissions (CO2e metric tons) | Lifetime Landfill GHG Emissions (CO2e metric tons) | Total GHG Emissions (CO2e metric tons) |
| Cattelman / Yuma County Land | 19336 S Ave #1E, Yuma, AZ 85305 | 284 | 567 | 70.0 | 2,080 | 78,000 | 2,280.33 | 7,548.04 | 188,716.00 | 190,996.33 |
| TOTAL | | | | | | | 2,280.33 | 7,548.04 | 188,716.00 | 190,996.33 |

Diesel Combustion GHG Input Values

| Value | Units | Notes |
|-------|----------------------|---|
| 73.96 | g CO2 / MMBtu diesel | 40 CFR 99 Subpart C Table C-1 Distillate Fuel Oil No. 2 Default CO2 Emission Factor |
| 0.133 | MMBtu / gal diesel | 40 CFR 99 Subpart C Table C-1 Distillate Fuel Oil No. 2 Default High Heat Value |
| 0 | miles / gal diesel | Fer Factor Gamma 10-24-13 Email |
| 22.5 | B CO2 / gal diesel | Unit conversion |
| 2.8 | B / mile | |

40 CFR 99 Subpart TT - Industrial Waste Landfills Equation TT-1

$$W_x \cdot DOC_x \cdot MCF \cdot DOC_f \cdot \frac{16}{12} \cdot \left(1 - e^{-k \cdot (t - x)} \right)$$

- W_x Quantity of waste disposed in the industrial waste landfill in year X from measurement data and/or other company records (metric tons, as received [wet weight]).
- DOC_x Degradable organic carbon for waste disposed in year X from Table TT-1 to this subpart or from measurement data (as specified in paragraph (a)(2) of this section), if available (metric tons (2 metric ton waste)).
- MCF Methane correction factor (fraction). Use the default value of 1 unless there is active oxidation of waste within the landfill during the reporting year; if there is active oxidation of waste within the landfill during the reporting year, use either the default value of 1 or select an alternative value no less than 0.5 based on site-specific oxidation parameters.
- DOC_f Fraction of DOC that is oxidized (fraction); use the default value of 0.5.
- F Fraction by volume of CH₄ in landfill gas (fraction, dry basis, corrected to 0% oxygen). If you have a gas collection system, use the annual average CH₄ concentration from measurement data for the current reporting year; otherwise, use the default value of 0.5.
- k Decay rate constant from Table TT-1 to this subpart (yr⁻¹). Select the most applicable k value for the majority of the past 10 years (or operating life, whichever is shorter).
- T Reporting year for which emissions are calculated.
- x Year in which waste was disposed.

Table TT-1 to Part 99 - Food Processing

| Variable | Value |
|------------------|-------|
| DOC _f | 0.22 |
| k (dry) | 0.05 |
| k (moderate) | 0.13 |
| k (wet) | 0.13 |

Equation TT-1 Input Values

| Variable | Value | Notes |
|------------------|-------|--|
| DOC _f | 0.22 | Table TT-1 Food Processing |
| MCF | 1 | Default value |
| DOC _f | 0.5 | Default value |
| F | 0.5 | Default value |
| k | 0.13 | Table TT-1 Food Processing - wet climate (conservative) |
| T | | Assumed to calculate emissions after 1 year within landfill. The 1-year emission is a worst-case estimate assuming that all of the waste was placed within the landfill on January 1, and emissions were calculated on December 31 of that year. This does not account for emissions after the first year. |
| x | | Assumed as the 1st year. |

Total Landfill Emission Calculation Derivation

The equation to calculate the waste's total GHG emissions over time from decomposition assuming a wet climate is below.

$$= \sum_{x=0}^{\infty} W_x \cdot DOC_x \cdot MCF \cdot DOC_f \cdot \frac{16}{12} \cdot \left(1 - e^{-k \cdot (t - x)} \right)$$

The equation above is derived by performing the limit of Equation TT-1 from the time of placing the waste into the landfill to infinity. The limit was determined using the program Mathcad.

$$\lim_{t \rightarrow \infty} \sum_{x=0}^t \left[e^{-k \cdot (t - x)} \right] \cdot e^{-k \cdot (t - x)} \rightarrow 1.1972173631218191649 \cdot 1.197$$

22-1

D1. Response to Comments

2. **Response to Comments Farmer John, Terry Hadden, Vice President of Operations, dated August 12, 2015.**

On June 25, 2015, South Coast Air Quality Management District (SCAQMD) published the CEQA EA for Proposed Rule 415 (PR 415) - Odors from Rendering Facilities. This letter includes a discussion of Clougherty Packing's regulatory oversight and commitment to the surrounding community, an overview of the important issues with the currently proposed EA, and detailed comments, questions and suggested revisions to the EA.

2.0-1

Response 2.0-1

The introduction provides background information and does not raise any environmental issues necessitating a response under CEQA. However, it is important to note that the Draft EA for PR 415 was circulated for a 30-day public review and comment period starting on July 14, 2015 and ending on August 12, 2015 (State Clearinghouse Number [SCH] #2015071030). Refer to Section D0-1.0, *Introduction*, in Appendix D to the Final EA.

Clougherty Packing, LLC is a food processing facility that has been in its current location since 1931 and currently employs more than 1,500 people in the City of Vernon. The facility includes an integrated rendering and pretreatment wastewater operations. The rendering operation is covered in our Title V permit and employs Best Available Control Technology (BACT) ensuring that emissions are below permitted limits. The facility operates under various Federal, State and local environmental permits including our Title V Air Permit and Permit for Industrial Wastewater Discharge from the County Sanitation Districts of Los Angeles County. In addition, our facility also operates under the U.S. Department of Agriculture and Food Safety and Inspection Services inspection and processing standards.

2.0-2

D1. Response to Comments

Clougherty Packing, LLC seeks to promote responsible rendering practices to the extent feasible in order to live peaceably with our neighbors. Approximately 90% of the 1,500 Clougherty Packing, LLC rendering operations employees live within 10 miles of the facility, therefore, Clougherty Packing, LLC has a vested interest in ensuring that the rule's purpose is fulfilled. We commend the AQMD for asking for feedback from the stakeholders to this proposed rulemaking and implementation.

2.0-2
Cont'd

Clougherty Packing, LLC recognizes the shift in regulatory philosophy PR 415 represents in terms of placing the principal focus on prevention of odors that can pose a nuisance to neighbors. We have a long history of using preventive measures to limit odors and we recognize that we have a corporate responsibility towards the community.

Response 2.0-2

This comment provides background information and does not raise any environmental issues necessitating a response under CEQA.

Important Issues

The following section describes in more detail the important issues that Clougherty Packing, LLC with the PR415 CEQA EA. An overview is as follows:

2.0-3

Response 2.0-3

This comment provides background information and does not raise any environmental issues necessitating a response under CEQA. Individual comments are responded to later in this document.

1. SCAQMD underestimated the magnitude of construction needed to comply with the currently proposed PR415.

2.0-4

Response 2.0-4

Refer to Master Response 4, *Worst-Case Scenario*, and Response 2.0-7 for a discussion on the modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose

D1. Response to Comments

of developing construction and operational scenarios. As explained in the Draft EA²², the environmental analysis was conducted based on one of the larger facilities in the current affected facility inventory. Choosing a larger facility for the impact analysis was reasonable because it required the most construction activities (e.g., the largest enclosure area in terms of square footage) of the five facilities and provided a reasonable basis that was predicated upon facility-provided facts to estimate maximum foreseeable impacts. As such, the methodology used in the EA represents SCAQMD staff's best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415. As discussed in the Final EA, the modifications to PR 415 do not result in new or more severe environmental impacts than those already analyzed and disclosed in the Draft EA.

Further, while PR 415 requires permanent total enclosure of certain odorous processes (raw material receiving, wastewater treatment), good faith efforts were made by SCAQMD staff during the rule development process to accommodate each facility's needs. Various changes to the scope and requirements of PR 415 include allowing a closed system in lieu of a permanent total enclosure and limiting asphalt repair BMPs under paragraph (e)(6) to the outside raw material receiving area only. These revisions result in a reduction of the construction activities at individual facilities required to ensure compliance with PR 415.

2. SCAQMD overestimated the ability of nearby rendering facility to accept rendering materials if a facility were to stop operations as a result of PR415's compliance requirements. | 2.0-5

Response 2.0-5

For reasons explained in Master Response 2, *Facility Shutdown*, and Response 2.0-8, PR 415 will not cause the rendering facilities to stop operation. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

3. The EA doesn't adequately address the additional requirements from existing regulations as a result of PR415 compliance (ex - California Fire Codes). | 2.0-6

Response 2.0-6

Refer to Master Response 7, *Building Codes*, and Response 2.0-9 for a discussion on the compliance requirements with existing regulations. New permanent total enclosures

²² South Coast Air Quality Management SCAQMD (SCAQMD), PR 415 Draft EA, Chapter 2, Environmental Checklist. Page 2-4.

D1. Response to Comments

required by PR 415 would need to conform to the California Building Standards Code, Title 24, California Code of Regulations (CCR), including the California Fire Code. Consistent with the Socioeconomic Impact Assessment for PR 415, SCAQMD staff assumed that all permanent total enclosures would be required to install a fire suppression system, and that water sprinkler-type fire suppression systems would be sufficient for the enclosed areas to meet the municipal fire code requirements. This assumption is based on the current setup of the facility that has already submitted permit applications for modifications that would satisfy PR 415's requirements. Although not anticipated, if a facility demonstrates that they would be unable to enclose operations because it would pose a fire hazard, a closed system of cooking and processing equipment is an acceptable alternative to a permanent total enclosure, provided fugitive odors from that closed system do not continue to cause verified odor complaints.

1. Underestimated Magnitude of Construction

The estimated construction surface area for new enclosures within EA's Table 2-2 (53,500 ft²) grossly underestimated the worst-case scenario. Clougherty Packing, LLC (an integrated rendering plant) will require roughly 221,000 ft² for six new structures and associated trenching/concrete activities for the footings of the new structures, as well as paving of the receiving area as a result of compliance with PR415. The updated worst-case construction scenario increases the daily emissions from Peak Construction Phase for nitrogen oxides (NO_x) from 34.99 lb/day to 144.54 lb/day, which is greater than the 100 lb/day CEQA NO_x Significance Threshold. Clougherty Packing, LLC suggests that SCAQMD revise the worst case scenario to represent Clougherty Packing, LLC's compliance requirements. Refer to Appendix A for additional information.

2.0-7

Response 2.0-7

SCAQMD staff has worked in good faith with the affected rendering facilities to minimize potential operational impacts, including making various changes to the scope and requirements of PR 415 from early versions of draft rule language (Refer to Table P-1 in the Final EA). Based on those changes, the need to construct six new structures totaling 221,000 square feet at this facility is not foreseeable (Refer to Table P-2 in the Final EA).

The repair and repaving BMP under paragraph (e)(6) has been clarified to limit repairs and repaving to the outside raw material receiving area where material touches the ground, rather than the entire facility grounds. Refer to Response 3.1-28 for a discussion on the repair and repaving BMP.

D1. Response to Comments

Master Response 4, *Worst-Case Scenario*, Response 2.0-4 (above), and the Final EA provide further discussion of the analysis of the construction impacts from implementation of PR 415. Therefore, all environmental impacts associated with construction have been adequately analyzed in the EA and no further analysis is required under CEQA.

2. Overestimated Surrounding Facilities Raw Rendering Material Capabilities
 Page 2-15 of the EA states "in the unlikely event that it is not economically feasible for an affected facility to continue current operations, a facility could close down and the product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport." Clougherty Packing, LLC believes that SCAQMD is overestimating the surrounding facilities' ability to accept additional raw rendering material. Increasing an existing rendering facility's permitted capacity requires various permit revisions and favorable market conditions. Therefore, Clougherty Packing, LLC suggests that SCAQMD revise the EA to include a worst-case scenario of disposing of the permitted raw rendering material capacity of a facility that would not continue current operations as a result of PR415 compliance requirements. Clougherty Packing, LLC conducted a preliminary worst-case analysis by calculating the lifetime social cost of carbon (\$9,400,000) from the additional greenhouse gas (GHG) emissions (191,000 tons) from shipping and decomposition of one year of Clougherty Packing, LLC permitted capacity (300 tons/day) within a landfill. The analysis was conducted using 40 CFR 98 Subpart C and TT emission calculation methodologies and the Environmental Protection Agency's "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis" and has been included in Appendix B.

2.0-8

Response 2.0-8

Refer to Master Response 2, *Facility Shutdown* and Master Response 6, *Methodology*. Existing rendering operations are not expected to cease, and animal carcasses and parts are not expected to be diverted because of the requirements included in PR 415. The indirect effects associated with facility shutdown would be speculative because it would require an analysis of hypothetical conditions. Therefore, the EA is not obligated to evaluate these types of indirect impacts

Section 20890, Title 27, CCR, provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. In 2006, the Southern San Joaquin Valley experienced a larger-

D1. Response to Comments

than-normal number of dairy and other animal mortalities due to extreme temperatures. In response to the heat event and the intermittent operation of key rendering facilities in the valley, a series of recommendations were developed and approved by CalEPA and the California Department of Food and Agriculture (CDFA). Disposal at landfills is only recommended if rendering capacity is exceeded or suspended. Only the Kettleman Hills facility in Kern County accepts disposal of carcasses and self-haul is not permitted. However, rendering operations within the South Coast Basin are not expected to cease; and therefore, it would be speculative to assume that animal carcasses and parts would be diverted to landfills. Additionally, changes to PR 415 have occurred since circulation of the Draft EA, which allow a rendering facility to accept additional materials from another rendering facility in the event that rendering equipment is broken down or for performing emergency rendering services (subdivision (k)).

PR 415 would require existing rendering facilities to enclose certain rendering operations, install odor emission control equipment (an unventilated permanent total enclosure for raw material receiving is allowed, provided a secondary odor containment method is used at each enclosure opening), and carry out BMPs. If a rendering facility is not able to meet the requirements of PR 415 through various compliance options, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or would generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal carcasses and parts. Therefore, it is not expected that rendering material will be diverted to landfills as a result of PR 415.

As stated above, SCAQMD staff has made good faith efforts to make various changes to the scope and requirements of PR 415 to accommodate each affected facility's needs and provide sufficient flexibility to ensure compliance. Refer to Table P-1 in the Final EA.

Lastly, the GHG emissions analysis in Appendix B to this comment letter is based on a lifecycle assessment of GHG emissions. Refer to Response 2.2-1. GHG emissions estimates associated with implementation of PR 415 are based on the direct and indirect effects. A lifecycle assessment of GHG emissions would require speculation on the potential upstream and downstream effects resulting from a hypothetical scenario that rendering operations would cease within SCAQMD's jurisdiction. Air quality and GHG emissions in the EA were estimated using the CalEEMod™ emissions computer model. The CalEEMod™ model incorporates up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. The CalEEMod™ model is the only model maintained by the California Air Pollution Control Officers Association (CAPCOA) and is recommended by

D1. Response to Comments

SCAQMD for use to estimate construction and operation air quality impacts under CEQA. Based on the reasons stated in Master Response 4, *Worst-Case Scenario* and Response 3.8-1, the EA for PR 415 disclosed the worst-cast scenario for potential impacts on GHG emissions from PR 415 and no further analysis is required under CEQA.

3. **Additional Compliance Requirements From Existing Regulations**
 Clougherty Packing, LLC believes that SCAQMD did not adequately discuss the additional regulatory requirements that would be applicable due to PR415 compliance. Page 2-32 of the EA states "The proposed project does not require any activities which would be in conflict with fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities." Inedible rendering material has high amounts of fats and oils and greases and the material meets the definition of Class IIIB combustible liquid, therefore, the new enclosures must meet specific building code, California Fire Code, and Occupational Safety and Health Act (OSHA) requirements.

2.0-9

Response 2.0-9

Refer to Master Response 7, *Building Codes*. While the City of Vernon Fire Marshall has not presented any evidence as to why the permanent total enclosure requirement would cause concerns; based on one of five existing rendering facilities' current setup, which would satisfy the proposed permanent total enclosure or closed system requirements, it is foreseeable that the water sprinkler-type fire suppression system would be sufficient to meet the fire code requirements. All buildings in California are required to meet the standards set forth in the California Fire Code of Regulations, Title 24, Part 9. Thus, any new permanent total enclosure constructed as a result of PR 415 would need to meet the standards set forth in this code, per state law. Compliance with the California Fire Code would minimize potential fire hazards associated with the facility. Finally, as noted in Master Response 4, *Worst-Case Scenario*, the City of Vernon has the sole authority to review and approve (or disapprove) site or architectural plans as part of their land use permitting process. Therefore, new enclosures as required by PR 415 are expected to meet the applicable building code, California Fire Code, and Occupational Safety and Health Act (OSHA) requirements, and PR 415 is not expected to cause any significant impacts on hazards and hazardous materials with respect to fire hazards and worker safety. Refer to Responses 2.1-33 through 2.1-43, Response 2.1-45, and Response 2.1-46 for discussions on compliance with existing regulations with respect to California Building Standards code and the issues of fire hazards and worker safety.

D1. Response to Comments

Therefore, all environmental impacts have been adequately analyzed in the EA, including those of additional regulatory requirements, and no further analysis is required under CEQA.

Detailed Comments

Clougherty Packing assembled a list of detailed comments and suggested revisions to PR415 CEQA EA, which are included within Appendix A.

2.0-10

Response 2.0-10

Responses to comments in Appendix A to the comment letter are provided in Responses 2.1-1 through 2.1-69.

1. **Page 1-1.** In the event that a new version(s) of Proposed Rule 415 is developed and/or introduced, that an updated CEQA would also be required including but not limited to project description, project objective, etc.

2.1-1

Response 2.1-1

The Final EA incorporates revisions to the Draft EA based on revisions to PR 415 that have occurred since the Draft EA was circulated. As identified in the Final EA, the revisions to the Draft EA are primarily in response to the various changes to the scope and requirements of PR 415. Based on the analysis in the Final EA, the revisions do not result in substantial changes that would result in a finding of a new significant environmental impact or a more severe adverse impact than discussed in the Draft EA. Therefore, the modifications to the rule requirements and associated revisions to the Draft EA do not trigger recirculation pursuant to CEQA Guidelines Section 15073.5.

2. **Page 2-4. "In order to ensure that any potential significant adverse environmental impacts are identified and evaluated and that feasible methods to reduce or avoid any potential significant adverse environmental impacts associated with the proposed project are identified and evaluated, an environmental impact analysis was conducted based on one of the larger facilities in the current affected facility inventory as a basis to estimate maximum foreseeable impacts."**

Proposed Rule 415 captures both rendering facilities and integrated rendering facilities. As a result, Clougherty believes that SCAQMD did not accurately assess the unintended impacts on operations at integrated facilities. For example, an odor mitigation plan ((h)(F)(ii)) requires that all sources be identified that can cause odors and subsequently be met through best management practices including closed systems and permanent enclosures. This is important since Clougherty Packing, LLC is the largest integrated renderer captured under this rule and may require additional equipment to be in compliance. Was it the intent of SCAQMD to include agricultural operations, including hog and food processing operations, within the scope of this proposed rule as well?

2.1-2

D1. Response to Comments

Response 2.1-2

Refer to Master Response 4, *Worst-Case Scenario* and Master Response 6, *Methodology*. The Draft EA evaluated potential environmental impacts associated with implementation of PR 415 on all affected facilities. No significant environmental impacts were identified and the comment does not provide specifics on which impacts were not accurately assessed.

Implementation of PR 415 would require rendering facilities to implement BMPs to control odors and would require processes with the greatest potential for generation of off-site odors to be enclosed. The BMPs are achieved in practice and reasonable measures that would result in odor reductions from rendering facilities. The rule approach for PR 415 considers differences in operation at each facility. While PR 415 requires permanent total enclosures for certain very odorous processes (raw material receiving, wastewater treatment), good faith efforts were made during the rule development process to accommodate each facility's needs such as operating rendering processes in a closed system. PR 415 is intended to control rendering odors. It is not intended to apply to agricultural operations including hog and food processing operation. PR 415 only applies to inedible rendering operations, not for human consumption. For an integrated rendering facility that conducts rendering operations at the same physical location as a slaughterhouse or meat-pack plant, PR 415 only applies to the rendering operations. Refer to subdivision (c) of PR 415 and Master Response 8, *Agricultural Preemption*.

The requirements for an OMP are outlined in subdivision (h). The requirement to submit an OMP by a facility subject to PR 415 is based on a facility receiving either a NOV for public nuisance, or three confirmed odor events within a 180-day period, as specified in subparagraphs (d)(2)(A) and (d)(2)(B)..

3. **"The affected rendering facilities are located in the City of Vernon, CA," - Pg.2-5** Clougherty Packing, LLC believes that SCAQMD incorrectly listed a rendering facility in the City of Vernon. This facility operates its rendering operations in the City of Los Angeles. Proposed Rule 415 identifies rendering operations. Currently there are more than five rendering facilities in the SCAQMD jurisdiction that exist beyond these two cities; and would mean that these facilities would be subject to this rule as well. The Environmental Assessment for PR415 must identify and include its analysis the proposed impacts from these other rendering facilities.

2.1-3

Response 2.1-3

Refer to Master Response 6, *Methodology*. It will be clarified in the Final EA that four facilities are located in Vernon and one facility is located in the City of Los Angeles, on

D1. Response to Comments

the boundary of Vernon, with some ancillary uses to the rendering operations located in Vernon.

SCAQMD staff is aware of two other potential rendering operators within SCAQMD's jurisdiction: Stiles in Ontario and Co-West in San Bernardino. However, neither Stiles nor Co-West meet the applicability criteria for PR 415. Neither facility performs inedible rendering. Odors from kitchen trap grease are not subject to PR 415. Therefore, the EA for PR 415 has adequately identified and analyzed the potential impacts on all of the rendering facilities affected by PR 415.

4. **"...[P]roposed project would not involve the demolition of any existing buildings or facilities..."-Pg. 2-5**

Clougherty Packing, LLC believes that SCAQMD did not accurately assess the need for demolition of existing equipment or possibly portion of buildings because of the highly industrialized areas surrounding the rendering activities. These demolition activities need to be included in the Environmental Assessment for PR415. For example, to allow egress for the City of Vernon Fire Department, certain structures would need to be moved or relocated. For H-1 rated buildings such as the one PR415 is proposing, typical wood construction would be allowed as long as there 60 yards of separation. However, since these facilities have been in operation for over 50 years substantial modifications and improvements have occurred (e.g. piping on walls) in and around their footprint as a result of compliance measures or other requirements. As a result, these improvements are going to have to be removed, restructured and retrofitted so as to be in compliance with existing California Building Code regulations since they will be required to be enclosed.

2.1-4

Response 2.1-4

Refer to Master Response 4, *Worst-Case Scenario*. While PR 415 requires permanent total enclosures, good faith efforts were made during the rule development process to accommodate each facility's unique site and operational needs in order to provide flexibility during implementation. Various changes to the rule language were based on input from stakeholders as a result of the public process and ongoing stakeholder outreach for PR 415 since 2014. Refer to Table P-1 in the Final EA for a summary of various changes to PR 415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. Refer to the Final EA for modifications to the construction scenario.

The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios. As such, the methodology used in the EA represents SCAQMD staff's best efforts to reasonably estimate and disclose the environmental impacts associated with PR

D1. Response to Comments

415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. As discussed in details in the Final EA, no significant environmental impacts would occur.

5. Page. 2-5,6. "The proposed project is not expected to degrade the visual character of any site or its surrounding from the existing visual character, affect any scenic vista or damage scenic resources."

The 2007 General Plan for City of Vernon identified the Clougherty Packing, LLC murals as a "notable landmark surrounding the company's meat processing facility on Vernon Ave."-Pg. 133. Also, a concern exists that the contact information will be misused in the event of a demonstration at the facility. This may place people in harm's way as a result. Any new structure built within 50 feet from the entrance or new signage located in or around its wall would need to be addressed.

2.1-5



Response 2.1-5

Appendix D-4, *Landmark Wall Viewshed Photos*, to this document depicts the visual character of the rendering facility and the Landmark Wall surrounding the facility. As depicted in these photographs, there are existing structures within 50 feet of the Landmark Wall that are visible from the roadway right-of-way on Soto Street, Bandini Boulevard/37th Street, and Vernon Avenue. As shown in Table P-2 in the Final EA, it is expected that this facility will use a closed system under paragraph (f)(3) to meet the requirements of PR 415. It is not expected that this facility will construct any new enclosures or undertake modifications to the existing buildings. However, in the unlikely event that this facility is required to build a permanent total enclosure, the enclosure would be approximately 250 feet north of the southern entryway on Vernon Avenue. The new permanent total enclosure would not be located closer to the Landmark Wall than the current buildings are and would also not be taller than the current buildings. Because the proposed enclosure, though not anticipated, would be farther (greater than 50 feet) and no higher than existing structures, the new enclosure would not have the potential to significantly degrade the visual character of the site.

Additionally, while PR 415 would require new signage to notify businesses and residents of whom to contact in the event of an odor incident, there are existing signs on the block

D1. Response to Comments

wall on Vernon Avenue and the Landmark Wall on Soto Street for the Farmer John facility. Proposed signage, consistent with the requirements of PR 415, would be similar in scale as the existing signage and would not have the potential to significantly degrade the visual character of the site.

6. Page 2-22. "The proposed project is not expected to require physical changes to a site, feature, place, cultural landscape...."

The Clougherty Packing, LLC Facility's iconic artwork on the outside walls of the facility has been featured in various movies, parodied in television, used in documentaries, and has been included on various tours, and is featured on various social media sites including TripAdvisor due to its artwork murals on its walls. As a result, Clougherty Packing, LLC feels that SCAQMD incorrectly assessed the impact of placing signage.

2.1-6

Response 2.1-6

Refer to Response 2.1-5 (above). This comment is referring to analysis in the Draft EA which stated that "The proposed project is not expected to require physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe." The proposed signage required by PR 415 would be similar in scale as the existing signage; therefore, implementation of PR 415 requirements at this facility would not require physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe and the comment has not provided evidence to the contrary.

7. Page 2-7. "The proposed project conflicts with existing zoning for agricultural use...."

Clougherty Packing, LLC believes that SCAQMD incorrectly assessed the agricultural operations that occur. The facility has hog operations, meat packing operations and rendering operations. The facility is the last hog conversion operations in the west coast. The facility operates under the California Department of Food and Agriculture. The 2015 City of Vernon Ordinance allows for rendering operations and slaughterhouse operations. Operations at Clougherty Packing, LLC has occurred for more than 80 years in its current location. The Ordinance is consistent with Section 3482.6 of the California Civil Code and Health and Safety Code 41704. Both identify that meat packing and rendering operations as "agricultural use" under Government Code Section 51201. These operations that occur in an area that is specifically zoned where further "development" is in direct conflict with Proposed Rule 415

2.1-7

Response 2.1-7

Refer to Master Response 1, *Legal Authority to Adopt and Enforce* and Master Response 8, *Agricultural Preemption*. SCAQMD is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) Section 40000.

D1. Response to Comments

SCAQMD staff has investigated the land uses surrounding the Vernon rendering facilities and determined that between 1989 and 1994, the facilities were surrounded by commercial and residential (i.e. non-agricultural) uses as of 1993. Refer to Appendix D-5, Historic Aerial Photographs. Under Civil Code Section 3482.6, SCAQMD may enforce regulations adopted pursuant to Health & Safety Code Section 41700, such as PR 415, in these circumstances.

The comment cites Section 41704 of the Health and Safety Code as another reason why the facility is exempt from nuisance complaints. However, agricultural operations are defined under this section as agricultural operations necessary for the growing of crops or raising of fowl or animals, which does not apply to the rendering facilities here.

Lastly, the existing rendering facilities that are subject to PR 415 are not operating under a Williamson Act contract subject to Government Code Section 51201.

8. Page 2-8. "Adoption of the proposed project would not result in any new construction of buildings...[that is in] conflict with zoning for agricultural use...."

Clougherty Packing, LLC believes that SCAQMD incorrectly assessed the agricultural operations that occur; and that further development under Government Code 65567 would be in direct conflict with Proposed Rule 415 (See Comment No. 9). The City of Vernon has been identified as having facilities in a "highly industrialized setting"(Pg. 2-5). The City of Vernon's 2007 Zoning and Planning stated that open spaces do exist in the City; but are limited to privately owned areas that are not needed for recreational purposes due to the industrial nature of a company. (pg. 128) "Open space does provide visual relief from hard urban surfaces."-Ibid. Under Government Code Section 65560(a) (a) "Local open-space plan" is the open-space element of a county or city general plan adopted by the board or council, either as the local open-space plan or as the interim local open-space plan adopted

2.1-8

pursuant to Section 65563. Under Government Code Section 65560(a) (a) (2) Open space used for the managed production of resources, including but not limited to...areas of economic importance for the production of food.... Then Government Code 65567 states that "No building permit may be issued, no subdivision map approved, and no open-space zoning ordinance adopted, unless the proposed construction, subdivision or ordinance is consistent with the local open-space plan." Therefore, Proposed Rule 415 would be in direct violation with Government Code 65567.

2.1-8
Cont'd

Response 2.1-8

This comment is referring to the analysis in the Draft EA which stated that adoption of the proposed project would not result in any new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. The proposed project would not require

D1. Response to Comments

converting farmland to non-agricultural uses because the potentially affected facilities are already completely developed. For the same reasons, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. The areas where existing rendering facilities are located are developed with industrial uses and are not considered open space. The City of Vernon’s General Plan (2007) does not include a land use designation for open space. The facilities in Vernon are not zoned open space in the City of Vernon’s Zoning Code, despite the comment stating that privately owned “open space” exists between the buildings on the developed site. Therefore, PR 415 would not be in conflict with Government Code Section 65567.

While the rendering operations are unique and beneficial, as discussed in Response 2.1-2 (above), PR 415 only applies to inedible rendering operations, not for production of food for human consumption.

Therefore, agriculture impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

9. Pg. 2-12. Table 2-2 depicts the estimated enclosure sizes to be added for the worst case scenario facility analysis.

Please see Comment No. 4. If the Proposed Rule 415 was intended to capture agricultural operations, including hog and food processing operations, within the scope of this proposed rule as well, therefore the worst case scenario would be for an integrated facility since rendering operations would constitute a small amount of its operations. The worst-case construction emissions evaluated in the PR415 Environmental Assessment needs to be revised as it would not include the construction of all enclosures expected to be required at Clougherty Packing, LLC. In Lieu of Table 2-2, the following table depicts the estimated enclosure sizes to be added for the worst-case scenario facility analysis for an integrated rendering facility:

2-1-9

| Area | Size of Structure (sq. ft.) |
|---|-----------------------------|
| Wastewater Treatment Area and Blood Meal Rendering Operations (new) | 11,000 |
| Secondary processing plant (existing) | 3,000 |
| Secondary Processing Plant (Blood and Flourmill) (new) | 3,000 |
| Receiving Area (existing) | 1,000 |
| Material Handling Building (existing) | 1,600 |
| Outside Storage Building for Material (new) | 3,500 |
| Hog Pens Unloading / Trucking Area (new) | 113,000 |
| Hog Pens (new) | 83,500 |

D1. Response to Comments

Response 2.1-9

Refer to Response 2.0-4 and Response 2.0-7 for a discussion on the modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. Refer to Response 2.1-2 for rendering odor control methods under PR 415. Implementation of PR 415 would require rendering facilities to implement BMPs to control odors and would require rendering processes with the greatest potential for generating rendering odors to be enclosed. PR 415 is not intended to apply to agricultural operations including hog and food processing operation. PR 415 only applies to inedible rendering. Refer to Master Response 8, *Agricultural Preemption*.

Refer to Master Response 4, *Worst-Case Scenario*. The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios. As such, the methodology used in the EA represents SCAQMD staff's best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. As discussed in detail in the Final EA, no significant environmental impacts are anticipated.

The table included in the comment lists several operations that would not warrant an enclosure under PR 415. As shown in Table P-2 in the Final EA, the Farmer John facility's rendering operations would be expected to meet the requirements of PR 415 in a closed system under paragraph (f)(3). No enclosures or modifications to the existing building structures at the Farmer John facility are expected as a result of PR 415.

10. Page 2-12. "Additionally, the enclosures are expected to be equipped with high-speed doors and other appropriate building envelope openings in order to ensure that negative pressure is maintained."

The PR415 EA needs to evaluate whether a permanent enclosure made of "overlapping plastic flap curtains" according to Proposed Rule 415 (f)(3)(D), would be sufficient to reducing odors if other appropriate building envelope openings have different requirements.

2.1-10

Response 2.1-10

As defined in paragraph (c)(15) and subparagraph (f)(2)(D), a "Permanent Total Enclosure" example includes masonry, sheet metal, sheet plastic, wood, metal or aluminum siding, or even industrial-grade plastic flap curtains. The enclosure should be kept under negative pressure and vented to control equipment or use alternative

D1. Response to Comments

permanent total enclosure requirements for the enclosure for the raw material receiving area. PR 415 does not specify the type of negative pressure system; only that the system is capable of meeting the inward face velocity requirements of paragraph (f)(2). A negative pressure system for a partially-open enclosure will need to be designed to maintain the required minimum inward face velocity through all openings. Likewise, a system for an enclosure with regularly opened doors will need to maintain minimum face velocity accounting for all doors open at once. Note that subparagraph (f)(2)(A) limits the combined area of all routine enclosure openings through which odors can escape from a permanent total enclosure to 5% of the enclosure envelope. Additionally, PR 415 allows the usage of a closed system as an alternative to a permanent total enclosure if the requirements under paragraph (f)(3) are met.

11. Page 2-12 to 2-13. "Peak daily construction air quality impacts...have been determined to not exceed any applicable significance thresholds."

Clougherty Packing believes that SCAQMD underestimated the emissions due to not taking into account the worst-case scenario for an integrated renderer's compliance with Proposed Rule 415. The previous "worst-case" scenario was based on 53,500 square feet, the actual "worst-case" scenario (i.e., closures that are expected to be required at Clougherty Packing, LLC) is 221,000 square feet for six new structures and associated trenching / concrete activities for the footings of the new structures, as well as paving of the receiving area. As a result, it is estimated that the NOx significance threshold would be exceeded.

2.1-11

| PEAK CONSTRUCTION | vOC | CO | NOx | SOx | PM10 | PM2.5 |
|---|---------|---------|---------------|---------|---------|---------|
| | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day |
| Daily Emissions from Peak Construction Phase* | 14.38 | 111.74 | 144.54 | 0.17 | 19.79 | 10.82 |
| SCAQMD CEQA SIGNIFICANCE THRESHOLD | 75 | 550 | 100 | 150 | 150 | 55 |
| SIGNIFICANT? | NO | NO | YES | NO | NO | NO |

2.1-11
Cont'd

Response 2.1-11

Refer to Master Response 4, *Worst-Case Scenario*, Response 2.0-4, and Response 2.0-7 for a discussion on the modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. Refer to Responses 2.1-2 and 2.1-9 for rendering odor control methods under PR 415. The comment did not include evidence as to how 144.54 lbs/day of NOx was calculated. As shown in Table 2-3 in the Draft EA on page 2-13, implementation of PR 415 would be expected to generate 34.99 lbs/day of NOx, which is below SCAQMD's air quality CEQA threshold of significance of 100 lbs/day. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of

D1. Response to Comments

Response 2.1-12

PR 415 is intended to control and reduce rendering odors. PR 415 is not intended to apply to agricultural operations including hog and food processing operation. PR 415 only applies to inedible rendering. Refer to Master Response 8, *Agricultural Preemption*.

Refer to Master Response 4, *Worst-Case Scenario* and Response 2.0-4. The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios. As such, the methodology used in the EA represents SCAQMD staff's best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415.

As discussed in Response 3.0-18, the affected rendering facilities may elect to meet the alternative permanent total enclosure requirements for raw materials receiving areas under PR 415 (f)(5). The alternative requirements include more enhanced measures for enclosure openings where vehicles or equipment can access with the use of an automated roll-up door with an air curtain, vestibule, and air lock system to minimize fugitive odors escaping through enclosure openings. The alternative requirements would also be applicable to personnel access doors defined under subparagraph (f)(5)(D). The Final EA includes modifications to the operational scenarios analyzed in the Draft EA. The Final EA includes revisions to Table 2-8, *Additional Electricity Usage from New APCDs and Negative Pressure Air Handling Equipment for Worst-Case Analysis Scenario*. However, as shown in Table P-5 in the Final EA, the worst-case impact scenario assumes that approximately 517 MWh per year of additional electricity would be needed. This is substantially less electricity consumption than was analyzed and disclosed in the Draft EA. Therefore, PR 415 is not expected to result in significant adverse air quality and GHG impacts from the generation of electricity and the comment does not provide evidence to the contrary.

- 13. Page 2-24. "To analyze the "worst-case" emissions from construction activities associated with the installation of the APCDs, SCAQMD staff assumed that two APCDs could be installed at any given time for the worst-case scenario facility analysis. It is expected that the facility would not completely shut down operations for the installation of APCDs at all three required locations at the same time."**

Clougherty Packing, LLC believes that SCAQMD underestimated the amount of 'worst-case emissions' in the event of that Proposed Rule 415 intended to capture other agricultural operations from an integrated rendering plant resulting in NOx significant threshold exceedance. The previous "worst-case" scenario analyzed in the PR415 EA

2.1-13

D1. Response to Comments

was based on four scrubbers, the actual "worst-case scenario (i.e., APCD's expected to be required at Clougherty Packing, LLC) is 30 scrubbers for six new structures. Also, because (h)(1)(i) Odor Mitigation Plan, The Peak Construction Emissions Due to Installation of New APCDs for Worst-Case Analysis Scenario would result in the SCAQMD NOx significance threshold being exceeded if the assumption was that only two APCDs were installed at any given time. The following table shows the expected construction emissions.

| PEAK CONSTRUCTION | VOC | CO | NOx | SOx | PM10 | PM2.5 |
|------------------------------------|---------|---------|---------|---------|---------|---------|
| | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day | lbs/day |
| Total Project Emissions | 24.00 | 122.78 | 156.75 | 0.20 | 12.08 | 10.73 |
| SCAQMD CEQA SIGNIFICANCE THRESHOLD | 75 | 550 | 100 | 150 | 150 | 55 |
| SIGNIFICANT? | No | No | Yes | No | No | No |

2.1-13
Cont'd

Response 2.1-13

Refer to Master Response 4, *Worst-Case Scenario*, Response 2.0-4, Response 2.0-7 for a discussion on the modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios. As such, the methodology used in the EA represents SCAQMD staff's best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities.

As discussed in Response 2.0-8 (above), CalEEModTM was used to calculate construction and operation emissions from implementation of PR 415 requirements. Based on the analysis in the Final EA, substantial decreases in the size of enclosures are expected despite 9,000 square feet of demolition. Therefore, the peak daily construction emissions disclosed in Table 2-5 on page 2-14 of the Draft EA and Appendix C of the Draft EA represented the worst-case impact scenario for air quality. Peak construction emissions due to installation of new APCDs would result in additional emissions from VOCs, CO, NOx, SOx, PM10, and PM2.5 but would not exceed SCAQMD's CEQA thresholds of significance for air quality. The comment did not include substantial evidence to show how the emissions in the table included in the comment were calculated.

D1. Response to Comments

Refer to Master Response 4, *Worst-Case Scenario*. The construction emissions in the Draft EA assumed that construction would take up to two months to complete. However, construction time that would likely affect peak daily construction emissions because of the use of heavy construction equipment could be expected to require less than two months. Additionally, the fuel usage for construction activities were based on “two affected facilities at any given time²³,” representing a worst-case impact scenario on energy. For these reasons, PR 415 is not expected to result in significant adverse air quality impacts.

Refer to Master Response 8, *Agricultural Preemption* and Response 2.1-12 for a discussion on odor control equipment. PR 415 requires reduction of rendering odors. PR 415 is not intended to apply to agricultural operations including hog and food processing operation. The estimates of installing 30 scrubbers and six new enclosures are not supported by PR 415 requirements (refer to the analysis in Table P-1, Table P-3, and Table P-5 in the Final EA). The worst-case impact scenario for electricity consumption assumes four APCDs (one scrubber and three carbon adsorption systems) (see Table 2-4 in the Final EA). The Final EA includes modifications to the operational scenarios analyzed in the Draft EA, including the modifications to electricity consumption. As such, the Final EA includes revisions to Table 2-8, *Additional Electricity Usage from New APCDs and Negative Pressure Air Handling Equipment for Worst-Case Analysis Scenario*. Therefore, peak construction emissions due to the installation of APCDs are not expected to exceed SCAQMD’s air quality CEQA thresholds of significance.

With regards to the comment about the OMP, subdivision (h) outlines the requirements for an OMP, while paragraph (d)(2) explains the events that will trigger the submittal of an OMP. Refer to Response 3.1-11 for a discussion on the OMP and violation notice under Rule 402. Therefore, an OMP submittal required under subparagraph (h)(1)(i) is not expected to increase construction emissions beyond what was already analyzed in the Final EA.

²³ *Ibid.* Page 2-25.

D1. Response to Comments

- 14. Page 2-14. "Furthermore, as a "worst-case," the SCAQMD's air quality impacts analysis assumes that construction could take up to two months to complete."**
 Clougherty Packing, LLC believes that SCAQMD underestimated the amount of time construction would take because SCAQMD's "worst-case" facility did not take into account Proposed Rule 415's unintended impacts on integrated rendering facilities. Construction would more than likely last longer than the two months, because SCAQMD's "worst-case" facility did not take into account integrated rendering facilities that would need to construct up to 30 scrubbers and additional enclosures. The EA for PR415 needs to be revised to include the appropriate assumptions for a "worst-case" facility..

2.1-14

Response 2.1-14

Refer to Master Response 4, *Worst-Case Scenario*, Response 2.1-12, and Response 2.1-13 for a discussion on air quality impacts from construction activities. PR 415 only applies to the rendering operations of an integrated rendering facility. Based on the total modified square footage of permanent total enclosures that would be required under PR 415 (refer to Table P-2 in the Final EA), it is reasonable to assume that construction activities that will involve the use of heavy equipment and will potentially affect the peak daily emissions would not last more than two months. Therefore, the environmental analysis in the Draft EA represented a conservative estimate by SCAQMD staff for a worst-case impact scenario for PR 415. Moreover, the Final EA explains that Appendix C for the Draft EA had already assumed 10 days of demolition, and this assumption was included when calculating the peak daily construction emissions. Therefore, the environmental analysis for PR 415 has included the appropriate assumptions for worst-case impact scenario. Refer to the Final EA for revisions to the Draft EA. As stated above, those revisions do not trigger a recirculation of the Draft EA.

- 15. Page 2-14. "All of the construction impacts from the project are not significant for criteria pollutant emissions."**

Clougherty Packing, LLC believes that construction emissions exceeded NOx significance threshold due to SCAQMD's underestimation caused by the improper selection of a "worst-case" facility.

2.1-15

Response 2.1-15

Refer to Master Response 4, *Worst-Case Scenario*, Response 2.0-4, and Responses 2.1-9 through 2.1-14 for a discussion of the worst-case impact scenario analyzed in the Draft EA and Final EA. The comment does not provide specifics on the improper selection of a worst-case facility. Air quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

16. Page 2-14. "Construction emissions at the worst-case analysis scenario facility would not exceed any of the significance thresholds identified in Tables 2-3 and 2-5."

Construction emissions would exceed the NO_x significance threshold; therefore, the EA for PR415 should be revised to include the appropriate assumptions and recirculated for public review.

2.1-16

Response 2.1-16

Refer to Master Response 4, *Worst-Case Scenario*, Response 2.0-4, and Responses 2.1-9 through 2.1-15 for a discussion of the worst-case impact scenario analyzed in the Draft EA and Final EA. The comment does not provide specifics on how the construction emissions would exceed the NO_x significance thresholds. Air quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

17. Page 2-15. "A screening health risk analysis ...was prepared based on...the facility with the highest estimated construction emissions."

Clougherty Packing, LLC believes that SCAQMD underestimated the emissions because SCAQMD's "worst-case" facility did not take into account Proposed Rule 415's unintended impacts on integrated rendering facilities. The screening health risk analysis was not prepared based on the facility with the highest estimated construction emissions; therefore, this analysis needs to be revised.

2.1-17

Response 2.1-17

Refer to Master Response 4, *Worst-Case Scenario*. PR 415 only applies to the rendering operations of an integrated rendering facility. The screening health risk analysis was prepared based on the total amount of diesel particulate matter emitted from the worst-case construction scenario. Refer to Draft EA Section III. a), b), and f). As discussed in Response 2.0-4 and Responses 2.1-9 through 2.1-15, the environmental analysis in the Draft EA for PR 415 analyzed the worst-case scenario for air quality impacts. Therefore, all air quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

18. Page 2-15. "Additionally, in the unlikely event that it is not economically feasible for an affected facility to continue current operations, a facility could close down and the product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport. However, the affected facilities are located very close to each other, and any additional trips generated would

2.1-18

D1. Response to Comments

likely be less than a few miles. The closure procedures and possible demolition of a facility could not be predicted at this time since the subsequent operation of the site would be unknown. Thus, attempting to predict impacts from the closure and any subsequent operation of the facility would be speculative. Moreover, staff has not received evidence demonstrating that compliance would be infeasible for any facility."

The scenario assumes that all three dedicated rendering facilities are operating after Proposed Rule 415 has passed. Acceptance of hog rendering material or any type of meat used in the preparation of food products by an outside firm is usually dependent on availability. The worst case scenario for risk management is that two rendering facilities no longer exist here in Vernon because of Proposed Rule 415, and the third remaining facility cannot take anymore material for whatever reason (e.g. meeting its daily throughput permit limit, breakdown, etc.). As a result, a facility is left with determining options on where this material would need to go. Additional rendering facilities in the SCAQMD jurisdiction would face the same issue as Vernon Rendering facilities under Proposed Rule 415 which means that they would not be able to operate.

Under the worst case scenario, the "product normally processed would need to be transported to another facility, thus generating additional vehicle emissions from the transport." Under Title 3, California Code of Regulations, Section 1180.39 states that "any parts or products of animals disposed of by inspected establishments, retail stores, custom slaughterers and custom processors and which are not intended for use as human food shall be disposed of through licensed renderers, licensed pet food processors, licensed collection centers or other method approved by the Director. As a result, California Landfills would not be able to take rendered materials. Cal-EPA has developed Emergency Animal

Disposal guidelines which include: Temporary Storage for transport to rendering materials, Disposal at permitted landfills, and On-Site Composting. However, none of those options are currently available within the District at this time without substantial cost or would not be approved under current USDA regulations. Clougherty Packing, LLC and anyone dependent on rendering operations would need to send out material to the nearest disposal landfill, which would be either Kettleman Hills, California or Yuma, Arizona.

Response 2.1-18

The intent of PR 415 is to capture and control rendering odors, not cease rendering operations. PR 415 will not cause the closure of facilities or result in rendering materials transferred outside SCAQMD's jurisdiction. Absence of rendering operations within SCAQMD's jurisdiction is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. For the reasons discussed in Master Response 2, *Facility Shutdown*, such a scenario is not supported based on the requirements of PR 415 or the impacts on rendering facilities.

2.1-18
Cont'd

D1. Response to Comments

Regarding the comment on the acceptance of hog rendering material or any type of meat used in the preparation of food products and the comment on Section 1180.39, Title 3, CCR, PR 415 only applies to inedible rendering operations, not for food or human consumptions. For an integrated rendering facility that conducts rendering operations at the same physical location as a slaughterhouse or meat-pack plant, PR 415 only applies to the rendering operations. Refer to subdivision (c) of PR 415 and Master Response 8, *Agricultural Preemption*.

While PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made by staff during the rule development process to accommodate each existing facility's unique needs and provide sufficient flexibility. This has resulted in various changes to the scope and requirements of PR 415 and several public versions of the rule language. Refer to Table P-1 in the Final EA.

Regarding the comment on disposal of animal carcasses and parts in landfills, existing rendering operations are not expected to cease, and animal carcasses and parts are not expected to be diverted because of the requirements included in PR 415. Refer to Response 3.1-36.

Rendering facilities subject to the requirements of PR 415 are expected to continue to operate as they currently do. SCAQMD staff is aware of one facility that has already submitted permit applications for an enclosure and odor control equipment that will meet the permanent total enclosure, ventilation system, and odor control equipment standards in PR 415. Refer to Appendix D-1, Darling Modernization Permit. For the reasons stated in Master Response 4, *Worst-Case Scenario*, the environmental analysis for PR 415 is a conservative estimate with reasonable assumptions based on a worst-case impact scenario, and the Draft EA made a good-faith disclosure of the worst-case impacts from implementing PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

D1. Response to Comments

19. Page 2-18. "Overall CO2 Equivalent (eq) Increases for Worst-Case Analysis Scenario (metric tons/year)."

Clougherty Packing, LLC's daily rendering throughput limit is 300 Tons. An 80 yard truck can hold a maximum of 28 Tons. Approximately 11 trucks would be needed to ship material to a landfill. Since Yuma Landfill is the farthest, then the worst case scenario would be almost 600 miles round trip. Vehicle mile per gallon rating is approximately 8 mpg. Therefore, for one day's trip to calculate Greenhouse Gas Emissions under 40 CFR 98 Subpart TT - Industrial Waste Landfills Equation TT-1, 40 CFR 98 Subpart C Table C-1 Distillate Fuel Oil No. 2 Default CO2 Emission Factor and 40 CFR 98 Subpart C Table C-1 Distillate Fuel Oil No. 2 Default High Heat Value:

2.1-19

| | Diesel Combustion GHG Emissions (CO2e metric tons) | Yearly GHG Emissions (CO2e metric tons) | Lifetime Landfill CH4 Emissions (CH4 metric tons) | Lifetime Landfill GHG Emissions (CO2e metric tons) |
|----------|--|---|---|--|
| Annually | 2,280.5 | 31,093 | 7,541.93 | 188,548 |

The landfilled rendering material will decompose in its first year releasing the majority of its GHG emissions. If Clougherty Packing, LLC had to send one day's maximum total to landfill, this would amount to 119.6 CO2e metric tons per year. In the worst case scenario,

if Clougherty Packing, LLC decided to send all of its rendering material to landfill, it is estimated that approximately 31,093 Waste GHG (m.t.CO2e) would be generated in its first year.

2.1-19
Cont'd

Response 2.1-19

The GHG emissions estimated in the comment were based on a shutdown scenario which would cause the rendering material to be transported to landfills outside SCAQMD's jurisdiction. However, as discussed in Master Response 2, *Facility Shutdown* and Response 2.1-18 (above), closure of rendering facilities within SCAQMD's jurisdiction is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. For the reasons discussed in Master Response 2, *Facility Shutdown*, such a scenario is not supported by the requirements of PR 415 or the impacts on rendering facilities.

Furthermore, Section 20890, Title 27, CCR, provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. In 2006, the Southern San Joaquin Valley experienced a larger-than-normal number of dairy and other animal mortalities due to extreme temperatures. In response to the heat event and the intermittent operation of key rendering facilities in the valley, a series of recommendations were developed and

D1. Response to Comments

approved by CalEPA and the California Department of Food and Agriculture (CDFA). Disposal at landfills is only recommended if rendering capacity is exceeded or suspended. Only the Kettleman Hills facility in Kern County accepts disposal of carcasses and self-haul is not permitted. However, existing rendering operations are not expected to cease; and therefore, it would be speculative to assume that animal carcasses and parts would be diverted to landfills. Therefore, the GHG emissions impact as shown in the comment would not occur.

Master Response 4, *Worst-Case Scenario*, explains that the CalEEMod™ emissions computer model was used to quantify the GHG emissions. Based on the GHG emission analysis in Section III of the Draft EA from page 2-17 through 2-19, PR 415 is expected to cause an additional 3.2 metric tons of CO₂eq per year, which is substantially less than SCAQMD’s GHG CEQA significance threshold of 10,000 metric tons per year. Therefore, PR 415 is not expected to result in significant adverse impacts on GHG emissions.

20. Page 2-18. "Construction emission calculations were conducted for one of the larger facilities in the current affected facility inventory. This particular facility was chosen for the analysis because it required the most construction activities of the five facilities currently in the affected inventory. Therefore, this construction estimate was used as an example for a "worst-case" impact scenario"

Because additional scrubbers may be needed as well as additional construction activities required to be in compliance with Proposed Rule 415, the actual estimate for Greenhouse Gases are:

| Annual CO ₂ eq Emission Increases Due to: | CO ₂ | CH ₄ | CO ₂ eq |
|--|-----------------|-----------------|--------------------|
| | lb/day | lb/day | MT/year |
| Installing New Enclosures and Paving Activities | 18,374 | 2.69 | 8.26 |
| Installing New APCDs | 18,525 | 2.93 | 8.25 |
| | TOTAL: | | 16.51 |

2.1-20

In addition, Table 2-7 of the Draft EA must include the GHG emissions from the construction and operation of additional equipment at all facilities affect by PR415.

Response 2.1-20

Refer to Master Response 4, *Worst-Case Scenario*, Response 2.0-4, and Responses 2.1-9 through 2.1-15 for a discussion on the potential impacts on air quality and GHG emissions from the construction activities required under PR 415. The methodology used in the EA represents SCAQMD staff’s best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of

D1. Response to Comments

demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. Installation of 30 scrubbers is not anticipated or foreseeable. The BMP for patching, repair, and repaving under paragraph (e)(6) is limited to the outside raw material receiving area where material touches the ground, rather than the entire facility grounds. Refer to Response 3.1-28 for a discussion on the repair and repaving BMP. Therefore, as discussed in Response 2.1-19 above, the GHG emissions as identified by the comment would not occur.

21. **Page 2-16. "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same."**

Project-specific air quality impacts from implementing the proposed project would exceed air quality significance thresholds (Table 2-1) for NO_x and GHG for construction of enclosures, APCDs, and sending material to Landfill. As a result, SCAQMD is required under CEQA Guideline §15064.7, to determine potential adverse impacts from the proposed project that are "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. While construction impacts under Proposed Rule 415 may differentiate throughout the various rendering facilities throughout the SCAQMD jurisdiction, GHG impacts resulting from the loss of rendering facilities must be evaluated.

2.1-21

Response 2.1-21

As stated above, absence of rendering operations within SCAQMD's jurisdiction is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. The comment does not include evidence to support a shutdown scenario that will be caused by the requirements of PR 415. Therefore, due to the reasons listed in Master Response 4, *Worst-Case Scenario*, Response 2.0-4, and Responses 2.1-9 through 2.1-20, PR 415 is not expected to result in significant adverse project-specific air quality impacts that would be cumulatively considerable.

22. **Page 2-18. "Indirect GHG and criteria pollutant emissions are expected from the generation of electricity to operate new equipment that occurs off-site at electricity generating facilities (EGFs)."**

It is estimated that from four Vernon Facilities, there will be 75 GWs of electricity to be used. The EA for PR415 needs to be revised to include the revised GHG emissions associated with the increase in electricity use.

2.1-22

Response 2.1-22

Refer to Master Response 4, *Worst-Case Scenario* and Response 2.1-12 for a discussion on air quality impacts from construction activities. As shown in Table P-5 in the Final EA, additional 517 MWh per year of electricity would be needed. Based on the carbon intensity of Vernon's electricity of 761 lbs/MWh, as reported in the CalEEMod 2016

D1. Response to Comments

User's Guide, PR 415 would be expected to result in 180 MTCO₂ annually.²⁴ The Final EA includes modifications to the operational scenario analyzed in the Draft EA. Based on the analysis in the Final EA, implementation of PR 415 requirements is not expected to result in significant adverse impacts on GHG emissions. The comment does not include substantial evidence to support the statement that the four Vernon facilities will result in 75 GWs of electricity to be used to comply with PR 415 requirements. Therefore, indirect air quality and GHG impacts from electricity usage have been adequately analyzed in the EA and no further analysis is required under CEQA.

23. Page 2-19. "Under the SCAQMD Regional Clean Air Incentives Market (RECLAIM) program (that regulates NO_x and SO_x emissions)..."

Clougherty Packing, LLC is a RECLAIM facility. As such it is required to report RECLAIM emissions under its Title VIRECLAIM permit Rule 109 emissions, including equipment from construction activities (e.g. small generators, etc.) From Construction activities and APCD installation, it is estimated that approximately 300 lbs/NO_x would be generated. As a result additional recordkeeping measures along with credits would have to be purchased.

2.1-23

Response 2.1-23

Refer to also Master Response 4, *Worst-Case Scenario*, Response 2.0-4, and Responses 2.1-9 through 2.1-20 for maximum daily NO_x emissions during construction. The Regional Clean Air Incentives Market (RECLAIM) is an emission cap-and-trade program that was implemented in 1994 by SCAQMD to achieve cleaner air in an efficient and economical manner. The RECLAIM program creates an imaginary "bubble" for the facility so that the total pollution in the bubble can be regulated instead of regulating each source. Facilities under the RECLAIM program must meet annual emission-reduction targets for nitrogen oxide and sulfur oxide. Facilities that reduce emissions beyond the annual emissions reduction targets may have an asset to sell in the open market. Compared to command-and-control methods, the RECLAIM program gives flexibility to facilities by allowing them to determine the most economical way for them to reduce their emissions. As shown in Table P-2 in the Final EA, construction activities are expected to be substantially less than what was analyzed in the Draft EA and would likely result in a decrease in the peak daily construction emissions due to installation of APCDs in Table 2-5 of the Draft EA. Therefore, construction activities due to the installation of APCDs are not expected to generate NO_x emissions that would exceed SCAQMD's air quality CEQA threshold of significance of 100 lbs/day. The comment does not include

²⁴ CH₄ and N₂O intensity factors are based on 2012 E-Grid for California reported in the CalEEMod 2016 User's Guide. CO₂-equivalency (CO₂e) is based on the global warming potentials identified in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report for CH₄ and N₂O.

D1. Response to Comments

substantial evidence to support the estimated 300 lbs of NO_x generated from construction. Therefore, air quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

24. As discussion in Comment #20, the 2007 General Plan for City of Vernon identified the Clougherty Packing, LLC murals as a "notable landmark surrounding the company's meat processing facility on Vernon Ave."-Pg. 133. The potential impacts to this historic building should be included in the Draft EA for PR415. 2.1-24

Response 2.1-24

Based on Response 2.1-5, Response 2.1-6, and Appendix D-4, *Landmark Wall Viewshed Photos*, PR 415 is not expected to have the potential to significantly alter the historic value of the Landmark Wall as proposed signage that meets the requirements of PR 415 would be similar in scale as the existing signage. Pursuant to CEQA Guidelines Section 15064.5, the Landmark Wall is not considered a historic resource under CEQA. Although the City of Vernon's General Plan identifies the Landmark Wall as a notable landmark, it does not designate it as a historic resource. Furthermore, PR 415 would not result in the physical demolition, destruction, relocation, or alteration of the Landmark Wall or its immediate surroundings such that the significance of the Landmark Wall would be materially impaired. Therefore, cultural resources impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

25. Page 2-22, last 2 paragraphs. Not the notification to the Native American Tribes under AB52 is required PRIOR to the release of a Negative Declaration or EA. 2.1-25

Response 2.1-25

Public Resources Code Section 21080.3.1 includes two circumstances where the lead agency is required to begin consultation with a California Native American Tribe prior to the release of a negative declaration or EA. The first circumstance is when the California Native American tribe submits a request to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed projects in the geographic area that is traditionally and culturally affiliated with the tribe. The second circumstance is when the California Native American tribe responds, in writing, within 30 days of receipt of the formal notification, and requests the consultation. If the California Native American tribe does not designate a lead contact person, or designates multiple lead contact people, the lead agency shall defer to the individual listed on the contact list maintained by the Native American Heritage Commission (NAHC) for the purposes of Chapter 905 of the Statutes of 2004.

D1. Response to Comments

As discussed in Section D0-1.0 of Appendix D, a Notice of Completion (NOC) for the Draft EA for PR 415 was provided to all California Native American Tribes (Tribe) that requested to be on the NAHC's notification list. SCAQMD did not receive a consultation request from a Tribe prior to the release of the Draft EA or during the 30-day public review and comment period. Moreover, no Tribes responded to the NOC to request a consultation on PR 415 and the associated Draft EA. Therefore, SCAQMD as the lead agency under CEQA for PR 415 fulfilled the tribal consultation requirement pursuant to Public Resources Code Section 21080.3.1 and AB 52.

26. Page 2-24 last paragraph and 1st paragraph of 2-25. Data used for electricity consumption was based on 2008 data. More recent data from electrical use in Los Angeles should be provided. LADWP published its 2014 Integrated Resource Plan (IRP) which provides more recent information on electricity use in Los Angeles.

2.1-26

Response 2.1-26

Refer to Response 2.1-12 for a discussion on air quality and GHG impacts from the generation of electricity. The City of Vernon supplies electricity to facilities within the City. As discussed in Master Response 4, *Worst-Case Scenario* and in Table P-5 in the Final EA, implementation of PR 415 would require a conservative estimate of 517 MWh of additional electricity each year. However, based on the analysis in the Final EA, PR 415 is not expected to result in a significant adverse impact on energy.

27. Page 2-24. "...[A]additional electricity would be required by the operation of this new equipment."

Because the SCAQMD assessment did not include the worst-case scenario for a facility, there will be significantly more scrubbers needed than what was anticipated. Further, industry estimates peg the usage to be approximately 75 horsepower rating to operate each scrubber. As a result for the expected four facilities, there will approximately 2,850 KWH used annually, a five-fold usage estimate.

2.1-27

Response 2.1-27

Refer to Master Response 4, *Worst-Case Scenario* and Responses 2.1-12 and Response 2.1-22 for a discussion on air quality and GHG impacts from the generation of electricity. As shown in Table P-5 in the Final EA, a conservative estimate of 517 MWh additional electricity annually was estimated. Based on the carbon intensity of Vernon's electricity of 761 lbs/MWh, as reported in the CalEEMod 2016 User's Guide, PR 415 would be

D1. Response to Comments

expected to result in 180 MTCO₂ annually.²⁵ The Final EA includes modifications to the operational scenario analyzed in the Draft EA. Based on the analysis shown in the Final EA, implementation of PR 415 is not expected to result in significant adverse impacts on energy. The comment does not include substantial evidence to support the estimate of approximately 2,850 KWH of electricity use needed to comply with PR 415 requirements. Therefore, energy impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

28. Page 2-24. "No consumption information was available for City of Vernon Gas & Electric."

In 2008, Carlos Fandino, provided this information.

2.1-28

Response 2.1-28

Refer to Response 2.1-27, above. Implementation of PR 415 is expected to require additional 517 MWh of electricity each year. According to the City of Vernon Utility's 2015 Renewable Portfolio (RPS) Compliance Report²⁶, in 2014, the Vernon Gas & Electricity Utility had a retail load of 1,120.89 GWh. The anticipated increase in energy from electricity consumption from the APCDs would represent less than 1 percent of Vernon's electricity demand. Therefore, PR 415 is not expected to result in significant adverse impacts on energy. The Final EA will include the electricity consumption information from City of Vernon Gas & Electric.

²⁵ CH₄ and N₂O intensity factors are based on 2012 E-Grid for California reported in the CalEEMod 2016 User's Guide. CO₂-equivalency (CO₂e) is based on the global warming potentials identified in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report for CH₄ and N₂O.

²⁶ Vernon Utility. 2015, January 20. Renewable Portfolio Standard Annual Status Report for Calendar Year 2014. Staff Report, Vernon Gas & Electricity Department. Accessed at: http://www.cityofvernon.org/images/light-and-power/rps/RPS_Annual_Report_for_Calendar_Year_2014_1_20_15.pdf.

D1. Response to Comments

29. **Page 2-25. "SCAQMD staff concludes that the amount of electricity required to meet the incremental energy demand associated with the proposed rule requirements would not result in a significant adverse electricity energy impact."**

As discussed above in the above comments, Clougherty Packing, LLC expects to require up to 30 new scrubbers. The electricity demand in the EA for PR415 needs to be revised to include the increase electricity demand. The additional 2,015 megawatt-hours annually required to operate the new APCDs and air handling equipment at the worst-case facility analysis scenario would be 0.008 percent of the 2008 consumption of 25,921 gigawatts and the peak consumption of 0.23 megawatt-hours would be 0.00004 percent of the peak 5,717 megawatt-hours consumption. Moreover, if all five facilities operated the same amount of air handling and control equipment as the worst-case scenario facility, the additional 10,075 megawatt-hours (2,015 megawatt-hours x 5 facilities) annually required would be 0.04 percent of the 2008 consumption of 25,921 gigawatts and the peak consumption of 1.15 megawatt-hours (0.23 megawatt-hours x 5 facilities) would be 0.0002 percent of the peak 5,717 megawatt-hours consumption.

2.1-29

Response 2.1-29

Refer to Response 2.1-28 (above). Since the increase in energy from the APCDs would represent less than 1 percent of Vernon's electricity demand, the electricity that is needed to power the APCDs would not result in a significant adverse electricity impact. Therefore, PR 415 is not expected to result in significant adverse impacts on energy. Also refer to Master Response 4, *Worst-Case Scenario*, Response 2.1-12, and Response 2.1-26 for a discussion on air quality impacts from construction activities and from the generation of electricity.

30. **Page 2-25. "To estimate construction workers' fuel usage per commute round trip, the SCAQMD staff assumed that workers' vehicles would get 20 miles to the gallon and would travel 40 miles round trip to and from the construction site in one day. "**

Table 2-9, page 2-25. The fuel usage for construction activities at all facilities should be included in Table 2-9. The worker's fuel usage must be revised to account for the increase in construction activities expected to occur at Clougherty Packing, LLC.

2.1-30

Response 2.1-30

Refer to Master Response 4, *Worst-Case Scenario* and Response 2.1-23 for a discussion on maximum daily NO_x emissions during construction. Since construction activities are expected to be substantially less than what was analyzed in the Draft EA, the estimate of construction workers' fuel usage per commute round trip in the Draft EA reasonably represented a worst-case impact scenario. Therefore, PR 415 is not expected to result in significant adverse impacts to energy from the usage of petroleum fuels.

31. **Table 2-9, page 2-25.** The fuel usage for construction activities at all facilities should be included in Table 2-9.

2.1-31

D1. Response to Comments

Response 2.1-31

As explained in Master Response 4, *Worst-Case Scenario*, the potential energy impacts from fuel usage for construction activities, which were based on “two affected facilities at any given time,” represented a worst-case impact scenario. Moreover, since construction activities are expected to be substantially less than what was analyzed in the Draft EA, PR 415 is not expected to result in significant adverse impacts on energy from the fuel usages for construction activities. The average fuel consumption per hour for construction equipment is based on OFFROAD.²⁷ Based on the number of hours of equipment use in CalEEMod for the worst-case impact scenario (see the Final EA Appendix C), PR 415 would result in 1,923 gallons (0.0019 million gallons) of diesel (see Final EA Appendix C).

32. Page 2-27, under Discussion VII.a: The Uniform Building Code has been replaced with the California Building Code. | 2.1-32

Response 2.1-32

Refer to Response 1.0-5. The Final EA will reference the California Building Standards Code rather than the Uniform or International Building Code.

33. Page 2-32. "Affected facilities must comply with all local and county requirements for fire prevention and safety. The proposed project does not require any activities which would be in conflict with fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities." | 2.1-33

a. Inedible rendering material has high amounts of fats and oils and greases, especially when raw. This material is a class IIIB combustible liquid. Based on the California Fire Code, Table 5003.1.1(1) for the storage of Class IIIB you can have up to 13,200 gallons, for a closed use system. For an open use system you can have up to 3,300 gallons. There is also a footnote (f) Quantities shall not be limited in a building equipped throughout with an approved sprinkler system in accordance with section 903.3.1.1 (H-1 Building Rating). | 2.1-34

b. The equipment that is used to process rendering material that is housed under a permanent enclosure can cause grease fires. | 2.1-35

²⁷ California Air Resources Board. OFFROAD 2011 and OFFROAD 2007. In-Use Off-Road Equipment Emissions Inventory. Construction equipment in year 2016.

D1. Response to Comments

Response 2.1-33, 2.1-34, and 2.1-35

Refer to Master Response 7, *Building Codes*, Response 1.0-5, and Response 1.0-8 for discussions on compliance with existing regulations with respect to California Building Standards code and the issues of fire hazards and worker safety. All facilities must comply with local and county requirements for fire prevention and safety. All cities and counties are required to adopt the California Building Standards Code, which is Title 24, CCR. Rendering facilities, collection centers, and facilities that store animal carcasses and parts must already conform to the standards listed in Section 1241, Title 24, CCR. Any new building constructed as a result of PR 415 would be required to conform to these standards as well. Compliance with the California Building Standards Code is not a new requirement and would ensure that structural and fire hazards associated with building operation are minimized and would not result in new or more severe adverse environmental impacts than analyzed in the EA. Enclosures that are constructed pursuant to the requirements of PR 415 will need to meet all appropriate fire and safety codes and would not undermine worker safety.

Furthermore, SCAQMD staff is aware of an integrated rendering facility in the City of Vernon that is operating grease generating processes within an enclosure. This demonstrates that a permanent total enclosure can and should meet the California Building Standards Code since it already exists in the City. Additionally, the comment has not included any evidence to substantiate why an enclosure cannot meet the building code or provided information about the Fire Marshall's objections to the enclosure as a result of PR 415. For these reasons, the Draft EA concluded that PR 415 does not require any activities which would be in conflict with fire prevention and safety requirements, and thus would not create or increase fire hazards at these existing facilities. No significant adverse impacts on hazards and hazardous materials as a result of PR 415 are expected.

Refer to Response 2.0-6 and 2.0-9 for discussions on compliance with existing regulations with respect to California Building Standards code and the issues of fire hazards and worker safety. It is assumed that all permanent total enclosures would be required to install a fire suppression system, and that water sprinkler-type fire suppression systems would be sufficient for the enclosed areas to meet the municipal fire code requirements. This assumption is based on the current setup of the facility that has already submitted permit applications to the SCAQMD (refer to Master Response 2, *Facility Shutdown* and Appendix D1) and that would satisfy PR 415's requirements. Therefore, PR 415 is not expected to be in conflict with fire prevention and safety

D1. Response to Comments

requirements, and would not result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards at these existing facilities.

- c. Because some rendering equipment identified in Proposed Rule 415 will have combustible liquid that is heated (e.g. duplex cooker, heated tanks in wastewater), the type of building required will not be suitable for wood, or plastic under Chapter 26 of the Building Code. The 'H' use is limited in size and cannot exceed 10% of the floor area. There are size limitations if the H use is not located along the perimeter of the building. Occupancy separations would be required. Typical wood construction is not permitted for an H-1 use. Depending on the H classification, the square footage area needed for the H use however appears to be over the allowable area for wood construction. Therefore, the preliminary assessment is that H use may limit construction to a type I or II, which is a totally non-combustible construction. This requirement could require additional demolition and construction activities not included in the EA for PR415.

2.1-36

Response 2.1-36

Paragraph (f)(D) lists the types of materials for exterior walls for the permanent total enclosures. However, as discussed in Master Response 7, *Building Codes*, Response 2.0-7, and Response 2.1-33 through 2.1-35, PR 415 is not expected to be in conflict with fire prevention and safety requirements, and would not result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards at these existing facilities.

As explained in Master Response 4, *Worst-Case Scenario*, implementation of PR 415 will likely involve approximately 9,000 square feet of existing buildings or facilities to be demolished at one rendering facility. However, as shown in Table P-2 in the Final EA, the size of enclosures that would be constructed is substantially less than what was analyzed in the Draft EA. When demolition is added to the amount of enclosures that are no longer required as shown in Table P-2 in the Final EA, there is an overall reduction in construction activities. Therefore, PR 415 would not require additional demolition and construction activities beyond what has been analyzed in the Final EA.

D1. Response to Comments

- d. Because of the City of Vernon Fire Department and its Class 1 Rating, equipment will need access to all areas of the facility, many of the structures proposed under PR415 will provide access challenges as they encroach onto current existing emergency pathways. In order to have access through these emergency pathways, facilities will have to accommodate fire trucks and all other equipment in the City's vast arsenal of Class 1 equipment. Therefore, any new structure proposed will need to meet these requirements. Since Vernon rendering facilities have been existence for more than 50 years, and we have been operating as an open process, changes proposed by Rule 415 will be an expensive challenge to meet these new regulations and would require additional construction/demolition activities that were not evaluated in the EA for PR415.

2.1-37

Response 2.1-37

Due to the reasons explained in Master Response 7, *Building Codes* and Response 2.1-33 through 2.1-36, PR 415 is not expected to be in conflict with fire prevention and safety requirements, and would not result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards at these existing facilities.

Due to the reasons explained in Master Response 4, *Worst-Case Scenario*, Response 2.0-7 and 2.1-37, PR 415 would not require additional demolition and construction activities that have not been analyzed in the Final EA.

Regarding the comment that PR 415 will be an expensive challenge, SCAQMD staff has prepared a Socioeconomic Impact Assessment for PR 415, which analyzes the costs associated with PR 415. Refer to Table P-1 in the Final EA for a summary of various changes to PR 415.

- e. Because there are workers assigned to wastewater treatment and others identified and regulated in Proposed Rule 415, additional precautions in the closed system, ventilation or building requirements will be needed per California Code of Regulations Title 8, General Industry Safety Orders and/or the federal Occupational Safety and Health Act (OSH Act) includes, in Section 5(a)(1). Here are some but not all of the requirements associated with converting once open processes to closed systems, permanent enclosures with ventilation and odor control requirements.

2.1-38

Response 2.1-38

All cities and counties are required to adopt the California Building Standards Code. For those reasons explained in Master Response 4, *Worst-Case Scenario*, Master Response 7, *Building Codes*, Response 2.0-7, and Response 2.1-33 through 2.1-35, PR 415 is not expected to be in conflict with fire prevention and safety requirements in the California Building Standards Code or the federal OSHA requirements. Therefore, PR 415 would

D1. Response to Comments

not result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety at these existing facilities and the comment does not provide substantial evidence to the contrary.

- f. Because the proposed rule requires permanent enclosures for heated equipment (e.g. continuous cooker room and waste water treatment system) this will require compliance with California Code of Regulations and Subchapter 7. General Industry Safety Orders | 2.1-39

Group 20. Flammable Liquids, Gases and Vapors "Heating equipment may be installed in a special room separated from an area classified as Division 1 or Division 2 in Table FL-9 by walls having a fire-resistance rating of at least one hour and without any openings in the walls within 8 feet of the floor into an area classified as Division 1 or Division 2 in Table FL-9. This room shall not be used for combustible storage, and all air for combustion purposes shall come from outside the building." | 2.1-39 Cont'd

Response 2.1-39

All buildings in California must comply with local and county requirements for fire prevention and safety and are required to meet the standards set forth in the California Building Standards Code. For the reasons explained in Master Response 7, *Building Codes* and Responses 2.1-33 through 2.1-38, a permanent total enclosure constructed as a result of PR 415 would need to meet the requirements set forth in these codes, per state law since they are not new requirements or regulations. Compliance with these codes would minimize potential fire hazards associated with the facility. As explained in Response 1.0-8, there are enclosed rendering operations in many jurisdictions around the country, including within the City of Los Angeles immediately adjacent to the City of Vernon. In all of these jurisdictions, the fire protection authority is obligated to fight grease fires that occur within an enclosure. The comment does not substantiate the reasons that the City of Vernon Fire Department is incapable of providing fire protection services within an enclosure, when dozens of other fire departments have that capability. Therefore, it is not expected that PR 415 would result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety at these existing facilities and the comment does not provide evidence to the contrary.

- g. Because additional equipment is identified as part of the rendering process under the facility's permits including but not limited to singeing equipment, blood dryer, and hair hydrolyzer, the proposed rule does not rule out the analysis and inclusion of these systems in the event that the Odor Mitigation Plan is triggered. If these heated systems are required to be in an enclosed system or under a permanent enclosure, then they will require H-1 status. | 2.1-40

D1. Response to Comments

Response 2.1-40

Refer to Master Response 4, *Worst-Case Scenario* and Responses 2.1-33 through 2.1-39. Paragraph (d)(2) discusses the triggering events for submitting an OMP by a rendering facility, and subdivision (h) lists the requirements for an OMP. As shown in Table P-1 in the Final EA, a closed system is an acceptable alternative to a permanent total enclosure, provided fugitive odors from that closed system do not continue to cause verified odor complaints. The additional equipment listed in the comment is expected to achieve a closed system. In the event that a permanent total enclosure is required, it must comply with local and county requirements for fire prevention and safety and is also required to meet the standards set forth in the California Building Standards Code and additional industry safety requirements in the CCR. For the reasons explained in Master Response 7, *Building Codes*, Response 1.0-8, and Responses 2.1-33 through 2.1-39, it is not expected that PR 415 would result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety at these existing facilities and the comment does not provide evidence to the contrary.

- h. Systems and/or equipment that is heated would require additional ventilation to meet Title 8 §3395. Heat Illness Prevention requirements.

2.1-41

Response 2.1-41

Refer to Master Response 7, *Building Codes*. All buildings in California are required to meet the standards set forth in the California Building Standards Code and additional industry safety requirements in the CCR. Thus, any new enclosure constructed as a result of PR 415 would need to meet the standards set forth in these codes, per state law. For the reasons stated in Responses 2.1-33 through 2.1-40, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to conflicting with Section 3395, Title 8, CCR, for heat illness prevention requirements.

- i. Because equipment will be in a closed system or a permanent enclosure it would need to meet Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors Article 142. Industrial Plants.

2.1-42

Response 2.1-42

For the reasons stated in Master Response 7, *Building Codes* and Responses 2.1-33 through 2.1-41, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to fire

D1. Response to Comments

hazards and worker safety. PR 415 is not expected to conflict of Subchapter 7, General Industry Safety Orders Group 20, Flammable Liquids, Gases, and Vapors Article 142, Industrial Plants and the comment does not provide evidence to the contrary.

- j. Because equipment will be in a closed system or a permanent enclosure it would need to meet Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors Article 145. Tank Storage §5603. Sources of Ignition. "In locations where flammable vapors may be present, precautions shall be taken to prevent ignition by eliminating or controlling sources of ignition. Sources of ignition may include open flames, lightning, smoking, cutting and welding, hot surfaces, frictional heat, sparks (static, electrical and mechanical), spontaneous ignition, chemical and physical-chemical reactions and radiant heat."

2.1-43

Response 2.1-43

For the reasons stated in Master Response 7, *Building Codes* and Responses 2.1-33 through 2.1-42, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety. PR 415 is not expected to conflict with Subchapter 7, General Industry Safety Orders Group 20, Flammable Liquids, Gases, and Vapors Article 145, Tank Storage Section 5603, Sources of Ignition and the comment does not provide evidence to the contrary.

- k. Because blood drying (and other rendering equipment) equipment uses a direct fire, it will be in violation of Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors §5476. Special Rooms, where:
- (a) Floor, walls, and ceiling shall have a fire-resistance rating of at least two hours. Walls or partitions shall be continuous from floor to ceiling and shall be securely anchored. At least one wall shall be an exterior wall. Openings to other parts of the building shall not be permitted. Windows and doors shall be in exterior walls and shall be located so as to be readily accessible in case of emergency. Windows shall be of glass or plastic in metal frames.
 - (b) Ventilation shall be as provided in 5475(b).
 - (c) Explosion venting shall be as provided in 5475(c).
 - (d) There shall be no sources of ignition from open flames, electrical equipment, or heating equipment.
 - (e) Electrical equipment shall be in accordance with the California Electrical Safety Orders for Class I, Division 2 locations.
 - (f) Heating, if provided, shall be by steam, hot water, or indirect means. (Title 24, T8-5476)

2.1-44

D1. Response to Comments

Response 2.1-44

For the reasons stated in Master Response 7, *Building Codes* and Responses 2.1-33 through 2.1-43, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards. Moreover, blood meal processing is exempt from PR 415, provided that it meets the requirements under paragraph (l)(5).

- | | |
|--|------------------|
| <p>l. Because equipment will be in a closed system and/or in a permanent enclosure it will need to comply with Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors §5475. Separate Buildings. In which:</p> | 2.1-45 |
| <p>(a) Separate buildings shall be built of at least noncombustible construction. Windows and doors shall be located so as to be readily accessible in case of emergency. Windows shall be of glass or plastic in metal frames.</p> | 2.1-45 Cont'd |
| <p>(b) Adequate ventilation to the outdoors shall be provided. Inlet openings shall be located near the floor in exterior walls only. Outlet openings shall be located at the high point of the room in exterior walls or roof. Inlet and outlet openings shall each have a minimum total area of one (1) square foot per 1,000 cubic feet of room volume. Discharge from outlet openings shall be directed or conducted to a safe location.</p> | 2.1-45 Cont'd |
| <p>(c) Explosion venting shall be provided in exterior walls or roof only. The venting area shall be equal to not less than one square foot per 30 cubic feet of room volume and may consist of any one or any combination of the following: walls of light, noncombustible material, preferably single thickness, single strength glass; lightly fastened hatch covers; lightly fastened swinging doors in exterior walls opening outward; lightly fastened walls or roof designed to relieve at a maximum pressure of 25 lb. per sq. ft.</p> | |
| <p>(d) There shall be no sources of ignition from open flames, electrical equipment, or heating equipment.</p> | |
| <p>(e) Electrical equipment shall be in accordance with the California Electrical Safety Orders for Class I, Division 2 locations.</p> | |
| <p>(f) Heating, if provided, shall be by steam, hot water, or other indirect means. (Title 24, T8-5475)</p> | |

Response 2.1-45

For the reasons stated in Master Response 7, *Building Codes* and Responses 2.1-33 through 2.1-43, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety and the comment does not provide evidence to the contrary.

D1. Response to Comments

- m. Because equipment (including tanks) will be in a closed system or permanent enclosure it would need to California Code of Regulations Title 8 and Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors Article 142. Industrial Plants where the use and handling of flammable or combustible liquids is only incidental to the principal business (e.g. food processing) include distance requirements, fire resistance requirements and no open flames,

2.1-46

Response 2.1-46

For the reasons stated in Master Response 7, *Building Codes*, Responses 2.1-33 through 2.1-43, and Response 2.1-45, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety and the comment does not provide evidence to the contrary.

- n. Because equipment will be in a permanent enclosure it would need to meet Subchapter 7. General Industry Safety Orders Group 20. Flammable Liquids, Gases and Vapors requiring: (a) Vapor areas shall be limited to the smallest practical space by maintaining a properly designed system of mechanical ventilation arranged to move air from all directions towards the vapor origin area to a safe outside location. Ventilating systems shall conform to Section 5154.
 (b) Required ventilating systems shall be so arranged that the failure of any ventilating fan shall automatically stop any dipping conveyor system.
 (c) When a required ventilating system serves associated drying operations utilizing a heating system which may be a source of ignition, means shall be provided for pre-ventilation before heating system can be started; the failure of any ventilating fan shall automatically shut down the heating system; and the installation shall otherwise conform to NFPA Standard for Ovens and Furnaces (NFPA No. 86A1977).
 NOTE: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code. o.

2.1-47

Response 2.1-47

For the reasons stated in Master Response 7, *Building Codes*, Responses 2.1-33 through 2.1-43, Response 2.1-45 and 2.1-46, implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous materials with respect to fire hazards and worker safety and the comment does not provide evidence to the contrary.

- o. Whether plastic, used as part of the permanent enclosure could become brittle and break off thereby posing a hazard since the hogs could eat these pieces which are indigestible, violate 9 CFR Ch. 3 Section 313.1(a) where "livestock pens, driveways and ramps shall be maintained in good repair, would be Including the California Gull, another concern are the hogs .

2.1-48

D1. Response to Comments

Response 2.1-48

Refer to Response 2.1-10. As defined in subparagraph (f)(2)(D), exterior walls of a permanent total enclosure may be constructed of masonry, sheet metal, sheet plastic, wood, metal or aluminum siding, or even industrial-grade plastic flap curtains. Therefore, plastic is not required to be used in the construction of the permanent total enclosure. Additionally, PR 415 is not intended to apply to agricultural operations including hog and food processing operation. PR 415 only applies to inedible rendering; therefore, enclosures are not needed where there are livestock pens that could pose a hazard to the hogs. Refer to Master Response 8, *Agricultural Preemption*.

34. **Page 2-30, VIII.d: The Draft EA should have included whether the facilities affect by Rule 415 were included on the §65962.5 list.** | 2.1-49

Response 2.1-49

Section VIII. d) in the Draft EA evaluated impacts associated with hazardous materials sites compiled per Government Code Section 65962.5. As identified in the Draft EA, PR 415 is intended to control and reduce rendering odors. It would not alter, in any way, how operators of rendering facilities who are affected by PR 415 manage their hazardous wastes. Therefore, the affected facilities would continue to manage any and all hazardous materials and hazardous waste, in accordance with federal, state and local regulations, and implementation of PR 415 requirements is not expected to result in any significant adverse impacts on hazards and hazardous wastes and the comment does not provide evidence to the contrary.

35. **Pages 2-34 and 2-35.** The estimated increase in water demand should include water required for the washdown of receiving areas and or any open drums and containers. | 2.1-50

Response 2.1-50

Refer to Master Response 4, *Worst-Case Scenario*. The Draft EA for PR 415 analyzed potential water usage associated with washing activities required by PR 415 in Section IX and subsection IX a) and f). The Final EA includes modifications to the operational scenario analyzed in the Draft EA. BMP (e)(4) for washing of drums and containers has been limited such that only drums and containers that previously contained raw rendering materials that are open upon exiting the facility are required to be washed before leaving a rendering facility. BMP (e)(11) for cleaning floor drains is limited to at least once per month to remove accumulation of rendering materials. Refer to Table P-1 in the Final EA for a summary of various changes to the washing requirements. Refer to Table P-3 in the

D1. Response to Comments

Final EA for the revised water usages with respect to BMP (e)(4) and BMP (e)(11). Therefore, hydrology and water quality impacts associated with the BMPs have been adequately analyzed in the EA and no further analysis is required under CEQA.

36. Page 2-34. "Adoption of the proposed rule would establish procedures to reduce odors from facilities conducting rendering operations."

Because current definitions in proposed rule 415 do not clearly exempt odor sources from operations other than rendering in integrated rendering facilities, the draft report discusses hog operations odors, as well as public comments on hog operations and health concerns, then it is assumed that the proposed rule's intent is to capture the odors from agricultural operations. Therefore, this assessment will be based on current requirements for rendering facilities as they apply to the facility.

2.1-51

Response 2.1-51

Refer to Master Response 6, *Methodology*, Master Response 8, *Agricultural Preemption*, and Response 2.1-2. Subdivision (a) states that PR 415 is intended to reduce rendering odors only. For an integrated rendering facility, PR 415 is intended to reduce odors only from the rendering operations. PR 415 only applies to inedible rendering. Because PR 415 is specific to odor reductions from rendering operations, PR 415 is not intended to apply to agricultural operations including hog and food processing operation. Therefore, all environmental impacts associated with PR 415 have been adequately analyzed in the EA and no further analysis is required under CEQA.

- a. What is the estimated amount of rinsing (e.g. triple rinsing) that would be required for BMP (e)(4) for washing of drums and containers (e.g. so that odors do not travel beyond the facility boundary)? The water associated with the rinsing activities must be included in the Draft EA.

2.1-52

Response 2.1-52

Refer to Response 2.1-50, regarding water use for BMPs.

- b. Is washing outgoing trucks requirement that are currently required to be cleaned under 3 CCR §1180.35 for rendering facilities, intended for integrated rendering plants since they do not accept rendering materials from other facilities under Proposed Rule 415?

2.1-53

Response 2.1-53

Washing of outgoing trucks that is required under BMP (e)(3) is intended for the rendering operations of integrated rendering facilities. Section IX. b) in the Draft EA stated that outgoing trucks are currently required to be washed under Section 1180.35,

D1. Response to Comments

Title 3, CCR. The washing of outgoing trucks requirement is not intended to be applied to integrated rendering facilities that are not subject to PR 415.

- c. Pages 2-34 and 2-35. The estimated increase in water demand should include water required for the washdown of receiving areas and or any open drums and containers.

2.1-54

Response 2.1-54

Section IX. b) in the Draft EA discussed the potential water demands from the washdown of receiving areas, drums, and containers. As discussed in Response 2.1-50, for the washdown requirement for drums and containers, rendering facilities are already washing the receiving areas. Thus, PR 415 is not expected to increase new water demand from washing the receiving areas. As for the washing of drums and containers under BMP (e)(4), the washing has been limited such that only drums and containers that previously contained raw rendering materials that are open upon exiting the facility are required to be washed before leaving a rendering facility. Refer to Table P-1 and Table P-3 in the Final EA. Therefore, the estimated water demand in the Final EA includes water usage for washing drums and containers and no further analysis is required under CEQA.

37. Page 2-35. "The size of the scrubbers expected to be utilized is not known at this time."
 a. "Some types of scrubbers are mainly designed to remove particulate pollutants (e.g. venturi scrubbers)."-Pg. 9-1, (Section 9.0 Wet Scrubbers--EPA). Therefore a venturi scrubber would not necessarily work for a system trying to eliminate hydrogen sulfide and ammonia.

2.1-55

Response 2.1-55

PR 415 does not specify a particular type of odor control equipment. An example of an odor control system is a series of collection hoods and intake ports that are ducted through a ventilation system to a packed-bed scrubber or other wet scrubber that meets the minimum control efficiency requirements of the proposed rule. Consistent with the Socioeconomic Impact Assessment for PR 415, the usage of cross-flow type wet scrubbers was assumed. As discussed in Table P-2 in the Final EA, the Farmer John facility's rendering operation is expected to use a closed system to meet the requirements of PR 415. No building modifications or enclosures are assumed. To comply with the permanent total enclosure requirement for the raw materials receiving area, the Farmer John facility is expected to elect the secondary odor containment system under paragraph (f)(5), and no ventilation or scrubbers were assumed. Therefore, hydrology and water quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

- b. A 1976 EPA Study "Odor Control by Scrubbing in the Rendering Industry" concluded that "reductions of 80-90% were achieved with water for highly soluble odorants such as amines and acids." 2.1-56

Response 2.1-56

This comment does not raise any issues with the environmental analysis and no response is necessary under CEQA.

- c. SCAQMD assumes that hydrogen sulfide and ammonia are being released as fugitive emissions PR415 (f)(5). If this is correct, then if facilities are required to use just a water scrubber, then the chemical reactions associated would produce sulfuric acid ("sour" water) and ammonium, which is a base. These two reactions would create a precipitate that would eventually plug up the pipe. As a result sufficient amount of water is needed to ensure that there is a conversion as well as be able to flush the pipes accordingly. 2.1-57

Response 2.1-57

Paragraph (f)(5) discusses the alternative standards for a permanent total enclosure for raw material receiving area. As discussed in Response 2.1-55, it is expected that the Farmer John facility will elect the secondary odor containment system for the permanent total enclosure for the raw materials receiving area and no ventilation or scrubbers would be required. Refer to Table P-3 in the Final EA for the scrubber makeup water that would be expected for the five rendering facilities. Therefore, hydrology and water quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

- d. Using this, a worst case scenario calculated by Clean Air Technologies resulted in a quick estimate for a packed or a tray tower for obtaining based on 20,000 CFM at ambient conditions with a 10 wt% NH₃ max as a starting point, a venturi scrubber with a 36" gas inlet and 36" discharge will use 1,200 gpm of water, once through. (McLeod, 2015). 2.1-58

Response 2.1-58

Refer to Response 2.1-55 through 2.1-57. Therefore, hydrology and water quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

- e. For one scrubber operating at a worst case scenario for one day will be over 1,700,000 gallons. This is considerably higher than then 262,820 gallons per day single facility significance threshold. The Draft EA for PR415 must be revised and recirculated to account for the estimated increase in water use. 2.1-59

D1. Response to Comments

Response 2.1-59

Refer to Master Response 4, *Worst-Case Scenario* and Response 2.1-57 for a discussion on the alternative standards for a permanent total enclosure for raw material receiving area. Section IX in the Draft EA discussed the anticipated worst-case impact scenario for water usage for scrubbers. As shown in Table P-3 in the Final EA, scrubber makeup water that would be required for all of the rendering facilities would be approximately 2,940 gallons per day, which is substantially below SCAQMD's significance threshold of 262,820 gallons per day of potable water. Therefore, water usage for scrubbers are not expected to result in a significant adverse impact on water demand, and recirculation of the Draft EA for PR 415 is not triggered.

- f. Page 2-36. "Based on the above information, amount of additional wastewater is not expected to be a significant increase in the amount that any affected facility is currently permitted to discharge. It is expected that this additional wastewater generation would not be a significant impact on the current wastewater infrastructure"

2.1-60

LACSD industrial waste water permits require a change to permit conditions if there is an increase of water by 25%. Further approval is needed by the City of Vernon for increase in peak flow rates. The Draft EA for PR415 must be revised and recirculate to account for the estimate increase in wastewater discharge.

Response 2.1-60

For the reasons discussed in Master Response 4, *Worst-Case Scenario*, Response 1.0-1, Response 1.0-6, Responses 2.1-53 through 2.1-59, and Response 3.1-24, implementation of PR 415 requirements is not expected to cause a significant increase in the amount of wastewater than any affected facility is currently permitted to discharge. Each of the affected rendering facilities are already currently subject to specific California Regional Water Quality Control Board (RWQCB) and National Pollutant Discharge Elimination System (NPDES) wastewater discharge requirements. Compliance with PR 415 would not impact any facility's obligation to adhere to these already existing requirements.

Washing activities are required by PR 415. However, outgoing transport vehicles or trucks under BMP (e)(3) are currently required to be washed under Section 1180.35, Title 3, CCR. BMP (e)(4) for washing of drums and containers has been limited such that only drums and containers that previously contained raw rendering materials that are open upon exiting the facility are required to be washed before leaving a rendering facility. Rendering facilities are already washing the receiving areas under BMP (e)(10). BMP (e)(11) for cleaning floor drains is limited to at least once per month to remove accumulation of rendering materials. Refer to Table P-3 in the Final EA. However, if a

D1. Response to Comments

modification to the wastewater permit is required in order to comply with the requirements of subdivision (g), the timing of requirements to submit permit applications and operate within a permanent total enclosure are contained in subparagraph (d)(1)(D). If a rendering facility is unable to meet the construction deadlines in subparagraph (d)(1)(D) due to conditions that beyond the facility owner or operator's control such as delay in obtaining a permit from a wastewater agency, the facility may apply for a one-time extension under subparagraph (d)(1)(F) or petition the SCAQMD's independent Hearing Board for variance relief.

Moreover, as discussed in Response 3.0-23, the amount of additional wastewater generated by implementing PR 415 requirements is within the treatment capacity of the regional wastewater treatment plant. As shown in Table P-3 in the Final EA, implementing PR 415 requirements would likely cause an increase in usage of 3,340 gallons per day of potable water. Based on data from Los Angeles County Sanitation Districts (LACSD)²⁸, the wastewater treatment capacities from regional plants range from 0.2 million gallons per day (mgd) to 400 mgd. The additional wastewater discharge that would be generated from the increased water usage of 3,340 gallons per day is approximately 1.7 percent of the lowest treatment capacity. Therefore, PR 415 is not expected to cause any significant adverse impacts on hydrology and water quality with respect to the amount of wastewater generation.

38. Page 2-41, XII a and c). The conclusions regarding the increase in noise associated with the proposed project does not have requisite data to support the claim that noise associated with construction and operation are less than significant. Wet gas scrubbers are new equipment at industrial facilities that will generate additional noise. The estimate of the increase in noise levels associated with the use of wet gas scrubbers must be provided in order to make the conclusion that there would be no increase in noise levels.

2.1-61

Response 2.1-61

Refer to Response 2.1-55 through 2.1-57 for a discussion on the alternative standards for a permanent total enclosure for raw material receiving area. PR 415 does not specify a particular type of odor control equipment. Consistent with the Socioeconomic Impact Assessment for PR 415, the usage of cross-flow type wet scrubbers was assumed. Existing rendering facilities are typically located in heavy industrial settings. The existing noise environment at each of the affected facilities is typically dominated by noise from existing equipment on-site, vehicular traffic around the facilities, and trucks entering and

²⁸ Sanitation Districts of Los Angeles County. Accessed on October 16, 2017. Available at: <http://www.lacsd.org/wastewater/wwfacilities/#map>.

D1. Response to Comments

exiting facility premises. Construction activities associated with implementing PR 415 may generate some noise associated with the use of construction equipment and construction-related traffic. However, noise from construction activities is not expected to produce noise in excess of current operations at each of the existing facilities. If odor control devices are installed or existing odor control devices are modified, the operations phase of PR 415 may add new sources of noise to each affected facility. However, control devices are not typically equipment that generate substantial amounts of noise. Nonetheless, for any noise that may be generated by the control devices, it is expected that each facility affected will comply with all existing noise control laws or ordinances. Any new odor control devices at the Farmer John facility in Vernon would be required to achieve the City of Vernon's Zoning Code, Section 26.4.1-7, Development and Performance Standards, (b)(2), Noise, and the standards in Table 26.4.1-7(b)(2), Noise Standards (for the facility in Los Angeles, new equipment would be required to achieve the City of Los Angeles' noise standards²⁹). Based upon these considerations, given the industrial nature of the site and the surroundings, the new odor control equipment would not represent a substantial increase in noise levels, PR 415 is not expected to result in significant adverse noise impacts.

39. Page 2-43. **"All newly installed enclosures and control equipment would be expected to be compliant with fire department standards, therefore they would not increase the risk of fire to occur."**
Please see comment number 32.

2.1-62

Response 2.1-62

Refer to Master Response 7, *Building Codes*, Response 2.0-9, Response 2.1-32, and Responses 2.1-33 through 2.1-47 for discussions on compliance with existing regulations with respect to California Building Standards code and the issues of fire hazards and worker safety. All buildings in California are required to meet the standards set forth in California Fire Code of Regulations, Title 24, Part 9. Thus, any new enclosure constructed as a result of PR 415 would need to meet the standards set forth in this code, per state law. Compliance with the California Fire Code of Regulations would minimize potential fire hazards associated with the facility. Therefore, implementation of PR 415 requirements is not expected to increase the risk of fire hazards or increase the need for public services and the comment does not provide substantial evidence to the contrary.

²⁹ As specified in Sections 112.02 and 112.05 of the City of Los Angeles Municipal Code, noise attributable to mechanical equipment (such as heating, air conditioning, and ventilation equipment (HVAC) systems or any pumping, filtering, or heating equipment) cannot exceed the ambient noise level by more than 5 decibels. Ambient noise levels can be as-measured at the project site or established via Code-presumed levels.

D1. Response to Comments

40. **Page 2-43. "No flammable substances are necessary to operate rendering equipment."** Blood rendering system uses natural gas to operate the dryer and natural gas is a flammable material. Other systems labeled under "Rendering" in air permits include singeing equipment which also uses natural gas. 2.1-63

Response 2.1-63

With regards to the comment about the fire hazards from flammable substances, refer to Response 2.1-62. As stated in Response 2.1-44, blood meal processing is exempt from PR 415, provided that it meets the requirements under subparagraph (1)(5). Therefore, public services impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

41. **Page 2-43. "As such, the proposed project will not increase the chances for fires or explosions that could affect local fire departments."** Please see comment number 32. 2.1-64

Response 2.1-64

For the reasons stated in Master Response 7, *Building Codes*, Response 1.0-8, Response 2.0-9, Response 2.1-32, Responses 2.1-33 through 2.1-47, and Response 2.1-62, implementation of PR 415 requirements is not expected to increase the chances for fires or explosions that could affect fire departments. Therefore, public services impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

42. **Page 2-49, last paragraph. The estimated number of construction workers and the related trips should be included in this paragraph in order to justify the conclusion that no significant traffic impacts would occur.** 2.1-65

Response 2.1-65

Refer to Master Response 4, *Worst-Case Scenario* and Response 2.1-23 for a discussion on maximum daily NO_x emissions during construction. The transportation and traffic impact analysis in the Draft EA for PR 415 assumed a worst-case impact scenario. On Page 2-50 of the Draft EA, the analysis stated that "[S]ince the construction activities required as a result of PR 415 at the affected facilities are not expected to overlap because of the three-year compliance timeframe, no significant construction traffic impacts are anticipated based on the analysis conducted. Even if all five facilities performed construction at the same time, this would not be expected to generate 350 employees or truck trips". Based on the worst-case impact scenario, construction activities would generate a maximum of 24 vehicle trips per day (see the Final EA, Appendix C). Since construction activities as a result of various changes to the scope and requirements of PR

D1. Response to Comments

415 are expected to be substantially less than what was analyzed in the Draft EA, the estimated number of construction workers and the related trips in the Draft EA reasonably represented a worst-case impact scenario. Therefore, PR 415 is not expected to result in significant adverse impacts on transportation and traffic.

43. Page 2-45. "Rendering operations within the basin are not expected to cease and animal waste is not expected to be diverted to landfills because of the requirements included in PR 415. If a rendering facility is not able to meet the requirements of PR 415, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal waste."

Please see comment number 19. Clougherty Packing, LLC believes that SCAQMD has underestimated the throughput limits of existing rendering facilities that would be able to take in all the rendering material in its jurisdiction. Currently, there is insufficient capacity at rendering plants that would be able to handle all the material. In the event that the rendering material cannot be processed, there will be an increase in both odor and health related concerns. The impact to Clougherty Packing, LLC would be severe if our rendering material is not able to be accepted by rendering plants; and if an alternative (e.g. landfills) are not able to take the material in a timely manner. This will have a negative impact on

2.1-66

our operations. The impacts from this and all other industries who depend on rendering must be evaluated in the Draft EA.

2.1-66
Cont'd

Response 2.1-66

Refer to Master Response 2, *Facility Shutdown*, Responses 1.0-2 through 1.0-12, Response 2.0-8, and Response 2.1-19 for discussions that the EA analyzes the potential environmental impacts from implementing PR 415 requirements and does not analyze the shutdown scenario. Existing rendering operations are not expected to cease, and animal carcasses and parts are not expected to be diverted to landfills because of the requirements included in PR 415. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

PR 415 would require existing rendering facilities to enclose certain rendering operations, install odor emission control equipment and carry out best management practices. With or without PR 415, a rendering facility makes its own business decisions. If a rendering facility is not able to meet the requirements of PR 415 through various compliance options, it is reasonably foreseeable to expect that one or more of the other currently

D1. Response to Comments

existing rendering facilities would have the ability or would generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal carcasses and parts. In the event of equipment breakdowns or if emergency rendering services are needed, PR 415 allows a rendering facility to accept additional materials from another rendering facility that cannot conduct rendering activities for up to seven days, provided certain requirements are met. This provision will further reduce the probability of excess build-up of rendering materials or animal carcasses and parts. Therefore, it is not expected that rendering material will be diverted to landfills or facilities that depend on rendering products will be affected as a result of PR 415.

44. **Page 2-46. "Affected equipment may be refurbished and used elsewhere or the scrap metal or other materials from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with the proposed project are expected to be minor."**

The Draft EA for PR415 does not include the demolition activities required to construct permanent enclosures around processes. Demolition activities may include removing structures due compliance with current building codes including H-1 rated sprinkler system, ceiling supports for new APCD equipment, and fire access requirements to all areas of the facility. The impacts of these additional construction activities must be evaluated in the Draft EA.

2.1-67

Response 2.1-67

Refer to Master Response 4, *Worst-Case Scenario*. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. Refer to the Preface in the Final EA. Consistent with the Socioeconomic Impact Assessment for PR 415, SCAQMD staff assumed that all permanent total enclosures would be required to install a fire suppression system, and that water sprinkler-type fire suppression systems would be sufficient for the enclosed areas to meet the municipal fire code requirements. This assumption is based on the current setup of the facility that has already submitted permit applications that would satisfy PR 415's requirements. For the reasons explained in Master Response 7, *Building Codes*, Response 2.0-6, Response 2.0-9, Response 2.1-32, Responses 2.1-33 through 2.1-47, and Response 2.1-62, implementation of PR 415 is not expected to result in construction impacts beyond what was analyzed in the EA.

D1. Response to Comments

45. Page 2-41, XII a and c). The conclusions regarding the increase in noise associated with the proposed project are conclusory with no data to back up the claim that noise associated with construction and operation are less than significant. Wet gas scrubbers are new equipment at industrial facilities that will generate additional noise. The estimate of the increase in noise levels associated with the use of wet gas scrubbers must be provided in order to make the conclusion that there would be no increase in noise levels. 2.1-68

Response 2.1-68

Refer to Response 2.1-61 for a discussion on the potential noise impacts from construction activities and operation of odor control equipment required under PR 415.

46. Page 2-49, last paragraph. The estimated number of construction workers and the related trips should be included in this paragraph in order to justify the conclusion that no significant traffic impacts would occur. 2.1-69

Response 2.1-69

Refer to Response 2.1-65 for a discussion on the worst-case impact scenario that is used in the Final EA. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities.

D1. Response to Comments

Climate by Packing Landfill Waste GHG Emission Reduction Calculation

| Climate by Packing Landfill Waste GHG | | | | | | | | | | |
|---------------------------------------|--------------------------------|----------------------|------------------|--------------------------------|-------------|--------------------|------------------------------|---|--|--|
| Landfill Location | Landfill Address | One-Way Trip (miles) | Raw Trip (miles) | Raw Trip Fuel Usage (gal/mile) | Total Trips | Total Waste (tons) | Emissions (CO2e metric tons) | Lifetime Landfill CH4 Emissions (CH4 metric tons) | Lifetime Landfill GHG Emissions (CO2e metric tons) | Total GHG Emissions (CO2e metric tons) |
| Wetmoren / Yuma County Landfill | 4990 S Ave 911, Yuma, AZ 85407 | 284 | 567 | 703 | 11 | 300 | 2.0 | 28.0 | 72.0 | 74.0 |
| | | | | | | TOTAL | 2.0 | 28.0 | 72.0 | 74.0 |

| Climate by Packing Landfill Waste GHG | | | | | | | | | | |
|---------------------------------------|--------------------------------|----------------------|------------------|--------------------------------|-------------|--------------------|------------------------------|---|--|--|
| Landfill Location | Landfill Address | One-Way Trip (miles) | Raw Trip (miles) | Raw Trip Fuel Usage (gal/mile) | Total Trips | Total Waste (tons) | Emissions (CO2e metric tons) | Lifetime Landfill CH4 Emissions (CH4 metric tons) | Lifetime Landfill GHG Emissions (CO2e metric tons) | Total GHG Emissions (CO2e metric tons) |
| Wetmoren / Yuma County Landfill | 4990 S Ave 911, Yuma, AZ 85407 | 284 | 567 | 703 | 2,360 | 75,000 | 2,280.76 | 5,340.84 | 105,748.06 | 110,988.82 |
| | | | | | | TOTAL | 2,280.76 | 5,340.84 | 105,748.06 | 110,988.82 |

| Default Correction GHG Input Values | | |
|-------------------------------------|-----------------------|--|
| Parameter | Units | Value |
| W | kg CO2 / MWh of waste | 80 (CFR 98 Subpart C, Table C-1, Default Fuel Oil No. 2 Default CO2 Emission Factor) |
| W _{corr} | kg CO2 / MWh of waste | 80 (CFR 98 Subpart C, Table C-1, Default Fuel Oil No. 2 Default High Heat Value) |
| W _{corr} | kg CO2 / gal of fuel | Per Factor Table 12-24-12, Item 1 |
| W _{corr} | kg CO2 / gal of fuel | Unit conversion |
| W _{corr} | kg CO2 / mile | |

AO CFR 98 Subpart T1 - Industrial Waste Landfill Emission T1-1

$$E_{T1-1} = \frac{W_{corr} \cdot W \cdot (1 - f_{CH4})}{1 - f_{CH4}}$$

- W, A: Quantity of waste disposed in the landfill waste landfill in year t from mass measurement data or other company records (metric tons, as received wet weight).
- W_{corr}: Represents organic carbon (waste disposed in year t) from Table T1-1 to this subject or from measurement as specified in paragraph 11.10 of this section. It is a variable fraction (metric tons C/metric ton waste). With the correction factor (fraction) is the default value of 1, unless there is a specific fraction of waste within the landfill during the reporting year. If there is a specific fraction of waste within the landfill during the reporting year, use either the default value of 1 or a specific fraction value (as measured) based on the specific fraction parameter.
- W_{corr}: Fraction of CO2 is simulated (fraction), use the default value of 0.5.
- F: Fraction by volume of CH₄ in the landfill gas (fraction, dry basis, corrected to 0% oxygen). If you have a gas collection system, use the annual average CH₄ concentration from measurement data for the current reporting year (0.06), or the default value of 0.5.
- K: Decay rate constant from Table T1-1 to this subject (yr⁻¹). Select the most applicable value to the majority of the past 30 years of operation (the whichever is the older).
- T: Reporting year for which emissions are calculated.
- A: Year in which waste was disposed.

| Table T1-1 for Part 98 - Food Processing | |
|--|-------|
| Parameter | Value |
| DOC | 0.23 |
| K (Biy) | 0.06 |
| K (Indeterminate) | 0.45 |
| K (Inert) | 0.35 |

Equation T1-1 Input Values

| Parameter | Value | Notes |
|-----------|--|---|
| DOC | 0.23 | Table T1-1 Food Processing |
| K (Biy) | 0.06 | Default value |
| DOC | 0.5 | Default value |
| F | 0.5 | Default value |
| K | 0.35 | Table T1-1 Food Processing - wet climate (intermediate) |
| T | See equation to calculate emissions after 1 year when in landfill. The 1-year emissions are worst-case scenario assuming that all of the waste was placed within the landfill on January 1, and emissions were calculated on December 31 of that year. This does not account for emissions after the first year. | |
| A | 0 | As used as the start year. |

Total Landfill Emission Calculation Derivation

The equation to calculate the waste's total GHG emissions over time from decomposition assuming a wet climate is below:

$$E_{T1-1} = \frac{W_{corr} \cdot W \cdot (1 - f_{CH4})}{1 - f_{CH4}}$$

The equation above is derived by performing the limit of Equation T1-1 from the time of placing the waste into the landfill to infinity. The limit was determined using the program Method:

$$E_{T1-1} = \lim_{t \rightarrow \infty} \left[\frac{W_{corr} \cdot W \cdot (1 - f_{CH4})}{1 - f_{CH4}} \left(1 - e^{-K(t-A)} \right) \right]$$

Response 2.2-1

Refer to Response 2.0-8. The GHG emissions analysis in Appendix B is based on a lifecycle assessment based on a hypothetical assumption that existing rendering facilities would shut down and that rendering materials or animal carcasses and parts would need to be disposed at the landfills. However, as discussed in Master Response 2, *Facility Shutdown*, existing rendering operations are not expected to cease; and therefore, it would be speculative to assume that animal carcasses and parts would be diverted to landfills. Furthermore, the GHG emissions estimates in the Draft EA are based on the incremental changes to GHG emissions from implementation of PR 415 requirements such as GHG emissions from the generation of electricity in Section III. g) and h) of the Draft EA. A lifecycle assessment of GHG emissions would require speculation on the potential upstream and downstream effects resulting from a hypothetical scenario that rendering operations would cease within SCAQMD's jurisdiction because of PR 415. As discussed in Master Response 4, *Worst-Case Scenario*, air quality and GHG emissions in the EA were estimated using the CalEEMod™ emissions computer model based on a reasonable

22-1

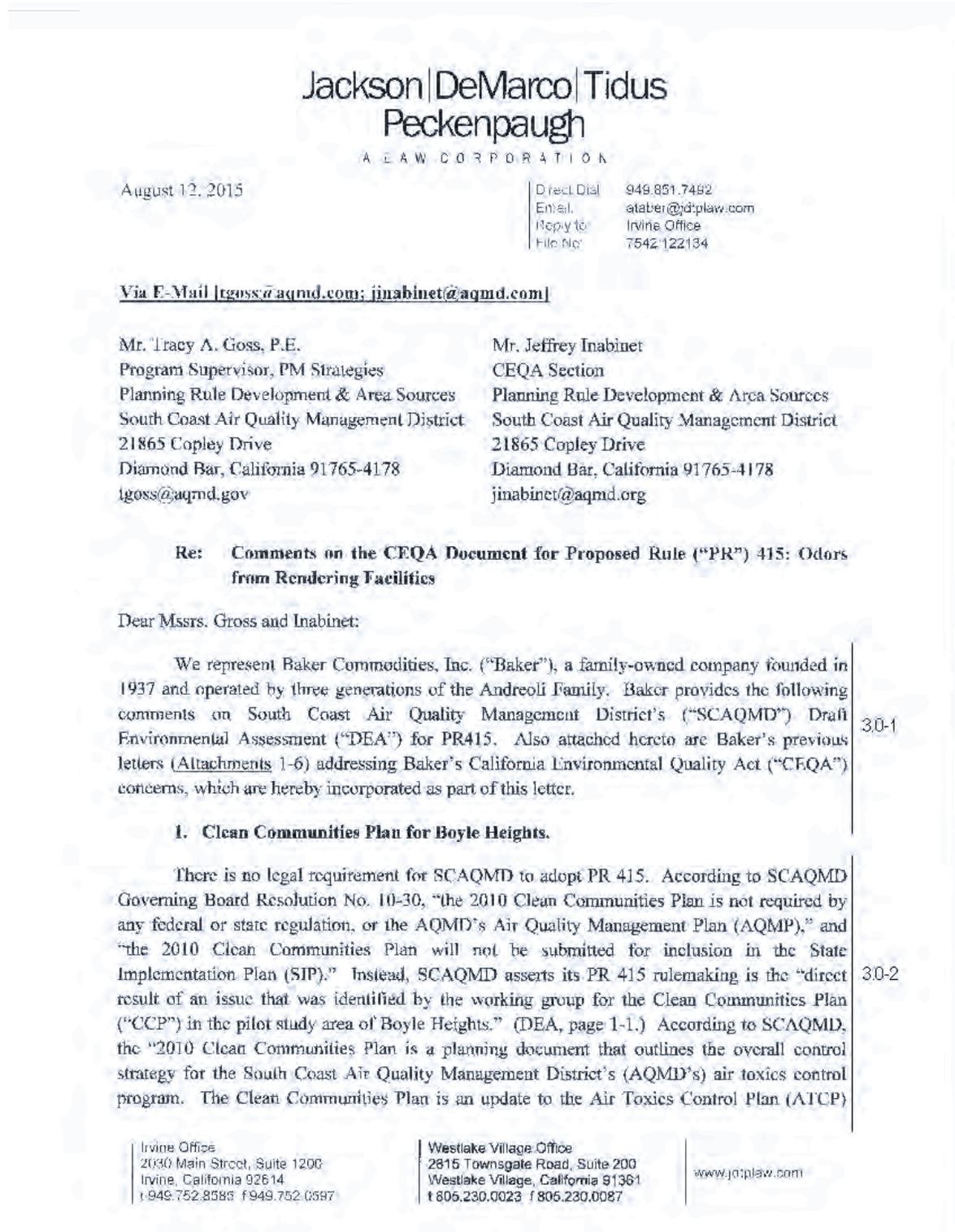
D1. Response to Comments

assumption of a worst-case impact scenario. Therefore, implementation of PR 415 requirements is not expected to result in significant adverse impacts on GHG emissions. Air quality and GHG emissions impacts have been adequately analyzed in the EA and no further analysis is required under CEQA

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D1. Response to Comments

D1-2.3 LETTER 3 – Jackson, DeMarco, Tidus, Peckenpaugh



Jackson | DeMarco | Tidus
Peckenpaugh
A LAW CORPORATION

August 12, 2015

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Re: Comments on the CEQA Document for Proposed Rule ("PR") 415: Odors from Rendering Facilities

Dear Messrs. Goss and Inabinet:

We represent Baker Commodities, Inc. ("Baker"), a family-owned company founded in 1937 and operated by three generations of the Andreoli Family. Baker provides the following comments on South Coast Air Quality Management District's ("SCAQMD") Draft Environmental Assessment ("DEA") for PR415. Also attached hereto are Baker's previous letters (Attachments 1-6) addressing Baker's California Environmental Quality Act ("CEQA") concerns, which are hereby incorporated as part of this letter.

30-1

I. Clean Communities Plan for Boyle Heights.

There is no legal requirement for SCAQMD to adopt PR 415. According to SCAQMD Governing Board Resolution No. 10-30, "the 2010 Clean Communities Plan is not required by any federal or state regulation, or the AQMD's Air Quality Management Plan (AQMP)," and "the 2010 Clean Communities Plan will not be submitted for inclusion in the State Implementation Plan (SIP)." Instead, SCAQMD asserts its PR 415 rulemaking is the "direct result of an issue that was identified by the working group for the Clean Communities Plan ("CCP") in the pilot study area of Boyle Heights." (DEA, page 1-1.) According to SCAQMD, the "2010 Clean Communities Plan is a planning document that outlines the overall control strategy for the South Coast Air Quality Management District's (AQMD's) air toxics control program. The Clean Communities Plan is an update to the Air Toxics Control Plan (ATCP)

30-2

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D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 2

developed in 2000 and the subsequent Addendum in 2004.” Further, SCAQMD asserts that the “centerpiece of the Clean Communities Plan is the Community Exposure Reduction Measures which includes a pilot study for two communities to develop Community Exposure Reduction Plans and development of a template so other communities can develop a Community Exposure Reduction Plan.” (SCAQMD November 5, 2010 Board letter, agenda item No. 35.)

3.0-2
 Cont'd

SCAQMD is obligated to base its rulemaking on scientific evidence. SCAQMD has not even bothered to create an emission inventory (as it does with other rulemakings) or addressed all of the permitted and unpermitted sources operating that could be contributing to odors in the Boyle Heights area. SCAQMD does not know the amount, if any, that the rendering facilities allegedly contribute to the odor issues in Boyle Heights. SCAQMD has failed to produce any evidence that emissions from Baker are causing a public nuisance in Boyle Heights or that the requirements of PR 415 will reduce odors in Boyle Heights, assuming there are any. In short, the Boyle Heights community will not experience a reduction in odors as a result of PR 415.

2. SCAQMD's Purported Legal Authority to Adopt PR 415.

SCAQMD cites Health and Safety Code sections 41700 (“Section 41700”) and 40001, subdivision (b) (“Section 40001(b)”) as its sole authority to adopt PR 415. Health and Safety Code section 41700 states:

Except as otherwise provided in Section 41705, a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

3.0-3

SCAQMD continues to ignore the exception in Section 41700. Health and Safety Code section 41705 does not apply to odors emanating from any agricultural operations necessary for the growing of crops or the raising of fowl or animals. Rendering is an agricultural activity. (Civ. Code, § 3482.6.) Civil Code section 3482.6(e)(1) states, under the public nuisance exceptions: “ [a]gricultural processing activity, operation, facility, or appurtenances thereof” includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 3

and Agricultural Code.” Baker is an agricultural operation that is maintained and regulated under the Food and Agricultural Code. (Food & Agric. Code, §§ 19300 et. seq.; Cal. Code Regs., §§ 1180 et seq.)

3.0-3
 Cont'd

Even if Section 41700 did apply, SCAQMD has not produced any information on the quantities of air contaminants that are causing injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD adopted Rule 402 to implement Section 41700. Rule 402 does not impose a more stringent requirement than Section 41700 as SCAQMD proposes with PR 415. SCAQMD has not cited authority permitting it to adopt a rule more stringent than Section 41700. Unless and until SCAQMD does so, it has failed to establish it has the requisite legal authority as inaccurately asserted in the DEA.

3.0-4

Section 40001(b) states:

The district rules and regulations may, and at the request of the state board shall, provide for the prevention and abatement of air pollution episodes which, at intervals, cause discomfort or health risks to, or damage to the property of, a significant number of persons or class of persons.

This statute also does not confer authority upon SCAQMD to adopt PR 415. The State Air Resources Board has not requested that SCAQMD adopt PR 415. SCAQMD has no evidence that PR 415 will prevent and abate air pollution episodes that cause discomfort or health risks to, or damage to the property of, a significant number of persons or class of persons.

3. PR 415 Project Description.

The project description in the DEA is vague and incomplete. It is impossible to tell from the description which version of PR 415 is being analyzed in the DEA. Therefore, it is not possible for the DEA to completely evaluate the impacts of PR 415. Further, SCAQMD adopted policies and procedures for investigating and issuing notices of violation relating to odor issues. (Attachment 7.) SCAQMD’s description of the PR 415 project is inconsistent with these existing policies and procedures.

3.0-5

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 4

4. Basis for the DEA.

According to the DEA, the “environmental analysis was conducted based on one of the larger facilities in the current affect facility inventory to estimate maximum foreseeable impacts.” (DEA, page 2-4.) This analysis underestimates the true impact. The five facilities are very different. Two of the facilities operate only in conjunction with their meat packing activities. Of the three independent facilities, one facility accepts road kill, and the other two (Baker and Darling) are competitors in the market-place accepting materials from farms, ranches, restaurants, butchers and markets. By focusing on only one facility, the DEA does not address the differences between the facilities, the overlapping and cumulative impacts caused by the five facilities’ compliance with PR 415, and the environmental impacts that will be caused by Baker shutting down its rendering operation if PR 415 is adopted. Baker’s closure is not speculative as stated in the DEA. (See Attachments 1-6.) The DEA is incorrect in its assumption there is no overlap. PR 415 requires simultaneous submittals of enclosure plans. Unless SCAQMD will purposely stagger its approvals, all facilities are expected to obtain their approvals around the same time. The 3-year deadline will result in all facilities constructing and operating simultaneously.

3.0-6

5. Local Environmental Surrounding.

CEQA requires that the description of the existing environment in the vicinity of the project be discussed from both a local and regional perspective. The DEA fails altogether to discuss the existing environment from a local perspective. It is critical to the analysis that the local setting around the facilities that are impacted be discussed. Without this information, the DEA does not inform the public that these facilities are located in the City of Vernon, which was incorporated for the very purpose of accommodating this type of business. Further, the environmental analysis does not consider odor impacts to the Boyle Heights community from other stationary (both permitted and not permitted) and mobile sources in the area.

3.0-7

6. Baseline.

There is no disclosure in the DEA of the baseline that was used in the analysis from which the impacts are measured. Without a baseline, impacts cannot be accurately assessed.

3.0-8

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 5

7. Aesthetics.

The DEA incorrectly states that “the proposed project would not involve the demolition of any existing buildings or facilities.” (DEA, pages 2-5.) Baker has told SCAQMD numerous times that its existing structures cannot be modified to become “enclosed structures” and meet all of the requirements for these structures. For example, the current structures cannot meet the pressure requirements. Most of Baker’s facility would need to be demolished and rebuilt as an “enclosed structure.”

3.0-9

8. Agriculture and Forestry Resource Impacts.

PR 415 in its current form will cause Baker to shut down its rendering operation because of the significant costs of rule compliance. Baker is one of only two independent renderers in the South Coast Air Basin that accept material from agricultural operations. The other existing independent renderer does not currently have the capacity to accept all of the material from agricultural operations in the area. There will be no substitute rendering location if the one remaining independent facility has a breakdown. The reduction in rendering capacity in the region caused by PR 415 may cause deceased farm animals (cattle, cows, chickens, and pigs) to remain longer and decay at farms and ranches. As dead animals decompose, bacteria that may normally be contained within the animal’s body can be released, exposing people, soil and groundwater to potential disease-causing pathogens. None of these issues are analyzed in the DEA; if they had been analyzed, the impact would have been declared significant and mitigation measures would be required.

3.0-10

9. Air Quality and Greenhouse Gas Emissions Impacts.

PR 415 will conflict with and obstruct the implementation of all southern California AQMP and SIP rules that rely on biodiesel because if Rule 415 is adopted in its current form, Baker will shut down its rendering operation that produces feedstock for its biofuels facility in San Diego. This will reduce biofuel production at the San Diego facility and, in turn, reduce the supply necessary to implement AQMPs and SIPs in southern California.

3.0-11

There is a potential violation of the regional PM10, PM2.5, and NOx standards and a cumulatively considerable net increase of these criteria pollutants caused by the overlapping demolition, construction, paving and control equipment installation activities that will need to occur in order for the five facilities to comply with PR 415. There is no basis for SCAQMD to assume there will be no overlap between the construction activities occurring at the five

3.0-12

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 6

locations. If overlap between the five facilities is considered, then the emissions from the construction activities would exceed the significance threshold for NOx for both construction activities and installation of control equipment. These impacts must be deemed significant and mitigation measures identified in the DEA. Further, SCAQMD's analysis of whether the localized significant thresholds for construction are exceeded proves Baker's point that odors from its facilities cannot reach residents in Boyle Heights.

3.0-12
 Cont'd

Assuming arguendo that SCAQMD is correct that odors from the five rendering operations affect the Boyle Heights community, it is then incorrect to conclude in the DEA that PR 415 will not increase exposure to odors. In order to comply with all of the water requirements in PR 415, it is likely that wastewater treatment facilities – that SCAQMD claims are odorous – will need to be expanded. According to SCAQMD's logic, increasing the wastewater treatment facilities will increase odors.

3.0-13

SCAQMD is improperly deferring greenhouse gas ("GHG") and criteria pollutant emissions analyses from increased electrical consumption due to the required PR 415 operation changes. For example, SCAQMD estimated the number and type of control equipment necessary to comply with PR 415 and could have, based on its experience, estimated increased electricity generation. Further, SCAQMD did not evaluate the loss of GHG reductions achieved by Baker if it is forced to close down its rendering operation because of PR 415. When materials are rendered, they do not enter landfills to decay and create GHGs. Other recycling methods, such as composting, may eliminate the recyclable materials and make amendments for soils, but the composting process also produces large amounts of carbon dioxide and methane that is not captured. Gases from composting add to the GHGs in the atmosphere, which may contribute to global warming or climate change. Products from the rendering processes do not. Rendering produces products like biodiesel that reduce GHG emissions. The carbon footprint of rendering was studied recently via a project conducted by the National Renderers Association at Clemson University's Animal Co-Products Research & Education Center ("ACREC"). As these studies progressed, Dr. Charles H. Gooding, Ph.D., P.E., Professor of Chemical Engineering, developed the "Carbon Footprint Calculator for Rendering Operation," a method of calculating the carbon footprint of a rendering facility. This calculator provided the rendering industry a method of measuring the good that is done by the rendering recycling process and industry. (See Attachment 8.) SCAQMD should use this recognized process for calculating GHG impacts. Please also see number 10 below regarding increased truck idling. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-14

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 7

10. Energy Impacts.

The DEA concludes that the control equipment will be powered by electricity. PR 415 would require the operation of new control equipment. The DEA fails to assess the full impact caused by PR 415 because the analysis is based on only one facility and not five. Had the total impacts of new equipment for five facilities been analyzed, the impact may have been declared significant and mitigation measures required. Despite the fact that four of the five facilities are located in the City of Vernon, SCAQMD did not analyze the impacts based on City of Vernon Gas & Electric. Instead, SCAQMD utilized the much larger Los Angeles Department of Water and Power that supplies power to one facility to dilute the impacts.

3.0-15

Further, the truck covering requirement will cause increased fuel usage. There is no state law requiring trucks transporting material for rendering facilities to be covered. In order to comply with PR 415, truckers may decide to cover the materials just prior to entering the rendering facilities. To do this, the trucks would have to idle while the covers are placed on the open area of the truck. This will increase truck emissions and truck fuel use. See also number 16. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-16

11. Geology and Soils Impacts.

Please see number 8 above.

3.0-17

12. Hazards and Hazardous Materials Impacts.

The enclosures required by PR 415 may be considered "confined spaces" by the California Occupational Health and Safety Administration ("Cal OSHA"). The DEA does not address exposing employees and rescuers to the risks and requirements of confined spaces. (See Attachment 9, which discusses these risks in detail.) As a result of PR 415 creating new confined spaces, the renderers may be regulated by Cal OSHA requirements that may include permits, new worker training programs, development of a confined space program, and requiring employees to work in protective gear. (See Attachment 10, which discusses the requirements in detail.) Not only will PR 415 expose employees and rescuers to new hazardous risks, but adherence to Cal OSHA's requirements for confined spaces will also delay the processing of the rendering materials that could increase odors. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-18

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 8

13. Hydrology and Water Quality Impacts.

The DEA does not address the current severe drought situation, which should lower SCAQMD's water demand significance standard of 262,820 gallons per day of portable water. On January 17, 2014, the Governor proclaimed a State of Emergency and called for all Californians to reduce water consumption by 20 percent, not increase water usage as will occur with PR 415. The January 17, 2014 emergency proclamation is in Attachment 11. On April 25, 2014, the Governor issued an executive order to speed up actions necessary to reduce harmful effects of the drought, and he called on all Californians to redouble their efforts to conserve water. The April 25, 2014 executive order is in Attachment 12.

30-19

The executive order included:

Recognizing the tremendous importance of conserving water during this drought, all California residents should refrain from wasting water:

- a. Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes.
- b. Turn off fountains and other decorative water features unless recycled or grey water is available.
- c. Limit vehicle washing at home by patronizing local carwashes that use recycled water.
- d. Limit outdoor watering of lawns and landscaping to no more than two times a week.

Recreational facilities, such as city parks and golf courses, and large institutional complexes, such as schools, business parks and campuses, should immediately implement water reduction plans to reduce the use of potable water for outdoor irrigation.

Commercial establishments such as hotel and restaurants should take steps to reduce water usage and increase public awareness of the drought through measures such as offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets.

Professional sports facilities, such as basketball arenas, football, soccer, and baseball stadiums, and hockey rinks should reduce water usage and increase public awareness of the drought by reducing the use of potable water for outdoor irrigation and encouraging conservation by spectators.

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Irabine
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 August 12, 2015
 Page 9

On December 22, 2014, Governor Brown issued Executive Order B-28-14. This new Executive Order cites to paragraph 9 of the January 17, 2014 Proclamation and paragraph 19 of the April 25, 2014 Proclamation and extends the operation of the provisions in these paragraphs through May 31, 2016. The December 22, 2014 executive order is in Attachment 13.

3.0-20

On April 1, 2015, the Governor issued Executive Order B-29-15. Key provisions include ordering the State Water Resources Control Board to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016. The April 1, 2015 executive order is in Attachment 14. SCAQMD's significance threshold and PR 415 are contrary to the Governor's executive order.

3.0-21

SCAQMD's water demand analysis fails to include water usage required by SCAQMD's dust suppression rules. Adherence to these rules will be required during construction activities. The DEA provides no information on how the assumption of washing four hours per day to comply with BMPs was developed. Baker operates more than four hours a day. The DEA wrongly assumes that only one hose will be used at a facility. All of BMP activities occur in different areas of the facility and will occur simultaneously. Therefore, the DEA's assumption that the five facilities will use 15,200 gallons a day significantly underestimates the true impact. The wastewater impact is also significantly understated for the above reasons.

3.0-22

Without any factual basis the DEA concludes that the "amount of additional wastewater is not expected to be a significant increase in the amount that any affected facility is currently permitted to discharge." (DEA, page 2-36.) The DEA does not identify a standard for determining significance of wastewater impacts, does not estimate the amount of additional wastewater created from all sources, and does not analyze whether this additional amount requires permit changes. SCAQMD is relying upon Los Angeles County Sanitation District requirements to limit discharge quantities and concentrations to avoid declaring a significant impact. Assuming Los Angeles County Sanitation District does this, what does SCAQMD expect to happen to the increased wastewater discharge that Los Angeles County Sanitation District does not permit? There is also no analysis of the quality of the additional wastewater and impacts to the existing wastewater treatment facilities. The increase in discharge will require more wastewater to be treated and could require expansion of these facilities. Further, as discussed above, according to SCAQMD, more wastewater treatment equates to more control devices (which increases water usage and wastewater) and odors. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-23

14. Public Services Impacts.

Please see number 12.

3.0-24

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
Mr. Jeffrey Inabinet
Planning Rule Development & Area Sources
South Coast Air Quality Management District
August 12, 2015
Page 10

15. Transportation/Traffic Impacts.

The DEA fails to recognize that trucking operators may choose to cover their loads on the street next to the facilities before entering. This would still comply with PR 415. If trucks pull to the side of the roads, they could block traffic and cause an increase in traffic congestion and an increase in idling emissions. See also number 9 above. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-25

16. The DEA must be revised and recirculated.

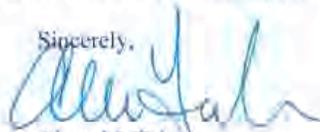
As discussed above, and in the attached documents, PR 415 will have a significant adverse impact on the environment. CEQA requires in these instances that alternatives be proposed (such as the use of masking agents or limiting the enclosure requirement to wastewater treatment) to avoid or reduce significant effects and that mitigation measures be adopted. Since responding to these comments will necessitate that the DEA be significantly revised and impact status changed to significant, the revised document must be recirculated for a second public review period.

3.0-26

17. Conclusion.

Baker respectfully requests that SCAQMD provide a written response to each of the issues raised in this letter. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you.

Sincerely,



Alene M. Taber

w/ attachments

D1. Response to Comments

ATTACHMENT 1

D1. Response to Comments

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Re: Proposed Rule 415: Odors from Rendering Facilities

Dear Messrs. Goss and Inabinet:

We represent Baker Commodities, Inc. (Baker), a family-owned company founded in 1937 and operated by three generations of the Andreoli family. Baker has not had any violation notices for odors in the last 17 years. Baker's rendering operations serve a critical function in California by recycling millions of pounds of animal by-product, used cooking oil, and trap grease that cannot lawfully be disposed of in landfills. Baker is committed to environmental stewardship, and provides 202 green jobs. Baker's operations fully comply with industry standards and government regulations, including California Occupational Safety and Health Administration (OSHA), California Department of Transportation (Cal DOT) & (USDOT), California Department of Food and Agriculture (CDFA), United States Department of Food and Agriculture (USDA), Food and Drug Administration (FDA), Hazard Analysis Critical Control Points (HACCP), Rendering Code of Practice, Animal Protein Producers Industry (APPI), Association of American Feed Control Officials (AAFCO) and other miscellaneous City, County and State Regulations. It is essential that South Coast Air Quality Management District (SCAQMD) ensure that Proposed Rule 415 - Odors from Rendering Facilities (PR 415) does not conflict with these standards.

3.1-1

Baker recently attended SCAQMD's March 5, 2015, Public Workshop and CEQA Scoping Meeting for PR 415 and has been actively engaged in the public process for PR 415 since SCAQMD first proposed the rule. Baker estimates the initial capital costs to comply with PR 415 to be \$27 million and will increase annual operation costs by \$2.5 million. Baker simply

3.1-2

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D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 2

cannot sustain a viable business in light of these significant costs. If the rule is passed in its current form, Baker will close down. Despite Baker's active participation in the process and SCAQMD's commitment that PR 415 would not cause rendering companies to go out of business, the February 18, 2015 version fails to meaningfully respond to Baker's concerns. In fact, the February 18 version of PR 415 has gone backwards from the original draft. It does not seem like SCAQMD is seriously considering Baker's comments.

3.1-2
 Cont'd

In its January 30, 2015 comment letter, Baker requested that the SCAQMD provide specific data so that Baker could meaningfully respond to PR 415. The requested data includes the evidence the SCAQMD is relying upon to claim that odors from Baker are causing public nuisance level odors in Boyle Heights. When the SCAQMD began to claim that odors cause health effects, Baker requested the SCAQMD provide it with the data confirming these allegations. To date, Baker has not received the requested documents. SCAQMD's lack of disclosure is seriously hampering Baker's ability to provide comments to SCAQMD.

3.1-3

Despite the fact that critical information has not yet been disclosed and key issues remain unresolved, Baker understands that the SCAQMD staff intends to proceed with a Public Hearing before the SCAQMD Governing Board on May 1, 2015. Baker renews its request that SCAQMD staff postpone the Governing Board's consideration of PR 415 until all information has been disclosed to the public and the serious problems with PR 415 have been addressed and resolved. There is no need to fast track this rule.

3.1-4

Baker submits these comments on PR 415 and in response to the scoping meeting and requests that this letter be included in the administrative record for PR 415. Baker reserves the right to submit additional comments on PR 415 in the future.

1. Baker's Operation Provides an Essential Public Service.

Baker provides the following services to its customers:

- A Total Grease Management Program that includes the collection of used cooking oil from restaurants and food manufacturers, the pumping and cleaning of grease trap and interceptor systems, commercial Hydrojet drain cleaning, and high pressure power washing service.
- Collecting and recycling animal mortalities from the cattle and dairy industries.

3.1-5

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 3

- Collecting and recycling animal by-products from meat and poultry processing plants, supermarkets and butcher shops.

The products that Baker recycles are either collected by Baker's trucks or by outside trucking companies. Baker has no control over trucks it does not own. Baker processes the products by a continuous flow operation. This means that there must be sufficient product on-site before the process is started. Only batch operations can operate intermittently to process products as they arrive at the site. A continuous flow operation produces significantly less emission and odors than a batch process.

The rendering of these materials is vital because it protects the environment, prevents disease, and provides necessary products for other industries. Fifty percent of every animal raised for consumption is considered inedible and goes to renderers for recycling. Without rendering plants, cities would risk becoming filled with diseased and rotting carcasses causing a terrible stench and the spread of viruses and bacteria. If the carcasses are burned, it will create more air pollution and reduce recycling opportunities.

Through the rendering process, inedible wastes that are rich in carbon and nitrogen are recycled into useable materials. The recycled products include biofuels, livestock feed, pet food, fertilizer, cosmetics, paints, varnishes, soaps, and many other industrial products. The use of biodiesel can reduce greenhouse gas emissions by as much as 78%. Without recycling, it is likely the financial and environmental cost of these products will increase because other likely new resources would have to be used instead of the recycled product produced by rendering.

3.1-5
 Cont'd

The wastes Baker recycles will not disappear if the rendering operations shut down. These wastes cannot be sent to landfills. Even if they could, without rendering the landfills in the United States would be full in four years. What does the SCAQMD propose happen to these wastes in the absence of rendering operations in the South Coast Air Basin?

2. SCAQMD Lacks Authority to Impose a Rule that is More Stringent than the Public Nuisance Statute or Bypass the Public Nuisance Proof Requirement.

3.1-6

SCAQMD has regulated odors since 1976 under Rule 402. Rule 402 conforms to California Health and Safety Code section 41700 (Section 41700). PR 415 is unnecessary because the SCAQMD already has Rule 402.

SCAQMD derives its authority strictly from the Legislature. Under Health and Safety Code section 40001, subdivision (b) (Section 40001(b)), SCAQMD may adopt rules that

3.1-7

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 4

“provide for the prevention and abatement of air pollution episodes which, at intervals, cause discomfort or health risks to, or damage to the property of, a *significant number of persons* or class of persons.” (Emphasis added.) SCAQMD lacks statutory authority to adopt a rule more stringent than Section 41700. Further, SCAQMD lacks statutory authority to regulate bacteria.

3.1-7
 Cont'd

Not every odor constitutes a public nuisance. Generally, to qualify, the odor must be both substantial and unreasonable. Substantiality is significant harm, one that is definitely offensive, seriously annoying, or intolerable. The measure is an objective one: if normal persons in that locality would not be substantially annoyed or disturbed by the situation, then the odor is not a significant one. Unreasonableness of a given interference is determined by comparing the social utility of an activity against the gravity of the harm it inflicts, taking into account a handful of relevant factors. SCAQMD’s failure to implement Rule 402 on a case-by-case basis prevents the lawful consideration of defenses such as laches (*City and County of San Francisco v. Pucello* (1978) 85 Cal.App.3d 637) or coming to a nuisance. (*Hellman v. La Cumbre Golf & Country Club* (1992) 6 Cal.App.4th 1224.) The current residents complaining about rendering and Baker’s operations knew when they moved into the area that heavy manufacturing is located in Vernon and of Baker’s presence since approximately 1950.

3.1-8

SCAQMD staff informed the Governing Board in May 2014 that a public nuisance involves complaints from six or more separate households or businesses; that the odors must be confirmed by the inspector with the complainants, and traced back to the source; and that the complainant must sign a form and either complete a declaration or be willing to testify in court if necessary. SCAQMD staff contends that PR 415 is necessary because the odors occurring in Boyle Heights *cannot* be traced back to any specific company. If the source of the odors cannot be traced to Baker, there is no problem and SCAQMD lacks authority to require that Baker comply with the extraordinary and costly PR 415. SCAQMD cannot simply decide to bypass the rigorous application of Rule 402.

3.1-9

Vernon is an industrial city incorporated in 1905; the intent was to locate heavy manufacturing facilities and industrial uses in this pocket of L.A. County. Vernon currently houses more than 1,800 businesses. Between Baker and Boyle Heights, there are freeways, rail yards, and a significant number of facilities that cause odors, including food processing plants, heavy manufacturing, mineral processing and warehousing, and trucking distribution centers. SCAQMD has yet to produce any evidence demonstrating that the odors in Boyle Heights are not caused by one of these other uses, or that the odors in Boyle Heights are not the cumulative effect of being located next to an industrial city. SCAQMD cannot in good conscience claim

3.1-10

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 5

that the odor issues in Boyle Heights are all caused by a few rendering operations located several miles away. In sum, there is no proof that Baker is causing a public nuisance in Boyle Heights. 3.1-10
 Cont'd

PR 415 applies to all rendering plants regardless of whether the plant is creating a public nuisance. (PR 415(b).) The definition of a "confirmed odor event" requires only three complaints that are "verified" (whatever this means) by SCAQMD personnel. This standard is inconsistent with PR 402. The number of complaints has been reduced from 6 to 3. Why are the rendering facilities being held to a different standard than other industries, particularly the industries with the highest odor complaint rates? There is no requirement that the rendering facility cause quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public. 3.1-11

The most sensitive persons can create an odor event. (See also the definition of "odor" in PR 415(c)(13), making anything that can be smelled an odor.) An odor is not even required to be emitted; the operation or process is a source if an odor *may be* emitted. (PR 415(c)(14).) Regardless of whether a rendering facility creates a public nuisance, the facility must still implement Best Management Practices (BMP), operate in a closed system or permanent enclosure, and install odor control equipment. (PR 415(d)(1).) PR 415 essentially mandates an on-site zero odor threshold. This standard is not reasonable and cannot be met. On-site odors do not necessarily cause migrating public nuisance level odors. If the implementation of the BMP sufficiently reduced odors at the facility, why is it necessary for SCAQMD to require an existing facility have its equipment and processes operated in a closed system or located within the confines of a permanent enclosure? 3.1-12

SCAQMD also lacks authority to require and enforce the BMP requiring covered trucks. There has been no analysis disclosed to the public that demonstrates these measures will reduce odors in Boyle Heights. Even if a facility does all of the above, the Executive Officer is vested with unfettered authority to require a rendering operation to submit an Odor Mitigation Plan (OMP) and approval of the OMP. (PR 415(d)(2)-(3).) SCAQMD requires the facility to do its work by investigating the causes of a confirmed odor complaint. (PR 415(e)(22), (d)(3).) 3.1-13

3. PR 415 Amounts to a Regulatory Taking of Private Property.

As discussed in this letter, PR 415 will make it impossible for Baker to operate in the City of Vernon. When a government regulation goes too far, it will be recognized as a taking, in which case the owner is afforded a remedy under the U.S. and California Constitutions. (*First* 3.1-14

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 6

English Evangelical Lutheran Church of Glendale v. Los Angeles County (1987) 482 U.S. 304.) The Fifth Amendment to the federal Constitution provides that “just compensation” must be made for a taking by the federal government. Article I, section 19 of the California Constitution contains a similar requirement. 3.1-15

4. PR 415 Lacks Appropriate Legal Standards and Clarity.

The “confirmed odor event” standard is impermissibly vague. There is no time frame within which the complaints must occur. The language in the original version of PR 415 requiring a SCAQMD inspector verify the odor by tracing it upwind to a facility was removed in the second February 18th version. Now, any untrained SCAQMD staff member or even the Executive Officer can verify an odor event. Verification is left up to the discretion of each SCAQMD employee. 3.1-16

How can a violation of any term of an approved OMP be legally considered a violation of PR 415? How can an OMP be required when there is no violation of the rule? Even if Baker does everything SCAQMD requires, SCAQMD has reserved its right to come back after Baker and require it to do more. A public nuisance is not a pre-requisite for this requirement. There are no standards of what constitutes an approvable odor mitigation plan. It is entirely within the SCAQMD’s discretion to decide what SCAQMD wants to require. Businesses cannot operate in this climate of uncertainty. What are the standards for approving or disapproving an OMP? 3.1-17

What standards will SCAQMD permitting staff use to evaluate whether an existing rendering operation complies with the closed system requirement, or in approving a permanent enclosure and the odor control equipment? These standards must be articulated in PR 415. 3.1-18

Odors are subjective. How is the SCAQMD intending to maintain consistency between how odors from the different rendering operations are treated? How are the inspectors going to determine whether the complainant’s odor is the same odor coming from the rendering facility? Why is the SCAQMD not considering a quantitative methodology? What methodology is the SCAQMD using to determine that a specific rendering facility is the cause of an odor complaint? How will SCAQMD determine whether odors are escaping from individual pieces of equipment? 3.1-19

5. Closed System or Permanent Enclosure Requirement Comments.

Baker should be permitted to use alternative methods to address odors when there has been a substantiated violation of Rule 402. The construction of a permanent enclosure is cost- 3.1-20

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinot
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 7

prohibitive. Baker cannot retrofit the existing roofing structure to meet PR 415 requirements as the SCAQMD staff claim because of the control system requirements.

3.1-20
 Cont'd

Baker has repeatedly asked whether its existing operation complies with the closed system requirement. To date, SCAQMD staff has not provided a clear unequivocal answer. SCAQMD rulemaking staff claim Baker's current operation fully complies with the closed system requirement. But, when Baker has asked for certainty, SCAQMD has hedged stating that the decision will be made by the engineers processing the enclosure permits. What are examples of closed systems? What standards will the SCAQMD utilize to determine if a system is closed? Is Baker's equipment, excepting the raw material pit, considered by the SCAQMD to be in closed systems that comply with PR 415? Is a screw that is covered considered a closed system? If the existing conveyor system does not comply, then what areas would Baker be required to permanently enclose under PR 415? What parts of the trap grease process also would need to be enclosed? For the permanent enclosure, what materials should be used to contain odors?

3.1-21

Baker cannot make business decisions when it does not know whether its current operation is in compliance with the proposed rule or not. PR 415 needs to be explicit and not leave Baker guessing. To do this, the rule must include language stating that Baker's current operation fully complies with the closed system requirement, and no more will be required. Why does a permit application for an enclosure need to be submitted if a facility opts to comply by a closed system?

3.1-22

What types of negative air pressure systems are acceptable to the SCAQMD? Does a closed system have to have a negative pressure system? Is the negative air pressure standard reasonable considering some enclosures may be partially open or regularly opened?

3.1-23

6. BMP Requirement Comments.

It is not reasonable and possible to require all of the BMPs to be implemented within 90 days. For example, all of the washing required will generate a significant amount of wastewater that may require modifications to wastewater facilities and permits that will take significant time to be processed.

3.1-24

What if the material holding standards in the BMPs cannot be met due to circumstances beyond Baker's control? What happens if there is a breakdown or necessary variation from standard procedures? Will the emergency breakdown and variance provisions apply, or will the rendering companies be issued NOV's? What are the penalties for an NOV? Are they defined or

3.1-25

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 8

are they up to the SCAQMD's discretion? Under what conditions would a notice to comply be issued instead of an NOV?

3.1-25
 Cont'd

What is the basis for imposing a three-hour deadline for contacting the SCAQMD if Baker receives an odor complaint? What if the complaint is made after hours or on the weekend when Baker is not operating? What if the odor is not coming from Baker? Baker cannot be required to prove a negative after the fact.

3.1-26

Why does PR 415 establish deadlines for repairing any leaking components? These components do not contribute to migrating odors. Why is a written log of leaking valves, flanges, etc. required? Why is it necessary to have a who, what, where and why on every leak that is discovered when this is an odor rule?

3.1-27

7. Paving Requirement Comments.

The paving requirements are extremely costly and unrealistic. It will cost Baker about \$8.5 million to pave all of the areas required by PR 415. These paved areas are used for heavy duty truck movements, back loaders, and other equipment. Cracks will occur. To comply with the rule, Baker will be paving continuously to deal with the cracks. The \$8.5 million cost does not include repaving to fill cracks.

3.1-28

What are the standards for exactly what types of cracks and potholes in asphalt need to be repaired? What is the standard for maintaining the facility grounds once the asphalt is repaired? What areas are required to be repaved? Is it only the area around the pit or the entire property, which is 13 acres? How often does the rule require the area be repaved?

8. Watering And Cleaning Requirement Comments.

PR 415 requires constant washing of the trucks, drums, containers, and grounds. This washing will not reduce migrating odors. Instead, the washing requirement will significantly increase the amount of wastewater, which may cause more emissions and odors. The extensive washing requirements in the rule increase the amount of standing water and water that has to be treated. Further, California is in the middle of a serious drought and is requiring water use to be reduced, not increased as proposed by the rule. What is the basis for imposing all of these washing requirements?

3.1-29

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 9

Processing all of material within four hours is unreasonable. Baker does not receive enough material every four hours to process. It is not practical to wash the exterior of every truck every time as is proposed in the rule. How was this frequency determined?

3.1-29
 Cont'd

The requirement that Baker has only 30 minutes for cleaning up any spilled material is unrealistic. What is the basis for imposing the 30 minute deadline?

What are the standards for preventing the accumulation of and cleaning up drippings in the plant?

9. Truck Requirement Comments.

Baker does not own or operate all of the trucks that enter its facility and, as such, truck drivers and companies may refuse to install tarps. Baker has no control over whether the truck drivers and companies use tarps on public streets. If the tarping requirement is limited to what Baker can control, which is only entry to the rendering facility, the purported benefits do not justify the cost and time because the tarp would only be on the truck for a few minutes until it is removed for unloading the material.

3.1-30

Baker cannot turn away uncovered trucks. Where will they go? The delay may increase odors and vehicle emissions if the trucks have to return to their original location to be covered.

Trucks also transfer the meal to the grinding department. Would these trucks have to be sealed? What is an odor tight container?

The requirement for the venting of release valves for the venting of trap grease delivery vehicles is unclear. What does this mean, and what exactly is required?

10. SCAQMD Must Prepare an Environmental Impact Report (EIR) for PR 415.

As demonstrated below, the California Environmental Quality Act (CEQA) requires SCAQMD to evaluate the environmental impacts caused affected by PR 415 in an EIR. It is difficult to provide comprehensive comments without the Initial Study.

3.1-31

- Aesthetics

PR 415 requires the construction of massive buildings in the City of Vernon. There would be a change to the visual character of the existing setting.

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 10

- Greenhouse Gas Emissions

PR 415 is inconsistent with State greenhouse gas (GHG) reduction goals and plans. Rendering averts the release of carbon dioxide and other GHGs that would otherwise be released into the air through the normal decomposition process. The carbon in decaying organic material includes methane and nitrogen which have global warming potentials that are substantially greater than CO₂. This makes rendering even more important in removing GHGs from the environment.

3.1-32

- Land Use/Planning

Rendering provides a sustainable method of handling unique wastes and repurposing them into valuable products, while protecting human and animal health.

3.1-33

- Agriculture and Forestry Resources

How will the cattle and dairy industries dispose of animal mortalities without rendering operations?

3.1-34

- Public Services

Rendering is important to assist cities in meeting their state mandated recycling requirements. These wastes cannot be sent to landfills. If the diseased and rotting carcasses are not disposed of properly, they will cause a terrible stench and the spread of viruses and bacteria. Additional government services may be needed for displaced employees.

3.1-35

- Solid Waste

Where will products be disposed of that cannot be rendered? Disposal at landfills does not comply with state and local statutes and regulations related to solid waste. Even if landfills allowed these products to be disposed of, the landfills do not have sufficient permitted capacity to accommodate the solid waste disposal needs.

3.1-36

- Transportation

The demand for on-site truck parking facilities will increase in order clean and process the trucks per PR 415.

3.1-37

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 March 18, 2015
 Page 11

- Utilities/Service Systems

What is the increase in utilities to comply with PR 415?

3.1-38

- Air Quality

If the carcasses are burned, it will create more air pollution. Additional wastewater treatment can increase emissions and odors. What are the air quality impacts of all the construction and paving? What are the air quality impacts of trucks returning to their original locations to be tarped? SCAQMD does not consider odors to be significant under CEQA unless a Rule 402 violation exists.

3.1-39

- Hydrology/Water Quality

The BMPs impose significant watering requirements during a drought which interferes with California water policies. PR 415 will generate a significant amount of wastewater and degrade the quality of water. The construction of massive buildings will change the existing drainage pattern of the site, and contributing more storm water to the drainage system.

3.1-40

The proposed rule is seriously flawed. If the current version of PR 415 is adopted by the SCAQMD Governing Board, Baker will shut down its facility and go out of business in Southern California. Baker requests that the rule be taken off the rulemaking calendar until these issues can be worked out. Baker appreciates the opportunity to provide these comments and would appreciate receiving a written response to each of the questions raised in the letter. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you.

3.1-41

Very truly yours,


 Alene M. Taber

cc: Nicholas Sanchez, Senior Deputy District Prosecutor
 Bob Gottschalk, Air Quality Specialist

D1. Response to Comments

ATTACHMENT 2

D1. Response to Comments

Jackson | DeMarco | Tidus Peckenpaugh A LAW CORPORATION

May 8, 2015

Direct Dial: 949.851.7492
E-mail: ataber@jdtplaw.com
Reply to: Irvine Office
File No.: 7542-122134

VIA E-MAIL AND U.S. MAIL

Barry R. Wallerstein, Ph.D.
Executive Officer
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Re: Proposed Rule 415 – Odors From Rendering Facilities

Dear Dr. Wallerstein:

We represent Baker Commodities, Inc. (“Baker”). Baker submitted a California Public Records Act (“PRA”) request to the South Coast Air Quality Management District (“SCAQMD”) on January 30, 2015. Under the PRA, SCAQMD was required to determine whether it possesses responsive documents within ten (10) days of the PRA request and promptly notify Baker of such determination, in this case, by February 9, 2015. (Gov. Code, § 6253.) SCAQMD failed to make this determination or notify Baker that it required additional time to search its records for responsive documents in violation of the PRA. (*Id.*) To date, the SCAQMD has not provided Baker with any response, much less documents responsive to the request. As such, this letter constitutes notice to the SCAQMD that it has violated the PRA, Government Code section 6250 et seq., and that Baker expressly reserves all legal rights, relief and remedies to which it is entitled.

32-1

The SCAQMD’s violation of the PRA is irreparably prejudicial to Baker. SCAQMD has set a public hearing for Proposed Rule 415 – Odors From Rendering Facilities (“PR 415”) on July 10, 2015 at the Governing Board meeting. SCAQMD’s violation of the PRA has prevented Baker from submitting fully informed comments on PR 415. The current version of PR 415 would substantively alter the operations of rendering facilities located in the South Coast Air Basin, including Baker’s. The requested California Environmental Quality Act (“CEQA”) and socioeconomic scoping analyses contain the relevant assumptions that will be included in the final CEQA and socioeconomic analyses underlying a proposed rule. The purpose of the scoping documents is to correct any assumptions or analyses before the final analyses are completed. Despite Baker’s good faith effort to actively participate in the rulemaking process, SCAQMD’s failure to provide the requested documents has significantly hindered Baker’s ability to submit informed comments on PR 415.

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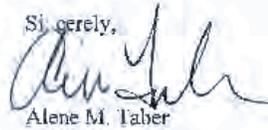
D1. Response to Comments

Barry R. Wallerstein, Ph.D.
 Executive Officer
 May 8, 2015
 Page 2

Baker hereby **demands** that SCAQMD provide the following requested documents immediately to my attention, and in no event later than close of business on **Wednesday, May 13, 2015**:

- | | |
|--|-----------------|
| • All technical and other information the SCAQMD relied upon to draft PR 415. | 3.2-1 Cont'd |
| • All NOV's issued to any rendering facility in the SCAQMD's jurisdiction in the last ten years. | 3.2-2 |
| • Location, time, and dates of all odor complaints made about rendering facilities in the SCAQMD's jurisdiction in the last ten years. | 3.2-3 |
| • All information the SCAQMD obtained or generated in regards to its review of out-of-state rendering facilities. | 3.2-4 |
| • All odor studies or analysis SCAQMD developed or is in possession of for rendering facilities. | 3.2-5 |
| • All comment letters received about PR 415. | 3.2-6 |
| • All cost data the SCAQMD has in its possession for PR 415 requirements. | 3.2-7 |
| • All data estimating the air quality benefits of PR 415. | 3.2-8 |
| • SCAQMD's protocol for odor complaints. | 3.2-9 |
| • All documents or data SCAQMD is relying on to claim that odors from Baker are causing public nuisance level odors in Boyle Heights. | 3.2-10 |
| • All documents or data SCAQMD is relying on to support its allegations that odors cause health effects. | 3.2-11 |
| | 3.2-12 |

Baker hopes that this issue can be resolved without the need for judicial intervention. We look forward to SCAQMD's prompt response. Please contact me at 949.851.7492 if you have any questions.

Sincerely,

 Alene M. Taber

D1. Response to Comments

ATTACHMENT 3

D1. Response to Comments

Jackson | DeMarco | Tidus
Peckenpaugh
A LAW CORPORATION

June 19, 2015

| | |
|-------------|--------------------|
| Direct Dial | 949.851.7492 |
| Email | ataber@jdtplaw.com |
| Reply to | Irvine Office |
| File No. | 7542.122134 |

Via E-Mail (tgoss@aqmd.com; jinabinet@aqmd.com)

Mr. Tracy A. Goss, P.E.
Program Supervisor, PM Strategies
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Mr. Jeffrey Inabinet
CEQA Section
Planning Rule Development & Area Sources
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765-4178
jinabinet@aqmd.org

Re: Proposed Rule 415: Odors from Rendering Facilities

Dear Messrs. Goss and Inabinet:

We represent Baker Commodities, Inc. ("Baker"), a family-owned company founded in 1937 and operated by three generations of the Andreoli Family. Baker recently attended South Coast Air Quality Management District's ("SCAQMD") June 4, 2015 working group meeting to discuss the June 3rd version of Proposed Rule ("PR") 415. The comments and questions in Baker's previous letters still apply, and are incorporated by reference. SCAQMD has not responded to Baker's numerous comments or answered Baker's questions in its prior letters. When asked at the working group meeting about SCAQMD's failure to at least respond to the numerous legal issues Baker raised, SCAQMD would only refer to a staff report, which has not been released to the public. This prevents Baker from responding to the SCAQMD's legal analysis. Further, the June 3rd version of the proposed rule does little to alleviate the initial capital costs required to comply with PR 415 and increased annual operating costs. SCAQMD is intent on regulating business practices it knows nothing about, instead of focusing on the real need to address the odor issues in Boyle Heights. If the June 3rd version of the rule is passed in its current form, Baker will be forced to shut down its rendering business in Southern California despite SCAQMD's commitment that PR 415 would not cause rendering companies to go out of business. In short, it does not seem like SCAQMD is seriously considering Baker's comments.

3.3-1

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D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 2

Further, Baker's review of documents SCAQMD provided in response to Baker's Public Records Act request shows SCAQMD has no evidence to support its contentions made during the rulemaking process that Baker is the cause of public nuisance level odors in the Boyle Heights community. Rather, the record shows that the PR 415 rule-makers have presumed Baker is guilty, formed a predetermined prejudice against Baker, and as a result have targeted Baker specifically in this rulemaking. It appears SCAQMD has spent considerable time researching Baker's out-of-state activities, particularly for its New York and Washington operations, even though these activities are clearly not within SCAQMD's jurisdiction. The last odor-related Notice of Violation ("NOV") Baker from SCAQMD, was on September 3, 1998 – almost 17 years ago. By contrast, SCAQMD has received 69 odor complaints about Darling International, Inc. ("Darling") and issued seven (7) NOVs. Despite Darling's much higher NOV rate, SCAQMD has collected only two documents for Darling's operations elsewhere. Further, the record does not contain information about any of the other renderers, even though some of them have received an NOV in the past.

3.3-2

Baker understands that SCAQMD staff intends to request the Governing Board on July 10, 2015 to set a public hearing for September 4, 2015. Baker renews its request that no Board consideration of PR 415 be scheduled until after SCAQMD has conducted the proper scientific analysis in conjunction with the rendering industry and there is legally sufficient proof that the odor issues in Boyle Heights will be resolved by taking the actions proposed in PR 415.

3.3-3

Baker submits these comments on the June 3rd version of PR 415 and pending California Environmental Quality Act ("CEQA") document, and requests that this letter be included in the administrative record for PR 415. Baker reserves the right to submit additional comments on PR 415, CEQA and socioeconomic impacts in the future.

I. Public Nuisance Laws Do Not Apply to Rendering Operations.

Rendering is a key component of the state's waste disposal systems and is essential for agriculture to exist. According to the State Senate Judiciary Committee, the expanding urban population's potential conflict with long operating agriculture businesses resulted in the passage of "Right to Farm" laws, including creating a general protection from nuisance findings for those farmers, ranchers, and processors in operation for three years without incident (Attachment D). This general protection has been twice amended to include agricultural processing facilities and rendering operations licensed under the Food and Agricultural Code.

3.3-4

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 3

Civil Code section 3482.6 ("Section 3482.6") (addressed in Attachment 1) is a "Right to Farm" law that expressly forbids, under certain conditions that are present here, agricultural operations from being declared a nuisance. The Civil Code specifically states: "No agricultural processing activity, operation, facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in continuous operation for more than three years if it was not a nuisance at the time it began." (Civ. Code, § 3482.6(a); see also Civ. Code, § 3482.5(a).) This statute is intended to expand on the "coming to the nuisance" doctrine by making it clear that there is no legal recourse under nuisance laws when a person buys a home near an existing rendering operation.

3.3-4
 Cont'd

All of the facts necessary to be protected under Section 3482.6 are present. Rendering is an agricultural activity. Section 3482.6 was amended to specifically include rendering operations (Attachment 1). Section 3482.6(e)(1) now states under the public nuisance exceptions: "[a]gricultural processing activity, operation, facility, or appurtenances thereof" includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food and Agricultural Code." Baker is a business conducted and maintained for commercial purposes (Attachment 2). Baker operates in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality (Attachment 3). Baker is an agricultural operation that is maintained and regulated under the Food and Agricultural Code. (Food & Agric. Code, §§ 19300 et. seq.; Cal. Code Regs., §§ 1180 et seq.) The rendering operation at the Baker site was established before the Boyle Heights neighborhood existed (Attachment 4). The allegations of nuisance occurred after Baker had been in operation for more than three years (Attachment 5). The rendering operation at the Baker site was not a nuisance at the time it began (Attachment 6).

3.3-5

The statute specifically provides that "[t]his section prevails over any contrary provision of any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993." (Civ. Code, § 3482.6(d).) As discussed in Baker's prior letters, SCAQMD lacks authority to regulate public nuisances more stringently than Health and Safety Code section 41700. Further, Baker is not surrounded by housing or commercial development. Between Baker and the Boyle Heights neighborhood, there are freeways, rail yards, and a significant number of other facilities (most of

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 4

which are not permitted by SCAQMD) that cause odors, including food processing plants, heavy manufacturing, mineral processing and warehousing, and trucking distribution centers. SCAQMD has yet to produce any evidence demonstrating that the odors in Boyle Heights are not caused by one of these other uses, or that the odors in Boyle Heights are not the cumulative effect of being located next to several freeways and an industrial city. If SCAQMD really wanted to address odor problems in Boyle Heights, before embarking on rulemaking or singling out a specific industry as creating the odor issues it would have carefully inventoried the area to identify all potential odor sources, required permits for all of the non-permitted facilities in the area, and assessed the impacts of the freeways in the area. Until this work is completed, the regulation of a few rendering facilities is not going to resolve the odor issues in the Boyle Heights neighborhood.

3.3-5
 Cont'd

In addition to the above, the Civil Code also states that “[n]othing which is done or maintained under the express authority of a statute can be deemed a nuisance.” (Civ. Code, § 3482.) As discussed above, Baker’s operation is maintained under the express authority of the Food and Agricultural Code and, thus, cannot be deemed a nuisance.

3.3-6

2. **SCAQMD Lacks Authority to Impose PR 415.**

PR 415 states that its purpose “is to reduce odors from facilities rendering animals and animal parts.” SCAQMD derives its authority strictly from the Legislature. SCAQMD has no authority to regulate odors.

3.3-7

3. **The SCAQMD’s April 2012 Study of the Ambient Air Quality at Resurrection Catholic School Eliminates Baker as a Potential Source.**

According to the February 2015 staff report, PR 415 is being developed solely because of a working group recommendation made for the Clean Communities Plan in the pilot study area of Boyle Heights. In response to the working group’s recommendations, SCAQMD conducted a year-long study to measure ambient air pollutants in the Boyle Heights neighborhood. The study was authored by Dr. Fine, who is in charge of the PR 415 rulemaking.

3.3-8

Emissions from the freeways in the area dominate the air quality in the Boyle Heights neighborhood. According to the SCAQMD 2012 study, “the extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights....” (Attachment 7.) “The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 5

Long Beach and Los Angeles.” Although elemental carbon (which is an indicator of diesel particulate matter) levels measured at Resurrection School are similar to those observed in other dense urban areas of the Los Angeles Basin, “they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.”

Exide Technologies as source of emissions in Boyle Heights was ruled out. According to the study:

Increased lead concentrations in the Boyle Heights area may be due to re-suspension of historically deposited dust accumulated on or near the nearby freeways. While lead has been completely removed from gasoline for over 30 years, some studies have shown higher lead levels leftover in soils next to busy roadways. Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blow from the Exide plant toward the Resurrection School. In addition, the lead data collected at the Resurrection School site are not well correlated to those measured right next to the Exide plant during the same time period.

3.3-8
 Cont'd

Exide is north east of Baker and closer to Resurrection School than Baker (Attachment 8). For the same reasons SCAQMD finds it unlikely that emissions from Exide travel toward Resurrection School, emissions from Baker are unlikely to affect Resurrection School.

Volatile organic compounds (“VOCs”), which include odorous compounds, were not traced from Baker and were found at concentration levels at Resurrection School “comparable to those observed at the other two monitoring stations in Central Los Angeles and Rubidoux”. The SCAQMD study concluded that “gaseous emissions from motor vehicles are likely to be the predominant source of these volatile species at all three monitored locations and throughout the entire South Coast Air Basin” and that “VOCs measurements at Resurrection school might be explained by the close proximity of this site to the I-5 and/or nearby surface streets.”³⁷

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 6

The June 3rd rule version targets sulfur compounds (PR 415(f)(5)(A)(ii)). However, according to the SCAQMD study, sulfur is typically generated from combustion of sulfur-containing fuel. How can SCAQMD distinguish between freeway/roadway-generated sulfur compounds and industry-generated compounds, let alone compounds traced from Baker? How can SCAQMD rule out freeway/roadway-generated sulfur compounds as a problem in the Boyle Heights neighborhood?

3.3-8
 Cont'd

4. The Public Health Literature Relied On by SCAQMD Does Not Support the Rule.

The Characterization of Odor Nuisance (2012) (“dissertation”) notes that SCAQMD receives fewer odor complaints for rendering facilities than for other industries, namely landfill, transfer station/recycling, foundry/metal processing, and refinery/fossil fuel (Attachment 9). To date, the SCAQMD has only adopted a specific regulation for one of these industries – Transfer Stations – for odor, Rule 410. Moreover, the dissertation also indicates that SCAQMD is targeting rendering facilities because of the SCAQMD’s current challenge in identifying and verifying the source of the odor complaint. SCAQMD’s inability to identify and verify the source demonstrates that SCAQMD lacks data to establish a causal connection between Baker and odors complaints received by SCAQMD. In the event that the odor source is a single nuisance operation in Vernon, PR 415 would be unlawfully over-inclusive.

3.3-9

SCAQMD has also relied on health studies and dissertations that discuss odor outside of the context of animal rendering. For example, SCAQMD’s document production includes a doctoral thesis about odor from animal production processes, which are distinct from rendering processes, Odour Impact: Odour Release, Dispersion, and Influence on Human Well-Being with Specific Focus on Animal Production (2004). Additionally, the record shows that SCAQMD has improperly utilized a health study rooted in industrial hygiene literature to assess odors in developing PR 415, Odor Thresholds and Irritation Levels of Several Chemical Substances: A Review by Jon H. Ruth (1986). Use of this literature is misplaced because it is aimed at exposure in the workplace, not on nuisance odors detected by a neighborhood.

5. Definitions Remain Vague and Ambiguous.

- a. “Closed System” (c)(2) is defined as a system “in which odors are contained within the system.” What does “contained” mean? Is “contained” defined by the closed system standards in (f)(4)? If so, there is a conflict between sections (f)(4) and “odor” defined in (c)(12). Odor is defined as “the perception experienced by a person when one or more chemical substances in the air come into contact with the human

3.3-10

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 7

olfactory nerves.” Therefore, a system is only considered “closed” if a person cannot perceive a chemical substance in the air. It is left up to the complete discretion of SCAQMD staff; the majority of which are not qualified to determine if there is an odor. Renderers will not know whether their system is “closed” because SCAQMD staff with sensitive olfactory nerves may smell something the renderers or previous SCAQMD staff persons do not. What if one SCAQMD staff person does not perceive a chemical substance in the air, and a second SCAQMD staff person does? Is this a one-time test, or can SCAQMD at any point in the future declare a system not to be closed if at any time a SCAQMD staff person perceives a chemical substance in the air? SCAQMD has yet to inform Baker whether its operation is considered “closed.” SCAQMD has visited Baker several times and there is no reason why SCAQMD cannot definitively inform Baker as to whether the operation complies as is with the proposed rule, or whether an enclosure is required.

3.3-10
 Cont'd

b. “Collection Center” (c)(3) refers to a licensed rendering plant or pet food processor. What licensing is SCAQMD referring to? There is no definition of a “pet food processor.” What businesses besides rendering plants is SCAQMD attempting to regulate under PR 415 by referencing “pet food processor”?

3.3-11

c. “Confirmed Odor Event” (c)(2) continues to be an unlawful discretionary standard and is inconsistent with the Civil Code, which states: “[a] public nuisance is one which affects *at the same time an entire community or neighborhood, or any considerable number of persons*, although the extent of the annoyance or damage inflicted upon individuals may be unequal.” (Civ. Code, § 3480 [emphasis added].) Any SCAQMD staff member can declare a confirmed odor event instead of only qualified inspectors. There is no time frame for the odors. Is this one odor during a specific hour or will SCAQMD add up complaints over the days, weeks, or years in order to declare a “confirmed odor event?” How will SCAQMD exclude other sources of odors? How will SCAQMD determine which rendering facility is allegedly emitting the odor when several are located near one another? SCAQMD staff informed the Governing Board in May 2014 that a public nuisance involves complaints from six or more separate households or businesses; that the odors must be confirmed by the inspector with the complainants, and traced back to the source; and that the complainant must sign a form and either complete a declaration or be willing to testify in court if necessary. (Attachment 10.) This is the standard that should be used consistently in all SCAQMD rules and not some lesser standard

3.3-12

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 8

- | | |
|--|--------------------------|
| <p>applied to a select and small group of businesses. There are other industries that receive more odor complaints and NOVs than renderers, yet SCAQMD is not imposing a more stringent public nuisance standard or enclosure requirement on those industries as it is doing with PR 415 and the rendering companies.</p> | <p>3.3-12 Cont'd</p> |
| <p>d. "Odor Generating Source" (c)(13) means "an operation or process at a rendering facility from which odors <i>may be emitted</i>..." (Emphasis added.) This should be "are" emitted, otherwise it is vague, ambiguous, and unlawfully discretionary.</p> | <p>3.3-13</p> |
| <p>e. "Permanent Enclosure" (c)(14) requires that the enclosure contain all odors from the odor-generating sources. Odor is defined as "the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves." Therefore, a permanent enclosure is only considered as such if a person cannot perceive a chemical substance in the air. It is left up to the complete discretion of SCAQMD staff. Renderers will not know whether their enclosure is sufficient because SCAQMD staff with sensitive olfactory nerves may smell something the renderers or other SCAQMD staff do not. What if one SCAQMD staff person does not perceive a chemical substance in the air, and a second SCAQMD staff member does? Is this a one-time test, or can SCAQMD make a future determination that an enclosure does not meet the requirements if at any time any SCAQMD staff person perceives a chemical substance in the air? What happens if SCAQMD decides that an enclosure does not meet the requirements of PR 415 after it is built? This is also inconsistent with "Routine Enclosure Opening (c)(20), which properly recognizes that enclosures must have certain openings. How will SCAQMD staff determine that the allowed openings are the source of the odor and not the enclosure?</p> | <p>3.3-14</p> |
| <p>6. <u>The Requirements are Draconian, Unnecessarily Costly, and will Not Reduce Odors in Boyle Heights.</u></p> <p>a. The requirements are based on the presumptions that all renderers are causing odors in the Boyle Heights community, and that enclosure is the only method of addressing the issue. There is no evidence to support these assumptions. PR 415(d)(1)(A) requires that "all applicable Odor BMP[s] identified in subdivision (c) shall be implemented." There is no identification of who makes the determination of whether certain Odor BMPs are applicable or not. SCAQMD should not be interfering in business operations and activities that are already regulated by the Food and</p> | <p>3.3-15</p> |

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabiet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 9

- Agricultural Code and following well-recognized best practices established by the industry. There is also no legal justification for requiring all businesses to implement Odor BMPs unless a public nuisance NOV has been issued and sustained after all appeals and judicial proceedings have concluded. 3.3-16
- b. PR 415(d)(1)(B)(ii) requires all rendering facilities to submit permit applications for a permanent enclosure even if the facility has a closed system or it has not been the subject of an public nuisance NOV. PR 415(e)(2) assumes all raw rendering receiving locations will be enclosed, although this requirement is not part of PR 415(d)(1)(B)(ii). In short, this rule presumes every existing facility will be required to construct permanent enclosures, and that the "closed system" provisions are not really an option. There is no approval process proposed for quickly obtaining SCAQMD's determination as to whether existing facilities already have "closed systems." In fact, there is no reason why SCAQMD cannot inform the existing rendering operations now as to whether their systems are considered "closed." If a "closed system" is really an option for the few existing facilities, there is no reason for these facilities to endure the cost of engineering and permits when a permanent enclosure is not required under the rule. 3.3-17
- c. The time frames in PR 415(d) are unreasonable for existing facilities. The rule fails to recognize the time necessary to evaluate all of the Odor BMPs, determine whether the BMPs are applicable, change business practices, deal with increased water usage, etc. The rule fails to recognize the extensive permitting that must occur in addition to SCAQMD's permitting process that is not within the control of the facilities, or time required to conduct demolition activities, obtain financing, and get inspection clearances from the different permitting agencies. What if construction is slowed down because of weather, delays in obtaining equipment, etc.? The rule does not provide sufficient time to develop an effective odor mitigation plan, and does not recognize any appeal time frames for challenging "confirmed odor events." One day to conduct a specific cause analysis for a confirmed odor event is unreasonable. 3.3-18
- d. PR 415(d)(1)(D)(ii) requires enclosures for wastewater treatment systems regardless of whether they are the source of a public nuisance odor. SCAQMD has no evidence proving the wastewater treatment systems from the five renderers are causing public nuisance level odors in Boyle Heights. 3.3-19

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 10

- | | | |
|----|---|--------|
| e. | What is the purpose of the odor complaint contact sign requirement in PR 415(d)(1)(F) and (i)? If there are any odors at the perimeter of the rendering operations, these would only affect persons in vehicles driving by, which does not qualify as a public nuisance and would not further any public purpose. Moreover, this requirement would impermissibly create undue and unjustified negative publicity for rendering companies, despite the fact that the companies are lawfully operating. | 3.3-20 |
| f. | There is no legal or factual basis for requiring an odor mitigation plan in PR 415(d)(2) when there is no proven public nuisance under Rule 402. The 180-day provision for confirmed odor events conflicts with Civil Code section 3480 (see above). What are the criteria for SCAQMD approval of an Odor Mitigation Plan? The provision making a violation of any term of an approved Odor Mitigation Plan a violation of PR 415 confers unlawful discretion on SCAQMD staff. SCAQMD lacks authority to impose an Odor Mitigation Plan penalty in addition to a settlement of an NOV. It is unclear why the specific cause analysis report should identify correct measures when presumably the Odor Mitigation Plan will do this. What is the difference between the two? | 3.3-21 |
| g. | The notification requirement in PR 415(d)(1)(F) and covering requirement in Odor Best Management Practices PR 415(e)(1) are unlawful. SCAQMD has no authority to regulate whether trucks are covered on public roadways or to force a rendering operation to regulate trucks for SCAQMD under the guise of "best management practices." Further, there is no factual evidence justifying this requirement. According to SCAQMD staff at the June 4 meeting, odors from trucks are fleeting, minor, and not a nuisance. Covering trucks will not reduce odors in Boyle Heights. | 3.3-2 |
| h. | Despite the fact there is no evidence showing that the raw rendering material receiving areas are the source of odors in Boyle Heights, PR 415(e)(2) requires an enclosure for these receiving areas. The option of storing the materials in sealed, odor tight containers on a continuous basis after material delivery is not operationally possible and thus, not a real option. | 3.3-23 |
| i. | The extensive washing requirements in PR 415(e)(3)-(4), (13)-(14) are inconsistent with State drought policies and Executive Orders. Further, these requirements will generate more wastewater to be treated (and more emissions and odors), and possible changes to wastewater permits which could take a considerable time to obtain. Who determines how much water is needed to wash outgoing trucks in PR 415(e)(3)? | 3.3-24 |

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 11

- | | |
|--|--------------------------|
| <p>How does the truck washing and drum washing requirements relate to reducing odors in Boyle Heights? What authority does SCAQMD have to prevent trackout of raw rendering materials on to public streets? What about tanker trucks that cannot be washed and do not contribute to trackout of raw rendering materials on public streets? There is no evidence that washing will reduce odors in Boyle Heights.</p> | <p>3.3-24 Cont'd</p> |
| <p>j. The requirements in PR 415 (e)(5) relating to holding time of raw rendering materials cannot be implemented until a permanent enclosure is constructed as the storage in a sealed, odor tight container is not an option as discussed above. There is no evidence showing that limiting the holding time and requiring the raw materials be enclosed will reduce odors in Boyle Heights.</p> | <p>3.3-25</p> |
| <p>k. According to SCAQMD staff at the June 4 meeting, the requirement to repair the raw material receiving area in PR 415(e)(6) is required to reduce bacteria, in addition to preventing standing water. Not only is there no evidence that bacteria causes odors in Boyle Heights, but SCAQMD lacks authority and jurisdiction to regulate bacteria or standing water. Further, there is no evidence showing that preventing standing water will reduce odors in Boyle Heights. The requirement is also vague as to time, is this a one-time requirement or continuous requirement?</p> | <p>3.3-26</p> |
| <p>l. The requirement in PR 415(e)(9) limits transfer of raw or cooked rendering materials between enclosures to a closed system of conveyance or odor-tight drum. There is no evidence showing that transporting material between enclosures causes odors in Boyle Heights.</p> | <p>3.3-27</p> |
| <p>m. The accumulation of processed materials requirements in PR 415(e)(12) are unlawfully vague and ambiguous as to time, in part because of the use of the word "accumulate." Water which is regulated by this requirement is not an accumulation of the processed materials, or within SCAQMD's jurisdiction to regulate. There is no evidence showing that regulating accumulations of processed materials will reduce odors in Boyle Heights. The requirements related to floor drains in PR 415(e)(14) suffer from the same defects. PR 415(e)(12) is also unlawfully vague and ambiguous as to the terms "grease" and "oils" because it does not state whether they are derived from the rendering process. Rendering companies may utilize other processes that generate grease and oils that are entirely unrelated to the rendering process that would not be subject to PR 415.</p> | <p>3.3-28</p> |

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 12

- | | | |
|----|---|--------|
| n. | The permanent enclosure requirements in PR 415(f)(1)-(3) are not justified. There is no evidence demonstrating that constructing a permanent enclosure will reduce odors in Boyle Heights. The requirements are extremely costly. If SCAQMD is truly interested in reducing odors and had jurisdiction to impose this rule, it should focus on less costly alternatives such as masking agents. Why does PR 415 specify the materials that the enclosure can be constructed of? Since SCAQMD approves the enclosure materials, it should bare the risk if the enclosure does not perform as required by the rule. | 3.3-29 |
| o. | The closed system requirements in PR 415(f)(4) are inconsistent with the definition of closed system in PR 415(c)(2). The use of the phrase "to the maximum extent possible" makes the requirement vague and ambiguous, and grants unlawful discretion to SCAQMD staff. Who makes the determination of whether a system is considered "closed" and when does that determination occur? Why is there a need to close air gaps - these small gaps cannot conceivably cause odors in Boyle Heights. Where does a closed system end; which part of the process? | 3.3-30 |
| p. | The June 3rd version of PR 415 is the first attempt by SCAQMD to apply standards to any aspect of the rule. Unfortunately, these "standards" have no scientific basis. This was especially evident at the June 4 meeting during the exchange between SCAQMD staff and a Los Angeles city employee about increasing the control efficiencies with no discussion of a basis for doing so. There is no evidence of whether nitrogen and sulfur compounds are causing odors in Boyle Heights. There is no evidence that the control efficiencies selected are achievable, cost-effective, and will reduce odors in Boyle Heights. SCAQMD needs to also address these issues in the socioeconomic analysis. The provision allowing the Executive Officer to identify other marker compounds causes these requirements to be impermissibly vague and ambiguous and an unlawful delegation of discretion. 180 days is not sufficient time to have source testing protocols approved. The testing and analytical methods are not identified and are to be determined. Baker cannot comment on requirements that are not specified in the rule. This level of technical detail cannot be provided to Baker the day before the public consultation meeting as was the June 3rd version of the rule. | 3.3-31 |

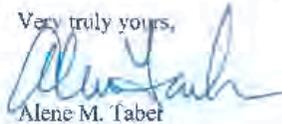
D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 June 19, 2015
 Page 13

q. The Odor Mitigation Plan requirements in PR 415(h) presume that all existing facilities will be constructing a permanent enclosure. There are no standards governing the approval or disapproval of the Odor Mitigation Plan. This provides SCAQMD with unfettered discretion in deciding which Odor Mitigation Plan should be approved or disapproved. 3.3-32

The proposed rule is seriously flawed. If the current version of PR 415 is adopted by the SCAQMD Governing Board, Baker will shut down its rendering operation and go out of the rendering business in Southern California. Baker respectfully requests that SCAQMD provide a written response to each of the questions raised in the letter and the previous letters. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you. 3.3-33

Very truly yours,



Alene M. Faber

cc: Nicholas Sanchez, Senior Deputy District Prosecutor
 Bob Gottschalk, Air Quality Specialist

Enclosures: Attachments 1-10

D1. Response to Comments

ATTACHMENT 1

3.3-34

D1. Response to Comments

6/19/2015 Law section

 **California**
LEGISLATIVE INFORMATION

Code: Select Code Sections: Search 

Home << Previous Next >> cross-reference chaptered bills Add To My Favorites  Highlight

CIVIL CODE - CIV

DIVISION 4. GENERAL PROVISIONS [3274 - 9566] (*Heading of Division 4 amended by Stats. 1988, Ch. 160, Sec. 16.*)

PART 3. NUISANCE [3479 - 3508.2] (*Part 3 enacted 1872.*)

TITLE 1. GENERAL PRINCIPLES [3479 - 3488.5] (*Title 1 enacted 1872.*)

3482.6. (a) No agricultural processing activity, operation, facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in continuous operation for more than three years if it was not a nuisance at the time it began.

(b) If an agricultural processing activity, operation, facility, or appurtenances thereof substantially increases its activities or operations after January 1, 1993, then a public or private nuisance action may be brought with respect to those increases in activities or operations that have a significant effect on the environment. For increases in activities or operations that have been in effect more than three years, there is a rebuttable presumption affecting the burden of producing evidence that the increase was not substantial.

(c) This section does not supersede any other provision of law, except other provisions of this part, if the agricultural processing activity, operation, facility, or appurtenances thereof, constitute a nuisance, public or private, as specifically defined or described in the provision.

(d) This section prevails over any contrary provision of any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993. However, nothing in this section precludes a city, county, city and county, or other political subdivision of this state, acting within its constitutional or statutory authority and not in conflict with other provisions of state law, from adopting an ordinance that allows notification to a prospective homeowner that the dwelling is in close proximity to an agricultural processing activity, operation, facility, or appurtenances thereof and is subject to provisions of this section consistent with Section 1102.6a.

(e) For the purposes of this section, the following definitions apply:

(1) "Agricultural processing activity, operation, facility, or appurtenances thereof" includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food and Agricultural Code and collection centers licensed pursuant to Section 19300.5 of the Food and Agricultural Code, the canning or freezing of agricultural products, the processing of dairy products, the production and bottling of beer and wine, the processing of meat and egg products, the drying of fruits and grains, the packing and cooling of fruits and vegetables, and the storage or warehousing of any agricultural products, and includes processing for wholesale or retail markets of agricultural products.

(2) "Continuous operation" means at least 30 days of agricultural processing operations per year.

(3) "Proper and accepted customs and standards" means the compliance with all applicable state and federal statutes and regulations governing the operation of the agricultural processing activity, operation, facility, or appurtenances thereof with respect to the condition or effect alleged to be a nuisance.

(f) This section does not apply to any litigation pending or cause of action accruing prior to January 1, 1993. (*Amended by Stats. 1999, Ch. 329, Sec. 1. Effective January 1, 2000.*)

http://leginfo.ca.gov/pub/codes/codes_displaySection.html?lawCode=CIV§ionNum=3482.6 

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 1 of 4

BILL ANALYSIS

SENATE JUDICIARY COMMITTEE
 Anton E. Sisti, Chairman
 1999-2000 Regular Session

| | |
|------------------------------|----|
| SB 1274 | 5 |
| Senator Costa | 11 |
| April 25, 1999 | |
| Meeting Date: April 27, 1999 | 1 |
| Food and Agriculture Codes | 2 |
| DMF:ff | 7 |
| | 8 |

SUBJECT
 Agricultural Nuisance Exemption: Rendering and Collection Centers

DESCRIPTION

This bill would declare that rendering and collection centers and agricultural processing activities for purposes of including their activities in the existing exemption for agricultural activities from public and private nuisance laws.

BACKGROUND

State law dating back to the 1800's declares that nothing done or maintained under the express authority of statute can be deemed a nuisance. More recently, the expanding urban population's potential conflict with long operating agricultural businesses resulted in the passage of "right to farm" laws. In particular, AB 585 (Assembly Ch. 515, Stats., 1978) created a general protection from nuisance findings for those farmers, ranchers, and processors in operation for three years without incident. This legislation was expanded in 1992 by AD 1190 (Assembly Ch. 34, Stats. of 1992) to include agriculture processing facilities.

CHANGES TO EXISTING LAW

1. Existing law provides that no agricultural processing activity, operation, facility, or appliances thereof, that are conducted or maintained for commercial purposes,

(b)(1)

page 2

shall be or become a nuisance, private or public, due to any changed condition in or about the locality after it has been in continuous operation for more than three years if it was not a nuisance at the time it began.

This bill would add rendering plants and collection centers licensed under the Food and Agriculture Code to the specified categories of agricultural processors.

2. Existing law requires every person engaged in the business of rendering to obtain a license from the Secretary of Food and Agriculture for each rendering plant and collection center operated.

This bill would require:

Every person engaged in the business of rendering to obtain a license from the Department of Food and Agriculture for each rendering plant.

Every person engaged in the business of operating a collection center to obtain a license from the Department of Food and Agriculture for each collection center operated.

3. Existing law authorizes the Secretary of Food and Agriculture, in lieu of any civil action and in lieu of writ relief, prosecution, to levy a civil penalty against a person who violates certain of these provisions, or any regulation adopted, in no amount not to exceed \$1,000.

Before a civil penalty is levied, the person charged with the violation shall receive notice of the nature of the violation and shall be granted an opportunity to be heard, which shall include the right to review evidence and the right to present evidence on his or her own behalf.

http://leginfo.ca.gov/pub/99-00/bill/sen/sb_1251-1300/sb_1274_cfa_19990428_111203_sen... 6/9/2015

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 2 of 4

This bill would provide, instead, that before a civil penalty is imposed, the person charged with the violation shall receive notice of the nature of the violation and shall be granted the right to examine the department's evidence and for up to 30 days following the issuance of the notice, opportunity to present written objection and evidence to the department as to why the civil penalty

Page 3

shall not be imposed or shall be reduced.

The bill would further specify that these provisions do not require the department to conduct either a formal or informal hearing, and that instead the department may dispose of the matter upon review of the documentation submitted.

LEGISLATION

Stated Goals for Bill

The author states his belief that rendering operations and collection centers are included in the scope of regulated rendered processing existing law was intended to occur. This bill is needed, he suggests, to specifically include rendering operations and collection centers. "The rendering industry is a key component of the state's waste management system, recycling millions of pounds of waste into byproducts from the food and agricultural industries into useful food products each year. Our cattle and poultry farms are dependent on renderings to dispose of animals that die each day due primarily of natural causes. Only a handful of rendering plants are left in California to process dead animals and only about a dozen collection centers. My bill is limited in scope to affect only a very small, but necessary, industry."

Support

The sponsors of the bill, California Cattle and Poultry Association, state the bill is needed, "to clarify the department's regulation of collection centers under the rendering laws. These centers are drop-off facilities for animal carcasses and/or kitchen grease from the rendering plants. The bill gives authority to the department to prescribe necessary minimum for collection centers to make certain they are operated in a way that promotes food safety and environmental quality."

The bill's chief sponsor, Western United Dairymen, writes to say, "The Dairy Industry loses several hundred animals per month throughout the state, not in addition to livestock owned by other commodity industries. These

Page 4

animals can only be processed for non-human consumption. By-products are used within the livestock and animal industries for food for animals, feeds for large animals, in particular 1,200-pound dairy animals, require a beneficial and health protective way to dispose of them. Rendering is the most efficient. And for the most part, the only acceptable legal way to have carcasses away from human health concerns."

1. The law of nuisance and access to the nuisance

Levent Hefner - Let the Buyer Beware... should anyone living & have near an existing rendering plant or collection facility be unaware where it is operating and its smells before they purchase. When you purchase the home in November the smell may not have seemed so bad, but now summer the smell is quite pungent. Should you have a legal recourse? This bill sounds to the way which says, "No."

Section 7874 of the Civil Code defines a "nuisance" as "anything which is injurious to health or is offensive or offensive to the senses or is obstructive to the free use of property, or is an interference with the comfortable enjoyment of life or property, or unlawfully obstructs the free passage of air, or the free passage of water, or the free body of water, air, or other public place."

http://leginfo.ca.gov/pub/99-00/bills/sen/sb_1251-1300/sb_1274_cfa_19990428_111203_sen.._6/9/2015

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 3 of 4

Section 3480 defines a "public nuisance" as "one which affects the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal."

In the policy determination of whether an enterprise should be excused from nuisance law, as against those who neighbors who have "come to the nuisance," Dean Prosser framed the debate quite well. "The question frequently arises, whether the plaintiff assumes the risk and is barred from recovery by the fact that he has 'come to the nuisance' by purchasing land and moving to live on it after it is already in existence or operation. The prevailing rule is that in the absence of prescriptive rights, the defendant cannot condemn the surrounding populace to endure the nuisance, and that the purchaser

Page 3

is entitled to reasonable use and enjoyment of his land as the same existed at any one time, so long as he buys in good faith and not for the sole purpose of a speculative venture.... Thus the cases, however, which have held that the plaintiff is barred by his voluntary choice of a place to live, particularly where the defendant's activity is one in which the plaintiff has a major interest, and the safer and more accurate statement would appear to be that 'coming to the nuisance' is merely one factor, although clearly not the most important one, to be weighed in the area's along with the other elements which bear upon the question of reasonable use." Prosser, *Handbook on the Law of Torts*, 4th Ed. at 411.

In California, we have such a successive right to which the Dean refers, Section 3482.6 of the Civil Code, which places restrictions on the ability to bring agricultural activities to be nuisances. This "right to farm" statute provides that, if an agricultural processing activity, operation, facility, or apparatus thereof has existed for more than three years and it was not a nuisance when it started operation, and it continues to be conducted in a manner consistent with the customs and standards of the locality, it cannot be declared a nuisance because of changed conditions in the area (i.e. because others have now built next to the plant).

4. Are rendering and collection centers "agricultural processes?"

The Food and Agriculture Code defines "rendering" as the conversion of packinghouse waste, dead animal carcasses, and kitchen grease into inedible fat and still inedible by human consumption and other products inedible for human consumption. "Collection center" means a receiving area for the temporary storage of animal carcasses, packinghouse waste or other products before transportation to a licensed rendering plant. While these activities are an obvious relationship to agriculture, they are unlike in industrial activities, particularly in the collection and conversion of non-comestible kitchen grease.

The author argues that these facilities are indeed

Page 4

agricultural, as the predominant component of their "product" is from farm and ranching related processing. In addition, he points out the product derived from rendering is also agricultural, such as chicken feed. He further asserts that the enforcement of existing law is conducted by the Meat and Poultry Inspection Branch of the USDA as a form of meat processing.

In reviewing the legislative history of this portion of law, the supporters of AB 3104 (now SB 1274) included Nipps USA, Bestizer/Mac Hagan and Campbell Soup, as well as the King Institute and Kroger food processors. The food processing activities of these companies span at least as "industrial" as processing dead animals and used kitchen grease into chicken feed.

5. Pre-rented legislation: a question of retroactivity

http://leginfo.ca.gov/pub/99-00/bill/sen/sb_1251-1300/sb_1274_cfa_19990428_111203_sen..._6/9/2015

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 4 of 4

Comprehensive legislation

In 1992, AB 1136 (Herrington, Co. 97, Stats. of 1992), expanded the existing protection from nuisance law for feedlots and farrowing operations to cover agricultural processing activities as well. The bill provided a three month period of January 1, 1993 for these operations to begin. SB 1274 would take the same date and would, therefore, leave operations of rendering facilities and collection centers which were in place as of January 1, 1993.

SHOULD RETROACTIVE APPLICATION BE GIVEN TO THE ACTIVITIES OF RENDERING PLANTS AND COLLECTION CENTERS?

SHOULD THE BILL BE PROSPECTIVE ONLY, SINCE APPLICATION WOULD BE A SEPARATE PROCESS? SHOULD THE BILL WITH THE PASSAGE OF THIS BILL?

1. Lengthy nature of limitations for informal appeal process

The bill allows a person charged with violation of this section to challenge the decision through an informal process within 30 days following issuance of notice of violation subject to a fine is levied. The bill expressly declares that the Administrative Procedures Act does not

Page 4

apply in these provisions, stating the bill does not allow a challenge, but does not give a statute of limitations upon the party's time for challenging the decision.

The limitations period under the Administrative Procedures Act is 90 days. For most state agencies, the period is prescribed in statute, such as 10 days for the Food and Agriculture Code (30 days for non-test commodity marketing program assessments) CIP 704.015 (90 days for withholding order for cases under Code 4148 (30 days) under a suspension (30 days). However, these limitations periods can be challenged to some extent here. This bill would allow a person to proceed with a fine if a notice is issued. There does not seem to be any process issues raised with the bill's proposed 30-day limitation period.

Support: California Poultry Industry Federation; California Cattlemen's Association; California Farm Bureau Federation; Pacific Egg and Poultry Association

Opposition/None Known

HISTORY

Related: Western United Livestock and California Cattle and Deer Associations

Related Funding Legislation: None Known

Prior Legislation: AB 1136 (Herrington, Co. 97, Stats. of 1992)

http://eginfo.ca.gov/pub/99-00/bill/sen/sb_1251-1300/sb_1274_cfa_19990428_111203_sen... 6/9/2015

D1. Response to Comments

ATTACHMENT 2

3.3-35

D1. Response to Comments

| Business Licenses | | CITY OF VERNON | | | | | | | |
|---|---------------------------------------|--|---------------|---------------------------------|------------|------------------------|----------|-------------------------|------------|
| <p>The person, firm or corporation named below is granted this certificate pursuant to the provisions of the City Business License Ordinances of the City of Vernon, California to engage in, carry on or conduct in the City of Vernon, California, the business, trade, calling, profession, avocation or occupation described below for the period indicated. This license is permission only, and is issued without verification that the licensee is subject to or exempt from licensing by the State of California, nor shall such issuance be deemed a waiver of the City of Vernon of past or future violations of such laws or ordinances.</p> | | <p>License Department 4305 Santa Fe Avenue Vernon, CA 90058 (323) 583-6811</p> | | | | | | | |
| BUSINESS NAME: | BAKER COMMODITIES, INC. | DESCRIPTION: | MANUFACTURING | | | | | | |
| BUSINESS LOCATION: | 4020 BANDINI BLVD VERNON, CA 90058 | | | | | | | | |
| <p>BAKER COMMODITIES, INC. 4020 BANDINI BLVD VERNON, CA 90058</p> | |  | | | | | | | |
| | | <table border="1"> <tr> <td>License Business Number:</td> <td>GBL-008069</td> </tr> <tr> <td>Effective Date:</td> <td>1/1/2015</td> </tr> <tr> <td>Expiration Date:</td> <td>12/31/2015</td> </tr> </table> | | License Business Number: | GBL-008069 | Effective Date: | 1/1/2015 | Expiration Date: | 12/31/2015 |
| License Business Number: | GBL-008069 | | | | | | | | |
| Effective Date: | 1/1/2015 | | | | | | | | |
| Expiration Date: | 12/31/2015 | | | | | | | | |
| <p>TO BE POSTED IN A CONSPICUOUS PLACE * NOT TRANSFERABLE and NON-REFUNDABLE</p> | | | | | | | | | |

D1. Response to Comments

State of California Secretary of State

CERTIFICATE OF STATUS

ENTITY NAME:

BAKER COMMODITIES, INC.

FILE NUMBER: C1264834
REGISTRATION DATE: 12/29/1984
TYPE: FOREIGN CORPORATION
JURISDICTION: DELAWARE
STATUS: ACTIVE (GOOD STANDING)

I, DEBRA BOWEN, Secretary of State of the State of California, hereby certify:

The records of this office indicate the entity is qualified to transact intrastate business in the State of California.

No information is available from this office regarding the financial condition, business activities or practices of the entity.



IN WITNESS WHEREOF, I execute this certificate and affix the Great Seal of the State of California this day of December 09, 2013.

A handwritten signature in cursive script that reads "Debra Bowen".

DEBRA BOWEN
Secretary of State

D1. Response to Comments

ATTACHMENT 3

3.3-36

D1. Response to Comments



42-002 (Rev 7/04)

**Department of Food and Agriculture
Division of Measurement Standards**

6799 Fylin Parkway Rd., Suite 100, Sacramento, CA 95823-1212
Email: dms@cdfa.ca.gov Web Address: www.cdfa.ca.gov/dms/programs/wm/wm.html
Phone #: (916) 228-3040 Fax #: (916) 228-3085

Remit fees payable to: CDFA 00001, PO Box 942272, Sacramento, CA 94271-2272

Weighmaster License

License No: 000385

Weighmaster

BAKER COMMODITIES, INC.
4020 BANDINI BLVD.
VERNON, CA 90058

Total Fees Remitted: \$670.00

Issue Date: 8/30/2014

Revision Date: 4/6/2015

License Year: 01/01/2015 - 12/31/2015

The Weighmaster is responsible to renew this license. (Division 8, Chapter 7, Section 12707, Business and Professions Code)

**California Department of Food and Agriculture
Meat, Poultry and Egg Safety Branch**

2/5/2015

1220 N Street, Sacramento, CA 95814
(916) 227-6894

Renderer License

Unit # A-503

Mailing Address:
BAKER COMMODITIES
4020 BANDINI BLVD
VERNON, CA 90058

Facility Address:
BAKER COMMODITIES
4020 BANDINI BLVD
VERNON, CA 90058

Expires: 12/31/2015

Authorized Use Of This License Is Restricted To California Licensed Establishments

D1. Response to Comments

ATTACHMENT 4 | 3.3-37

D1. Response to Comments




City of Los Angeles
Department of City Planning

6/18/2015
PARCEL PROFILE REPORT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|---|--|------------|-------------|------------------------------|-----------------|----------------------|--------------------|---------------------------|------------|-------|---------|---------------|--------------|-------|---|-----|-------|---------------------------|------|-----------|---------|--|--|---------------------|---------------|--------------------------|------------------|----------------------|---------------|------------------|---------------------|----------------|---------|-----------------------|-------------------|---|--|---------------|------|--------|------|-------------------------|--|-----------------------|---|--------------------------|-----|-----------------------------|----|-----------------------------|----|-----------------------------|----|--------------------|------|---------------------------|------|---------------------|----|------------------------------|----|------------------------------------|------|-----------------------------|------|-----------------------------------|------|--------------------|------|-------------------------------------|------|--------------------------------|------|--|----|-------------|----|---------------|----|-------------------------------|------|--------------------------------------|------|----------------------|----|------------------|----|---------------|------|--------------------|--|
| <p><u>PROPERTY ADDRESSES</u> 3300 FOPAL ST</p> <p><u>ZIP CODES</u> 90023</p> <p><u>RECENT ACTIVITY</u> None</p> <p><u>CASE NUMBERS</u> ENV-2013-3302-CE</p> | <table border="0" style="width: 100%;"> <tr> <td colspan="2"><u>Address/Legal Information</u></td> </tr> <tr> <td>Pin Number</td> <td>120A225 234</td> </tr> <tr> <td>Lot/Parcel Area (Calculated)</td> <td>4,545.9 (sq ft)</td> </tr> <tr> <td>Thomas Brothers Grid</td> <td>PAGE 675 - GRID B1</td> </tr> <tr> <td>Assessor Parcel No. (APN)</td> <td>5190013032</td> </tr> <tr> <td>Tract</td> <td>TR 4307</td> </tr> <tr> <td>Map Reference</td> <td>M B 47-44/45</td> </tr> <tr> <td>Block</td> <td>4</td> </tr> <tr> <td>Lot</td> <td>FR 30</td> </tr> <tr> <td>Acres (Lot Cal Reference)</td> <td>None</td> </tr> <tr> <td>Map Sheet</td> <td>120A225</td> </tr> <tr> <td colspan="2"><u>Jurisdictional Information</u></td> </tr> <tr> <td>Community Plan Area</td> <td>Boyle Heights</td> </tr> <tr> <td>Area Planning Commission</td> <td>East Los Angeles</td> </tr> <tr> <td>Neighborhood Council</td> <td>Boyle Heights</td> </tr> <tr> <td>Council District</td> <td>CD 14 - Jose Huizar</td> </tr> <tr> <td>Census Tract #</td> <td>2043.20</td> </tr> <tr> <td>LAUSD District Office</td> <td>Los Angeles Metro</td> </tr> <tr> <td colspan="2"><u>Planning and Zoning Information</u></td> </tr> <tr> <td>Special Notes</td> <td>None</td> </tr> <tr> <td>Zoning</td> <td>C2-1</td> </tr> <tr> <td>Zoning Information (ZI)</td> <td>ZI-2129 (EAS) LOS ANGELES STATE ENTERPRISE ZONE ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses</td> </tr> <tr> <td>General Plan Land Use</td> <td>Highway Oriented and Limited Commercial</td> </tr> <tr> <td>General Plan Footnote(s)</td> <td>Yes</td> </tr> <tr> <td>Hillside Area (Zoning Code)</td> <td>No</td> </tr> <tr> <td>Baseline Hillside Ordinance</td> <td>No</td> </tr> <tr> <td>Baseline Mansions Ordinance</td> <td>No</td> </tr> <tr> <td>Specific Plan Area</td> <td>None</td> </tr> <tr> <td>Special Land Use / Zoning</td> <td>None</td> </tr> <tr> <td>Design Review Board</td> <td>No</td> </tr> <tr> <td>Historic Preservation Review</td> <td>No</td> </tr> <tr> <td>Historic Preservation Overlay Zone</td> <td>None</td> </tr> <tr> <td>Other Historic Designations</td> <td>None</td> </tr> <tr> <td>Other Historic Survey Information</td> <td>None</td> </tr> <tr> <td>Mills Act Contract</td> <td>None</td> </tr> <tr> <td>POD - Pedestrian Oriented Districts</td> <td>None</td> </tr> <tr> <td>ODO - Community Design Overlay</td> <td>None</td> </tr> <tr> <td>NSO - Neighborhood Stabilization Overlay</td> <td>No</td> </tr> <tr> <td>Streetscape</td> <td>No</td> </tr> <tr> <td>Sign District</td> <td>No</td> </tr> <tr> <td>Adaptive Reuse Incentive Area</td> <td>None</td> </tr> <tr> <td>CRA - Community Redevelopment Agency</td> <td>None</td> </tr> <tr> <td>Central City Parking</td> <td>No</td> </tr> <tr> <td>Downtown Parking</td> <td>No</td> </tr> <tr> <td>Building Line</td> <td>None</td> </tr> <tr> <td>500 Ft School Zone</td> <td>Active, Animo Oscar De La Hoya Charter High School</td> </tr> </table> | <u>Address/Legal Information</u> | | Pin Number | 120A225 234 | Lot/Parcel Area (Calculated) | 4,545.9 (sq ft) | Thomas Brothers Grid | PAGE 675 - GRID B1 | Assessor Parcel No. (APN) | 5190013032 | Tract | TR 4307 | Map Reference | M B 47-44/45 | Block | 4 | Lot | FR 30 | Acres (Lot Cal Reference) | None | Map Sheet | 120A225 | <u>Jurisdictional Information</u> | | Community Plan Area | Boyle Heights | Area Planning Commission | East Los Angeles | Neighborhood Council | Boyle Heights | Council District | CD 14 - Jose Huizar | Census Tract # | 2043.20 | LAUSD District Office | Los Angeles Metro | <u>Planning and Zoning Information</u> | | Special Notes | None | Zoning | C2-1 | Zoning Information (ZI) | ZI-2129 (EAS) LOS ANGELES STATE ENTERPRISE ZONE ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses | General Plan Land Use | Highway Oriented and Limited Commercial | General Plan Footnote(s) | Yes | Hillside Area (Zoning Code) | No | Baseline Hillside Ordinance | No | Baseline Mansions Ordinance | No | Specific Plan Area | None | Special Land Use / Zoning | None | Design Review Board | No | Historic Preservation Review | No | Historic Preservation Overlay Zone | None | Other Historic Designations | None | Other Historic Survey Information | None | Mills Act Contract | None | POD - Pedestrian Oriented Districts | None | ODO - Community Design Overlay | None | NSO - Neighborhood Stabilization Overlay | No | Streetscape | No | Sign District | No | Adaptive Reuse Incentive Area | None | CRA - Community Redevelopment Agency | None | Central City Parking | No | Downtown Parking | No | Building Line | None | 500 Ft School Zone | Active, Animo Oscar De La Hoya Charter High School |
| <u>Address/Legal Information</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pin Number | 120A225 234 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lot/Parcel Area (Calculated) | 4,545.9 (sq ft) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thomas Brothers Grid | PAGE 675 - GRID B1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Assessor Parcel No. (APN) | 5190013032 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tract | TR 4307 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Map Reference | M B 47-44/45 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Block | 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lot | FR 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Acres (Lot Cal Reference) | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Map Sheet | 120A225 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Jurisdictional Information</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Community Plan Area | Boyle Heights | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area Planning Commission | East Los Angeles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Neighborhood Council | Boyle Heights | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Council District | CD 14 - Jose Huizar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Census Tract # | 2043.20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LAUSD District Office | Los Angeles Metro | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Planning and Zoning Information</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Notes | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zoning | C2-1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zoning Information (ZI) | ZI-2129 (EAS) LOS ANGELES STATE ENTERPRISE ZONE ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Plan Land Use | Highway Oriented and Limited Commercial | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Plan Footnote(s) | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hillside Area (Zoning Code) | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Baseline Hillside Ordinance | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Baseline Mansions Ordinance | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Specific Plan Area | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Land Use / Zoning | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design Review Board | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Historic Preservation Review | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Historic Preservation Overlay Zone | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Historic Designations | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Historic Survey Information | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mills Act Contract | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POD - Pedestrian Oriented Districts | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ODO - Community Design Overlay | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NSO - Neighborhood Stabilization Overlay | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Streetscape | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sign District | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adaptive Reuse Incentive Area | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CRA - Community Redevelopment Agency | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Central City Parking | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Downtown Parking | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Building Line | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 500 Ft School Zone | Active, Animo Oscar De La Hoya Charter High School | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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zimas.lacity.org cityplanning.lacity.org

D1. Response to Comments

| | |
|--|------------------|
| 500 F1 Park Zone | No |
| Assessor Information | |
| Assessor Parcel No. (APH) | 5190013032 |
| APN Area (Co. Public Works)* | 1,179 (ac) |
| Use Code | 7100 - Church |
| Assessed Land Val. | \$224,180 |
| Assessed Improvement Val. | \$1,031,901 |
| Last Owner Change | 02/24/65 |
| Last Sale Amount | \$0 |
| Tax Rate Area | 4 |
| Deed Ref No. (City Clerk) | None |
| Building 1 | |
| Year Built | 1960 |
| Building Class | CX |
| Number of Units | 0 |
| Number of Bedrooms | 0 |
| Number of Bathrooms | 0 |
| Building Square Footage | 15,360.0 (sq ft) |
| Building 2 | |
| Year Built | 1959 |
| Building Class | DX |
| Number of Units | 0 |
| Number of Bedrooms | 0 |
| Number of Bathrooms | 0 |
| Building Square Footage | 4,866.0 (sq ft) |
| Building 3 | |
| Year Built | 1961 |
| Building Class | DX |
| Number of Units | 0 |
| Number of Bedrooms | 0 |
| Number of Bathrooms | 0 |
| Building Square Footage | 4,660.0 (sq ft) |
| Building 4 | |
| Year Built | 1985 |
| Building Class | DGB |
| Number of Units | 0 |
| Number of Bedrooms | 0 |
| Number of Bathrooms | 0 |
| Building 5 | |
| Year Built | 1993 |
| Building Class | DX |
| Number of Units | 1 |
| Number of Bedrooms | 0 |
| Number of Bathrooms | 0 |
| Building Square Footage | 836.0 (sq ft) |
| Additional Information | |
| Airport Hazard | None |
| Coastal Zone | None |
| Fermland | Area Not Mapped |
| Very High Fire Hazard Severity Zone | No |
| Fire District No. 1 | No |
| Flood Zone | None |
| Watercourse | No |
| Hazardous Waste / Border Zone Properties | No |
| Methane Hazard Site | None |

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 (*) - APN Areas provided "as is" from the Los Angeles County's Public Works, Flood Control, Benefit Assessment.

D1. Response to Comments

| | |
|--|--|
| High Wind Velocity Areas | No |
| Special Grading Area (BOE Basic Grid Map A: 13372) | Yes |
| Oil Wells | None |
| Seismic Hazards | |
| Active Fault Near-Source Zone | |
| Nearest Fault (Distance in km) | 1.72595731547676 |
| Nearest Fault (Name) | Pacific Hills Blind Thrust |
| Region | Los Angeles Blind Thrusts |
| Fault Type | B |
| Slip Rate (mm/year) | 0.70000000 |
| Slip Geometry | Reverse |
| Slip Type | Moderately / Poorly Constrained |
| Down Dip Width (km) | 19.00000000 |
| Rupture Top | 5.00000000 |
| Rupture Bottom | 13.00000000 |
| Dip Angle (degrees) | 25.00000000 |
| Maximum Magnitude | 7.10000000 |
| Aquifer: Priolo Fault Zone | No |
| Landslide | No |
| Liquefaction | No |
| Tsunami Inundation Zone | No |
| Economic Development Areas | |
| Business Improvement District | None |
| Promise Zone | No |
| Renewal Community | No |
| Revitalization Zone | Central City |
| State Enterprise Zone | EAST LOS ANGELES STATE ENTERPRISE ZONE |
| Targeted Neighborhood Initiative | None |
| Public Safety | |
| Police Information: | |
| Bureau | Central |
| Division / Station | Hollenbeck |
| Reporting District | 488 |
| Fire Information: | |
| Division | 1 |
| Batallion | 1 |
| District / Fire Station | 25 |
| Red Flag Restricted Parking | No |

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D1. Response to Comments

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database.

Case Number: ENV-2013-3392-CE

Required Action(s): CE-CATEGORICAL EXEMPTION

Project Description(s): THE PROPOSED ORDINANCE MODIFIES SECTION 22.119 OF THE LOS ANGELES ADMINISTRATIVE CODE TO ALLOW ORIGINAL ART MURALS ON LOTS DEVELOPED WITH ONLY ONE SINGLE-FAMILY RESIDENTIAL STRUCTURE AND THAT ARE LOCATED WITHIN COUNCIL DISTRICTS 1, 9, AND 14.

DATA NOT AVAILABLE

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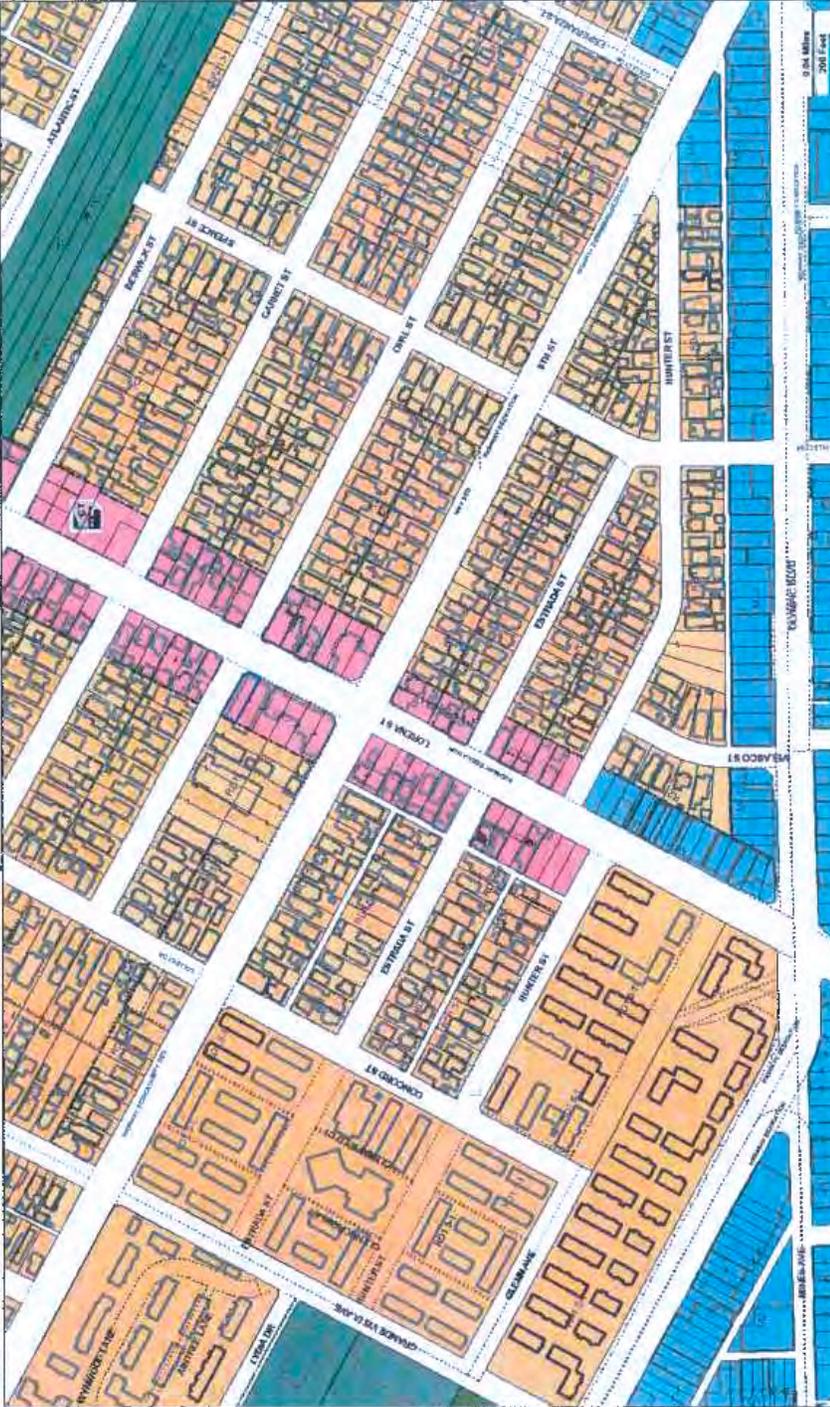
D1. Response to Comments

City of Los Angeles
Department of City Planning

08/18/2015

Generalized Zoning

ZIMAS PUBLIC



Zoning: C2-
General Plan: Highway Oriented and Limited Com

Tract: TR 4307
Block: 4
Lot: FR 30
Arb: None

Address: 3960 E OPAL ST
APN: 5190013032
PIN #: 120A225 234

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D1. Response to Comments

LEGEND

GENERALIZED ZONING

- OS, GW
- A, RA
- RE, RS, R1, RU, RZ, RW1
- R2, RD, RMP, RW2, R3, RAS, R4, R5
- CR, C1, C1.5, C2, C4, CS, CW, ADP, LASED, CEC, USC, PVSP
- CM, MR, WC, CCS, UV, UJ, UC, M1, M2, LAX, M3, SL
- P, PB
- PF
- HILLSIDE

GENERAL PLAN LAND USE

LAND USE

RESIDENTIAL

- Minimum Residential
- Very Low / Very Low I Residential
- Very Low II Residential
- Low / Low I Residential
- Low II Residential
- Low Medium / Low Medium I Residential
- Low Medium II Residential
- Medium Residential
- High Medium Residential
- High Density Residential
- Very High Medium Residential

COMMERCIAL

- Limited Commercial
- Limited Commercial - Mixed Medium Residential
- Highway Oriented Commercial
- Highway Oriented and Limited Commercial
- Highway Oriented Commercial - Mixed Medium Residential
- Neighborhood Office Commercial
- Community Commercial
- Community Commercial - Mixed High Residential
- Regional Center Commercial

FRAMEWORK

COMMERCIAL

- Neighborhood Commercial
- General Commercial
- Community Commercial
- Regional Mixed Commercial

INDUSTRIAL

- Commercial Manufacturing
- Limited Manufacturing
- Light Manufacturing
- Heavy Manufacturing
- Hybrid Industrial

PARKING

- Parking Buffer

PORT OF LOS ANGELES

- General / Bulk Cargo - Non Hazardous (Industrial / Commercial)
- General / Bulk Cargo - Hazard
- Commercial Fishing
- Recreation and Commercial
- Intermodal Container Transfer Facility Site

LOS ANGELES INTERNATIONAL AIRPORT

- Airport Landside
- Airport Airside
- Airport Northside

OPEN SPACE / PUBLIC FACILITIES

- Open Space
- Public / Open Space
- Public / Quasi-Public Open Space
- Other Public Open Space
- Public Facilities

INDUSTRIAL

- Limited Industrial
- Light Industrial

D1. Response to Comments

CIRCULATION

STREET

- Arterial Mountain Road
- Collector Scenic Street
- Collector Street
- Collector Street (Hillside)
- Collector Street (Modified)
- Collector Street (Proposed)
- Country Road
- Divided Major Highway I
- Divided Secondary Scenic Highway
- Local Scenic Road
- Local Street
- Major Highway (Modified)
- Major Highway I
- Major Highway II
- Major Highway II (Modified)

FREEWAYS

- Freeway
- Interchange
- On Ramp / Off-Ramp
- Railroad
- Scenic Freeway Highway

MISC. LINES

- Airport Boundary
- Bus Line
- Coastal Zone Boundary
- Coastline Boundary
- Collector Scenic Street (Proposed)
- Commercial Areas
- Commercial Center
- Community Redevelopment Project Area
- Country Road
- DWP Power Lines
- Desirable Open Space
- Detached Single Family House
- Endangered Ridgeline
- Equestrian and/or Hiking Trail
- Hiking Trail
- Historical Preservation
- Horsekeeping Area
- Local Street

- Major Scenic Highway
- Major Scenic Highway (Modified)
- Major Scenic Highway II
- Mountain Collector Street
- Park Road
- Parkway
- Principal Major Highway
- Private Street
- Scenic Divided Major Highway II
- Scenic Park
- Scenic Parkway
- Secondary Highway
- Secondary Highway (Modified)
- Secondary Scenic Highway
- Special Collector Street
- Super Major Highway

- MSA Desirable Open Space
- Major Scenic Controls
- Multi-Purpose Trail
- Natural Resource Reserve
- Park Road
- Park Road (Proposed)
- Quasi-Public
- Rapid Transit Line
- Residential Planned Development
- Scenic Highway (Obsolete)
- Secondary Scenic Controls
- Secondary Scenic Highway (Proposed)
- Site Boundary
- Southern California Edison Power
- Special Study Area
- Specific Plan Area
- Stagecoach Line
- Wildlife Corridor

D1. Response to Comments

POINTS OF INTEREST

| | | |
|--|--|--|
| Alternative Youth Hostel (Proposed) | Horticultural Center | Public Elementary School |
| Animal Shelter | Hospital | Public Elementary School (Proposed) |
| Area Library | Hospital (Proposed) | Public Golf Course |
| Area Library (Proposed) | House of Worship | Public Golf Course (Proposed) |
| Bridge | Important Ecological Area | Public Housing |
| Campground | Important Ecological Area (Proposed) | Public Housing (Proposed Expansion) |
| Campground (Proposed) | Interpretive Center (Proposed) | Public Junior High School |
| Cemetery | Junior College | Public Junior High School (Proposed) |
| Church | MTA / Metrolink Station | Public Middle School |
| City Hall | MTA Station | Public Senior High School |
| Community Center | MTA Stop | Public Senior High School (Proposed) |
| Community Library | MWD Headquarters | Pumping Station |
| Community Library (Proposed Expansion) | Maintenance Yard | Pumping Station (Proposed) |
| Community Library (Proposed) | Municipal Office Building | Refuse Collection Center |
| Community Park | Municipal Parking lot | Regional Library |
| Community Park (Proposed Expansion) | Neighborhood Park | Regional Library (Proposed Expansion) |
| Community Park (Proposed) | Neighborhood Park (Proposed Expansion) | Regional Library (Proposed) |
| Community Transit Center | Neighborhood Park (Proposed) | Regional Park |
| Convalescent Hospital | Oil Collection Center | Regional Park (Proposed) |
| Correctional Facility | Parking Enforcement | Residential Plan Development |
| Cultural / Historic Site (Proposed) | Police Headquarters | Scenic View Site |
| Cultural / Historical Site | Police Station | Scenic View Site (Proposed) |
| Cultural Arts Center | Police Station (Proposed Expansion) | School District Headquarters |
| DMV DMV Office | Police Station (Proposed) | School Unspecified Loc/Type (Proposed) |
| DWP DWP | Police Training site | Skill Center |
| DWP Pumping Station | Post Office | Social Services |
| Equestrian Center | Power Distribution Station | Special Feature |
| Fire Department Headquarters | Power Distribution Station (Proposed) | Special Recreation (a) |
| Fire Station | Power Receiving Station | Special School Facility |
| Fire Station (Proposed Expansion) | Power Receiving Station (Proposed) | Special School Facility (Proposed) |
| Fire Station (Proposed) | Private College | Steam Plant |
| Fire Supply & Maintenance | Private Elementary School | Surface Mining |
| Fire Training Site | Private Golf Course | Trail & Assembly Area |
| Fireboat Station | Private Golf Course (Proposed) | Trail & Assembly Area (Proposed) |
| Health Center / Medical Facility | Private Junior High School | Utility Yard |
| Helistop | Private Pre-School | Water Tank Reservoir |
| Historic Monument | Private Recreation & Cultural Facility | Wildlife Migration Corridor |
| Historical / Cultural Monument | Private Senior High School | Wildlife Preserve Gate |
| Horsekeeping Area | Private Special School | |
| Horsekeeping Area (Proposed) | Public Elementary (Proposed Expansion) | |

D1. Response to Comments

500 FT. SCHOOL/PARK ZONE

- | | |
|---|--|
|  Existing School/Park Site |  Opportunity School |
|  Planned School/Park Site |  Other Facilities |
|  Inside 500 Ft. Buffer |  Park / Recreation Centers |
|  Aquatic Facilities |  Parks |
|  Beaches |  Performing / Visual Arts Centers |
|  Charter School |  Recreation Centers |
|  Child Care Centers |  Span School |
|  Elementary School |  Special Education School |
|  Golf Course |  Senior Citizen Centers |
|  High School |  Skate Parks |
|  Historic Sites | |
|  Horticulture/Gardens | |
|  Middle School | |

COASTAL ZONES

-  Dual Jurisdictional Coastal Zone
-  Calvo Exclusion Area
-  Coastal Zone Commission Authority

OTHER SYMBOLS

- | | | |
|--|---|---|
|  Lot Line |  Airport Hazard Zone |  Flood Zone |
|  Tract Line |  Census Tract |  Hazardous Waste |
|  Lot Cut |  Coastal Zone |  High Wind Zone |
|  Easement |  Council District |  Hillside Grading |
|  Zone Boundary |  LADBS District Office |  Historic Preservation Overlay Zone |
|  Building Line |  Downtown Parking |  Specific Plan Area |
|  Lot Split |  Fault Zone |  Very High Fire Hazard Severity Zone |
|  Community Driveway |  Fire District No. 1 |  Oil Wells |
|  Tract Map | | |
|  Parcel Map | | |
|  Lot Ties | | |
|  Building Outlines | | |

D1. Response to Comments



City of Los Angeles
Department of City Planning

6/18/2015
PARCEL PROFILE REPORT

PROPERTY ADDRESSES

3546 E PERCY ST

ZIP CODES

90023

RECENT ACTIVITY

None

CASE NUMBERS

CPC-2388
CPC-188E-445-GPC
ORD-16688E-SA33200
ENV-2013-9392-CE
ND-83-385-ZC-HD

Address/Legal Information

PIN Number 121-5A227 170
Lot/Parcel Area (Calculated) 8,976.6 (sq ft)
Thomas Brothers Grid PAGE 636 - GRID C7
Assessor Parcel No. (APN) 5128005009
Tract THE SCHMITT TRACT
Map Reference M R 19-4142
Block 4
Lot 9
Arb (Lot Cut Reference) None
Map Sheet 121-5A227

Jurisdictional Information

Community Plan Area Boyle Heights
Area Planning Commission East Los Angeles
Neighborhood Council Boyle Heights
Council District CD 14 - Jose Huizar
Census Tract # 2049.10
LADBS District Office Los Angeles Metro

Planning and Zoning Information

Special Notes None
Zoning RD1.5-1
Zoning Information (ZI) ZI-2129 EAST LOS ANGELES STATE ENTERPRISE ZONE
General Plan Land Use Low Medium II Residential
General Plan Footnote(s) Yes
Hillside Area (Zoning Code) No
Baseline Hillside Ordinance No
Baseline Mansions/zaller Ordinance No
Specific Plan Area None
Special Land Use / Zoning None
Design Review Board No
Historic Preservation Review No
Historic Preservation Overlay Zone None
Other Historic Designations None
Other Historic Survey Information None
Mills Act Contract None
POD - Pedestrian Oriented Districts None
GDO - Community Design Overlay None
NSO - Neighborhood Stabilization Overlay No
Streetscape No
Sign District No
Adaptive Reuse/Preventive Area None
CRA - Community Redevelopment Agency None
Central City Parking No
Downtown Parking No
Building Line None
500 Ft School Zone Active: Robert Louis Stevenson Middle School
500 Ft Park Zone No

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D1. Response to Comments

| | |
|---|---------------------------------|
| Assessor Information | |
| Assessor Parcel No. (APN) | 5188005009 |
| APN Area (Co. Public Works)* | 0.413 (ac) |
| Use Code | 7100 - Church |
| Assessed Land Val. | \$627,061 |
| Assessed Improvement Val. | \$209,020 |
| Last Owner Change | 02/01/12 |
| Last Sale Amount | \$500,008 |
| Tax Rate Area | 4 |
| Deed Ref No. (City Clerk) | None |
| Building 1 | |
| Year Built | 1952 |
| Building Class | DX |
| Number of Units | 0 |
| Number of Bedrooms | 0 |
| Number of Bathrooms | 0 |
| Building Square Footage | 3,490.0 (sq ft) |
| Building 2 | No data for building 2 |
| Building 3 | No data for building 3 |
| Building 4 | No data for building 4 |
| Building 5 | No data for building 5 |
| Additional Information: | |
| Airport Hazard | None |
| Coastal Zone | None |
| Farmland | Area Not Mapped |
| Very High Fire Hazard Severity Zone | No |
| Fire District No. 1 | No |
| Flood Zone | None |
| Watercourse | No |
| Hazardous Waste / Border Zone Properties | No |
| Metane Hazard Site | None |
| High Wind Velocity Areas | No |
| Special Grading Area (BOE Basic Grid Map A-13372) | No |
| Oil Wells | None |
| Seismic Hazards | |
| Active Fault Near-Source Zone | |
| Nearest Fault (Distance in km) | 2.82743189684517 |
| Nearest Fault (Name) | Puente Hills Blind Thrust |
| Region | Los Angeles Blind Thrusts |
| Fault Type | B |
| Slip Rate (mm/year) | 0.70000000 |
| Slip Geometry | Reverse |
| Slip Type | Moderately / Poorly Constrained |
| Down Dip Width (km) | 18.00000000 |
| Rupture Top | 5.00000000 |
| Rupture Bottom | 13.00000000 |
| Dip Angle (degrees) | 25.00000000 |
| Maximum Magnitude | 7.10000000 |
| Alquist-Priolo Fault Zone | No |
| Landslide | No |
| Liquefaction | No |
| Tsunami Inundation Zone | No |
| Economic Development Areas | |
| Business Improvement District | None |

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D1. Response to Comments

| | |
|----------------------------------|--|
| Promise Zone | No |
| Renewal Community | No |
| Revitalization Zone | Central City |
| State Enterprise Zone | EAST LOS ANGELES STATE ENTERPRISE ZONE |
| Targeted Neighborhood Initiative | None |
| Public Safety | |
| Police Information | |
| Bureau | Central |
| Division / Station | Hollenback |
| Reporting District | 479 |
| Fire Information | |
| Division | 1 |
| Battalion | 1 |
| District / Fire Station | 25 |
| Red Flag Restricted Parking | No |

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D1. Response to Comments

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database

Case Number: CPC-1986-445-GPC
Required Action(s): GPC-GENERAL PLAN/ZONING CONSISTENCY (AB233)
Project Description(s): PLAN AND ZONE CONSISTENCY - BOYLE HEIGHTS (PART I)
Case Number: ENV-2013-2392-CE
Required Action(s): CE-CATEGORICAL EXEMPTION
Project Description(s): THE PROPOSED ORDINANCE MODIFIES SECTION 22.119 OF THE LOS ANGELES ADMINISTRATIVE CODE TO ALLOW ORIGINAL ART MURALS ON LOTS DEVELOPED WITH ONLY ONE SINGLE-FAMILY RESIDENTIAL STRUCTURE AND THAT ARE LOCATED WITHIN COUNCIL DISTRICTS 1, 9, AND 14.
Case Number: ND-83-285-ZC-HD
Required Action(s): HD-HEIGHT DISTRICT
ZC-ZONE CHANGE
Project Description(s): Data Not Available

DATA NOT AVAILABLE

CPC-2388
ORD-166585-SA3320D

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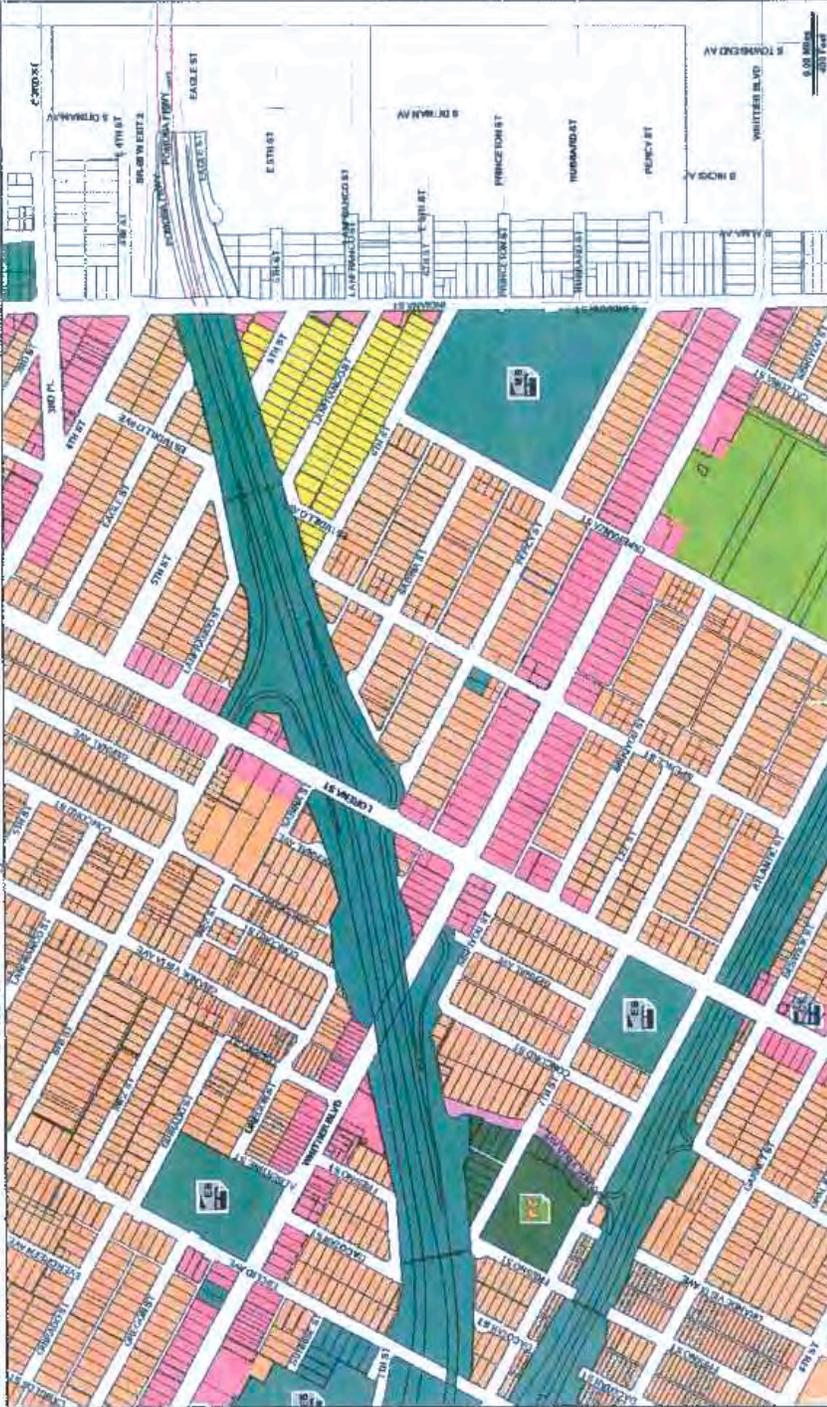
D1. Response to Comments

City of Los Angeles
Department of City Planning

06/18/2015

Generalized Zonin

ZIMAS PUBLIC



Street Copyright: © Thomas Brothers Maps, Inc.

Zoning: RD1.5-1
General Plan: Low Medium II Residential

Tract: THE SCHMITT TRACT
Block: 4
Lot: 9
Arb: None

Address: 3546 E PERCY ST
APN: 5488005008
PIN #: 121-5A227 170

D1. Response to Comments

LEGEND

GENERALIZED ZONING

- OS, GW
- A, RA
- RE, RS, R1, RU, RZ, RW1
- R2, RD, RMP, RW2, R3, RAS, R4, R5
- CR, C1, C1.5, C2, C4, C5, CW, ADP, LASED, CEC, USC, PVSP
- CM, MR, WC, CCS, UV, UI, UC, M1, M2, LAX, M3, SL
- P, PB
- PF
- HILLSIDE

GENERAL PLAN LAND USE

LAND USE

RESIDENTIAL

- Minimum Residential
- Very Low / Very Low I Residential
- Very Low II Residential
- Low / Low I Residential
- Low II Residential
- Low Medium / Low Medium I Residential
- Low Medium II Residential
- Medium Residential
- High Medium Residential
- High Density Residential
- Very High Medium Residential

COMMERCIAL

- Limited Commercial
- Limited Commercial - Mixed Medium Residential
- Highway Oriented Commercial
- Highway Oriented and Limited Commercial
- Highway Oriented Commercial - Mixed Medium Residential
- Neighborhood Office Commercial
- Community Commercial
- Community Commercial - Mixed High Residential
- Regional Center Commercial

FRAMEWORK

COMMERCIAL

- Neighborhood Commercial
- General Commercial
- Community Commercial
- Regional Mixed Commercial

INDUSTRIAL

- Commercial Manufacturing
- Limited Manufacturing
- Light Manufacturing
- Heavy Manufacturing
- Hybrid Industrial

PARKING

- Parking Buffer

PORT OF LOS ANGELES

- General / Bulk Cargo - Non Hazardous (Industrial / Commercial)
- General / Bulk Cargo - Hazard
- Commercial Fishing
- Recreation and Commercial
- Intermodal Container Transfer Facility Site

LOS ANGELES INTERNATIONAL AIRPORT

- Airport Landside
- Airport Airside
- Airport Northside

OPEN SPACE / PUBLIC FACILITIES

- Open Space
- Public / Open Space
- Public / Quasi-Public Open Space
- Other Public Open Space
- Public Facilities

INDUSTRIAL

- Limited Industrial
- Light Industrial

D1. Response to Comments

CIRCULATION

STREET

- Arterial Mountain Road
- Collector Scenic Street
- Collector Street
- Collector Street (Hillside)
- Collector Street (Modified)
- Collector Street (Proposed)
- Country Road
- Divided Major Highway II
- Divided Secondary Scenic Highway
- Local Scenic Road
- Local Street
- Major Highway (Modified)
- Major Highway I
- Major Highway II
- Major Highway II (Modified)

FREEWAYS

- Freeway
- Interchange
- On-Ramp / Off-Ramp
- Railroad
- Scenic Freeway Highway

MISC. LINES

- Airport Boundary
- Bis Line
- Coastal Zone Boundary
- Coastline Boundary
- Collector Scenic Street (Proposed)
- Commercial Areas
- Commercial Center
- Community Redevelopment Project Area
- Country Road
- DWP Power Lines
- Desirable Open Space
- Detached Single Family House
- Endangered Ridgeline
- Equestrian and/or Hiking Trail
- Hiking Trail
- Historical Preservation
- Horsekeeping Area
- Local Street

- Major Scenic Highway
- Major Scenic Highway (Modified)
- Major Scenic Highway II
- Mountain Collector Street
- Park Road
- Parkway
- Principal Major Highway
- Private Street
- Scenic Divided Major Highway II
- Scenic Park
- Scenic Parkway
- Secondary Highway
- Secondary Highway (Modified)
- Secondary Scenic Highway
- Special Collector Street
- Super Major Highway

- MSA Desirable Open Space
- Major Scenic Controls
- Multi-Purpose Trail
- Natural Resource Reserve
- Park Road
- Park Road (Proposed)
- Quasi-Public
- Rapid Transit Line
- Residential Planned Development
- Scenic Highway (Obsolete)
- Secondary Scenic Controls
- Secondary Scenic Highway (Proposed)
- Site Boundary
- Southern California Edison Power
- Special Study Area
- Specific Plan Area
- Stagecoach Line
- Wildlife Corridor

D1. Response to Comments

| POINTS OF INTEREST | | | |
|--------------------|--|--|--|
| | Alternative Youth Hostel (Proposed) | | Horticultural Center |
| | Animal Shelter | | Hospital |
| | Area Library | | Hospital (Proposed) |
| | Area Library (Proposed) | | HW House of Worship |
| | Bridge | | Important Ecological Area |
| | Campground | | Important Ecological Area (Proposed) |
| | Campground (Proposed) | | Interpretive Center (Proposed) |
| | Cemetery | | Junior College |
| | HW Church | | MTA / Metrolink Station |
| | City Hall | | MTA Station |
| | Community Center | | MTA Stop |
| | Community Library | | MWD Headquarters |
| | Community Library (Proposed Expansion) | | Maintenance Yard |
| | Community Library (Proposed) | | Municipal Office Building |
| | Community Park | | Municipal Parking Lot |
| | Community Park (Proposed Expansion) | | Neighborhood Park |
| | Community Park (Proposed) | | Neighborhood Park (Proposed Expansion) |
| | Community Transit Center | | Neighborhood Park (Proposed) |
| | Convalescent Hospital | | Oil Collection Center |
| | Correctional Facility | | Parking Enforcement |
| | Cultural / Historic Site (Proposed) | | Police Headquarters |
| | Cultural / Historical Site | | Police Station |
| | Cultural Arts Center | | Police Station (Proposed Expansion) |
| | DMV DMV Office | | Police Station (Proposed) |
| | DWP DWP | | Police Training site |
| | DWP Pumping Station | | Post Office |
| | Equestrian Center | | Power Distribution Station |
| | Fire Department Headquarters | | Power Distribution Station (Proposed) |
| | Fire Station | | Power Receiving Station |
| | Fire Station (Proposed Expansion) | | Power Receiving Station (Proposed) |
| | Fire Station (Proposed) | | Private College |
| | Fire Supply & Maintenance | | Private Elementary School |
| | Fire Training Site | | Private Golf Course |
| | Fireboat Station | | Private Golf Course (Proposed) |
| | Health Center / Medical Facility | | Private Junior High School |
| | Helistop | | Private Pre-School |
| | Historic Monument | | Private Recreation & Cultural Facility |
| | Historical / Cultural Monument | | Private Senior High School |
| | Horsekeeping Area | | Private Special School |
| | Horsekeeping Area (Proposed) | | Public Elementary (Proposed Expansion) |
| | | | Public Elementary School |
| | | | Public Elementary School (Proposed) |
| | | | Public Golf Course |
| | | | Public Golf Course (Proposed) |
| | | | Public Housing |
| | | | Public Housing (Proposed Expansion) |
| | | | Public Junior High School |
| | | | Public Junior High School (Proposed) |
| | | | Public Middle School |
| | | | Public Senior High School |
| | | | Public Senior High School (Proposed) |
| | | | Pumping Station |
| | | | Pumping Station (Proposed) |
| | | | Refuse Collection Center |
| | | | Regional Library |
| | | | Regional Library (Proposed Expansion) |
| | | | Regional Library (Proposed) |
| | | | Regional Park |
| | | | Regional Park (Proposed) |
| | | | Residential Plan Development |
| | | | Scenic View Site |
| | | | Scenic View Site (Proposed) |
| | | | School District Headquarters |
| | | | School Unspecified Loc/Type (Proposed) |
| | | | Skill Center |
| | | | Social Services |
| | | | Special Feature |
| | | | Special Recreation (a) |
| | | | Special School Facility |
| | | | Special School Facility (Proposed) |
| | | | Steam Plant |
| | | | Surface Mining |
| | | | Trail & Assembly Area |
| | | | Trail & Assembly Area (Proposed) |
| | | | Utility Yard |
| | | | Water Tank Reservoir |
| | | | Wildlife Migration Corridor |
| | | | Wildlife Preserve Gate |

D1. Response to Comments

500 FT. SCHOOL/PARK ZONE

- Existing School/Park Site
- Planned School/Park Site
- Inside 500 Ft. Buffer
- Aquatic Facilities
- Beaches
- Charter School
- Child Care Centers
- Elementary School
- Golf Course
- High School
- Historic Sites
- Horticulture/Gardens
- Middle School
- Opportunity School
- Other Facilities
- Park / Recreation Centers
- Performing / Visual Arts Centers
- Recreation Centers
- Span School
- Special Education School
- Senior Citizen Centers
- Skate Parks

COASTAL ZONES

- Dual Jurisdictional Coastal Zone
- Calvo Exclusion Area
- Coastal Zone Commission Authority

OTHER SYMBOLS

- Lot Line
- Tract Line
- Lot Cut
- Easement
- Zone Boundary
- Building Line
- Lot Split
- Community Driveway
- Tract Map
- Parcel Map
- Lot Ties
- Building Outlines
- Airport Hazard Zone
- Census Tract
- Coastal Zone
- Council District
- LADBS District Office
- Downtown Parking
- Fault Zone
- Fire District No. 1
- Flood Zone
- Hazardous Waste
- High Wind Zone
- Hillside Grading
- Historic Preservation Overlay Zone
- Specific Plan Area
- Very High Fire Hazard Severity Zone
- Oil Wells

D1. Response to Comments




City of Los Angeles
Department of City Planning

6/18/2015
PARCEL PROFILE REPORT

| | | |
|----------------------------------|---|---|
| <u>PROPERTY ADDRESSES</u> | <u>Address/Legal Information</u> | |
| 3155 E 8TH ST | PIN Number | 120A223 105 |
| 1156 S FRESNO ST | Lot/Parcel Area (Calculated) | 5,095.1 (sq ft) |
| | Thomas Brothers Grid | PAGE 625 - GRID B7 |
| | Assessor Parcel No. (APN) | 5190011024 |
| | Tract | PANORAMA TRACT |
| | Map Reference | M B 6-167 |
| | Block | 8 |
| | Lot | 43 |
| | Arb (Lot Cut Reference) | None |
| | Map Sheet | 120A223 |
| | <u>Jurisdictional Information</u> | |
| | Community Plan Area | Boyle Heights |
| | Area Planning Commission | East Los Angeles |
| | Neighborhood Council | Boyle Heights |
| | Council District | CD 14 - Jose Huizar |
| | Census Tract # | 2048 20 |
| | LADBS District Office | Los Angeles Metro |
| | <u>Planning and Zoning Information</u> | |
| | Special Notes | None |
| | Zoning | R2-1 |
| | Zoning Information (ZI) | ZI-2129 EAST LOS ANGELES STATE ENTERPRISE ZONE ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses |
| | General Plan Land Use | Low Medium Density Residential |
| | General Plan Footnote(s) | Yes |
| | Hillside Area (Zoning Code) | No |
| | Baseline Hillside Ordinance | No |
| | Baseline Mansionization Ordinance | No |
| | Specific Plan Area | None |
| | Special Land Use / Zoning | None |
| | Design Review Board | No |
| | Historic Preservation Review | No |
| | Historic Preservation Overlay Zone | None |
| | Other Historic Designations | None |
| | Other Historic Survey Information | None |
| | Mills Act Contract | None |
| | POD - Pedestrian Oriented Districts | None |
| | CDO - Community Design Overlay | None |
| | NSO - Neighborhood Stabilization Overlay | No |
| | Streetscape | No |
| | Sign District | No |
| | Adaptive Reuse Incentive Area | None |
| | CRA - Community Redevelopment Agency | None |
| | Central City Parking | No |
| | Downtown Parking | No |
| | Building Line | None |
| | 500 Ft School Zone | No |

This report is subject to the terms and conditions as set forth on the website. For more details, please refer to the terms and conditions at zimas.lacity.org
 (*) - APN Area is provided "as is" from the Los Angeles County's Public Works, Flood Control, Benefit Assessment.

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D1. Response to Comments

| | |
|--|------------------------------------|
| 500 Ft Park Zone | No |
| Assessor Information | |
| Assessor Parcel No. (APN) | 5198011024 |
| APN Area (Co. Public Works)* | 0.117 (ac) |
| Use Code | 0400 - 4 units (4 stories or less) |
| Assessed Land Val. | \$59,941 |
| Assessed Improvement Val. | \$124,792 |
| Last Owner Change | 03/05/02 |
| Last Sale Amount | \$0 |
| Tax Rate Area | 4 |
| Deed Ref No. (City Clerk) | 868842 |
| | 567481 |
| | 2171646 |
| | 2067774 |
| | 12760B4 |
| Building 1 | |
| Year Built | 1961 |
| Building Class | D55 |
| Number of Units | 4 |
| Number of Bedrooms | 4 |
| Number of Bathrooms | 4 |
| Building Square Footage | 2,018.0 (sq ft) |
| Building 2 | No data for building 2 |
| Building 3 | No data for building 3 |
| Building 4 | No data for building 4 |
| Building 5 | No data for building 5 |
| Additional Information | |
| Airport Hazard | None |
| Coastal Zone | None |
| Farmland | Area Not Mapped |
| Very High Fire Hazard Severity Zone | No |
| Fire District No. 1 | No |
| Flood Zone | None |
| Watercourse | No |
| Hazardous Waste / Bomb Zone Properties | No |
| Methane Hazard Site | None |
| High Wind Velocity Areas | No |
| Special Grading Area (BOE Basic Grd Map A-13372) | Yes |
| Oil Wells | None |
| Seismic Hazards | |
| Active Fault Near-Source Zone | |
| Nearest Fault (Distance in km) | 1.64964763631118 |
| Nearest Fault (Name) | Puente Hills Blind Thrust |
| Region | Los Angeles Blind Thrusts |
| Fault Type | E |
| Slip Rate (mm/year) | 0.70000000 |
| Slip Geometry | Reverse |
| Slip Type | Moderately / Poorly Constrained |
| Down Dip Width (km) | 19.00000000 |
| Rupture Top | 5.00000000 |
| Rupture Bottom | 13.00000000 |
| Dip Angle (degrees) | 25.00000000 |
| Maximum Magnitude | 7.10000000 |
| Alquist-Priolo Fault Zone | No |

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D1. Response to Comments

| | |
|-----------------------------------|--|
| Landslide | No |
| Liquefaction | No |
| Tsunami Foundation Zone | No |
| Economic Development Areas | |
| Business Improvement District | None |
| Promise Zone | No |
| Renewal Community | No |
| Revitalization Zone | Central City |
| State Enterprise Zone | EAST LOS ANGELES STATE ENTERPRISE ZONE |
| Targeted Neighborhood Initiative | None |
| Public Safety | |
| Police Information | |
| Bureau | Central |
| Division / Station | Hollenback |
| Reporting District | 483 |
| Fire Information | |
| Division | 1 |
| Battalion | 1 |
| District / Fire Station | 25 |
| Red Flag Restricted Parking | No |

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D1. Response to Comments

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database.

Case Number: CPC-1986-445-GPC
 Required Action(s): GPC-GENERAL PLAN/ZONING CONSISTENCY (AB283)
 Project Descriptions(s): PLAN AND ZONE CONSISTENCY - BOYLE HEIGHTS (PART II)

Case Number: ENV-2013-3392-CE
 Required Action(s): CE-CATEGORICAL EXEMPTION
 Project Descriptions(s): THE PROPOSED ORDINANCE MODIFIES SECTION 22.119 OF THE LOS ANGELES ADMINISTRATIVE CODE TO ALLOW ORIGINAL ART MURALS ON LOTS DEVELOPED WITH ONLY ONE SINGLE-FAMILY RESIDENTIAL STRUCTURE AND THAT ARE LOCATED WITHIN COUNCIL DISTRICTS 1, 9, AND 14.

Case Number: ND-83-384-ZC-HD
 Required Action(s): HD-HEIGHT DISTRICT
 ZC-ZONE CHANGE
 Project Descriptions(s): Data Not Available

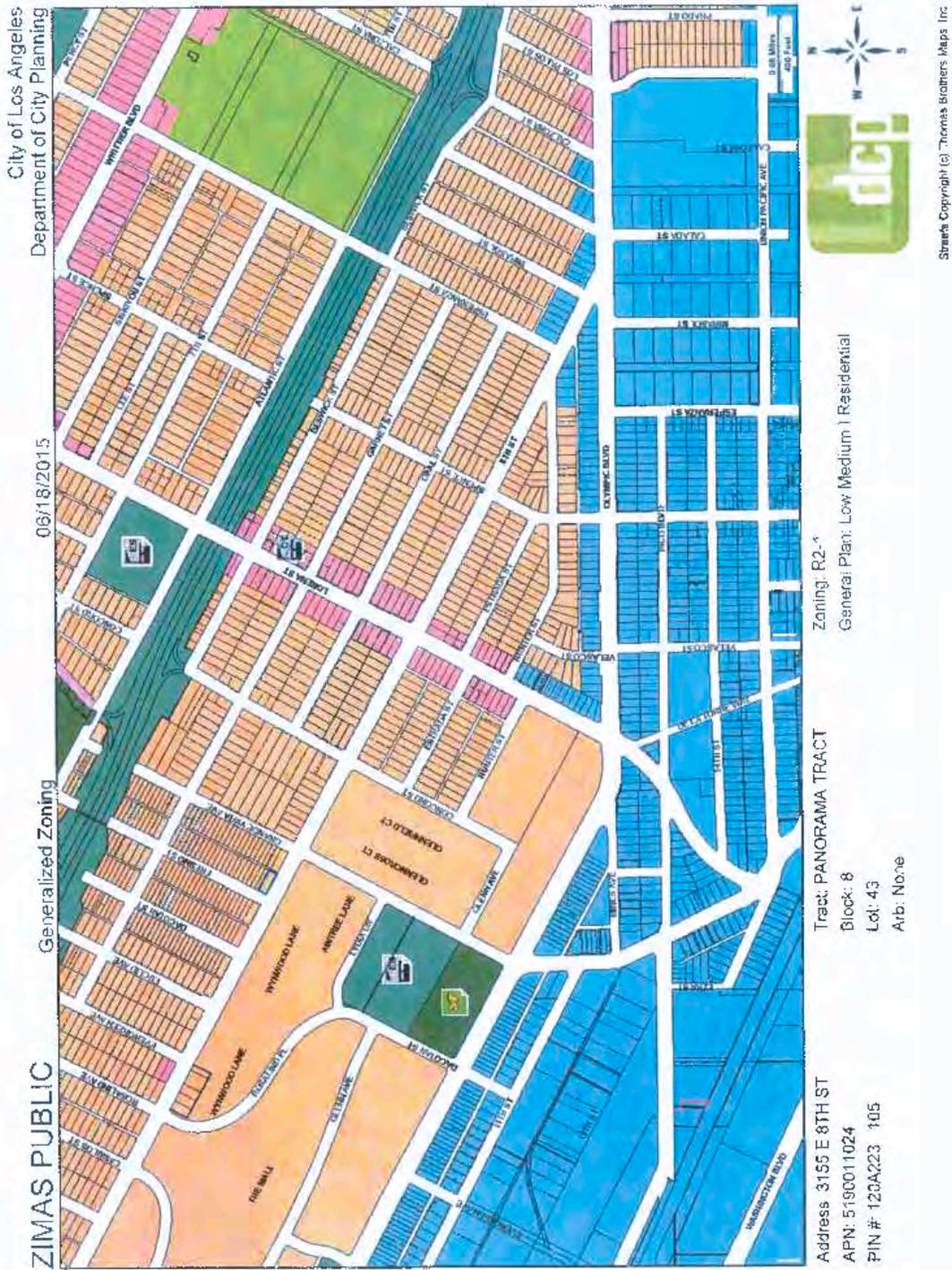
DATA NOT AVAILABLE

ORD-165525-SA3910C

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D1. Response to Comments



D1. Response to Comments

LEGEND

GENERALIZED ZONING

- OS, GW
- A, RA
- RE, RS, R1, RU, RZ, RW1
- R2, RD, RMP, RW2, R3, RAS, R4, RS
- CR, C1, C1.5, C2, C4, C5, CW, ADP, LASED, C&C, USC, PVSP
- CM, MR, WC, CCS, UV, UJ, UC, M1, M2, LAX, M3, SL
- P, PB
- PF
- HILLSIDE

GENERAL PLAN LAND USE

LAND USE

RESIDENTIAL

- Minimum Residential
- Very Low / Very Low I Residential
- Very Low II Residential
- Low / Low I Residential
- Low II Residential
- Low Medium / Low Medium I Residential
- Low Medium II Residential
- Medium Residential
- High Medium Residential
- High Density Residential
- Very High Medium Residential

COMMERCIAL

- Limited Commercial
- Limited Commercial - Mixed Medium Residential
- Highway Oriented Commercial
- Highway Oriented and Limited Commercial
- Highway Oriented Commercial - Mixed Medium Residential
- Neighborhood Office Commercial
- Community Commercial
- Community Commercial - Mixed High Residential
- Regional Center Commercial

FRAMEWORK

COMMERCIAL

- Neighborhood Commercial
- General Commercial
- Community Commercial
- Regional Mixed Commercial

INDUSTRIAL

- Commercial Manufacturing
- Limited Manufacturing
- Light Manufacturing
- Heavy Manufacturing
- Hybrid Industrial

PARKING

- Parking Buffer

PORT OF LOS ANGELES

- General / Bulk Cargo - Non Hazardous (Industrial / Commercial)
- General / Bulk Cargo - Hazard
- Commercial Fishing
- Recreation and Commercial
- Intermodal Container Transfer Facility Site

LOS ANGELES INTERNATIONAL AIRPORT

- Airport Landside
- Airport Airside
- Airport Northside

OPEN SPACE / PUBLIC FACILITIES

- Open Space
- Public / Open Space
- Public / Quasi-Public Open Space
- Other Public Open Space
- Public Facilities

INDUSTRIAL

- Limited Industrial
- Light Industrial

D1. Response to Comments



D1. Response to Comments

POINTS OF INTEREST

| | | |
|--|--|--|
| Alternative Youth Hostel (Proposed) | Horticultural Center | Public Elementary School |
| Animal Shelter | Hospital | Public Elementary School (Proposed) |
| Area Library | Hospital (Proposed) | Public Golf Course |
| Area Library (Proposed) | House of Worship | Public Golf Course (Proposed) |
| Bridge | Important Ecological Area | Public Housing |
| Campground | Important Ecological Area (Proposed) | Public Housing (Proposed Expansion) |
| Campground (Proposed) | Interpretive Center (Proposed) | Public Junior High School |
| Cemetery | Junior College | Public Junior High School (Proposed) |
| Church | MTA / MetroLink Station | Public Middle School |
| City Hall | MTA Station | Public Senior High School |
| Community Center | MTA Stop | Public Senior High School (Proposed) |
| Community Library | MWD Headquarters | Pumping Station |
| Community Library (Proposed Expansion) | Maintenance Yard | Pumping Station (Proposed) |
| Community Library (Proposed) | Municipal Office Building | Refuse Collection Center |
| Community Park | Municipal Parking lot | Regional Library |
| Community Park (Proposed Expansion) | Neighborhood Park | Regional Library (Proposed Expansion) |
| Community Park (Proposed) | Neighborhood Park (Proposed Expansion) | Regional Library (Proposed) |
| Community Transit Center | Neighborhood Park (Proposed) | Regional Park |
| Convalescent Hospital | Oil Collection Center | Regional Park (Proposed) |
| Correctional Facility | Parking Enforcement | Residential Plan Development |
| Cultural / Historic Site (Proposed) | Police Headquarters | Scenic View Site |
| Cultural / Historical Site | Police Station | Scenic View Site (Proposed) |
| Cultural Arts Center | Police Station (Proposed Expansion) | School District Headquarters |
| DMV Office | Police Station (Proposed) | School Unspecified Loc/Type (Proposed) |
| DWP | Police Training site | Skill Center |
| DWP Pumping Station | Post Office | Social Services |
| Equestrian Center | Power Distribution Station | Special Feature |
| Fire Department Headquarters | Power Distribution Station (Proposed) | Special Recreation (a) |
| Fire Station | Power Receiving Station | Special School Facility |
| Fire Station (Proposed Expansion) | Power Receiving Station (Proposed) | Special School Facility (Proposed) |
| Fire Station (Proposed) | Private College | Steam Plant |
| Fire Supply & Maintenance | Private Elementary School | Surface Mining |
| Fire Training Site | Private Golf Course | Trail & Assembly Area |
| Fireboat Station | Private Golf Course (Proposed) | Trail & Assembly Area (Proposed) |
| Health Center / Medical Facility | Private Junior High School | Utility Yard |
| Helistop | Private Pre-School | Water Tank Reservoir |
| Historic Monument | Private Recreation & Cultural Facility | Wildlife Migration Corridor |
| Historical / Cultural Monument | Private Senior High School | Wildlife Preserve Gate |
| Horsekeeping Area | Private Special School | |
| Horsekeeping Area (Proposed) | Public Elementary (Proposed Expansion) | |

D1. Response to Comments

500 FT. SCHOOL/PARK ZONE

-  Existing School/Park Site
-  Planned School/Park Site
-  Inside 500 Ft. Buffer

- | | |
|--|--|
|  Aquatic Facilities |  Opportunity School |
|  Beaches |  Other Facilities |
|  Charter School |  Park / Recreation Centers |
|  Child Care Centers |  Parks |
|  Elementary School |  Performing / Visual Arts Centers |
|  Golf Course |  Recreation Centers |
|  High School |  Span School |
|  Historic Sites |  Special Education School |
|  Horticulture/Gardens |  Senior Citizen Centers |
|  Middle School |  Skate Parks |

COASTAL ZONES

-  Dual Jurisdictional Coastal Zone
-  Calvo Exclusion Area
-  Coastal Zone Commission Authority

OTHER SYMBOLS

- | | | |
|--|---|---|
|  Lot Line |  Airport Hazard Zone |  Flood Zone |
|  Tract Line |  Census Tract |  Hazardous Waste |
|  Lot Cut |  Coastal Zone |  High Wind Zone |
|  Easement |  Council District |  Hillside Grading |
|  Zone Boundary |  LADBS District Office |  Historic Preservation Overlay Zone |
|  Building Line |  Downtown Parking |  Specific Plan Area |
|  Lot Split |  Fault Zone |  Very High Fire Hazard Severity Zone |
|  Community Driveway |  Fire District No. 1 |  Oil Wells |
|  Tract Map | | |
|  Parcel Map | | |
|  Lot Ties | | |
|  Building Outlines | | |

D1. Response to Comments



City of Los Angeles
Department of City Planning

6/18/2015
PARCEL PROFILE REPORT

PROPERTY ADDRESSES

2826 E GUIRADO ST

ZIP CODES

90023

RECENT ACTIVITY

None

CASE NUMBERS

CPC-1986-445 GPC
CPC-1983-237 GPC
ORD-166585-SA2910W
ENV 2013-3392-CE
ND-83 382-ZC-HD

Address/Legal Information

PIN Number 123A223 3D
Lot/Parcel Area (Calculated) 6,587.5 (sq ft)
Thomas Brothers Grid PAGE 636 - GRID B6
Assessor Parcel No. (APN) 5185035006
Tract CAMULOS STREET TRACT
Map Reference M B 15-149
Block None
Lot 5
Arb (Lot Cut Reference) None
Map Sheet 123A223

Jurisdictional Information

Community Plan Area Boyle Heights
Area Planning Commission East Los Angeles
Neighborhood Council Boyle Heights
Council District CD 14 - Jose Huizar
Census Tract # 2047.00
LADBS District Office Los Angeles Metro

Planning and Zoning Information

Special Notes None
Zoning R2-1
Zoning Information (Z1) ZI-1192 2000 ft. Buffer Zone for BZP Site (3128 Whittier Boulevard)
ZI-2129 EAST LOS ANGELES STATE ENTERPRISE ZONE

General Plan Land Use Low Medium I Residential

General Plan Footnote(s) Yes
Hillside Area (Zoning Code) No
Baseline Hillside Ordinance No
Baseline Mansionization Ordinance No
Specific Plan Area None
Special Land Use / Zoning None
Design Review Board No
Historic Preservation Review No
Historic Preservation Overlay Zone None
Other Historic Designations None
Other Historic Survey Information None
Mills Act Contract None
POD - Pedestrian Oriented Districts None
CDO - Community Design Overlay None
NSO - Neighborhood Stabilization Overlay No
Streetscape No
Sign District No
Adaptive Reuse Incentive Area None
CRA - Community Redevelopment Agency None
Central City Parking No
Downtown Parking No
Building Line None
500 Ft School Zone No

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D1. Response to Comments

| | |
|---|---|
| 500 Ft Park Zone | No |
| Assessor Information | |
| Assessor Parcel No. (APN) | 5185035000 |
| APN Area (Co. Public Works)* | 0.152 (ac) |
| Use Code | 0500 - 5 or more Units (4 stories or less) |
| Assessed Land Val. | \$18,749 |
| Assessed Improvement Val. | \$99,735 |
| Last Owner Change | 02/24/11 |
| Last Sale Amount | \$0 |
| Tax Rate /Area | 4 |
| Deed Ref No. (City Clerk) | 3199703 |
| | 1417527 |
| | 1356187 |
| Building 1 | |
| Year Built | 1964 |
| Building Class | D6 |
| Number of Units | 6 |
| Number of Bedrooms | 12 |
| Number of Bathrooms | 6 |
| Building Square Footage | 5,286.0 (sq ft) |
| Building 2 | No data for building 2 |
| Building 3 | No data for building 3 |
| Building 4 | No data for building 4 |
| Building 5 | No data for building 5 |
| Additional Information | |
| Airport Hazard | None |
| Coastal Zone | None |
| Farmland | Area Not Mapped |
| Very High Fire Hazard Severity Zone | No |
| Fire District No. 1 | No |
| Flood Zone | None |
| Watercourse | No |
| Hazardous Waste / Border Zone Properties | 2000 ft. Buffer Zone for BZP Site (3128 Whittier Boulevard) |
| Methane Hazard Site | None |
| High Wind Velocity Areas | No |
| Special Grading Area (BOE Basic Grid Map A-13372) | Yes |
| Oil Wells | None |
| Seismic Hazards | |
| Active Fault Near-Source Zone | |
| Nearest Fault (Distance in km) | 2.47482623427378 |
| Nearest Fault (Name) | Puente Hills Blind Thrust |
| Region | Los Angeles Blind Thrusts |
| Fault Type | B |
| Slip Rate (mm/year) | 0.70000000 |
| Slip Geometry | Reverse |
| Slip Type | Moderately / Poorly Constrained |
| Down Dip Width (km) | 19.00000000 |
| Rupture Top | 5.00000000 |
| Rupture Bottom | 13.00000000 |
| Dip Angle (degrees) | 25.00000000 |
| Maximum Magnitude | 7.10000000 |
| Alquist-Priolo Fault Zone | No |
| Landslide | No |
| Liquefaction | No |

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D1. Response to Comments

| | |
|-----------------------------------|--|
| Tsunami Inundation Zone | No |
| Economic Development Areas | |
| Business Improvement District | None |
| Pioneer Zone | No |
| Renewal Community | No |
| Revitalization Zone | Central City |
| State Enterprise Zone | EAST LOS ANGELES STATE ENTERPRISE ZONE |
| Targeted Neighborhood Initiative | None |
| Public Safety | |
| Police Information | |
| Bureau | Central |
| Division / Station | Hallenbeck |
| Reporting District | 477 |
| Fire Information | |
| Division | 1 |
| Battalion | 1 |
| District / Fire Station | 25 |
| Red Flag Restricted Parking | No |

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D1. Response to Comments

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database.

Case Number: CPC-1986-445-GPC
 Required Action(s): GPC-GENERAL PLAN/ZONING CONSISTENCY (AB203)
 Project Description(s): PLAN AND ZONE CONSISTENCY - BOYLE HEIGHTS (PART I)

Case Number: CPC-1983-237-GPC
 Required Action(s): GPC-GENERAL PLAN/ZONING CONSISTENCY (AB283)
 Project Description(s): Data Not Available

Case Number: ENV-2013-3392-CE
 Required Action(s): CE-CATEGORICAL EXEMPTION
 Project Description(s): THE PROPOSED ORDINANCE MODIFIES SECTION 22.119 OF THE LOS ANGELES ADMINISTRATIVE CODE TO ALLOW ORIGINAL ART MURALS ON LOTS DEVELOPED WITH ONLY ONE SINGLE-FAMILY RESIDENTIAL STRUCTURE AND THAT ARE LOCATED WITHIN COUNCIL DISTRICTS 1, 9, AND 14.

Case Number: ND-83-382-ZC-HD
 Required Action(s): HD-HIGHLIGHT DISTRICT
 ZC-ZONE CHANGE
 Project Description(s): Data Not Available

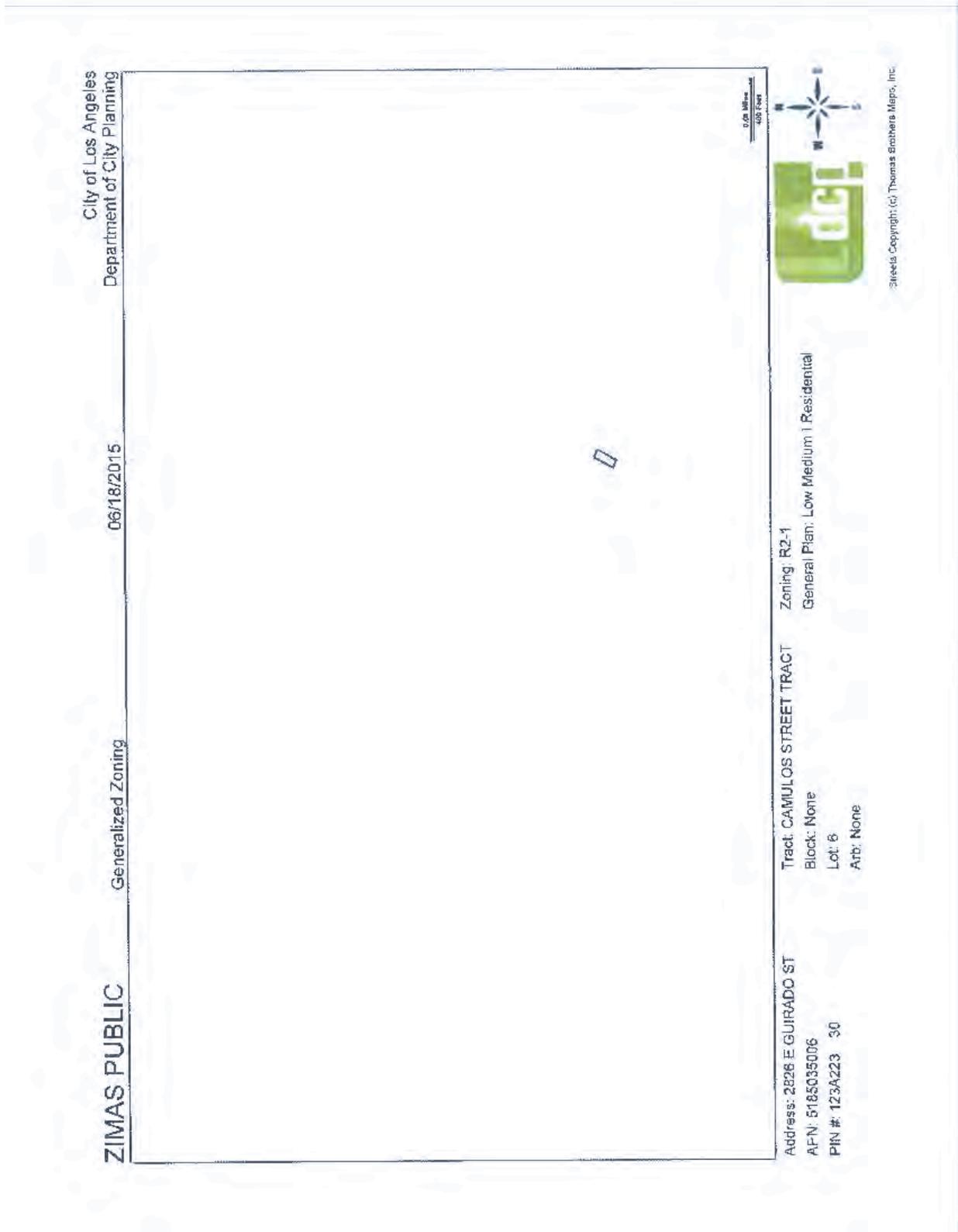
DATA NOT AVAILABLE

ORD 166585 SA2910W

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D1. Response to Comments



D1. Response to Comments

LEGEND

GENERALIZED ZONING

- OS, GW
- A, RA
- RE, RS, R1, RU, RZ, RW1
- R2, RD, RMP, RW2, R3, RAS, R4, R5
- CR, C1, C1.5, C2, C4, C5, CW, ADP, LASED, CEC, USC, PVSP
- CM, MR, WC, CCS, UV, UI, UC, M1, M2, LAX, M3, SL
- P, PB
- PF
- HILLSIDE

GENERAL PLAN LAND USE

LAND USE

RESIDENTIAL

- Minimum Residential
- Very Low / Very Low I Residential
- Very Low II Residential
- Low / Low I Residential
- Low II Residential
- Low Medium / Low Medium I Residential
- Low Medium II Residential
- Medium Residential
- High Medium Residential
- High Density Residential
- Very High Medium Residential

COMMERCIAL

- Limited Commercial
- Limited Commercial - Mixed Medium Residential
- Highway Oriented Commercial
- Highway Oriented and Limited Commercial
- Highway Oriented Commercial - Mixed Medium Residential
- Neighborhood Office Commercial
- Community Commercial
- Community Commercial - Mixed High Residential
- Regional Center Commercial

FRAMEWORK

COMMERCIAL

- Neighborhood Commercial
- General Commercial
- Community Commercial
- Regional Mixed Commercial

INDUSTRIAL

- Commercial Manufacturing
- Limited Manufacturing
- Light Manufacturing
- Heavy Manufacturing
- Hybrid Industrial

PARKING

- Parking Buffer

PORT OF LOS ANGELES

- General / Bulk Cargo - Non Hazardous (Industrial / Commercial)
- General / Bulk Cargo - Hazard
- Commercial Fishing
- Recreation and Commercial
- Intermodal Container Transfer Facility Site

LOS ANGELES INTERNATIONAL AIRPORT

- Airport Landside
- Airport Airside
- Airport Northside

OPEN SPACE / PUBLIC FACILITIES

- Open Space
- Public / Open Space
- Public / Quasi-Public Open Space
- Other Public Open Space
- Public Facilities

INDUSTRIAL

- Limited Industrial
- Light Industrial

D1. Response to Comments

CIRCULATION

STREET

- Arterial Mountain Road
- Collector Scenic Street
- Collector Street
- Collector Street (Hillside)
- Collector Street (Modified)
- Collector Street (Proposed)
- Country Road
- Divided Major Highway II
- Divided Secondary Scenic Highway
- Local Scenic Road
- Local Street
- Major Highway (Modified)
- Major Highway I
- Major Highway II
- Major Highway II (Modified)

FREEWAYS

- Freeway
- Interchange
- On-Ramp / Off-Ramp
- Railroad
- Scenic Freeway Highway

MISC. LINES

- Airport Boundary
- Bus Line
- Coastal Zone Boundary
- Coastline Boundary
- Collector Scenic Street (Proposed)
- Commercial Areas
- Commercial Center
- Community Redevelopment Project Area
- Country Road
- DWP Power Lines
- Desirable Open Space
- Detached Single Family House
- Endangered Ridgeline
- Equestrian and/or Hiking Trail
- Hiking Trail
- Historical Preservation
- Horsekeeping Area
- Local Street

- Major Scenic Highway
- Major Scenic Highway (Modified)
- Major Scenic Highway II
- Mountain Collector Street
- Park Road
- Parkway
- Principal Major Highway
- Private Street
- Scenic Divided Major Highway II
- Scenic Park
- Scenic Parkway
- Secondary Highway
- Secondary Highway (Modified)
- Secondary Scenic Highway
- Special Collector Street
- Super Major Highway

- MSA Desirable Open Space
- Major Scenic Controls
- Multi-Purpose Trail
- Natural Resource Reserve
- Park Road
- Park Road (Proposed)
- Quasi-Public
- Rapid Transit Line
- Residential Planned Development
- Scenic Highway (Obsolete)
- Secondary Scenic Controls
- Secondary Scenic Highway (Proposed)
- Site Boundary
- Southern California Edison Power
- Special Study Area
- Specific Plan Area
- Stagecoach Line
- Wildlife Corridor

D1. Response to Comments

| POINTS OF INTEREST | | | |
|--------------------|--|--|--|
| | Alternative Youth Hostel (Proposed) | | Horticultural Center |
| | Animal Shelter | | Hospital |
| | Area Library | | Hospital (Proposed) |
| | Area Library (Proposed) | | House of Worship |
| | Bridge | | Important Ecological Area |
| | Campground | | Important Ecological Area (Proposed) |
| | Campground (Proposed) | | Interpretive Center (Proposed) |
| | Cemetery | | Junior College |
| | Church | | MTA / Metrolink Station |
| | City Hall | | MTA Station |
| | Community Center | | MTA Stop |
| | Community Library | | MWD Headquarters |
| | Community Library (Proposed Expansion) | | Maintenance Yard |
| | Community Library (Proposed) | | Municipal Office Building |
| | Community Park | | Municipal Parking Lot |
| | Community Park (Proposed Expansion) | | Neighborhood Park |
| | Community Park (Proposed) | | Neighborhood Park (Proposed Expansion) |
| | Community Transit Center | | Neighborhood Park (Proposed) |
| | Convalescent Hospital | | Oil Collection Center |
| | Correctional Facility | | Parking Enforcement |
| | Cultural / Historic Site (Proposed) | | Police Headquarters |
| | Cultural / Historical Site | | Police Station |
| | Cultural Arts Center | | Police Station (Proposed Expansion) |
| | DMV Office | | Police Station (Proposed) |
| | DWP | | Police Training site |
| | DWP Pumping Station | | Post Office |
| | Equestrian Center | | Power Distribution Station |
| | Fire Department Headquarters | | Power Distribution Station (Proposed) |
| | Fire Station | | Power Receiving Station |
| | Fire Station (Proposed Expansion) | | Power Receiving Station (Proposed) |
| | Fire Station (Proposed) | | Private College |
| | Fire Supply & Maintenance | | Private Elementary School |
| | Fire Training Site | | Private Golf Course |
| | Fireboat Station | | Private Golf Course (Proposed) |
| | Health Center / Medical Facility | | Private Junior High School |
| | Helistop | | Private Pre-School |
| | Historic Monument | | Private Recreation & Cultural Facility |
| | Historical / Cultural Monument | | Private Senior High School |
| | Horsekeeping Area | | Private Special School |
| | Horsekeeping Area (Proposed) | | Public Elementary (Proposed Expansion) |
| | | | Public Elementary School |
| | | | Public Elementary School (Proposed) |
| | | | Public Golf Course |
| | | | Public Golf Course (Proposed) |
| | | | Public Housing |
| | | | Public Housing (Proposed Expansion) |
| | | | Public Junior High School |
| | | | Public Junior High School (Proposed) |
| | | | Public Middle School |
| | | | Public Senior High School |
| | | | Public Senior High School (Proposed) |
| | | | Pumping Station |
| | | | Pumping Station (Proposed) |
| | | | Refuse Collection Center |
| | | | Regional Library |
| | | | Regional Library (Proposed Expansion) |
| | | | Regional Library (Proposed) |
| | | | Regional Park |
| | | | Regional Park (Proposed) |
| | | | Residential Plan Development |
| | | | Scenic View Site |
| | | | Scenic View Site (Proposed) |
| | | | School District Headquarters |
| | | | School Unspecified Loc/Type (Proposed) |
| | | | Skill Center |
| | | | Social Services |
| | | | Special Feature |
| | | | Special Recreation (a) |
| | | | Special School Facility |
| | | | Special School Facility (Proposed) |
| | | | Steam Plant |
| | | | Surface Mining |
| | | | Trail & Assembly Area |
| | | | Trail & Assembly Area (Proposed) |
| | | | Utility Yard |
| | | | Water Tank Reservoir |
| | | | Wildlife Migration Corridor |
| | | | Wildlife Preserve Gate |

D1. Response to Comments

500 FT. SCHOOL/PARK ZONE

- | | |
|---|--|
|  Existing School/Park Site |  Opportunity School |
|  Planned School/Park Site |  Other Facilities |
|  Inside 500 Ft. Buffer |  Park / Recreation Centers |
|  Aquatic Facilities |  Parks |
|  Beaches |  Performing / Visual Arts Centers |
|  Charter School |  Recreation Centers |
|  Child Care Centers |  Span School |
|  Elementary School |  Special Education School |
|  Golf Course |  Senior Citizen Centers |
|  High School |  Skate Parks |
|  Historic Sites | |
|  Horticulture/Gardens | |
|  Middle School | |

COASTAL ZONES

-  Dual Jurisdictional Coastal Zone
-  Calvo Exclusion Area
-  Coastal Zone Commission Authority

OTHER SYMBOLS

- | | | |
|--|---|---|
|  Lot Line |  Airport Hazard Zone |  Flood Zone |
|  Tract Line |  Census Tract |  Hazardous Waste |
|  Lot Cut |  Coastal Zone |  High Wind Zone |
|  Easement |  Council District |  Hillside Grading |
|  Zone Boundary |  LADBS District Office |  Historic Preservation Overlay Zone |
|  Building Line |  Downtown Parking |  Specific Plan Area |
|  Lot Split |  Fault Zone |  Very High Fire Hazard Severity Zone |
|  Community Driveway |  Fire District No. 1 |  Oil Wells |
|  Tract Map | | |
|  Parcel Map | | |
|  Lot Ties | | |
|  Building Outlines | | |

D1. Response to Comments




City of Los Angeles
Department of City Planning

6/18/2015
PARCEL PROFILE REPORT

| | | |
|----------------------------------|---|--|
| <u>PROPERTY ADDRESSES</u> | <u>Address/Legal Information</u> | |
| 2728 E 5TH ST | PIN Number | 124 5A223 26 |
| <u>ZIP CODES</u> | Lot/Parcel Area (Calculated) | 5,775.0 (sq ft) |
| 90033 | Thomas Brothens Grid | PAGE 836 - GRID B8 |
| <u>RECENT ACTIVITY</u> | Assessor Parcel No. (APN) | 5186010065 |
| None | Tract | HUMBOLDT TRACT |
| <u>CASE NUMBERS</u> | Map Reference | M B 4-57 |
| CPC-7337 | Block | None |
| CPC-1986 445 GPC | Lpt | 14 |
| ORD-166585-SA2770C | Arb (Lot Cut Reference) | None |
| ORD-107853 | Map Sheet | 124-5A223 |
| ENV-2013-3392-CE | <u>Jurisdictional Information</u> | |
| ND 83-383 ZC-HD | Community Plan Area | Boyle Heights |
| | Area Planning Commission | East Los Angeles |
| | Neighborhood Council | Boyle Heights |
| | Council District | CD 14 - Jose Hutzar |
| | Census Tract # | 2043.00 |
| | LADES District Office | Los Angeles Metro |
| | <u>Planning and Zoning Information</u> | |
| | Special Notes | None |
| | Zoning | R2-1 |
| | Zoning Information (ZI) | ZI-2129 EAST LOS ANGELES STATE ENTERPRISE ZONE |
| | General Plan Land Use | Low Medium Density Residential |
| | General Plan Footnote(s) | Yes |
| | Hillside Area (Zoning Code) | No |
| | Baseline Hillside Ordinance | No |
| | Baseline Mansionization Ordinance | No |
| | Specific Plan Area | None |
| | Special Land Use / Zoning | None |
| | Design Review Board | No |
| | Historic Preservation Review | No |
| | Historic Preservation Overlay Zone | None |
| | Other Historic Designations | None |
| | Other Historic Survey Information | None |
| | Mills Act Contract | None |
| | PDD - Pedestrian Oriented Districts | None |
| | CDO - Community Design Overlay | None |
| | NSO - Neighborhood Stabilization Overlay | No |
| | Streetscape | No |
| | Sign District | No |
| | Adaptive Reuse Incentive Area | None |
| | CRA - Community Redevelopment Agency | None |
| | Central City Parking | No |
| | Downtown Parking | No |
| | Building Line | None |
| | 500 Ft School Zone | Active: Theodore Roosevelt High School |
| | 500 Ft Park Zone | No |

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D1. Response to Comments

| Assessor Information | |
|------------------------------|-------------------------|
| Assessor Parcel No. (APN) | 5185010005 |
| APN Area (Co. Public Works)* | 0.133 (ac) |
| Use Code | 0100 - Single Residence |
| Assessed Land Val. | \$91,823 |
| Assessed Improvement Val. | \$29,277 |
| Last Owner Change | 06/30/08 |
| Last Sale Amount | \$0 |
| Tax Rate Area | 4 |
| Deed Ref No. (City Clerk) | 321696 |
| | 2772904 |
| | 202332 |
| | 1886544 |
| | 1796091 |
| | 1153664 |
| | 1 268 |

| Building 1 | |
|-------------------------|------------------------|
| Year Built | 1957 |
| Building Class | D5A |
| Number of Units | 1 |
| Number of Bedrooms | 2 |
| Number of Bathrooms | 1 |
| Building Square Footage | 882.0 (sq ft) |
| Building 2 | No data for building 2 |
| Building 3 | No data for building 3 |
| Building 4 | No data for building 4 |
| Building 5 | No data for building 5 |

| Additional Information | |
|---|-----------------|
| Airport Hazard | None |
| Coastal Zone | None |
| Farmland | Area Not Mapped |
| Very High Fire Hazard Severity Zone | No |
| Fire District No. 1 | No |
| Flood Zone | None |
| Watercourse | No |
| Hazardous Waste / Border Zone Properties | No |
| Methane Hazard Site | Methane Zone |
| High Wind Velocity Areas | No |
| Special Grading Area (BOE Basic Grid Map A-13372) | Yes |
| Oil Wells | None |

| Seismic Hazards | |
|--------------------------------|---------------------------|
| Active Fault Near-Source Zone | |
| Nearest Fault (Distance in km) | 2.68241321918748 |
| Nearest Fault (Name) | Upper Elysian Park |
| Region | Los Angeles Blind Thrusts |
| Fault Type | B |
| Slip Rate (mm/year) | 1.30000000 |
| Slip Geometry | Reverse |
| Slip Type | Poorly Constrained |
| Down Dip Width (km) | 13.00000000 |
| Rupture Top | 3.00000000 |
| Rupture Bottom | 13.00000000 |
| Dip Angle (degrees) | 50.00000000 |
| Maximum Magnitude | 6.40000000 |

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D1. Response to Comments

| | |
|-----------------------------------|--|
| Aquist-Prolo Fault Zone | No |
| Landslide | No |
| Liquefaction | No |
| Tsunami Inundation Zone | No |
| Economic Development Areas | |
| Business Improvement District | None |
| Promise Zone | No |
| Renewal Community | No |
| Revitalization Zone | Central City |
| State Enterprise Zone | EAST LOS ANGELES STATE ENTERPRISE ZONE |
| Targeted Neighborhood Initiative | None |
| Public Safety | |
| Police Information | |
| Bureau | Central |
| Division / Station | Hollenbeck |
| Reporting District | 467 |
| Fire Information | |
| Division | 1 |
| Battalion | 1 |
| District / Fire Station | 25 |
| Red Flag Restricted Parking | No |

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D1. Response to Comments

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database.

| | |
|-------------------------|--|
| Case Number: | CPC-1986-445-GPC |
| Required Action(s): | GPC-GENERAL PLAN/ZONING CONSISTENCY (AB283) |
| Project Description(s): | PLAN AND ZONE CONSISTENCY - BOYLE HEIGHTS (PART I) |
| Case Number: | EMV-2013-3392-CE |
| Required Action(s): | CE-CATEGORICAL EXEMPTION |
| Project Description(s): | THE PROPOSED ORDINANCE MODIFIES SECTION 22.119 OF THE LOS ANGELES ADMINISTRATIVE CODE TO ALLOW ORIGINAL ART MURALS ON LOTS DEVELOPED WITH ONLY ONE SINGLE-FAMILY RESIDENTIAL STRUCTURE AND THAT ARE LOCATED WITHIN COUNCIL DISTRICTS 1, 9, AND 14. |
| Case Number: | NU-83-383-ZC-HD |
| Required Action(s): | HO-HEIGHT DISTRICT ZC-ZONE CHANGE |
| Project Description(s): | Data Not Available |

DATA NOT AVAILABLE

CPC-7337
 ORD-186585 SA2770C
 ORD-107653

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D1. Response to Comments

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- Very High Medium Residential

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- Airport Airside
- Airport Northside

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- Other Public Open Space
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- Light Industrial

D1. Response to Comments

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- Collector Street (Proposed)
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- Divided Secondary Scenic Highway
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- Major Highway I
- Major Highway II
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- Private Street
- Scenic Divided Major Highway II
- Scenic Park
- Scenic Parkway
- Secondary Highway
- Secondary Highway (Modified)
- Secondary Scenic Highway
- Special Collector Street
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- On-Ramp / Off-Ramp
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- Major Scenic Controls
- Multi-Purpose Trail
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- Secondary Scenic Highway (Proposed)
- Site Boundary
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D1. Response to Comments

POINTS OF INTEREST

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|--|--|--|--|--|--|
| | Alternative Youth Hostel (Proposed) | | Horticultural Center | | Public Elementary School |
| | Animal Shelter | | Hospital | | Public Elementary School (Proposed) |
| | Area Library | | Hospital (Proposed) | | Public Golf Course |
| | Area Library (Proposed) | | HW House of Worship | | Public Golf Course (Proposed) |
| | Bridge | | Important Ecological Area | | Public Housing |
| | Campground | | Important Ecological Area (Proposed) | | Public Housing (Proposed Expansion) |
| | Campground (Proposed) | | Interpretive Center (Proposed) | | Public Junior High School |
| | Cemetery | | Junior College | | Public Junior High School (Proposed) |
| | HW Church | | MTA / Metrolink Station | | Public Middle School |
| | City Hall | | MTA Station | | Public Senior High School |
| | Community Center | | MTA Stop | | Public Senior High School (Proposed) |
| | Community Library | | MWD Headquarters | | Pumping Station |
| | Community Library (Proposed Expansion) | | Maintenance Yard | | Pumping Station (Proposed) |
| | Community Library (Proposed) | | Municipal Office Building | | Refuse Collection Center |
| | Community Park | | Municipal Parking Lot | | Regional Library |
| | Community Park (Proposed Expansion) | | Neighborhood Park | | Regional Library (Proposed Expansion) |
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| | Community Transit Center | | Neighborhood Park (Proposed) | | Regional Park |
| | Convalescent Hospital | | Oil Collection Center | | Regional Park (Proposed) |
| | Correctional Facility | | Parking Enforcement | | Residential Plan Development |
| | Cultural / Historic Site (Proposed) | | Police Headquarters | | Scenic View Site |
| | Cultural / Historical Site | | Police Station | | Scenic View Site (Proposed) |
| | Cultural Arts Center | | Police Station (Proposed Expansion) | | School District Headquarters |
| | DMV DMV Office | | Police Station (Proposed) | | School Unspecified Loc/Type (Proposed) |
| | DWP DWP | | Police Training site | | Skill Center |
| | DWP Pumping Station | | PD Post Office | | Social Services |
| | Equestrian Center | | Power Distribution Station | | Special Feature |
| | Fire Department Headquarters | | Power Distribution Station (Proposed) | | Special Recreation (a) |
| | Fire Station | | Power Receiving Station | | Special School Facility |
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| | Horsekeeping Area | | Private Special School | | |
| | Horsekeeping Area (Proposed) | | Public Elementary (Proposed Expansion) | | |

D1. Response to Comments

500 FT. SCHOOL/PARK ZONE

- | | |
|---|--|
|  Existing School/Park Site |  Opportunity School |
|  Planned School/Park Site |  Other Facilities |
|  Inside 500 Ft. Buffer |  Park / Recreation Centers |
|  Aquatic Facilities |  Parks |
|  Beaches |  Performing / Visual Arts Centers |
|  Charter School |  Recreation Centers |
|  Child Care Centers |  Span School |
|  Elementary School |  Special Education School |
|  Golf Course |  Senior Citizen Centers |
|  High School |  Skate Parks |
|  Historic Sites | |
|  Horticulture/Gardens | |
|  Middle School | |

COASTAL ZONES

-  Dual Jurisdictional Coastal Zone
-  Calvo Exclusion Area
-  Coastal Zone Commission Authority

OTHER SYMBOLS

- | | | |
|--|---|---|
|  Lot Line |  Airport Hazard Zone |  Flood Zone |
|  Tract Line |  Census Tract |  Hazardous Waste |
|  Lot Cut |  Coastal Zone |  High Wind Zone |
|  Easement |  Council District |  Hillside Grading |
|  Zone Boundary |  LADBS District Office |  Historic Preservation Overlay Zone |
|  Building Line |  Downtown Parking |  Specific Plan Area |
|  Lot Split |  Fault Zone |  Very High Fire Hazard Severity Zone |
|  Community Driveway |  Fire District No. 1 |  Oil Wells |
|  Tract Map | | |
|  Parcel Map | | |
|  Lot Ties | | |
|  Building Outlines | | |

D1. Response to Comments




City of Los Angeles
Department of City Planning

6/18/2015
PARCEL PROFILE REPORT

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|------------|--------------|------------------------------|-----------------|----------------------|--------------------|---------------------------|------------|-------|--------|---------------|----------------|-------|------|-----|--------|------------------------|------|-----------|-----------|---------------------|---------------|--------------------------|------------------|----------------------|---------------|------------------|---------------------|----------------|---------|-----------------------|-------------------|---------------|------|--------|------|-------------------------|---|-----------------------|--------------------------------|--------------------------|-----|-----------------------------|----|-----------------------------|----|-----------------------------------|----|--------------------|------|---------------------------|------|---------------------|----|------------------------------|----|------------------------------------|------|-----------------------------|------|-----------------------------------|------|--------------------|------|-------------------------------------|------|--------------------------------|------|---|----|-------------|----|---------------|----|-------------------------------|------|--------------------------------------|------|----------------------|----|------------------|----|---------------|------|--------------------|----|
| <p><u>PROPERTY ADDRESSES</u> 1142 S MIRASOL ST 1144 S MIRASOL ST</p> <p><u>ZIP CODES</u> 90023</p> <p><u>RECENT ACTIVITY</u> None</p> <p><u>CASE NUMBERS</u> ENV-2013-3392-CE</p> | <p>Address/Legal Information</p> <table border="0" style="width: 100%;"> <tr><td>PIN Number</td><td>118-5A227 47</td></tr> <tr><td>Lot/Parcel Area (Calculated)</td><td>5,000.9 (sq ft)</td></tr> <tr><td>Thomas Brothers Grid</td><td>PAGE 675 - GRID C1</td></tr> <tr><td>Assessor Parcel No. (APN)</td><td>5191007016</td></tr> <tr><td>Tract</td><td>TR 941</td></tr> <tr><td>Map Reference</td><td>M B 16-194/195</td></tr> <tr><td>Block</td><td>None</td></tr> <tr><td>Lot</td><td>FR 328</td></tr> <tr><td>Arb (1 of 4) Reference</td><td>None</td></tr> <tr><td>Map Sheet</td><td>118-5A227</td></tr> </table> <p>Jurisdictional Information</p> <table border="0" style="width: 100%;"> <tr><td>Community Plan Area</td><td>Boyle Heights</td></tr> <tr><td>Area Planning Commission</td><td>East Los Angeles</td></tr> <tr><td>Neighborhood Council</td><td>Boyle Heights</td></tr> <tr><td>Council District</td><td>CD 14 - Jose Huizar</td></tr> <tr><td>Census Tract #</td><td>2048.20</td></tr> <tr><td>LADBS District Office</td><td>Los Angeles Metro</td></tr> </table> <p>Planning and Zoning Information</p> <table border="0" style="width: 100%;"> <tr><td>Special Notes</td><td>None</td></tr> <tr><td>Zoning</td><td>R2-1</td></tr> <tr><td>Zoning Information (ZI)</td><td>ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses ZI-2129 FAST LOS ANGELES STATE ENTERPRISE ZONE</td></tr> <tr><td>General Plan Land Use</td><td>Low Medium Density Residential</td></tr> <tr><td>General Plan Footnote(s)</td><td>Yes</td></tr> <tr><td>Hillside Area (Zoning Code)</td><td>No</td></tr> <tr><td>Baseline Hillside Ordinance</td><td>No</td></tr> <tr><td>Baseline Mansionization Ordinance</td><td>No</td></tr> <tr><td>Specific Plan Area</td><td>None</td></tr> <tr><td>Special Land Use / Zoning</td><td>None</td></tr> <tr><td>Design Review Board</td><td>No</td></tr> <tr><td>Historic Preservation Review</td><td>No</td></tr> <tr><td>Historic Preservation Overlay Zone</td><td>None</td></tr> <tr><td>Other Historic Designations</td><td>None</td></tr> <tr><td>Other Historic Survey Information</td><td>None</td></tr> <tr><td>Mills Act Contract</td><td>None</td></tr> <tr><td>POD - Pedestrian Oriented Districts</td><td>None</td></tr> <tr><td>CDD - Community Design Overlay</td><td>None</td></tr> <tr><td>NISO - Neighborhood Stabilization Overlay</td><td>No</td></tr> <tr><td>Streetscape</td><td>No</td></tr> <tr><td>Sign District</td><td>No</td></tr> <tr><td>Adaptive Reuse Incentive Area</td><td>None</td></tr> <tr><td>CRA - Community Redevelopment Agency</td><td>None</td></tr> <tr><td>Central City Parking</td><td>No</td></tr> <tr><td>Downtown Parking</td><td>No</td></tr> <tr><td>Building Line</td><td>None</td></tr> <tr><td>500 Ft School Zone</td><td>No</td></tr> </table> | PIN Number | 118-5A227 47 | Lot/Parcel Area (Calculated) | 5,000.9 (sq ft) | Thomas Brothers Grid | PAGE 675 - GRID C1 | Assessor Parcel No. (APN) | 5191007016 | Tract | TR 941 | Map Reference | M B 16-194/195 | Block | None | Lot | FR 328 | Arb (1 of 4) Reference | None | Map Sheet | 118-5A227 | Community Plan Area | Boyle Heights | Area Planning Commission | East Los Angeles | Neighborhood Council | Boyle Heights | Council District | CD 14 - Jose Huizar | Census Tract # | 2048.20 | LADBS District Office | Los Angeles Metro | Special Notes | None | Zoning | R2-1 | Zoning Information (ZI) | ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses ZI-2129 FAST LOS ANGELES STATE ENTERPRISE ZONE | General Plan Land Use | Low Medium Density Residential | General Plan Footnote(s) | Yes | Hillside Area (Zoning Code) | No | Baseline Hillside Ordinance | No | Baseline Mansionization Ordinance | No | Specific Plan Area | None | Special Land Use / Zoning | None | Design Review Board | No | Historic Preservation Review | No | Historic Preservation Overlay Zone | None | Other Historic Designations | None | Other Historic Survey Information | None | Mills Act Contract | None | POD - Pedestrian Oriented Districts | None | CDD - Community Design Overlay | None | NISO - Neighborhood Stabilization Overlay | No | Streetscape | No | Sign District | No | Adaptive Reuse Incentive Area | None | CRA - Community Redevelopment Agency | None | Central City Parking | No | Downtown Parking | No | Building Line | None | 500 Ft School Zone | No |
| PIN Number | 118-5A227 47 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lot/Parcel Area (Calculated) | 5,000.9 (sq ft) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Thomas Brothers Grid | PAGE 675 - GRID C1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Assessor Parcel No. (APN) | 5191007016 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Tract | TR 941 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Map Reference | M B 16-194/195 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Block | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lot | FR 328 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Arb (1 of 4) Reference | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Map Sheet | 118-5A227 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Community Plan Area | Boyle Heights | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Area Planning Commission | East Los Angeles | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Neighborhood Council | Boyle Heights | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Council District | CD 14 - Jose Huizar | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Census Tract # | 2048.20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| LADBS District Office | Los Angeles Metro | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Notes | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zoning | R2-1 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zoning Information (ZI) | ZI-2427 Freeway Adjacent Advisory Notice for Sensitive Uses ZI-2129 FAST LOS ANGELES STATE ENTERPRISE ZONE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Plan Land Use | Low Medium Density Residential | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General Plan Footnote(s) | Yes | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Hillside Area (Zoning Code) | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Baseline Hillside Ordinance | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Baseline Mansionization Ordinance | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Specific Plan Area | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Special Land Use / Zoning | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Design Review Board | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Historic Preservation Review | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Historic Preservation Overlay Zone | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Historic Designations | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other Historic Survey Information | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mills Act Contract | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| POD - Pedestrian Oriented Districts | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CDD - Community Design Overlay | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NISO - Neighborhood Stabilization Overlay | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Streetscape | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sign District | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Adaptive Reuse Incentive Area | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CRA - Community Redevelopment Agency | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Central City Parking | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Downtown Parking | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Building Line | None | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 500 Ft School Zone | No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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 (*) - APN Area is provided "as is" from the Los Angeles County's Public Works - Flood Control, Benefit Assessment.

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D1. Response to Comments

| | |
|---|--|
| 500 Ft Park Zone | No |
| Assessor Information | |
| Assessor Parcel No. (APN) | 5191007016 |
| APN Area (Co. Public Works)* | 0.115 (ac) |
| Use Code | 0200 - 2 units (4 stories or less) |
| Assessed Land Val. | \$152,997 |
| Assessed Improvement Val. | \$224,395 |
| Last Owner Change | 09/16/13 |
| Last Sale Amount | \$370,003 |
| Tax Rate Area | 4 |
| Deed Ref No. (City Clerk) | 839217 2397850 2381713 212041 1342798 1033473 |
| Building 1 | |
| Year Built | 1966 |
| Building Class | D55 |
| Number of Units | 2 |
| Number of Bedrooms | 5 |
| Number of Bathrooms | 3 |
| Building Square Footage | 1,806.0 (sq ft) |
| Building 2 | No data for building 2 |
| Building 3 | No data for building 3 |
| Building 4 | No data for building 4 |
| Building 5 | No data for building 5 |
| Additional Information | |
| Airport Hazard | None |
| Coastal Zone | None |
| Farmland | Area Not Mapped |
| Very High Fire Hazard Severity Zone | No |
| Fire District No. 1 | No |
| Flood Zone | None |
| Watercourse | No |
| Hazardous Waste / Former Zone Properties | No |
| Methane Hazard Site | None |
| High Wind Velocity Areas | No |
| Special Grading Area (BOE Basic Grid Map A-13372) | No |
| Oil Wells | None |
| Seismicity | |
| Active Fault Near-Source Zone | |
| Nearest Fault (Distance in km) | 2.03313899524544 |
| Nearest Fault (Name) | Puenle Hills Blind Thrust |
| Region | Los Angeles Blind Thrusts |
| Fault Type | B |
| Slip Rate (mm/year) | 0.70000000 |
| Slip Geometry | Reverse |
| Slip Type | Moderately / Poorly Constrained |
| Down Dip Width (km) | 19.00000000 |
| Rupture Top | 5.00000000 |
| Rupture Bottom | 13.00000000 |
| Dip Angle (degrees) | 25.00000000 |
| Maximum Magnitude | 7.10000000 |

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D1. Response to Comments

| | |
|-----------------------------------|--|
| Aquist-Priolo Fault Zone | No |
| Landslide | No |
| Liquefaction | No |
| Tsunami Inundation Zone | No |
| Economic Development Areas | |
| Business Improvement District | None |
| Promise Zone | No |
| Renewal Community | No |
| Revitalization Zone | Central City |
| State Enterprise Zone | FAST LOS ANGELES STATE ENTERPRISE ZONE |
| Targeted Neighborhood Initiative | None |
| Public Safety | |
| Police Information | |
| Bureau | Central |
| Division / Station | Moienbeck |
| Reporting District | 459 |
| Fire Information | |
| Division | 1 |
| Batallion | 1 |
| District / Fire Station | 25 |
| Red Flag Restricted Parking | No |

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D1. Response to Comments

CASE SUMMARIES

Note: Information for case summaries is retrieved from the Planning Department's Plan Case Tracking System (PCTS) database.

Case Number: ENY-2013-3392-CE

Required Action(s): CE-CATEGORICAL EXEMPTION

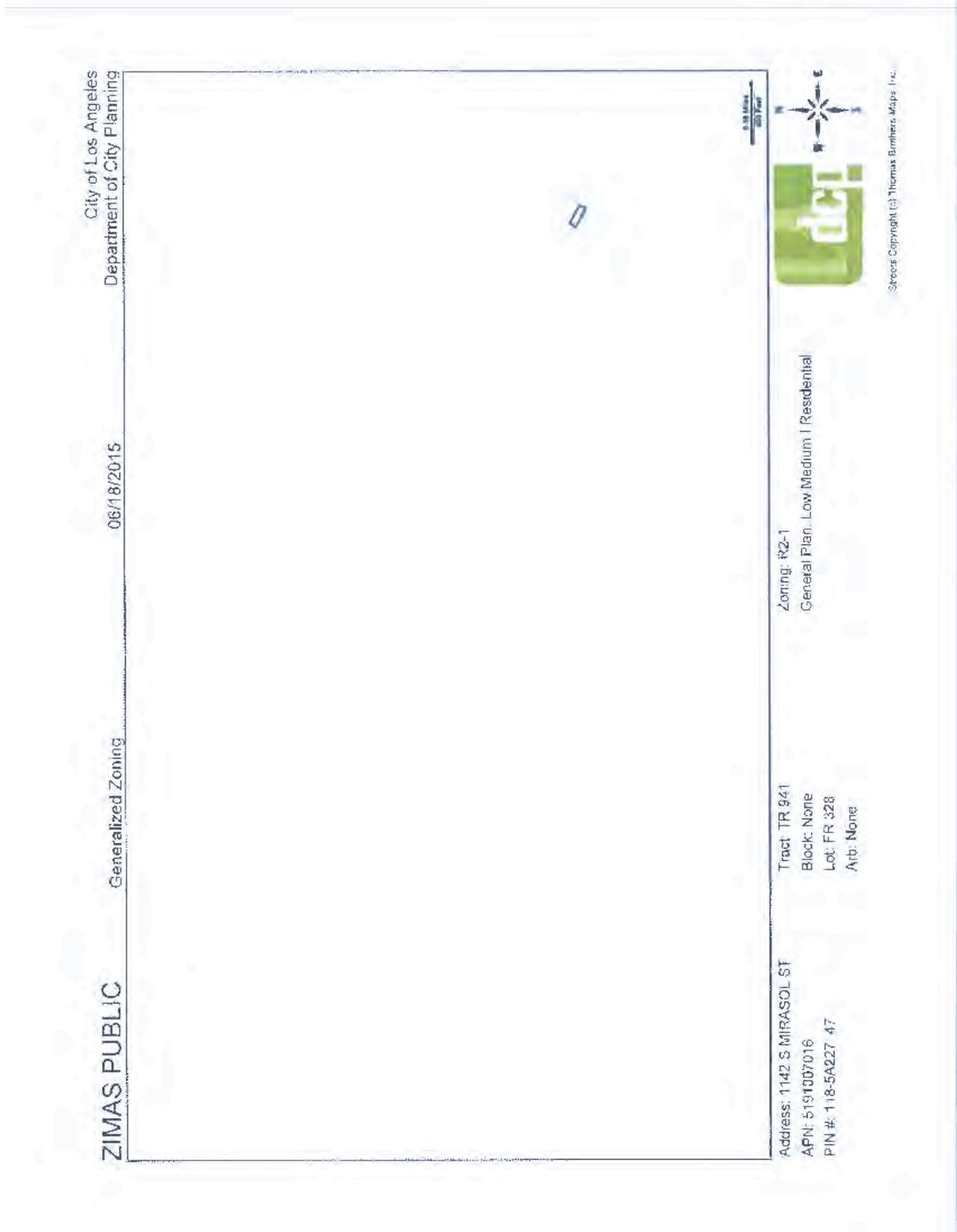
Project Description(s): THE PROPOSED ORDINANCE MODIFIES SECTION 22.119 OF THE LOS ANGELES ADMINISTRATIVE CODE TO ALLOW ORIGINAL ART MURALS ON LOTS DEVELOPED WITH ONLY ONE SINGLE-FAMILY RESIDENTIAL STRUCTURE AND THAT ARE LOCATED WITHIN COUNCIL DISTRICTS 1, 9, AND 14.

DATA NOT AVAILABLE

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D1. Response to Comments



D1. Response to Comments



D1. Response to Comments

CIRCULATION

STREET

-  Arterial Mountain Road
-  Collector Scenic Street
-  Collector Street
-  Collector Street (Hillside)
-  Collector Street (Modified)
-  Collector Street (Proposed)
-  Country Road
-  Divided Major Highway II
-  Divided Secondary Scenic Highway
-  Local Scenic Road
-  Local Street
-  Major Highway (Modified)
-  Major Highway I
-  Major Highway II
-  Major Highway II (Modified)

FREEWAYS

-  Freeway
-  Interchange
-  On-Ramp / Off-Ramp
-  Railroad
-  Scenic Freeway Highway

MISC. LINES

-  Airport Boundary
-  Bus Line
-  Coastal Zone Boundary
-  Coastline Boundary
-  Collector Scenic Street (Proposed)
-  Commercial Areas
-  Commercial Center
-  Community Redevelopment Project Area
-  Country Road
-  DWP Power Lines
-  Desirable Open Space
-  Detached Single Family House
-  Endangered Ridgeline
-  Equestrian and/or Hiking Trail
-  Hiking Trail
-  Historical Preservation
-  Horsekeeping Area
-  Local Street

-  Major Scenic Highway
-  Major Scenic Highway (Modified)
-  Major Scenic Highway II
-  Mountain Collector Street
-  Park Road
-  Parkway
-  Principal Major Highway
-  Private Street
-  Scenic Divided Major Highway II
-  Scenic Park
-  Scenic Parkway
-  Secondary Highway
-  Secondary Highway (Modified)
-  Secondary Scenic Highway
-  Special Collector Street
-  Super Major Highway

-  MSA Desirable Open Space
-  Major Scenic Controls
-  Multi-Purpose Trail
-  Natural Resource Reserve (Park Road)
-  Park Road (Proposed)
-  Quasi-Public
-  Rapid Transit Line
-  Residential Planned Development
-  Scenic Highway (Obsolete)
-  Secondary Scenic Controls
-  Secondary Scenic Highway (Proposed)
-  Site Boundary
-  Southern California Edison Power
-  Special Study Area
-  Specific Plan Area
-  Stagecoach Line
-  Wildlife Corridor

D1. Response to Comments

POINTS OF INTEREST

- Alternative Youth Hostel (Proposed)
- Animal Shelter
- Area Library
- Area Library (Proposed)
- Bridge
- Campground
- Campground (Proposed)
- Cemetery
- Church
- City Hall
- Community Center
- Community Library
- Community Library (Proposed Expansion)
- Community Library (Proposed)
- Community Park
- Community Park (Proposed Expansion)
- Community Park (Proposed)
- Community Transit Center
- Convalescent Hospital
- Correctional Facility
- Cultural / Historic Site (Proposed)
- Cultural / Historical Site
- Cultural Arts Center
- DMV DMV Office
- DWP DWP
- DWP Pumping Station
- Equestrian Center
- Fire Department Headquarters
- Fire Station
- Fire Station (Proposed Expansion)
- Fire Station (Proposed)
- Fire Supply & Maintenance
- Fire Training Site
- Fireboat Station
- Health Center / Medical Facility
- Heliport
- Historic Monument
- Historical / Cultural Monument
- Horsekeeping Area
- Horsekeeping Area (Proposed)
- Horticultural Center
- Hospital
- Hospital (Proposed)
- House of Worship
- Important Ecological Area
- Important Ecological Area (Proposed)
- Interpretive Center (Proposed)
- Junior College
- MTA / Metrolink Station
- MTA Station
- MTA Stop
- MWD MWD Headquarters
- Maintenance Yard
- Municipal Office Building
- Municipal Parking Lot
- Neighborhood Park
- Neighborhood Park (Proposed Expansion)
- Neighborhood Park (Proposed)
- Oil Collection Center
- Parking Enforcement
- Police Headquarters
- Police Station
- Police Station (Proposed Expansion)
- Police Station (Proposed)
- Police Training Site
- Post Office
- Power Distribution Station
- Power Distribution Station (Proposed)
- Power Receiving Station
- Power Receiving Station (Proposed)
- Private College
- Private Elementary School
- Private Golf Course
- Private Golf Course (Proposed)
- Private Junior High School
- Private Pre-School
- Private Recreation & Cultural Facility
- Private Senior High School
- Private Special School
- Public Elementary (Proposed Expansion)
- Public Elementary School
- Public Elementary School (Proposed)
- Public Golf Course
- Public Golf Course (Proposed)
- Public Housing
- Public Housing (Proposed Expansion)
- Public Junior High School
- Public Junior High School (Proposed)
- Public Middle School
- Public Senior High School
- Public Senior High School (Proposed)
- Pumping Station
- Pumping Station (Proposed)
- Refuse Collection Center
- Regional Library
- Regional Library (Proposed Expansion)
- Regional Library (Proposed)
- Regional Park
- Regional Park (Proposed)
- Residential Plan Development
- Scenic View Site
- Scenic View Site (Proposed)
- School District Headquarters
- School Unspecified Loc/Type (Proposed)
- Skill Center
- Social Services
- Special Feature
- Special Recreation (a)
- Special School Facility
- Special School Facility (Proposed)
- Steam Plant
- Surface Mining
- Trail & Assembly Area
- Trail & Assembly Area (Proposed)
- Utility Yard
- Water Tank Reservoir
- Wildlife Migration Corridor
- Wildlife Preserve Gate

D1. Response to Comments

500 FT. SCHOOL/PARK ZONE

- | | |
|---|--|
|  Existing School/Park Site |  Opportunity School |
|  Planned School/Park Site |  Other Facilities |
|  Inside 500 Ft. Buffer |  Park / Recreation Centers |
|  Aquatic Facilities |  Parks |
|  Beaches |  Performing / Visual Arts Centers |
|  Charter School |  Recreation Centers |
|  Child Care Centers |  Span School |
|  Elementary School |  Special Education School |
|  Golf Course |  Senior Citizen Centers |
|  High School |  Skate Parks |
|  Historic Sites | |
|  Horticulture/Gardens | |
|  Middle School | |

COASTAL ZONES

-  Dual Jurisdictional Coastal Zone
-  Calvo Exclusion Area
-  Coastal Zone Commission Authority

OTHER SYMBOLS

- | | | |
|--|---|---|
|  Lot Line |  Airport Hazard Zone |  Flood Zone |
|  Tract Line |  Census Tract |  Hazardous Waste |
|  Lot Cut |  Coastal Zone |  High Wind Zone |
|  Easement |  Council District |  Hillside Grading |
|  Zone Boundary |  LADBS District Office |  Historic Preservation Overlay Zone |
|  Building Line |  Downtown Parking |  Specific Plan Area |
|  Lot Split |  Fault Zone |  Very High Fire Hazard Severity Zone |
|  Community Driveway |  Fire District No. 1 |  Oil Wells |
|  Tract Map | | |
|  Parcel Map | | |
|  Lot Ties | | |
|  Building Outlines | | |

D1. Response to Comments

E19/2015

Baker Commodities Marks a Milestone | October 2012 | 2012 Issues | Past Articles | Render Magazine



Baker Commodities Marks a Milestone

This is a big year for Baker Commodities, Inc. Founded in 1997, one of the nation's leading providers of rendering and grease removal services is celebrating 75 years of being in business, and the three generations that run the company today couldn't be any prouder.

Baker Commodities' story begins in 1926 when three brothers – Frank, Paul, and Yarney Jerome – started a fertilizer hauling business in a suburb of Los Angeles, CA. They moved their venture to the Imperial Valley four years later and seven years after that move, they were a player in the rendering industry.

To service the dairies located in the Imperial Valley, the Jeromes began collecting dead stock in a 1921 Studebaker touring car. Their "mother" plant consisted of an open tank filled with water that was heated to boiling with live steam. The dead stock was skinned and then boiled to render the fat. The fat was then barreled and, along with the hides, sold in Los Angeles. Considering this was 1927, it took the brothers nearly two days to process one cow.

Jump forward to today. What the Jeromes started back then is now a completely sustainable nationwide company, collecting and recycling animal by-products and used cooking oil via its network of facilities and service providers across the United States.

In the Beginning

Once the Jeromes began their rendering business, it didn't take long for them to expand. Within 25 years of that first cow being rendered, the Jeromes had opened rendering plants and hog farms in Arizona and New Mexico; began a solvent extraction plant in Southern California; acquired rendering, tallow, and packing operations, including one in Honolulu, HI, and sailed across the sea, shipping their tallow to the Orient.

One of those key purchases occurred in 1948. Frank Jerome and his brothers bought a defunct rendering business named Baker Rendering Company, previously owned by Phil Baker. The property was converted to a fish reduction plant and named Harbor By-Products, which became a subsidiary of Baker Rendering Company. Baker Rendering was relocated to Bantini Boulevard in Vernon, CA, just down the street from where Baker Commodities, Inc. is headquartered today.

As the business grew, Frank Jerome realized he needed qualified employees. From 1950 until 1960, he hired several key individuals who would eventually become part of the Baker family. One of these key employees was Jim Andreoli, who was hired in 1951 as a chief accountant, leaving his position at a public accounting firm.

Since mechanization of existing facilities and new construction was important to the company at this time, Frank Jerome became acquainted with Jack Keith, an engineer who,

Caring to the
Pet Food Market



October 2012 Issue [pdf]

<http://www.rendermagazine.com/articles/2012-issues/october-2012-baker-commodities-marks-a-milestone/>

1/2

D1. Response to Comments

5/19/2015

Baker Commodities Marks a Milestone | October 2012 | 2012 Issues | Past Articles | RENDER Magazine

together with the firm's, formed Keith Engineering Company. That business was instrumental in developing new rendering processes beneficial to Baker, including the first continuous rendering system that revolutionized the industry in 1960. Keith Engineering also developed the Keith press, which later became known as the Duke presser when Keith Engineering was sold to The Dupps Company.

In 1961, the firm's formed Baker Commodities, Inc., naming the brothers and a few pivotal employees as owners.

Growth Continues

From 1961 until the mid-1980s, Baker acquired a number of small rendering companies, primarily in California. In 1974, Baker ventured into the Korean market by establishing Seonyong Baker Tank Terminal in Incheon, Korea, with Sam Yang Foods as co-owner.

In 1976, Baker Commodities was sold to Canadian Pacific Enterprises, a subsidiary of Canadian Pacific Railroad. Under this new ownership, the growth continued, including the acquisition of Coreneo Corporation, which was headquartered outside Boston, MA. Coreneo was originally formed as Lowell Fertilizer Company in 1898 by the Swift family, owners of Swift Meat Packing.

In 1982, Baker purchased several rendering companies in New York, including a plant in Rochester (Wm. Slapwoback, Inc.) that began operations in 1892 as A-Peterson.

Andyolt, who was a key player when Baker first incorporated, became a notable part of the company's history when he reacquired Baker from Canadian Pacific in 1985. It was at this same time that his three sons, Jim, Jr., Tony, and Andy, became renderers alongside their father.

Under Jim Andyolt's leadership, Baker Commodities continued to thrive, acquiring additional companies throughout the western United States and on the East Coast. Baker is both a manufacturer and a merchandiser, not only selling its own products of tallow, food fat, and meal, and bone meal, but also buying products from other renderers for resale.

Baker prides itself on utilizing the latest technology, not only in processing its materials, but controlling odor. With plants located in the heart of major cities, several of which are situated in residential neighborhoods, Baker has remained vigilant in applying good rendering practices and using the best odor control technology to prevent and control odors. The company has also remained proactive with local citizens groups and governmental agencies.

Baker is also completely committed to being a 100 percent sustainable company, recycling everything it picks up, and turning it into other materials such as high-energy fats and high-quality protein ingredients that supplement the diet and help efficient production of beef, veal, pork, poultry, fish, eggs, and milk. The renderer's facilities also convert used cooking oil into yellow grease, a key ingredient in biodiesel fuels.

Today, as three generations of the Andyolt family – Jim Andyolt, his three sons, and their sons – celebrate 75 years of being in business, they also celebrate 75 years of "Rendering for Life." Ensuring that the environment is protected for many generations to come.

October 2012 RENDER | back

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<http://www.rendermagazine.com/articles/2012-issues/october-2012/baker-commodities-marks-a-milestone/>

2/2

D1. Response to Comments

ATTACHMENT 5 | 3.3-38

D1. Response to Comments

6/18/2015
Facility Information Detail



Facility Information Detail (FIND)

NOV/NC Details

| | | | | | | | |
|---------------|--------|----------------|----------|------------|-----------|-------------|-----|
| Notice Number | P25180 | Violation Date | 9/3/1998 | Issue Date | 3/25/1999 | Notice Type | NOV |
|---------------|--------|----------------|----------|------------|-----------|-------------|-----|

Facility ID: 800016
 Company Name: BAKER COMMODITIES INC
 Address: 3648 BANDINI #100
 VERNON, LA 90023

Violation Description: ISSUE OF ODOR CONTAMINANTS SUCH THAT DISTURBANCE OF HEALTH, SAFETY, REPOSE AND COMFORT OF MULTIPLE COMPLAINANTS

Equipment Description:
 Follow Up Status:
 Disposition: Closed Case
 Disposition Date: 3/25/1999

| | | |
|--|-------|----------|
| | 402 | Nuisance |
| | 41700 | Nuisance |

http://www3.aqmd.gov/webapp/fin/prog/ncydetail.aspx?novic=P25180¬ice_type=NOV&fac_id=800016

1/1

D1. Response to Comments

6/19/2015
Facility Information Detail



Facility Information Detail (FIND)

NOV/NC Details

| | | | | | | | |
|---------------|--------|----------------|-----------|------------|-----------|-------------|-----|
| Notice Number | P13889 | Violation Date | 8/23/1996 | Issue Date | 11/4/1997 | Notice Type | NOV |
|---------------|--------|----------------|-----------|------------|-----------|-------------|-----|

| | |
|-----------------------|---|
| Facility ID | 800016 |
| Company Name | BAKER COMMODITIES INC |
| Address | 3848 410 BANDINI VERNON, CA 90023 |
| Violation Description | PUBLIC NUISANCE CAUSED BY FOUL ODORS EMITTED FROM A RENDERING OPERATION |
| Equipment Description | |
| Follow Up Status | |
| Disposition | Closed Case |
| Disposition Date | 11/4/1997 |

| | | |
|--|-------|----------|
| | 402 | Nuisance |
| | 41700 | Nuisance |

http://www3.aqmd.gov/webapp/finm/prog/ncv/detail.aspx?ncvno=P13889¬ice_type=NOV&fac_id=800016

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D1. Response to Comments

ATTACHMENT 6 | 3.3-39

D1. Response to Comments



HEALTH & ENVIRONMENTAL CONTROL DEPARTMENT
Leonard Grossberg, Director / Health Officer
4305 Santa Fe Avenue, Vernon, California 90058
Telephone (323) 583-8811
June 15, 2015

Clougherty Packing, LLC
3049 E. Vernon Ave.
Vernon, CA 90058
Attn: Hector Garcia, Environmental Eng.

Subject: Review of Public Nuisance Complaints for Rendering Odors

Dear Mr. Garcia,

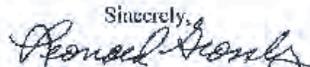
Thanks you for referencing the California Civil Law, Division 4, Part 3, Title 1, Section 3482.6 which prohibits the enacting of nuisance laws when a facility that has been in operation has not had nuisance complaints filed against them within the first 3 years of existence.

A search of our files did not find any complaints specifically filed for any of the rendering facilities in Vernon during the time frame of when they first were issued operating permits. As you may be aware, many of the rendering facilities operating in Vernon have been in operation for over 50 years!

While Vernon has been an industrial city since it was incorporated in 1905, it was set-up to facilitate industries from impacting and creating nuisances to the nearby communities. Encroachment over the years has driven homes closer to Vernon, yet we are working closely with businesses to be better neighbors and be mindful of emissions that may be of nuisance. In most cases, these emissions are not hazardous by definition, and have no adverse health effects known or that can be measured.

We agree with your conclusions that the proposed Rule 415 Rulemaking currently under process may be in conflict with this section of the law, and should be brought to the attention of the South Coast Air Quality Management Board (SCAQMD) as soon as possible.

Please feel free to contact me if you have any questions.

Sincerely,

Leonard Grossberg, MPA, REHS
Director / Health Officer

Xc: SCAQMD, 21865 E. Copely Dr., Diamond Bar, CA 91765, Attn: Tracy Goss

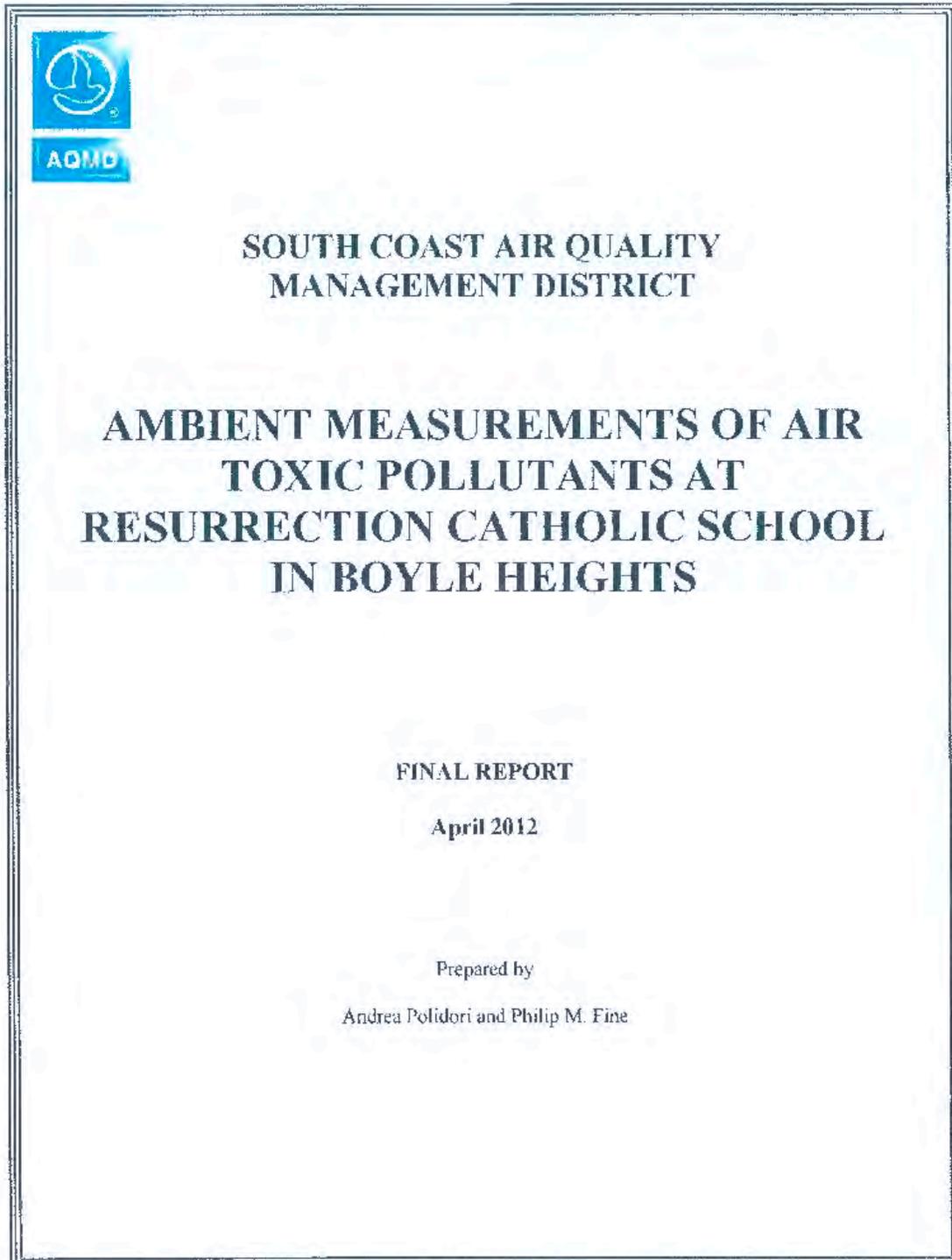
9cLG3MyDces72/COV/Su/fakubllty/Nuisance.odor ltr.doc

Exclusively Industrial

D1. Response to Comments

ATTACHMENT 7 | 33-40

D1. Response to Comments



D1. Response to Comments

TABLE OF CONTENTS

| | |
|---|------------|
| SUMMARY REPORT..... | 1 |
| BACKGROUND AND OBJECTIVES..... | 1 |
| METHODS..... | 1 |
| RESULTS..... | 2 |
| CONCLUSIONS..... | 9 |
| | |
| APPENDIX A: TECHNICAL ANALYSIS..... | A-1 |
| INTRODUCTION..... | A-1 |
| METHODS..... | A-3 |
| Study Design..... | A-3 |
| Measured Pollutants..... | A-4 |
| Measurement Techniques..... | A-4 |
| RESULTS AND DISCUSSION..... | A-6 |
| Meteorology..... | A-6 |
| Coarse Particulate Matter..... | A-7 |
| Fine Particulate Matter, Elemental Carbon Content and Diesel Emissions..... | A-9 |
| Total Suspended Particulate Lead..... | A-14 |
| Trace Elements..... | A-17 |
| Hexavalent Chromium..... | A-19 |
| Volatile Organic Compounds and Carbonyls..... | A-21 |
| ACKNOWLEDGEMENTS..... | A-26 |
| REFERENCES..... | A-26 |
| | |
| APPENDIX B: TRACE ELEMENT DATA..... | B-1 |
| APPENDIX C: VOC AND CARBONYL DATA..... | C-1 |

D1. Response to Comments

SUMMARY REPORT

BACKGROUND AND OBJECTIVES

Boyle Heights is a neighborhood located on the eastern bank of the Los Angeles River, east of downtown Los Angeles. The extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights, allowing access to the Golden State (I-5), Hollywood (U.S. Route 101), Pomona (SR 60), San Bernardino (I-10), Santa Ana (I-5), and Santa Monica (I-10) freeways. The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of Long Beach and Los Angeles. Boyle Heights is also bordered by heavy industrial areas such as the city of Vernon, home to facilities such as Exide Technologies (a lead-acid battery recycling facility) and rendering plants such as Baker Commodities, D&D Disposal Inc, West Coast Rendering, and Darling International. Local residents and community groups have expressed concern about increased levels of air toxics emitted from on-road and off-road vehicles (heavy duty diesel trucks and trains in particular) and industrial facilities, and the potential health consequences related to exposure to such pollutants, especially among children.

Following numerous requests from concerned residents and community leaders, AQMD began a comprehensive year-long monitoring study in April of 2009 of air toxic levels at the Resurrection Catholic School in Boyle Heights, in an area impacted by both local and regional pollution sources. This report discusses the air quality data collected at the Resurrection School and compares them to those obtained in other parts of the South Coast Air Basin during the same time period.

METHODS

Sampling was conducted from 04/01/09 to 06/01/10 at a monitoring station located in the parking lot of the Resurrection Catholic School (3324 East Opal Street, Los Angeles, CA 90023), about 320 m south of the intersection between the Interstate 5 (I-5) and South Lorena Street (Figure 1). The monitors at Resurrection were located immediately above and only a few meters from East 8th Street. Thus, the measured levels may reflect this very local traffic influence that does not exist to the same extent in other areas of Los Angeles. Since many residents in Boyle Heights, including the children at Resurrection School, live, work or play in similar proximity to traffic sources, the Resurrection site can be considered representative of typical exposures in the area. Several particle and gaseous pollutants were monitored at this location including: fine and coarse particulate matter (PM_{2.5} and PM₁₀, respectively), elemental carbon (EC, an indicator of diesel particulate emissions), hexavalent chromium (Cr⁶⁺), lead (Pb), volatile organic compounds (VOCs) and carbonyl compounds. Data collected at the Resurrection School site were then compared to those obtained at the Central Los Angeles and Rubidoux monitoring stations during the same time period. The Central Los Angeles and Rubidoux sites are two permanent AQMD's network stations used to monitor air quality where air toxics are measured year-round.

D1. Response to Comments

Figure 1 Map showing the locations of the Resurrection School, Central Los Angeles and Rubidoux monitoring sites. A picture of the measurement station used at the Resurrection School is also included



RESULTS

The air pollutant known as particulate matter (PM) is made up of microscopic particles that can be inhaled into the lung and is known to have serious health impacts. Particulate matter is a criteria pollutant regulated by the U.S. EPA based on the size of the particles. All particles less than 10 microns (μm) in diameter are known as PM_{10} (or coarse particles) and particles less than 2.5 μm in diameter are known as $\text{PM}_{2.5}$ (or fine particles). One micron is 1000 times smaller than a millimeter.

The study average PM_{10} mass concentration at the Resurrection School site ($33.0 \mu\text{g}/\text{m}^3$) was similar to that in Central Los Angeles ($31.3 \mu\text{g}/\text{m}^3$), and both were lower than the corresponding value measured in Rubidoux ($40.7 \mu\text{g}/\text{m}^3$), probably because of increased re-suspension of dust particles at the latter location (Figure 2a). Because of the larger size of coarse particles, the coarse portion (2.5 to 10 μm) of PM_{10} particles is generally not transported far away from its source, except under high wind conditions. All daily average PM_{10} levels observed during this study were well below the U.S. EPA National Ambient Air Quality Standard (NAAQS) for this pollutant, which is $150 \mu\text{g}/\text{m}^3$ over a 24-hour period.

The study average $\text{PM}_{2.5}$ level at the Resurrection School site ($16.3 \mu\text{g}/\text{m}^3$) was slightly higher than that observed in Central Los Angeles ($14.7 \mu\text{g}/\text{m}^3$). This difference may be due to the fact that a different sampling method was used to measure $\text{PM}_{2.5}$ at the Resurrection School site than at the Central Los Angeles (and Rubidoux) stations. This method is known to read slightly higher values (Figure 2b, see Appendix A for further details). However, the highest study

D1. Response to Comments

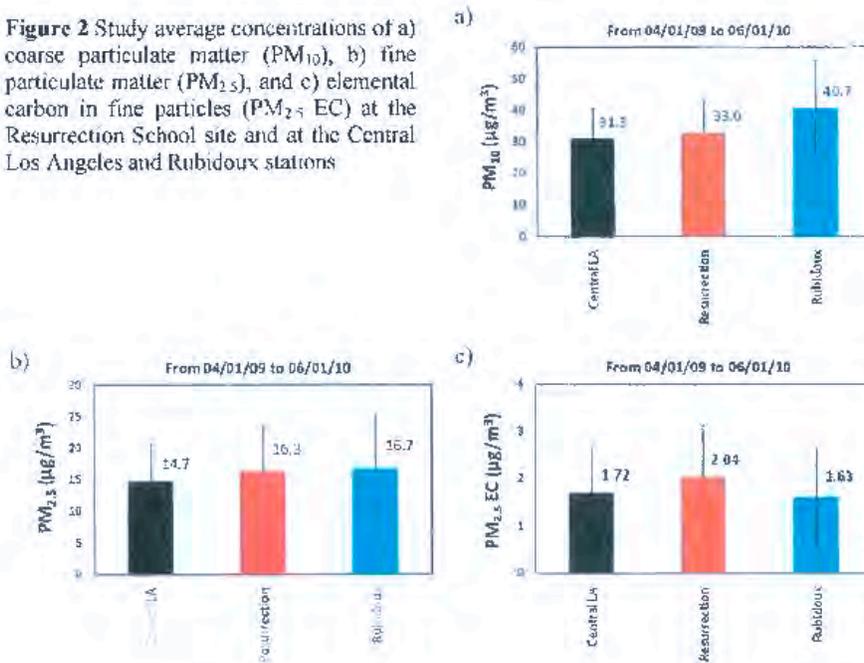
average $PM_{2.5}$ mass concentration was measured in Rubidoux ($16.7 \mu\text{g}/\text{m}^3$), probably because the atmospheric levels of this air pollutant is primarily influenced by regional particles that are formed chemically in the atmosphere. However, emissions from motor vehicles, industrial facilities and other local PM contributions can also be important. The study average $PM_{2.5}$ concentration at both the Resurrection School and Rubidoux stations exceeded the annual NAAQS for this pollutant set by the U.S. EPA ($15 \mu\text{g}/\text{m}^3$). Also, the daily average $PM_{2.5}$ levels at these two locations were higher than the corresponding 24-hr average NAAQS ($35 \mu\text{g}/\text{m}^3$) on more than one occasion.

The study average concentration of EC found in fine particles ($PM_{2.5}$ EC) was slightly higher at the Resurrection School site ($2.04 \mu\text{g}/\text{m}^3$) than at the Central Los Angeles and Rubidoux stations (1.72 and $1.63 \mu\text{g}/\text{m}^3$, respectively) (Figure 2c). Elemental carbon is an indicator of diesel PM, considered by the State of California to be an air toxic. Although the EC levels at Resurrection School are similar to those observed in other dense urban areas of the Los Angeles Basin, they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.

Fine PM samples were analyzed for their chemical composition, which can provide information on the origin of the particles. The $PM_{2.5}$ collected at the Resurrection Church, Central Los Angeles and Rubidoux stations had a similar chemical composition, probably because of the presence of similar emission sources at all three locations (Figure 3). There were slightly higher levels of crustal material and nitrate at Rubidoux as expected for an inland, dustier location. Higher levels of EC at Resurrection and Central Los Angeles reflect the proximity of those sites to diesel sources.

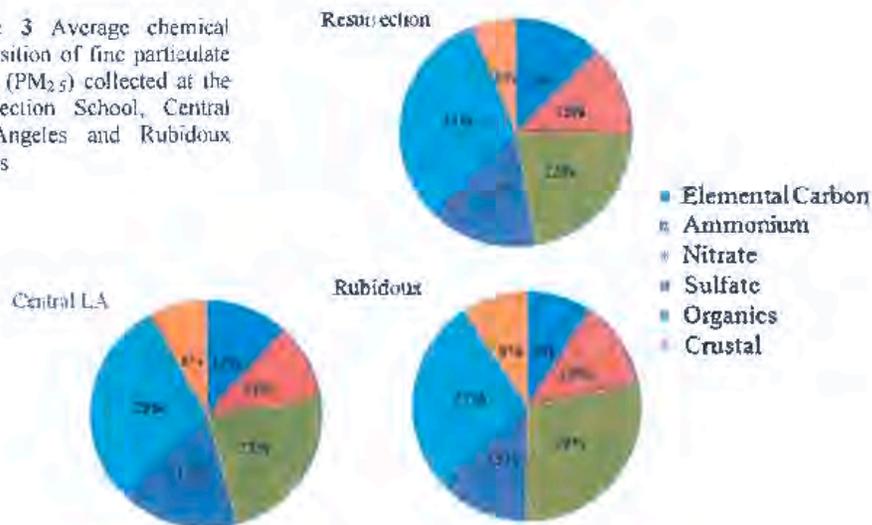
D1. Response to Comments

Figure 2 Study average concentrations of a) coarse particulate matter (PM₁₀), b) fine particulate matter (PM_{2.5}), and c) elemental carbon in fine particles (PM_{2.5} EC) at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



D1. Response to Comments

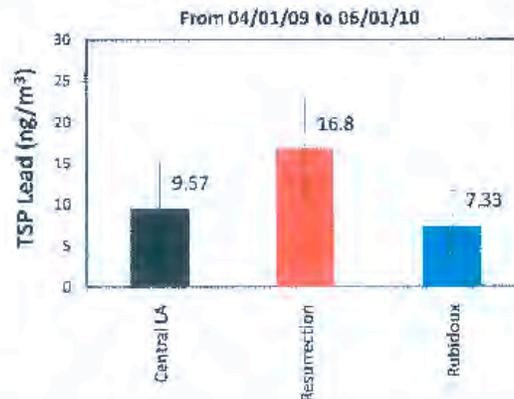
Figure 3 Average chemical composition of fine particulate matter (PM_{2.5}) collected at the Resurrection School, Central Los Angeles and Rubidoux stations



Airborne lead is measured by collecting and analyzing all particulate in the air, known as total suspended particulate (TSP). Like PM, airborne lead is regulated by the U.S. EPA with associated NAAQS. The highest study average lead concentration (16.8 ng/m^3) was measured at the Resurrection School site. The corresponding average lead levels at the Central Los Angeles and Rubidoux stations during the same time period were 9.6 and 7.3 ng/m^3 (Figure 4). Increased lead concentrations in the Boyle Heights area may be due to re-suspension of historically deposited dust accumulated on or near the nearby freeways. While lead has been completely removed from gasoline for over 30 years, some studies have shown higher lead levels leftover in soils next to busy roadways. Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blew from the Exide plant toward the Resurrection School site. In addition, the lead data collected at the Resurrection School site are not well correlated to those measured right next to the Exide plant during the same time period. In October 2008 the U.S. EPA strengthened the NAAQS for lead, lowering it from 1500 ng/m^3 (quarterly average) to a more stringent 150 ng/m^3 (rolling 3-month average). Although higher than the other sites, the lead levels at Resurrection School were still very low and none of the daily average or three-month average concentrations measured at the three monitoring sites during this study were close to or above the current NAAQS for lead.

D1. Response to Comments

Figure 4 Study average total suspended particulate (TSP) lead concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



Most of the trace elements in the particles measured at all three monitoring stations mainly originate from mechanical processes such as vehicle brake or engine wear (Fe) or from re-suspension of crustal materials (i.e. Mg, Ca, K, Fe, Si, and Al), and their concentrations were well within those reported in previous studies conducted in urban areas. Arsenic (As), Chromium (Cr) and other toxic trace elements were either not detected or were present in concentrations close to urban background levels. Sulfur (S), typically generated from combustion of sulfur-containing fuel and emitted as sulfate or SO₂, was the most abundant trace element in all collected samples (Figure 5).

The study average Cr⁶⁺ level at the Resurrection School site (0.11 ng/m³) was similar to that measured in Central Los Angeles and in Rubidoux (0.10 and 0.11 ng/m³, respectively) (Figure 6). These levels are consistent with what is considered the urban background in Southern California, and thus do not indicate the presence of any local sources of hexavalent chromium.

D1. Response to Comments

Figure 5 Study average concentrations of selected trace elements in PM_{2.5} samples collected at the Resurrection School site and at the Central Los Angeles and Rubidoux stations.

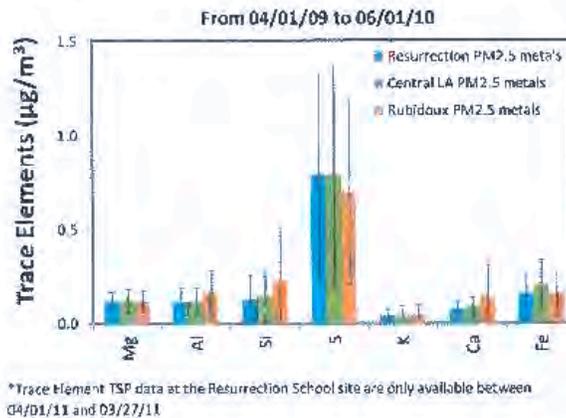
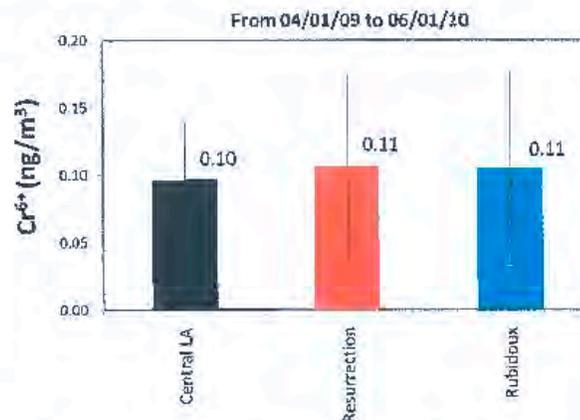


Figure 6 Study average hexavalent chromium (Cr⁶⁺) concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations.

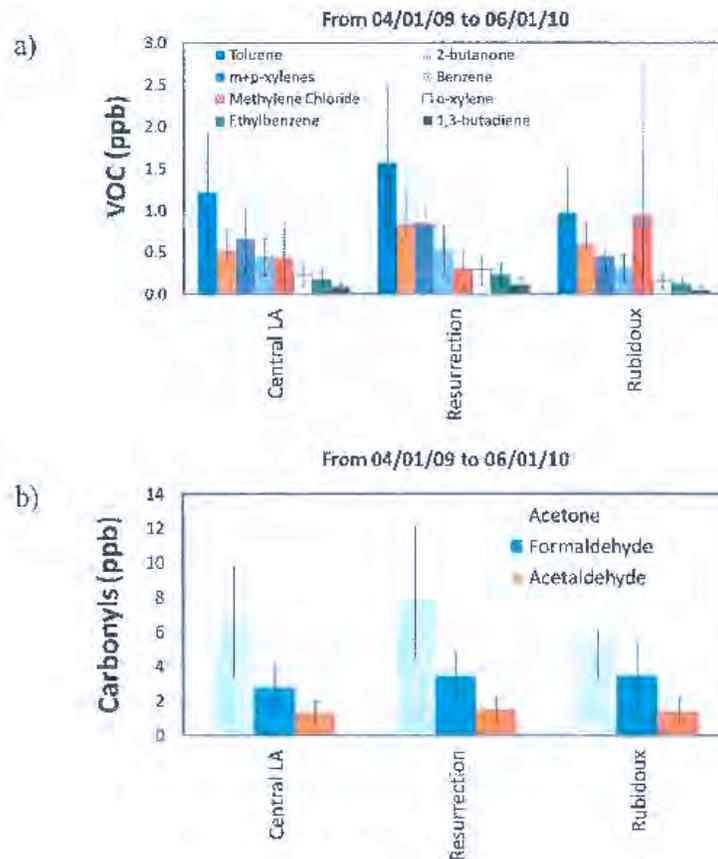


Volatile organic compounds and carbonyls are organic gases, some of which are considered air toxics. They are emitted from a variety of sources, including motor vehicles and industrial facilities. With the exception of methylene chloride, the concentrations of the most abundant VOCs and carbonyls measured at the Resurrection School site were comparable to those observed at the other two monitoring stations in Central Los Angeles and Rubidoux.

D1. Response to Comments

(Figure 7). This is probably because gaseous emissions from motor vehicles are likely to be the predominant source of these volatile species at all three monitored locations and throughout the entire South Coast Air Basin. The slightly higher atmospheric levels of toluene, 2-butanone, m+p-xylenes and other VOCs measured at Resurrection School might be explained by the close proximity of this site to the I-5 and/or to nearby surface streets. The potential contribution of emissions from nearby industrial facilities cannot be excluded, but this pattern of VOC levels is consistent with mobile source emissions.

Figure 7 Study average concentrations of a) selected volatile organic compounds (VOCs) and b) carbonyl compounds at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



D1. Response to Comments

CONCLUSIONS

Overall, the concentrations of all air pollutants measured at the Resurrection School site are similar to those found in other dense urban areas of Los Angeles dominated by motor vehicle emissions. The atmospheric levels of diesel PM and VOCs were higher than those observed in Central Los Angeles and Rubidoux, likely due to the very close proximity of the Resurrection School site to the I-5 and busy surface streets.

Lead concentrations were higher at Resurrection School than in Central Los Angeles and Rubidoux, but almost nine times below (on average) the Federal Standard set by the U.S. EPA for this air toxic ($0.15 \mu\text{g}/\text{m}^3$). Emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility cannot be ruled out. However, other historical sources such as re-suspension of dust accumulated on nearby roadways may be responsible for the slightly elevated lead levels at Resurrection School.

D1. Response to Comments

APPENDIX A: TECHNICAL ANALYSIS

INTRODUCTION

Boyle Heights is a neighborhood located on the eastern bank of the Los Angeles River, east of downtown Los Angeles. The extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights, allowing access to the Golden State (I-5), Hollywood (U.S. Route 101), Pomona (SR 60), San Bernardino (I-10), Santa Ana (I-5), and Santa Monica (I-10) freeways. The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of Long Beach and Los Angeles. Boyle Heights is also bordered by heavy industrial areas such as the city of Vernon, home to facilities such as Exide Technologies (a lead-acid battery recycling facility) and rendering plants such as Baker Commodities, D&D Disposal Inc, West Coast Rendering, and Darling International. Local residents and community groups have expressed concern about increased levels of air toxics emitted from on-road and off-road vehicles (heavy duty diesel trucks and train traffic in particular, and industrial facilities), and the potential health consequences related to exposure to such pollutants, especially among children.

In the fall of 2007, the South Coast Air Quality Management District began a focused investigation of lead emissions at Exide Technologies following public complaints alleging particulate and dust fallout from the plant. AQMD placed several new particulate sample collection plates around the facility and, based on detection of lead in the collected samples, installed additional air monitors near the plant and began collecting ambient air data continuously from November 2007. Air monitoring results found that the facility violated National Ambient Air Quality Standards (NAAQS) for lead during the five month period of December 2007 through April 2008. Since then, AQMD has held several town hall meetings in the communities surrounding this plant to discuss the air pollution control measures it has imposed on Exide Technologies and to share monitoring data collected near the facility. Lead samples are still being collected in and around Exide, and actions have been taken by AQMD to reduce the atmospheric concentrations of this air toxic below the federal standard, including adoption of a new rule (AQMD Rule 1420.1) focused specifically on lead acid battery recycling facilities. It should be noted that since the majority of lead is found in particles that are relative large in size, the atmospheric concentration of this species decreases steeply away from the Exide facility because of particle deposition, and levels measured in the surrounding residential neighborhoods continue to be very low. Also, despite the presence of these and other industrial air pollution sources, emissions from cars and trucks from major freeways and minor roads surrounding the Boyle Heights community continue to be the main air-quality concern in this area and throughout the entire South Coast Air Basin.

Following numerous requests from concerned residents and community groups, AQMD began a comprehensive year-long monitoring study in April of 2009 of air toxic levels at the Resurrection Catholic School (3324 East Opal Street) in Boyle Heights, in an area impacted by both local and regional pollution sources. The approximately year-long field study was completed on 06/01/10. A wide array of particle and gaseous pollutants were monitored at this location including:

D1. Response to Comments

- Fine Particulate Matter ($PM_{2.5}$, particles with an aerodynamic diameter less than $2.5 \mu m$): sources of $PM_{2.5}$ include emissions from motor vehicles, power plants, residential wood burning, and other combustion activities. Fine particles have well established health effects, including multiple adverse respiratory and cardiovascular outcomes. $PM_{2.5}$ is a U.S. Environmental Protection Agency (U.S. EPA) criteria pollutant for which there exist NAAQS.
- PM_{10} (particles with an aerodynamic diameter less than $10 \mu m$): PM_{10} includes all $PM_{2.5}$ particles, but also larger “coarse” particles between 2.5 and $10 \mu m$ in diameter. Sources of these coarse particles include crushing or grinding operations, re-suspension of dust from vehicles traveling on roads, and other mechanical processes. PM_{10} is also a U.S. EPA criteria pollutant and has associated NAAQS.
- Elemental Carbon (EC; sometimes referred to as soot; related closely to black carbon or BC): EC is a component of PM and is formed through the incomplete combustion of fossil fuels and biomass. It is emitted from both natural and anthropogenic sources. The majority of EC and BC in Southern California comes from diesel particulate matter (DPM) emissions. DPM is considered an air toxic by the State of California, and the SCAQMD has recently estimated that DPM accounts for more than 80% of the total cancer risk from air toxics in the South Coast Air Basin (MATES III; South Coast AQMD, 2008).
- Hexavalent Chromium (Cr^{6+}): chromium is a natural constituent of the earth’s crust and is present in several oxidation states. While trivalent chromium (Cr^{3+}) is naturally occurring and poses no risk to human health, Cr^{6+} is emitted from a number of commercial and industrial sources (e.g. chrome plating operations, cement manufacturing) and it has been associated with lung cancer and other respiratory problems. Hexavalent chromium (Cr^{6+}) is one of the top four pollutants of concern in the U.S. EPA National Air Toxics Trends Stations (NATTS) Program.
- Total Suspended Particulate Lead (Pb): in the past, motor vehicles were the major contributor of lead emissions to the air. Because of regulatory efforts to remove lead from on-road motor vehicle gasoline, lead emissions from the transportation sector have greatly declined over the past two decades. Today the major sources of lead emissions are metal processing facilities (e.g. incinerators and lead-acid battery manufacturers) and piston-engine aircraft operating on leaded aviation gasoline. Lead exposure can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead is also a U.S. EPA criteria pollutant and has associated NAAQS.
- Volatile Organic Compounds (VOCs) and carbonyls: these gases are emitted by a variety of evaporative processes and combustion sources, including paints, cleaning supplies, pesticides, building materials, household products, refineries, and mobile sources. Given some of the indoor sources, concentrations of many VOCs may be much higher indoors than outdoors (Jia et al., 2007; Bruno et al., 2008). Gasoline and diesel fuels are also important sources of VOCs. Exposure to many of these organic contaminants has also been associated with a wide array of toxic health effects.

D1. Response to Comments

METHODS**Study Design**

Sampling was conducted at a monitoring station located in the parking lot of the Resurrection Catholic School (3324 East Opal Street, Los Angeles, CA 90023), about 320 m South of the intersection between the Interstate 5 (I-5) and South Lorena Street (Figure 1). Measurements were conducted from 04/01/09 to 06/01/10 to capture seasonal variations of the targeted air pollutants. Data collected at the Resurrection School site were then compared to those obtained at the Central Los Angeles and Rubidoux monitoring stations during the same time period to study the spatial variability of the targeted pollutants. The Central Los Angeles and Rubidoux sites are the two permanent AQMD's network stations used to monitor air quality and where air toxics are measured year-round. The Central Los Angeles station (1630 North Main Street, Los Angeles, CA 90012) is about 5.3 km north of the Resurrection School site in a highly urban area with similar emission sources as the Resurrection site (Figure 1). However, the monitors at Resurrection were located immediately above and only a few meters from East 8th St. Thus, the measured levels may reflect this very local traffic influence that does not exist to the same extent at the Central Los Angeles station. Since many residents in Boyle Heights, including the children at Resurrection School, live, work or play in similar proximity to traffic sources, the Resurrection site can be considered representative of typical exposures in the area. The Rubidoux station (5888 Mission Blvd, Riverside, CA 92509) is located 73 km east of the Resurrection School in an area that is mostly impacted by air pollutants emitted from the greater Los Angeles region (including the Los Angeles-Long Beach port complex and numerous roadways and industrial sources) and transported inland by the prevailing winds.

Figure 1 Map showing the location of the Resurrection School site. A picture of the monitoring station used to measure the targeted pollutants is also included



A-3

D1. Response to Comments

Measured Pollutants

Table 1 shows a list of all particle and gaseous pollutants measured during this study. These species are among the most significant contributors to health risks related to exposure to air toxics in the South Coast Air Basin (MATES III, South Coast AQMD, 2008). Both continuous and integrated measurement techniques were used to collect/monitor these air pollutants. All integrated samples were collected on a 1-in-6 day schedule.

Table 1 List of the particle and gaseous species monitored during this study. Both continuous and integrated measurement techniques were used to collect/monitor all targeted pollutants

| Targeted Pollutants | | | |
|---|----------------------------------|-------------------------|--|
| Integrated Measurements | | Continuous Measurements | |
| PM ₁₀ mass | PM _{2.5} (non-FRM) mass | Black Carbon (BC) | Wind Speed (WS) Wind Direction (WD) |
| Organic Carbon (OC) | Volatile Organic Compounds (VOC) | | |
| Elemental Carbon (EC) | Carbonyls | | |
| Hexavalent Chromium (Cr ⁶⁺) | TSP Trace Metals (e.g. Lead) | | |

Measurement Techniques

Integrated (24-hr) PM₁₀ samples were collected on Quartz fiber filters by mean of a hi-volume FRM sampler (Lisch Environmental, Inc.) and then analyzed for gravimetric mass using an analytical micro-balance (Sartorius, Inc.). Integrated 24-hr PM_{2.5} samples were collected on Quartz and Teflon filters using a SASS PM_{2.5} speciation sampler (Met One, Inc.), and analyzed for: gravimetric mass (using an analytical micro-balance; Sartorius, Inc.), organic and elemental carbon (OC and EC, respectively), and trace metals. Carbon analysis for the determination of OC and EC was performed on small circular disks taken from the loaded PM_{2.5} quartz fiber filter samples. These disks were placed inside a heated furnace of a Thermal/Optical Carbon Analyzer (Desert Research Institute, Model 2001) one at the time and subjected to a programmed, step-wise temperature increase while helium gas (He) with varying amounts of oxygen was passed over the sample. This method (based on the IMPROVE protocol) uses a laser beam to monitor and correct, when necessary, the degree of oxidation or carbonization (pyrolysis) that occurs during the analysis. Because OC results may be affected by potential biases caused by sampling-related artifacts (i.e. excessive absorption of semi-volatile organic compounds on the sampling filter), they are not presented in this report. Metal analysis of PM_{2.5} samples was performed using a methodology based on IO-3 (Compendium of Methods for Inorganic Air Pollutants) implementing a combination of energy dispersive X-ray fluorescence (PANalytical Epsilon 5

D1. Response to Comments

Energy Dispersive X-Ray Fluorescence Spectrometer), and inductively coupled plasma mass spectrometry (Leco ICP-MS).

Twenty four hour Total Suspended Particulate (TSP) samples were collected on glass fiber filters by mean of high volume samplers (Tisch Environmental, Inc.). Loaded TSP filters from all sampling locations were then extracted with acid and analyzed for Lead using an Inductively Coupled Plasma Mass Spectrometer (ICP-MS; Leco Renaissance Time of Flight). In addition, integrated 24-hr VOC samples were collected using silica-lined 6-liter canisters connected to Xontec 910/912 multi-canister samplers. Targeted VOCs were identified and measured using Gas Chromatograph-Mass Spectrometer (GC/MS) method TO-15. Carbonyl compounds were sampled by drawing air through a DNPH (2, 4-Dinitrophenylhydrazine) cartridge attached to Xontec 924 samplers; carbonyls undergo derivatization upon contact with DNPH. The derivatives were extracted using acetonitrile and analyzed using Waters High Pressure Liquid Chromatography (HPLC) in accordance with U.S. EPA method TO-11. The HPLC system employed for the analysis of these samples consists of a Waters 2690 separation module and a Waters 996 Photodiode Array Detector. Samples for Cr⁶⁺ analysis were collected by drawing ambient air through cellulose filters impregnated with sodium bicarbonate using a Xontech 920 toxic air sampler. These filters were then extracted in de-ionized water via sonication and then filtered. The extract was analyzed by ion chromatography using a system that includes a UV-Vis detector. This method is based on a modification of the California Air Resources Board Hexavalent Chromium in Ambient Air Method CARB MLD-039.

Black carbon (BC, closely related to EC and also considered an indicator of diesel PM) measurements were taken at five minute intervals using portable Aethalometers (Magee Scientific Model AE42), which are based on light absorption of aerosol particles collected on a Quartz fiber filter tape mounted inside the instrument. The sample inlet probe was preceded by a PM_{2.5} sharp cut cyclone. One minute wind speed and wind direction data were obtained from a meteorological tower installed at the Resurrection School site. One and five minute data from the continuous instruments (Aethalometer and meteorological station) were recorded on a data logger and averaged to hourly values to allow for a easier interpretation of the results. All data files were periodically downloaded to a laptop computer and transferred to the AQMD's central database. A summary of the analytical methods that were used to measure the concentrations of all targeted chemical compounds is shown in Table 2.

D1. Response to Comments

Table 2 Sampling and analysis methods employed during this study. All integrated samples were collected on a 1-in-6 day schedule

| Ambient Species | Sampling Method | Analysis Method |
|--|--|---|
| <i>Integrated Measurements</i> | | |
| PM ₁₀ Mass | Hi-volume sampler | Analytical microbalance |
| PM _{2.5} Mass | SASS sampler | Analytical microbalance |
| Organic and Elemental Carbon (OC and EC) | SASS sampler | Thermal-optical carbon analyzer (IMPROVE method) |
| Trace Metals | SASS sampler | X-ray Fluorescence and Inductively Coupled Plasma Mass Spectrometry (ICP-MS) |
| TSP Lead | TSP Sampler | Inductively Coupled Plasma Mass Spectrometry (ICP-MS) |
| Volatile Organic Compounds (VOC) | Silica-lined Canisters | Gas Chromatography-Mass Spectrometry (GC-MS) with automated pre-concentration (TO-15) |
| Carbonyl Compounds | DNPH Cartridge | High Pressure Liquid Chromatography (HPLC) |
| Hexavalent Chromium (Cr ⁶⁺) | Sodium Bicarbonate impregnated cellulose filters | Ion Chromatography (modified CARB MLD-039) |
| <i>Continuous Measurements</i> | | |
| Black Carbon (BC) | Aethalometer (5 minute data) | Optical analysis method |

RESULTS AND DISCUSSION

The data collected at the Resurrection School site were examined for temporal patterns and compared to the corresponding values obtained at the Central Los Angeles and Rubidoux stations to better identify the influence of potential sources of air pollution near the Resurrection School. Also, the collected wind data were analyzed to better understand how local meteorology influences the atmospheric concentration of the measured air contaminants.

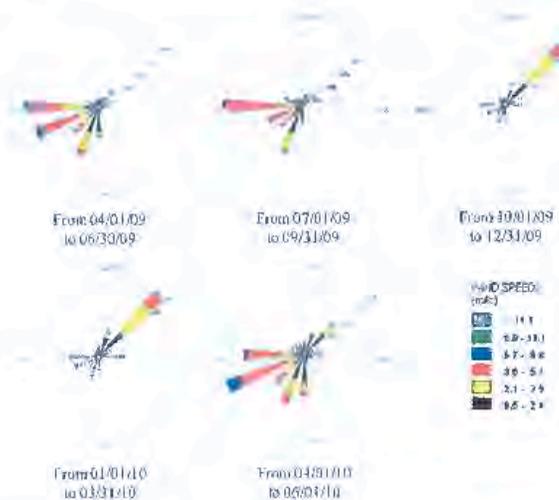
Meteorology

The wind roses shown in Figure 2 summarize the frequency distribution of wind speed and direction data over three-month periods. The spring (April through June) and summer (July through September) months (i.e., April through September) were characterized by predominantly westerly and west-southwesterly winds, typical of the daytime onshore sea-breezes in this part of the South Coast Air Basin. Conversely, the wind roses representative of colder fall and winter

D1. Response to Comments

conditions show the predominance of offshore flow from the northeast. This is characteristic of cold air drainage from the mountains to the ocean and it is typically observed this time of year. The stronger northeasterly winds indicate "Santa Ana" winds where high pressure over the deserts of the Great Basin cause cold air to cross the mountains, gaining momentum and warming as it moves down-slope. Santa Ana events bring low humidity and can be warmer or cooler depending on the temperature of the air-mass over the Great Basin deserts.

Figure 2 Wind roses showing three-month average wind speed and direction data from 04/01/09 to 06/01/10



Coarse Particulate Matter

The study average PM_{10} mass levels at the Resurrection School site and in Central Los Angeles (33.0 and 31.3 $\mu\text{g}/\text{m}^3$, respectively) were lower than the corresponding value measured in Rubidoux (40.7 $\mu\text{g}/\text{m}^3$, Table 3 and Figure 3), probably because of increased re-suspension of dust particles at the latter location and secondary aerosol formation in the downwind area. Because of its larger size, the coarse portion (2.5 to 10 μm) of PM_{10} particles is generally not transported far away from its source, except under high wind conditions.

The slightly higher PM_{10} levels observed at all three locations during the warmer months (Figure 4) are probably related to seasonal changes in meteorological conditions. Generally, during the summertime, consistent onshore sea-breeze winds can increase particle re-suspension, while strong temperature inversions limit mixing and solar insulation. High PM_{10} in the fall is typically related to Santa Ana winds. All daily average PM_{10} levels measured at the Resurrection School site and at the other two stations were well below the U.S. EPA NAAQS for PM_{10} (150 $\mu\text{g}/\text{m}^3$, not to be exceeded more than once per year on average over three years). On 10/28/09 the 24-hour average PM_{10} concentration measured at the Central Los Angeles (62 $\mu\text{g}/\text{m}^3$) and

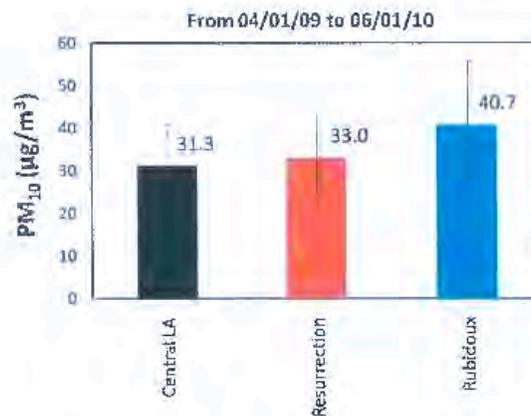
D1. Response to Comments

Resurrection School ($60 \mu\text{g}/\text{m}^3$) sites exceeded the corresponding California Ambient Air Quality Standard (CAAQS; $50 \mu\text{g}/\text{m}^3$). Between 08/29/09 and 11/03/09 the daily average PM_{10} levels at the Rubidoux station were between 60 and $77 \mu\text{g}/\text{m}^3$ on five different occasions. The study average PM_{10} concentrations at all three sites were above the corresponding annual average CAAQS ($20 \mu\text{g}/\text{m}^3$; annual arithmetic mean). PM_{10} levels higher than the CAAQS are common throughout the South Coast Air Basin. There is no longer an annual average NAAQS for PM_{10} .

Table 3 Average and median PM_{10} concentrations measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included

| | PM_{10} ($\mu\text{g}/\text{m}^3$) | | |
|---------|---|--------------|----------|
| | Central LA | Resurrection | Rubidoux |
| Average | 31.3 | 33.0 | 40.7 |
| Median | 31.6 | 32.0 | 41.0 |
| SD | 9.39 | 10.3 | 15.1 |
| Min | 10.0 | 12.0 | 12.0 |
| Max | 62.0 | 60.0 | 77.2 |
| Valid N | 69 | 69 | 71 |

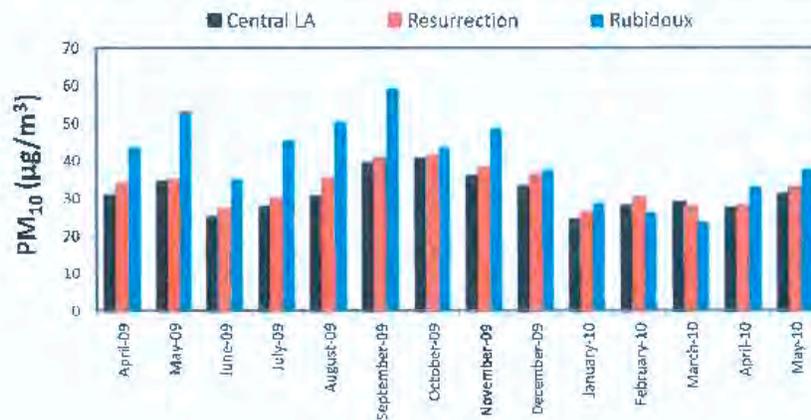
Figure 3 Study average PM_{10} concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar



A-8

D1. Response to Comments

Figure 4 Monthly average PM_{10} concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



Fine Particulate Matter, Elemental Carbon Content and Diesel Emissions

The study average $PM_{2.5}$ mass level at the Resurrection School site ($16.3 \mu\text{g}/\text{m}^3$) was slightly higher than that observed in Central Los Angeles ($14.7 \mu\text{g}/\text{m}^3$) but comparable to that measured in Rubidoux ($16.7 \mu\text{g}/\text{m}^3$) (Table 4; Figure 5). Note that the sampling method used to measure $PM_{2.5}$ mass at Resurrection School, the SASS speciation sampler, utilizes a different flow rate than the Federal Reference Method (FRM) samplers at Central Los Angeles and Rubidoux. This difference can lead to higher measured concentrations relative to the FRM as was observed in previous studies such as MATES III (South Coast AQMD, 2008). The observed difference is on the order of 10% and could explain the variation between Resurrection School and Central Los Angeles. The small difference may also be due to the fact that while the atmospheric concentration of $PM_{2.5}$ is primarily influenced by regional sources, emissions from motor vehicles, industrial facilities and other local PM contributions can also be important. The Resurrection Church site is located less than 350 m south of the I-5 (a highly trafficked highway), north of a large industrial area in the city of Vernon, and very near a city street. The presence of multiple air pollution sources near the Resurrection School site and the Boyle Heights neighborhood may contribute to increased atmospheric $PM_{2.5}$ levels slightly above those observed in downtown Los Angeles. Emissions from the most highly trafficked parts of Los Angeles (such as the Los Angeles-Long Beach port area and the transportation corridors), contribute to the increased $PM_{2.5}$ concentrations seen inland at sites such as Rubidoux. As they are transported inland by the prevailing winds, secondary particles are formed from gaseous PM precursors emitted from the upwind areas of the western South Coast Air Basin.

The monthly average $PM_{2.5}$ levels measured at all three stations (Figure 6) reveals that the temporal variation of this air pollutant was highly variable and did not consistently follow any specific seasonal pattern. The study average $PM_{2.5}$ concentration measured during this study was below the annual average NAAQS for $PM_{2.5}$ set by the U.S. EPA ($15 \mu\text{g}/\text{m}^3$) in Central Los Angeles, but exceeded the NAAQS concentration level at both the Resurrection School and

D1. Response to Comments

Rubidoux stations. The daily average PM_{2.5} levels at the Resurrection School site and in Rubidoux exceeded the corresponding 24-hr average NAAQS (35 µg/m³) on more than one occasion (Table 4). Note again that the NAAQS is based on FRM samplers, and the Resurrection Church site used a non-FRM method to measure PM_{2.5} mass.

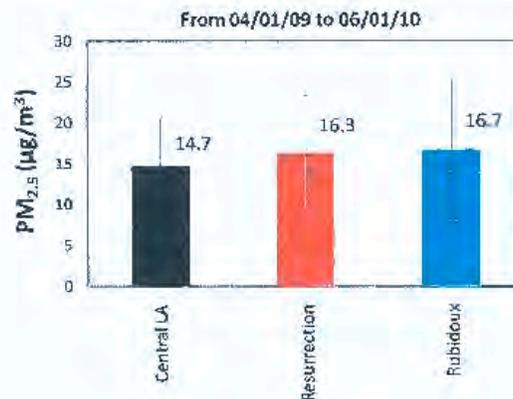
Table 4 Average and median PM_{2.5} concentrations measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), the total number of valid samples (Valid N), and the number of day above the 24-hour average NAAQS for PM_{2.5} are also included

| | PM _{2.5} (µg/m ³) | | |
|-----------|--|--------------|----------|
| | Central LA | Resurrection | Rubidoux |
| Average | 14.7 | 16.3 | 16.7 |
| Median | 14.2 | 15.4 | 15.9 |
| SD | 5.94 | 7.08 | 8.65 |
| Min | 3.91 | 5.16 | 4.13 |
| Max | 35.0 | 37.5 | 40.9 |
| Valid N | 68 | 64 | 69 |
| N > NAAQS | 0 | 2* | 3** |

*Resurrection: the PM_{2.5} concentrations measured on 09/28/09 and on 11/08/09 were 37.5 and 36.6 µg/m³, respectively

**Rubidoux: the PM_{2.5} concentrations measured on 05/13/09, 11/21/09 and on 12/03/09 were 40.9, 39.4 and 35.7 µg/m³, respectively

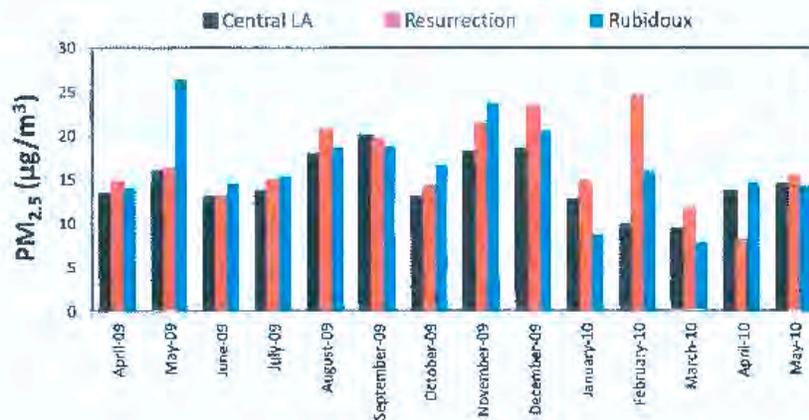
Figure 5 Study average PM_{2.5} concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar



A-10

D1. Response to Comments

Figure 6 Monthly average $PM_{2.5}$ concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



The atmospheric concentration of EC (an indicator of diesel PM) was characterized by a different spatial variability, with a study average value that was higher at the Resurrection School site ($2.04 \mu\text{g}/\text{m}^3$) than at the Central Los Angeles and Rubidoux stations (1.72 and $1.63 \mu\text{g}/\text{m}^3$, respectively) (Table 5; Figure 7). Although, the magnitude of these average EC levels is not particularly elevated relative to the ambient EC concentrations observed in other urban areas, these results may reflect the relatively close proximity of the Resurrection School site to the I-5 where heavy duty diesel truck comprise about 6% of the total traffic volume (<http://peims.dot.ca.gov/>).

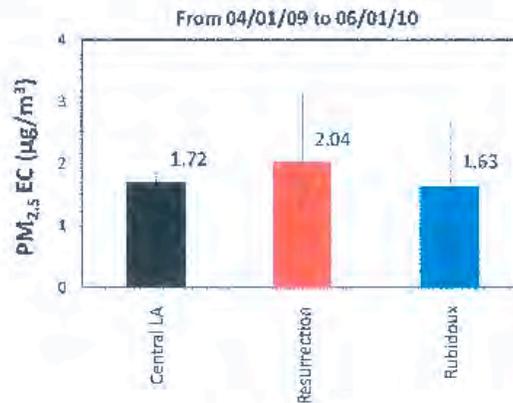
Elemental carbon followed a well-defined temporal pattern, with higher atmospheric levels in the late fall and early winter and lower values in the warmer months (Figure 8). These variations are likely related to seasonal changes in meteorological conditions. Generally, in the late fall and winter light winds result in reduced ventilation, and late night/early morning inversions contribute to increasing the surface-level concentrations of those pollutants that are emitted from nearby ground-level sources. Although EC is currently not regulated by the U.S. EPA, a previous study conducted by AQMD suggested that exposure to diesel particles is the major contributor to the air toxics cancer risk in the South Coast Air Basin, accounting on average for about 80% of the total carcinogenic risk (MATES III; South Coast AQMD, 2008).

D1. Response to Comments

Table 5 Average and median EC concentrations measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) also included

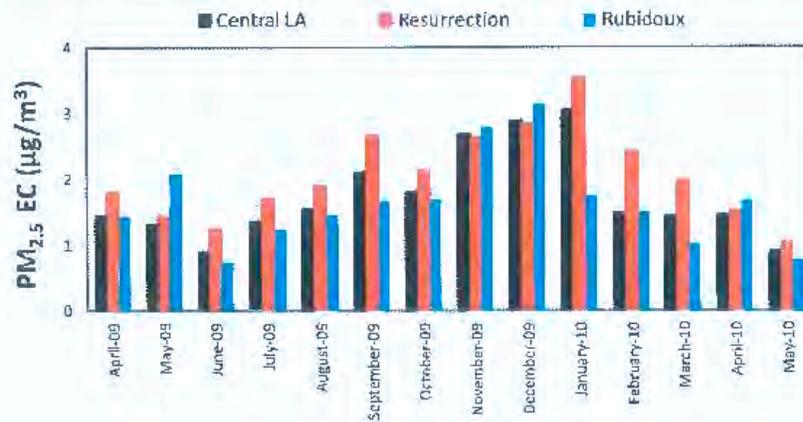
| | <i>PM_{2.5} EC (µg/m³)</i> | | |
|---------|---|--------------|----------|
| | Central LA | Resurrection | Rubidoux |
| Average | 1.72 | 2.04 | 1.63 |
| Median | 1.66 | 1.90 | 1.62 |
| SD | 0.98 | 1.09 | 1.04 |
| Min | 0.09 | 0.38 | 0.06 |
| Max | 4.50 | 5.34 | 4.57 |
| Valid N | 66 | 61 | 69 |

Figure 7 Study average $PM_{2.5}$ EC concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar



D1. Response to Comments

Figure 8 Monthly average $PM_{2.5}$ EC concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



To better understand the short-term impact of diesel PM in the area near the Resurrection School site, 1-hr BC data were taken at this location and analyzed in more detail. Elemental carbon and BC are both indicators of diesel PM emissions and are typically well correlated at any given monitoring location. However, recent data collected by AQMD have shown that the extent of this correlation can be different at coastal and inland sites and may vary throughout the year. As shown in the Figure 9 example, BC typically increased in the early morning because of rush hour traffic and decreased later in the afternoon. A slight increase in the atmospheric BC levels was also observed between 22:00 and 03:00 because of nighttime and early morning inversions. One hour values higher than $15 \mu\text{g}/\text{m}^3$ were recorded on a few other occasions, mostly in the morning when traffic activity near this site was the highest.

The impact of diesel emissions from the I-5 on the BC concentrations measured at the Resurrection School site is illustrated in Figure 10, which shows the study average diurnal variation in BC along with the correspondent average truck traffic flow data collected on the I-5 north during the same time period. The peak in truck traffic volume typically occurred at around 08:00, about two hours after the maximum increase in BC was measured. This discrepancy may reflect the combined effect that meteorology (i.e. early morning inversion) and increasing truck traffic emissions have on the observed BC levels. The traffic information shown in Figure 10 was retrieved from the CalTrans/PeMS website (<http://pems.dot.ca.gov/>) and refers to the average diurnal truck traffic flow (#/hr) as recorded by a traffic sensor located about 330m north of the Resurrection School site.

D1. Response to Comments

Figure 9 Time series showing the typical daily variations of BC at the Resurrection School site. Black carbon data (reported as 1-hr average concentrations) were collected for the entire duration of the study

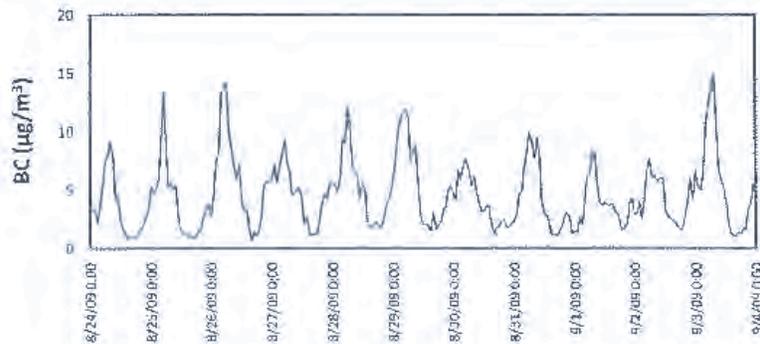
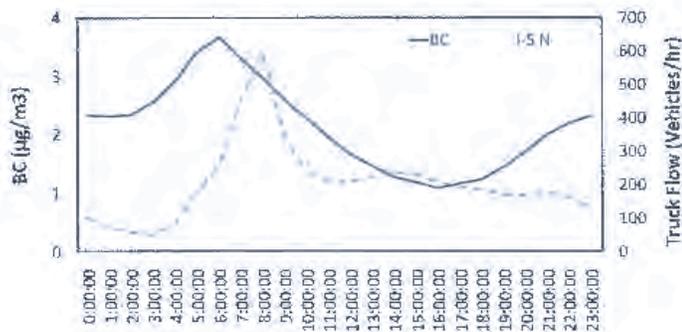


Figure 10 Study average diurnal profiles for BC and truck traffic volume at the Resurrection School site. Traffic information was taken from the CalTrans/PeMS website (<http://pems.dot.ca.gov/>)



Total Suspended Particulate Lead

As was the case for $\text{PM}_{2.5}$ and EC, the highest study average TSP lead concentration ($16.8 \text{ ng}/\text{m}^3$) was measured at the Resurrection School site (Table 6, Figure 11). The average lead levels observed at the Central Los Angeles and Rubidoux stations during the same time period were 9.57 and $7.33 \text{ ng}/\text{m}^3$, respectively, or 43 and 56% less than the corresponding value at the Resurrection School. A slight increase in the atmospheric lead concentration near this monitoring site may be associated with re-suspension of historically deposited dust accumulated on roads within the community or near the I-5, and not with fresh emissions. The school is

D1. Response to Comments

relatively far from the Exide plant (about 2.2 Km north-west) and the winds rarely blow towards the school from the Exide facility. In addition, the lead data collected at the Resurrection School site are not well correlated to those measured right next to the Exide plant during the same time period ($R^2 < 0.001$). However, we cannot exclude the possibility that direct lead emissions from Exide Technologies and/or transport of re-suspended particles containing lead from the Exide facility might have contributed to increase the atmospheric concentration of lead at the Resurrection School.

As shown in Figure 12, the lead concentration at all three sampling stations followed a similar temporal pattern as that observed for PM_{10} , probably because lead is mostly associated with larger particles. In October 2008 the U.S. Environmental Protection Agency strengthened the NAAQS for lead, lowering it from 1500 ng/m^3 (quarterly average) to a more stringent 150 ng/m^3 (rolling 3-month average). The concentrations measured at the three monitoring sites during this study were well below the current NAAQS for lead (Table 6).

Table 6 Average and median Total Suspended Particulate (TSP) lead concentrations measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) also included.

| | <i>TSP Lead (ng/m³)</i> | | |
|----------------|------------------------------------|---------------------|-----------------|
| | Central LA | Resurrection | Rubidoux |
| Average | 9.57 | 16.8 | 7.33 |
| Median | 10.0 | 16.1 | 8.83 |
| SD | 5.83 | 6.32 | 4.37 |
| Min | 0.00 | 4.87 | 0.00 |
| Max | 25.3 | 39.9 | 20.0 |
| Valid N | 69 | 68 | 69 |

D1. Response to Comments

Figure 11 Study average TSP lead concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar

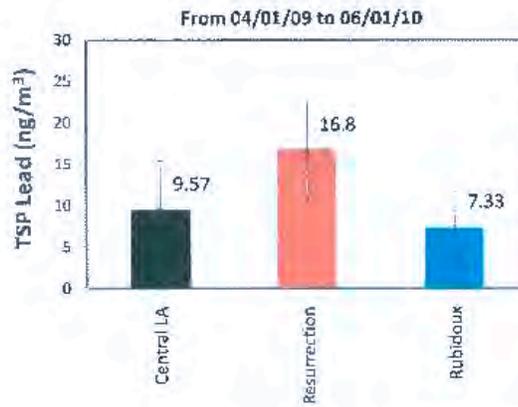
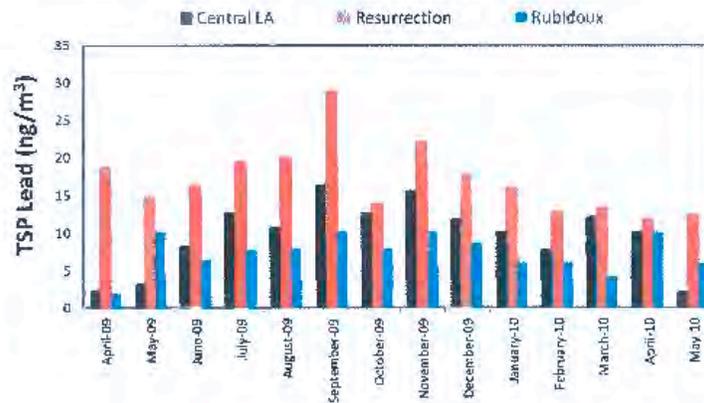


Figure 12 Monthly average Total Suspended Particulate (TSP) lead concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



D1. Response to Comments

Trace Elements

The elemental composition of the collected aerosol samples can be used to provide an important fingerprint to help distinguish particulate emissions from different sources. Some specific elements are also considered air toxics. Although more than 40 trace elements were analyzed on the TSP and PM_{2.5} samples collected at the Resurrection School site and on the PM_{2.5} samples taken at the Central Los Angeles and Rubidoux stations, only the concentrations of those species that were present in significant amounts [i.e. Magnesium (Mg), Aluminum (Al), Silicon (Si), Sulfur (S), Potassium (K), Calcium (Ca), and Iron (Fe)] will be discussed in the following paragraphs. Arsenic (As), Chromium (Cr) and other toxic trace elements were either non detected or present in concentrations close to urban background levels. The temporal and spatial distribution of lead has already been discussed in a previous section.

The spatial distribution of each trace element was quite uniform across all sampling stations and, typically, sulfur was the most abundant trace element in the collected PM_{2.5} samples (Table 7, Figure 13). Sulfur (emitted as sulfate or SO₂) is typically generated from combustion of sulfur-containing fuel. Previous studies (Ntziachristos et al., 2007; Arhami et al., 2009) have indicated that sulfur is mostly found in ultra-fine and accumulation mode particles, which explains why this trace element was found in similar concentrations in the TSP and PM_{2.5} samples collected at the Resurrection School site. The remaining trace elements mainly originate from mechanical processes such as vehicle brake abrasion (Fe) or from re-suspension of crustal materials (i.e. Mg, Ca, K, Fe, Si, and Al), and their concentrations are well within those reported in previous road-side, tunnel, and port studies conducted in the Los Angeles Basin (Singh et al., 2002; Ntziachristos et al., 2007; Arhami et al., 2009) and other urban areas (Birmili et al., 2006). Calcium (used as anti-wear, detergent, and stabilizing additive in oils) has also been proposed as marker for lube-oil combustion. Because these elements naturally occur in soil particles, their concentration in the TSP samples collected at the Resurrection Church site was higher than the corresponding levels present in the PM_{2.5} samples collected at the same site during the same time period (Figure 13). While PM_{2.5} is primarily emitted from combustion activities, TSP also includes larger particles from the Earth's crust. Overall, the temporal profile of the trace elements measured during this study is variable, with higher sulfur levels in the warmer months probably because of production of secondary sulfate in late spring and early summer (not shown). A summary of all trace element data collected during this study can be found in Appendix B.

D1. Response to Comments

Table 7 Average and median trace element concentrations measured in PM_{2.5} samples collected at the Resurrection School site and at the Central Los Angeles and Rubidoux stations between 04/01/09 and 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) are also included. Total Suspended Particulate (TSP) samples were also taken and analyzed for trace elements, but only at the Resurrection School

| TRACE ELEMENTS IN TSP ($\mu\text{g}/\text{m}^3$) | | | | | | | |
|--|------|------|------|------|------|------|------|
| <i>Resurrection</i> | | | | | | | |
| | Mg | Al | Si | S | K | Ca | Fe |
| Average | 0.37 | 1.36 | 1.84 | 0.63 | 0.36 | 1.02 | 1.50 |
| Median | 0.32 | 1.20 | 1.43 | 0.63 | 0.37 | 0.65 | 1.43 |
| SD | 0.22 | 0.69 | 1.40 | 0.43 | 0.27 | 0.75 | 0.65 |
| Min | 0.05 | 0.03 | 0.15 | 0.18 | 0.06 | 0.17 | 0.21 |
| Max | 1.28 | 4.14 | 5.87 | 1.79 | 1.13 | 4.58 | 4.38 |
| Valid N | 52 | 57 | 57 | 57 | 57 | 57 | 57 |

| TRACE ELEMENTS IN PM _{2.5} ($\mu\text{g}/\text{m}^3$) | | | | | | | |
|--|------|------|------|------|------|------|------|
| <i>Resurrection</i> | | | | | | | |
| | Mg | Al | Si | S | K | Ca | Fe |
| Average | 0.12 | 0.11 | 0.13 | 0.73 | 0.04 | 0.07 | 0.18 |
| Median | 0.12 | 0.11 | 0.10 | 0.76 | 0.03 | 0.07 | 0.13 |
| SD | 0.05 | 0.07 | 0.14 | 0.54 | 0.03 | 0.04 | 0.10 |
| Min | 0.03 | 0.01 | 0.01 | 0.06 | 0.00 | 0.01 | 0.00 |
| Max | 0.24 | 0.40 | 0.91 | 2.32 | 0.18 | 0.29 | 0.44 |
| Valid N | 87 | 67 | 66 | 65 | 61 | 67 | 67 |

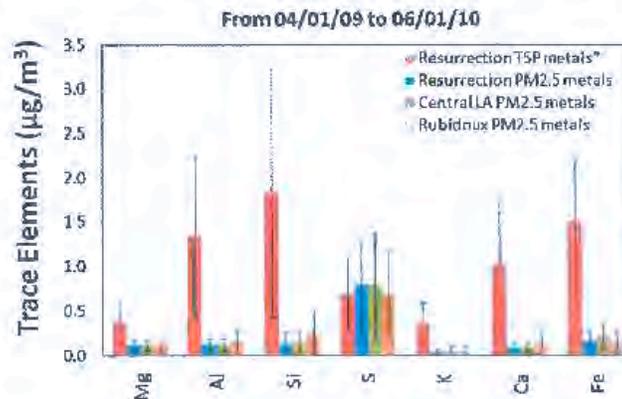
| <i>Central Los Angeles</i> | | | | | | | |
|----------------------------|------|------|------|------|------|------|------|
| | Mg | Al | Si | S | K | Ca | Fe |
| Average | 0.12 | 0.12 | 0.14 | 0.73 | 0.04 | 0.09 | 0.21 |
| Median | 0.13 | 0.12 | 0.11 | 0.67 | 0.02 | 0.06 | 0.18 |
| SD | 0.06 | 0.07 | 0.13 | 0.53 | 0.06 | 0.05 | 0.13 |
| Min | 0.01 | 0.01 | 0.01 | 0.06 | 0.00 | 0.01 | 0.04 |
| Max | 0.45 | 0.35 | 0.80 | 2.66 | 0.55 | 0.29 | 0.68 |
| Valid N | 112 | 112 | 112 | 112 | 112 | 112 | 112 |

| <i>Rubidoux</i> | | | | | | | |
|-----------------|------|------|------|------|------|------|------|
| | Mg | Al | Si | S | K | Ca | Fe |
| Average | 0.12 | 0.16 | 0.23 | 0.70 | 0.05 | 0.14 | 0.16 |
| Median | 0.13 | 0.14 | 0.15 | 0.58 | 0.03 | 0.09 | 0.14 |
| SD | 0.06 | 0.12 | 0.28 | 0.49 | 0.05 | 0.17 | 0.12 |
| Min | 0.01 | 0.01 | 0.02 | 0.07 | 0.00 | 0.01 | 0.03 |
| Max | 0.31 | 0.84 | 2.01 | 2.15 | 0.26 | 1.32 | 0.96 |
| Valid N | 113 | 113 | 113 | 113 | 113 | 113 | 113 |

*Trace Element TSP data at the Resurrection School site are only available between 04/07/11 and 03/27/11

D1. Response to Comments

Figure 13 Study average concentrations of selected trace elements in PM_{2.5} samples collected at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Total Suspended Particulate (TSP) samples were also taken and analyzed for trace elements, but only at the Resurrection School. Vertical lines represent standard deviations for each bar



*Trace Element TSP data at the Resurrection School site are only available between 04/01/11 and 03/27/11

Hexavalent Chromium

The study average concentration of Cr⁶⁺ at the Resurrection School site (0.11 ng/m³) was virtually identical to that measured in Central Los Angeles and in Rubidoux (0.10 and 0.11 ng/m³, respectively) (Table 8; Figure 14). The monthly average Cr⁶⁺ levels at all three locations reveals that the temporal variation of this air toxic was highly variable and did not follow any specific seasonal pattern (Figure 15) other than a general tendency to be slightly higher in the fall and winter seasons. These levels are consistent with what is considered the urban background in Southern California, and thus do not indicate the presence of any local sources.

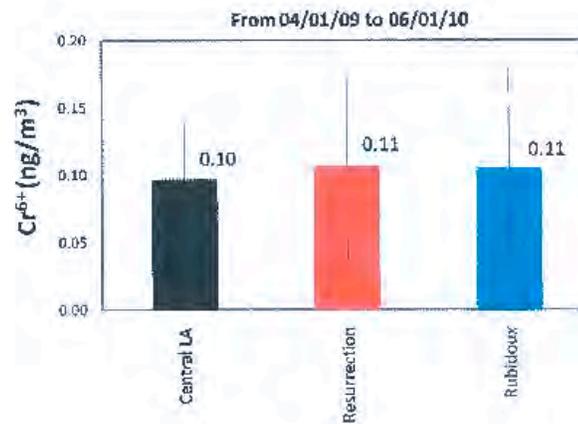
Hexavalent chromium is a toxic form of the element chromium and it is used in many industrial applications (e.g. chromate pigment production and chromium plating). Exposure to Cr⁶⁺ in the workplace has been related to a number of harmful health effects including respiratory irritation and lung cancer. Hexavalent chromium and Cr⁶⁺ containing compounds are listed as Toxic Air Contaminants by the California Air Resource Board (CARB). All Cr⁶⁺ concentrations measured during this study are similar to or below those observed by AQMD during other measurement studies conducted in the South Coast Air Basin (MATES III, South Coast AQMD, 2008).

D1. Response to Comments

Table 8 Average and median Hexavalent Chromium (Cr^{6+}) concentrations measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) also included

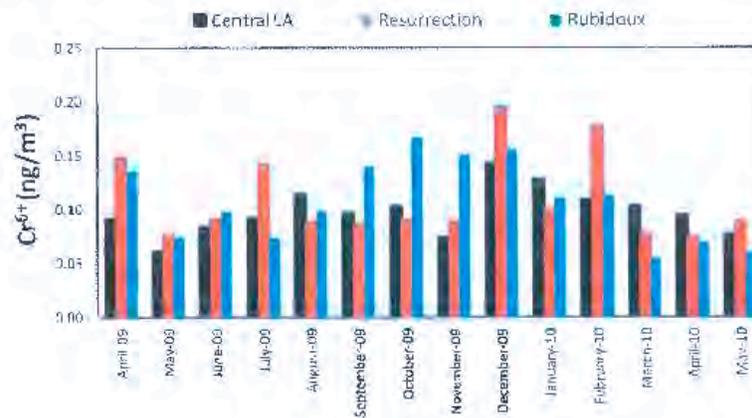
| | Cr^{6+} (ng/m ³) | | |
|---------|---------------------------------------|--------------|----------|
| | Central LA | Resurrection | Rubidoux |
| Average | 0.10 | 0.11 | 0.11 |
| Median | 0.09 | 0.09 | 0.09 |
| SD | 0.04 | 0.07 | 0.07 |
| Min | 0.02 | 0.03 | 0.03 |
| Max | 0.22 | 0.40 | 0.39 |
| Valid N | 73 | 66 | 70 |

Figure 14 Study average Cr^{6+} concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar



D1. Response to Comments

Figure 15 Monthly average Cr^{6+} concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



Volatile Organic Compounds and Carbonyls

The following VOCs were analyzed in all samples collected at the Resurrection School site and at the Central Los Angeles and Rubidoux stations because of their potential importance relative to toxic cancer risk in the South Coast Air Basin. Vinylchloride, 1,3-butadiene, 2-propenal, Acetone, Methylenechloride, Methylterbutylether, 2-butanone, chloroform, 1,2-Dichloroethane, Benzene, Carbontetrachloride, 1,2-Dichloropropane, Trichloroethylene, Toluene, 1,2-dibromoethane, Tetrachloroethene, Ethylbenzene, m,p-Xylenes, Styrene, o-Xylene, 1,4-DiChlorobenzene, and 1,2-DiChlorobenzene. Only those VOCs that were detected in significant amounts in all collected samples were selected for the purpose of this analysis and will be discussed here. The complete VOC dataset can be found in Appendix C.

With the exception of methylene chloride, the concentrations of all selected VOCs (namely, m+p-xylenes, o-xylenes, benzene, ethylbenzene, 1,3-butadiene, toluene, methylene chloride, and 2-butanone) at the Resurrection School site were comparable to those measured at the other two monitoring stations in Central Los Angeles and Rubidoux (Table 9; Figure 16). This is probably because gaseous emissions from motor-vehicles are likely to be the predominant source of these volatile species at all three monitored locations and throughout the entire South Coast Air Basin. The slightly higher atmospheric levels of toluene, 2-butanone, m+p-xylenes and other VOCs measured at the Resurrection School might be explained by the close proximity of this site to the I-5 or the very close proximity to the surface street. The potential contribution of evaporative emissions from nearby industrial facilities cannot be excluded, but this pattern of VOC levels is consistent with mobile source emissions.

The VOC concentration was generally higher during the colder months (November through February) than during the remaining part of the year. This is consistent with typical seasonal changes in local meteorological conditions, as described in previous sections. Monthly

D1. Response to Comments

average variations for benzene and 1,3-butadiene (considered to be good tracers of gasoline vehicle emissions) are shown in Figure 17 as an example.

Table 9 Average and median concentrations of selected VOCs measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) also included

| | | VOCs (ppb) | | | |
|--------------|---------|-------------------|--------------------|---------------------|---------------------------|
| | | <i>Toluene</i> | <i>m,p-xylenes</i> | <i>Benzene</i> | <i>Methylene Chloride</i> |
| CELA | Average | 1.21 | 0.65 | 0.44 | 0.43 |
| | Median | 1.06 | 0.58 | 0.37 | 0.33 |
| | SD | 0.72 | 0.38 | 0.23 | 0.44 |
| | Min | 0.18 | 0.08 | 0.10 | 0.08 |
| | Max | 3.14 | 1.62 | 1.06 | 2.57 |
| | Valid N | 66 | 66 | 66 | 66 |
| Resurrection | Average | 1.56 | 0.84 | 0.52 | 0.30 |
| | Median | 1.28 | 0.68 | 0.42 | 0.26 |
| | SD | 0.95 | 0.56 | 0.29 | 0.21 |
| | Min | 0.31 | 0.02 | 0.13 | 0.05 |
| | Max | 4.13 | 2.37 | 1.22 | 1.24 |
| | Valid N | 62 | 62 | 62 | 62 |
| Rubidoux | Average | 0.96 | 0.44 | 0.31 | 0.94 |
| | Median | 0.93 | 0.42 | 0.29 | 0.28 |
| | SD | 0.57 | 0.28 | 0.16 | 1.77 |
| | Min | 0.12 | 0.08 | 0.08 | 0.04 |
| | Max | 2.67 | 1.25 | 0.74 | 8.27 |
| | Valid N | 68 | 68 | 68 | 68 |
| | | <i>2-butanone</i> | <i>o-xylene</i> | <i>Ethylbenzene</i> | <i>1,3-butadiene</i> |
| CELA | Average | 0.52 | 0.22 | 0.18 | 0.08 |
| | Median | 0.47 | 0.19 | 0.15 | 0.06 |
| | SD | 0.24 | 0.13 | 0.10 | 0.06 |
| | Min | 0.15 | 0.03 | 0.02 | 0.01 |
| | Max | 1.26 | 0.58 | 0.42 | 0.24 |
| | Valid N | 66 | 66 | 66 | 66 |
| Resurrection | Average | 0.84 | 0.29 | 0.22 | 0.11 |
| | Median | 0.78 | 0.22 | 0.18 | 0.07 |
| | SD | 0.42 | 0.18 | 0.14 | 0.08 |
| | Min | 0.19 | 0.06 | 0.05 | 0.02 |
| | Max | 2.07 | 0.76 | 0.59 | 0.34 |
| | Valid N | 62 | 62 | 62 | 62 |
| Rubidoux | Average | 0.60 | 0.16 | 0.13 | 0.05 |
| | Median | 0.61 | 0.14 | 0.12 | 0.03 |
| | SD | 0.24 | 0.09 | 0.07 | 0.04 |
| | Min | 0.11 | 0.03 | 0.02 | 0.00 |
| | Max | 1.21 | 0.43 | 0.34 | 0.19 |
| | Valid N | 68 | 68 | 68 | 68 |

D1. Response to Comments

Figure 16 Study average concentrations of selected VOCs at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar

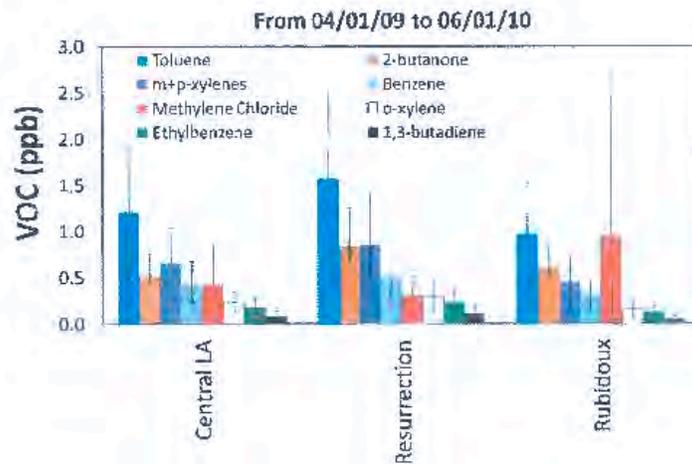
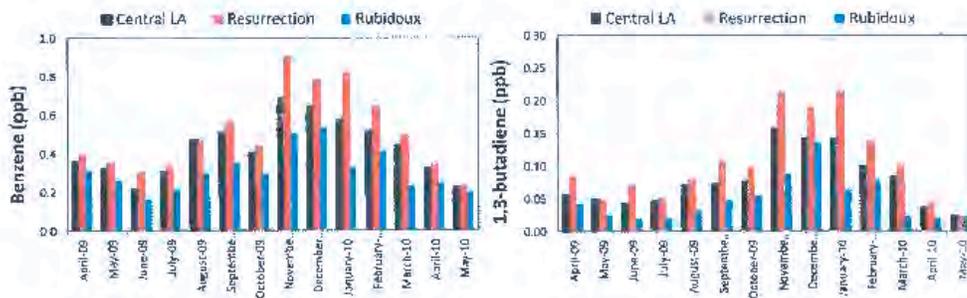


Figure 17 Monthly average concentrations of selected VOCs at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



The average concentrations of the most abundant carbonyl compounds (i.e. formaldehyde, acetaldehyde, and acetone) measured at the Resurrection School site were also comparable to those recorded at the Central Los Angeles and Rubidoux stations (Table 10; Figure 18) and followed a similar seasonal pattern at all three locations (an example for formaldehyde is shown in Figure 19). In addition to direct emissions, formaldehyde and acetaldehyde are also formed in the air via photochemical reactions. The higher levels in summer

D1. Response to Comments

and at inland Rubidoux point to regional formaldehyde formed by atmospheric chemistry, enhanced with more sunlight in summer and elevated at inland sites due to atmospheric aging and transport. In winter, with less sunlight and less inland transport, lower values inland suggest that the atmospheric concentration of these carbonyl compounds is mostly affected by primary motor-vehicle emissions and proximity to local traffic. Contributions from local evaporative sources may have contributed to increase the acetone levels at the Resurrection School site, but the extent of this contribution cannot be assessed from the available data. A summary of all carbonyl compound data collected throughout this study can be found in Appendix C.

Table 10 Average and median concentrations of the carbonyl compounds measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations from 04/01/09 to 06/01/10. Minimum (Min) and maximum (Max) values, standard deviations (SD), and the total number of valid samples (Valid N) also included

| CARBONYLS (ppb) | | | |
|---------------------|------------|--------------|----------|
| <i>Acetone</i> | | | |
| | Central LA | Resurrection | Rubidoux |
| Average | 6.60 | 8.33 | 5.58 |
| Median | 5.68 | 7.58 | 5.28 |
| SD | 3.27 | 3.93 | 2.41 |
| Min | 2.14 | 2.78 | 1.49 |
| Max | 16.4 | 21.1 | 13.9 |
| Valid N | 66 | 67 | 68 |
| <i>Formaldehyde</i> | | | |
| | Central LA | Resurrection | Rubidoux |
| Average | 2.77 | 3.41 | 3.43 |
| Median | 2.80 | 3.40 | 3.10 |
| SD | 1.38 | 1.36 | 1.94 |
| Min | 0.50 | 0.69 | 0.80 |
| Max | 6.00 | 8.75 | 9.50 |
| Valid N | 68 | 62 | 70 |
| <i>Acetaldehyde</i> | | | |
| | Central LA | Resurrection | Rubidoux |
| Average | 1.30 | 1.51 | 1.39 |
| Median | 1.20 | 1.44 | 1.40 |
| SD | 0.64 | 0.70 | 0.70 |
| Min | 0.30 | 0.40 | 0.30 |
| Max | 3.70 | 3.78 | 3.70 |
| Valid N | 67 | 62 | 70 |

D1. Response to Comments

Figure 18 Study average concentrations of the carbonyl compounds measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations. Vertical lines represent standard deviations for each bar

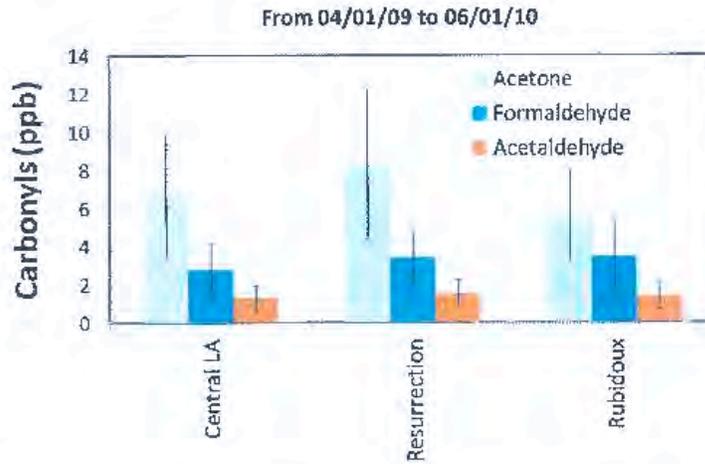
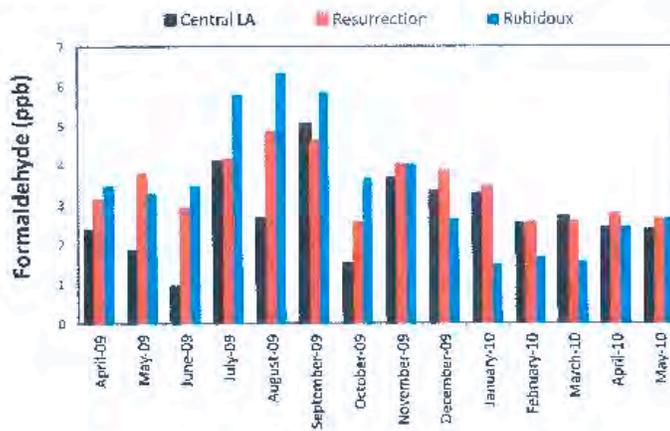


Figure 19 Monthly average concentrations of the carbonyl compounds measured at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



D1. Response to Comments

ACKNOWLEDGEMENTS

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D1. Response to Comments

APPENDIX B: TRACE ELEMENT DATA

B-1

D1. Response to Comments

| Central Los Angeles (PM _{2.5}) | | | | | | | | |
|--|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| Date | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 04/01/09 | 158.02 | 190.12 | 590.12 | 874.07 | 51.85 | 112.35 | 180.25 | 0.72 |
| 04/04/09 | 141.92 | 228.54 | 351.71 | 667.63 | 678.7 | 129.58 | 202.39 | 0.72 |
| 04/07/09 | 114.76 | 229.51 | 210.62 | 736.66 | 22.21 | 93.78 | 186.32 | 0.72 |
| 04/10/09 | | | | | | | | |
| 04/13/09 | 66.67 | 202.47 | 222.22 | 717.04 | 23.22 | 76.54 | 264.20 | 0.72 |
| 04/16/09 | 161.75 | 156.81 | 176.56 | 272.81 | 29.63 | 90.13 | 174.09 | 0.72 |
| 04/19/09 | 39.51 | 204.94 | 327.16 | 446.91 | 24.69 | 102.16 | 260.49 | 0.72 |
| 04/22/09 | 115.99 | 167.81 | 188.79 | 1485.66 | 35.78 | 81.44 | 144.37 | 0.72 |
| 04/25/09 | 149.31 | 207.30 | 160.41 | 572.54 | 34.55 | 80.21 | 164.11 | 0.72 |
| 04/28/09 | 165.40 | 176.57 | 157.01 | 1310.84 | 27.15 | 81.46 | 120.96 | 0.72 |
| 05/01/09 | 86.38 | 233.24 | 233.24 | 1161.25 | 22.21 | 97.49 | 264.09 | 0.72 |
| 05/04/09 | 95.03 | 124.65 | 123.42 | 698.55 | 0.63 | 49.37 | 96.27 | 0.72 |
| 05/07/09 | 144.46 | 208.68 | 302.50 | 525.98 | 207.43 | 130.88 | 214.84 | 0.72 |
| 05/10/09 | 118.47 | 208.56 | 209.79 | 2204.03 | 45.66 | 80.21 | 155.49 | 0.72 |
| 05/13/09 | 152.96 | 213.40 | 260.28 | 1725.08 | 55.51 | 102.38 | 154.19 | 0.62 |
| 05/16/09 | 117.72 | 215.32 | 193.73 | 2660.36 | 31.02 | 75.27 | 132.03 | 0.72 |
| 05/19/09 | 70.35 | 204.26 | 201.79 | 1192.22 | 1.85 | 49.98 | 147.49 | 0.62 |
| 05/22/09 | 153.01 | 208.53 | 254.19 | 1874.34 | 44.42 | 114.76 | 154.24 | 0.62 |
| 05/25/09 | 88.86 | 162.91 | 119.72 | 1620.49 | 4.94 | 48.13 | 61.71 | 0.62 |
| 05/28/09 | 39.26 | 148.15 | 145.68 | 1954.32 | 6.17 | 45.68 | 132.10 | 0.62 |
| 05/31/09 | 28.36 | 168.93 | 78.91 | 1538.84 | 0.51 | 8.63 | 30.55 | 0.62 |
| 06/03/09 | 16.03 | 159.11 | 115.94 | 1465.31 | 0.51 | 86.34 | 144.31 | 0.62 |
| 06/06/09 | 20.98 | 133.26 | 68.63 | 330.69 | 16.04 | 19.79 | 64.16 | 0.62 |
| 06/09/09 | 23.44 | 178.92 | 91.31 | 969.87 | 0.51 | 38.25 | 93.78 | 0.62 |
| 06/12/09 | 48.68 | 155.33 | 125.74 | 1020.75 | 0.51 | 36.98 | 134.51 | 0.62 |
| 06/15/09 | 44.42 | 148.07 | 70.33 | 531.83 | 0.51 | 29.61 | 82.67 | 0.62 |
| 06/18/09 | 48.13 | 170.32 | 16.46 | 1877.20 | 20.98 | 75.29 | 192.53 | 1.23 |
| 06/21/09 | 152.98 | 160.38 | 90.69 | 947.47 | 11.10 | 48.11 | 50.58 | 0.62 |
| 06/24/09 | 149.24 | 128.36 | 16.46 | 1334.16 | 17.28 | 95.03 | 129.39 | 62.94 |
| 06/27/09 | 160.61 | 219.91 | 16.47 | 2010.09 | 65.44 | 102.54 | 179.14 | 56.83 |
| 06/30/09 | 148.18 | 170.41 | 16.46 | 1641.08 | 35.81 | 93.61 | 274.13 | 40.75 |
| 07/03/09 | 153.07 | 187.64 | 16.46 | 1629.46 | 46.91 | 92.58 | 80.24 | 92.36 |
| 07/06/09 | 83.89 | 189.99 | 16.45 | 1033.82 | 80.19 | 87.59 | 148.04 | 107.35 |
| 07/09/09 | 101.19 | 187.58 | 16.45 | 1598.11 | 28.38 | 88.85 | 148.09 | 55.51 |
| 07/12/09 | 99.99 | 154.31 | 22.32 | 749.31 | 61.72 | 66.66 | 138.26 | 34.36 |
| 07/15/09 | 174.06 | 148.13 | 22.32 | 1207.90 | 37.03 | 102.46 | 154.31 | 74.68 |
| 07/18/09 | 60.48 | 138.21 | 22.32 | 392.41 | 11.11 | 51.84 | 140.71 | 62.95 |
| 07/21/09 | | | | | | | | |
| 07/24/09 | 92.51 | 187.48 | 22.30 | 1251.39 | 43.17 | 98.67 | 213.38 | 99.91 |
| 07/27/09 | 17.27 | 143.12 | 22.34 | 920.42 | 0.51 | 59.84 | 132.63 | 28.94 |
| 07/30/09 | 14.39 | 152.99 | 64.16 | 1005.55 | 13.57 | 80.20 | 220.85 | 37.01 |
| 08/02/09 | 14.41 | 187.71 | 22.31 | 1249.77 | 6.17 | 35.81 | 90.15 | 34.82 |
| 08/05/09 | 76.53 | 183.91 | 22.32 | 269.44 | 8.64 | 96.75 | 207.36 | 54.31 |
| 08/08/09 | 55.57 | 181.54 | 22.33 | 571.78 | 18.52 | 96.33 | 116.09 | 38.28 |
| 08/11/09 | 17.28 | 93.81 | 143.18 | 1271.31 | 0.63 | 55.94 | 111.00 | 9.72 |
| 08/14/09 | 56.69 | 115.85 | 119.54 | 1636.84 | 53.46 | 41.90 | 99.83 | 0.72 |
| 08/17/09 | 38.20 | 122.01 | 141.73 | 2012.53 | 83.80 | 59.16 | 98.59 | 0.72 |
| 08/20/09 | 17.28 | 91.32 | 70.34 | 979.84 | 7.40 | 59.23 | 133.02 | 18.51 |
| 08/23/09 | 29.63 | 71.61 | 77.79 | 1732.28 | 34.57 | 39.51 | 67.91 | 9.72 |
| 08/26/09 | 60.52 | 10.29 | 33.35 | 344.62 | 554.61 | 124.76 | 272.98 | 6.18 |
| 08/29/09 | 46.89 | 10.28 | 51.83 | 545.40 | 171.52 | 115.99 | 250.49 | 23.44 |
| 09/01/09 | 44.42 | 10.28 | 32.08 | 645.28 | 50.59 | 114.74 | 191.24 | 11.62 |
| 09/04/09 | 80.28 | 27.17 | 166.85 | 763.28 | 63.61 | 147.59 | 232.19 | 0.62 |
| 09/07/09 | 82.71 | 10.29 | 143.20 | 643.14 | 25.92 | 138.26 | 138.26 | 0.62 |
| 09/10/09 | 171.45 | 262.72 | 327.91 | 852.30 | 76.47 | 273.82 | 429.23 | 77.71 |
| 09/13/09 | 61.64 | 145.47 | 261.35 | 1236.49 | 0.63 | 51.78 | 34.24 | 140.54 |
| 09/16/09 | 183.93 | 72.77 | 130.85 | 564.11 | 13.58 | 79.00 | 223.41 | 97.52 |
| 09/19/09 | 139.48 | 98.65 | 66.57 | 1437.74 | 0.63 | 41.93 | 94.95 | 54.26 |
| 09/22/09 | 132.13 | 128.42 | 210.13 | 753.24 | 19.76 | 143.24 | 321.05 | 0.72 |

D1. Response to Comments

| Central Los Angeles (PM _{2.5}) | | | | | | | | | |
|--|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|--|
| Date | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) | |
| 08/25/09 | 90.07 | 209.13 | 343.31 | 593.93 | 96.24 | 196.18 | 629.86 | 29.46 | |
| 09/24/09 | 185.07 | 135.72 | 244.29 | 1944.48 | 64.16 | 46.88 | 120.91 | 128.32 | |
| 10/01/09 | 154.35 | 217.26 | 554.26 | 238.25 | 44.44 | 280.22 | 465.38 | 112.33 | |
| 10/04/09 | 265.46 | 130.88 | 248.17 | 317.32 | 20.99 | 93.84 | 48.15 | 70.38 | |
| 10/07/09 | 195.74 | 154.37 | 347.64 | 489.04 | 14.20 | 69.77 | 226.61 | 121.03 | |
| 10/10/09 | 119.70 | 99.96 | 273.56 | 1031.42 | 14.81 | 44.43 | 119.70 | 78.98 | |
| 10/13/09 | 93.76 | 74.02 | 188.75 | 189.99 | 0.51 | 48.11 | 44.41 | 55.52 | |
| 10/16/09 | 124.67 | 97.51 | 203.77 | 286.76 | 9.87 | 90.10 | 466.57 | 120.96 | |
| 10/19/09 | 166.56 | 96.24 | 208.51 | 908.08 | 0.63 | 41.95 | 60.46 | 146.82 | |
| 10/22/09 | 113.46 | 69.06 | 159.10 | 361.36 | 17.27 | 109.76 | 377.39 | 127.63 | |
| 10/25/09 | 124.73 | 71.63 | 60.51 | 1467.12 | 39.52 | 56.81 | 258.10 | 154.37 | |
| 10/28/09 | 213.12 | 351.09 | 799.54 | 110.87 | 50.51 | 234.06 | 296.89 | 108.41 | |
| 10/31/09 | 139.43 | 80.21 | 206.07 | 185.09 | 49.36 | 134.50 | 430.64 | 153.01 | |
| 11/03/09 | 138.53 | 62.99 | 87.69 | 702.76 | 11.12 | 95.10 | 393.99 | 80.28 | |
| 11/06/09 | 153.04 | 61.71 | 39.49 | 672.64 | 0.63 | 38.49 | 196.24 | 76.52 | |
| 11/09/09 | 116.04 | 64.19 | 109.87 | 690.05 | 33.33 | 102.65 | 417.24 | 98.76 | |
| 11/12/09 | 155.44 | 175.14 | 349.13 | 726.64 | 81.42 | 259.07 | 489.77 | 125.84 | |
| 11/15/09 | 135.68 | 78.94 | 127.04 | 235.32 | 60.44 | 67.84 | 275.05 | 114.71 | |
| 11/18/09 | 141.87 | 56.75 | 132.00 | 379.97 | 62.92 | 93.76 | 359.00 | 101.16 | |
| 11/21/09 | 119.61 | 41.92 | 43.16 | 414.30 | 27.13 | 49.32 | 194.82 | 62.89 | |
| 11/24/09 | 162.86 | 202.34 | 414.56 | 204.81 | 65.39 | 294.88 | 662.55 | 98.70 | |
| 11/27/09 | 165.24 | 61.67 | 104.84 | 173.91 | 43.17 | 80.17 | 202.28 | 48.67 | |
| 11/30/09 | 133.26 | 109.82 | 280.49 | 155.48 | 29.61 | 153.01 | 491.11 | 178.33 | |
| 12/03/09 | 171.32 | 53.00 | 76.42 | 666.80 | 43.14 | 61.69 | 266.23 | 86.28 | |
| 12/06/09 | 182.68 | 25.92 | 22.32 | 356.72 | 14.81 | 66.18 | 72.82 | 65.42 | |
| 12/09/09 | 128.30 | 37.01 | 30.84 | 194.92 | 28.37 | 33.31 | 197.39 | 139.31 | |
| 12/12/09 | 135.72 | 10.28 | 22.31 | 164.10 | 0.51 | 29.61 | 45.65 | 98.70 | |
| 12/15/09 | 122.12 | 66.61 | 58.51 | 119.65 | 25.90 | 78.95 | 293.59 | 83.65 | |
| 12/18/09 | 111.02 | 80.18 | 159.13 | 126.92 | 27.14 | 115.93 | 581.00 | 80.18 | |
| 12/21/09 | 118.46 | 75.27 | 150.54 | 206.07 | 35.33 | 102.42 | 404.73 | 108.57 | |
| 12/24/09 | 136.88 | 82.62 | 175.11 | 160.31 | 123.32 | 114.69 | 358.85 | 118.38 | |
| 12/27/09 | 144.31 | 45.64 | 30.84 | 262.72 | 96.21 | 33.30 | 202.28 | 133.21 | |
| 12/30/09 | 120.85 | 34.53 | 40.69 | 199.77 | 23.43 | 50.56 | 162.78 | 80.16 | |
| 01/02/10 | 151.81 | 50.60 | 60.48 | 55.54 | 7.41 | 40.73 | 161.68 | 99.97 | |
| 01/05/10 | 117.21 | 62.42 | 169.03 | 177.67 | 50.59 | 106.11 | 444.17 | 124.61 | |
| 01/14/10 | 149.31 | 74.04 | 127.10 | 228.81 | 13.57 | 124.63 | 370.18 | 70.33 | |
| 01/20/10 | | | | | | | | | |
| 01/26/10 | 138.20 | 40.72 | 51.83 | 128.33 | 4.94 | 45.66 | 207.30 | 104.88 | |
| 02/01/10 | | | | | | | | | |
| 02/07/10 | 149.28 | 25.91 | 22.31 | 104.86 | 1.23 | 21.21 | 85.12 | 225.76 | |
| 02/13/10 | 120.91 | 43.18 | 66.63 | 262.80 | 32.08 | 40.72 | 391.05 | 129.55 | |
| 02/19/10 | | | | | | | | | |
| 02/25/10 | 100.02 | 20.15 | 27.02 | 222.45 | 9.37 | 35.61 | 184.97 | 125.07 | |
| 03/03/10 | 136.25 | 36.00 | 12.02 | 191.41 | 0.00 | 30.801 | 114.66 | 96.27 | |
| 03/09/10 | 146.07 | 24.49 | 30.88 | 201.16 | 0.00 | 24.04 | 54.41 | 33.45 | |
| 03/15/10 | 160.18 | 91.43 | 158.71 | 169.60 | 13.11 | 91.95 | 323.67 | 91.44 | |
| 03/21/10 | 144.76 | 127.90 | 247.29 | 523.79 | 55.93 | 111.50 | 262.40 | 103.61 | |
| 03/27/10 | 157.94 | 176.48 | 386.45 | 206.11 | 35.97 | 170.51 | 288.87 | 92.78 | |
| 04/02/10 | 112.48 | 51.63 | 83.69 | 294.92 | 5.62 | 94.51 | 248.54 | 100.20 | |
| 04/08/10 | 139.98 | 90.96 | 217.22 | 198.53 | 21.43 | 97.65 | 247.51 | 139.75 | |
| 04/14/10 | 138.93 | 44.91 | 105.97 | 470.62 | 17.62 | 61.88 | 176.19 | 80.42 | |
| 04/20/10 | 151.84 | 38.89 | 80.97 | 397.32 | 1.92 | 62.98 | 87.29 | 71.67 | |
| 04/26/10 | 116.93 | 49.17 | 78.65 | 1344.91 | 6.37 | 56.99 | 167.63 | 77.19 | |
| 05/02/10 | 207.88 | 10.86 | 5.73 | 580.02 | 28.36 | 80.12 | 51.62 | 58.25 | |
| 05/08/10 | 203.94 | 54.81 | 105.98 | 422.23 | 31.53 | 99.16 | 142.33 | 102.54 | |
| 05/14/10 | 202.63 | 43.43 | 58.98 | 1316.21 | 22.58 | 82.95 | 109.02 | 84.62 | |
| 05/20/10 | 172.11 | 24.88 | 64.30 | 712.64 | 24.86 | 91.04 | 123.87 | 52.69 | |
| 05/26/10 | | | | | | | | | |
| 06/01/10 | 199.11 | 48.29 | 65.80 | 1106.87 | 21.04 | 77.81 | 92.23 | 80.23 | |

D1. Response to Comments

| Date | Rubbings (PM ₁₀) | | | | | | | |
|----------|------------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 04/01/09 | 101.59 | 193.27 | 344.41 | 646.71 | 78.41 | 131.32 | 152.78 | 0.72 |
| 04/04/09 | 131.31 | 298.54 | 554.97 | 718.89 | 83.00 | 169.71 | 195.73 | 0.72 |
| 04/07/09 | 50.73 | 268.48 | 379.83 | 519.33 | 30.93 | 169.50 | 188.06 | 0.72 |
| 04/10/09 | 29.73 | 159.80 | 122.64 | 874.57 | 3.72 | 35.92 | 60.70 | 0.72 |
| 04/13/09 | 90.27 | 218.88 | 270.82 | 677.66 | 23.50 | 143.45 | 202.80 | 19.79 |
| 04/16/09 | 128.85 | 214.33 | 194.51 | 317.16 | 23.54 | 94.16 | 109.82 | 0.72 |
| 04/19/09 | 60.69 | 213.03 | 330.68 | 526.37 | 29.72 | 117.66 | 182.05 | 0.72 |
| 04/22/09 | 72.95 | 220.09 | 270.79 | 1041.11 | 29.68 | 118.70 | 138.49 | 0.72 |
| 04/25/09 | 129.07 | 168.35 | 81.18 | 497.63 | 13.62 | 39.61 | 48.28 | 0.72 |
| 04/28/09 | 152.42 | 146.22 | 178.44 | 1327.14 | 28.50 | 71.87 | 64.44 | 0.72 |
| 05/01/09 | 91.57 | 257.40 | 309.37 | 1158.30 | 39.60 | 99.00 | 158.40 | 0.72 |
| 05/04/09 | | | | | | | | |
| 05/07/09 | 100.08 | 307.04 | 457.17 | 615.32 | 244.65 | 177.92 | 244.65 | 0.72 |
| 05/10/09 | 150.80 | 237.33 | 270.70 | 1582.20 | 90.21 | 85.29 | 170.01 | 0.72 |
| 05/13/09 | 80.45 | 200.52 | 325.53 | 1821.97 | 35.89 | 95.31 | 148.53 | 0.62 |
| 05/16/09 | 125.03 | 216.63 | 311.95 | 1577.05 | 61.89 | 132.45 | 167.11 | 0.62 |
| 05/19/09 | | | | | | | | |
| 05/22/09 | 146.05 | 269.83 | 367.61 | 1385.01 | 47.03 | 153.48 | 147.29 | 0.62 |
| 05/25/09 | 81.86 | 200.78 | 214.82 | 1342.28 | 18.59 | 64.45 | 76.84 | 0.62 |
| 05/28/09 | 61.81 | 216.34 | 210.16 | 2157.21 | 2.47 | 58.10 | 108.79 | 0.62 |
| 05/31/09 | 16.09 | 193.09 | 105.21 | 1278.60 | 0.52 | 17.33 | 87.88 | 0.62 |
| 06/03/09 | 36.04 | 196.33 | 144.14 | 996.58 | 0.52 | 64.62 | 121.78 | 0.62 |
| 06/06/09 | 19.83 | 173.52 | 63.21 | 401.57 | 0.52 | 6.20 | 37.18 | 0.62 |
| 06/09/09 | 25.96 | 180.51 | 92.73 | 935.92 | 0.52 | 29.67 | 59.34 | 0.62 |
| 06/12/09 | 33.39 | 150.87 | 107.58 | 863.15 | 0.52 | 12.15 | 160.76 | 0.62 |
| 06/15/09 | 37.08 | 150.34 | 123.60 | 868.88 | 14.83 | 49.44 | 63.03 | 0.62 |
| 06/18/09 | 37.14 | 153.51 | 17.33 | 1316.00 | 30.95 | 92.85 | 108.94 | 34.65 |
| 06/21/09 | 76.68 | 133.57 | 16.49 | 816.24 | 9.89 | 61.84 | 39.58 | 44.52 |
| 06/24/09 | 107.64 | 145.99 | 16.50 | 1276.83 | 45.78 | 97.74 | 92.79 | 12.37 |
| 06/27/09 | 163.23 | 347.49 | 273.29 | 1614.77 | 89.04 | 213.93 | 238.19 | 48.23 |
| 06/30/09 | 143.45 | 260.92 | 145.92 | 1346.65 | 50.70 | 169.41 | 199.09 | 29.68 |
| 07/03/09 | 163.20 | 270.76 | 24.62 | 1269.73 | 259.63 | 96.44 | 95.20 | 116.22 |
| 07/06/09 | 89.22 | 231.96 | 16.52 | 1084.02 | 162.33 | 97.89 | 127.63 | 37.92 |
| 07/09/09 | 80.51 | 109.42 | 76.80 | 795.21 | 34.68 | 125.10 | 137.49 | 71.84 |
| 07/12/09 | 95.25 | 202.87 | 132.36 | 535.61 | 36.90 | 145.96 | 164.23 | 83.06 |
| 07/15/09 | 132.54 | 196.94 | 26.01 | 1078.38 | 45.83 | 144.92 | 174.63 | 75.56 |
| 07/18/09 | 66.82 | 225.44 | 101.46 | 1097.55 | 47.02 | 103.94 | 147.25 | 104.94 |
| 07/21/09 | 56.95 | 212.96 | 139.91 | 881.55 | 40.86 | 160.96 | 157.24 | 136.19 |
| 07/24/09 | 75.51 | 222.82 | 22.38 | 1400.04 | 37.14 | 87.41 | 123.79 | 48.28 |
| 07/27/09 | 44.57 | 177.05 | 22.39 | 1044.27 | 64.38 | 90.38 | 115.15 | 28.48 |
| 07/30/09 | 14.43 | 179.38 | 22.37 | 993.40 | 0.52 | 47.04 | 111.24 | 79.18 |
| 08/02/09 | 39.73 | 141.73 | 22.40 | 1085.99 | 21.66 | 45.84 | 91.68 | 39.64 |
| 08/05/09 | 44.58 | 221.58 | 152.32 | 183.28 | 28.48 | 206.81 | 196.90 | 82.97 |
| 08/08/09 | 38.31 | 127.28 | 22.25 | 556.07 | 12.30 | 1005.87 | 87.74 | 90.64 |
| 08/11/09 | 28.47 | 110.16 | 178.24 | 1147.40 | 48.27 | 56.84 | 99.02 | 0.72 |
| 08/14/09 | 32.15 | 139.71 | 194.11 | 1352.57 | 39.56 | 77.89 | 79.13 | 0.72 |
| 08/17/09 | 69.28 | 121.74 | 197.98 | 1393.73 | 163.33 | 75.48 | 136.11 | 0.72 |
| 08/20/09 | 47.00 | 138.53 | 253.56 | 1453.31 | 68.08 | 102.66 | 139.15 | 0.72 |
| 08/23/09 | 37.07 | 130.97 | 156.92 | 1634.43 | 56.84 | 79.08 | 77.84 | 45.72 |
| 08/26/09 | 174.47 | 233.86 | 381.11 | 168.74 | 46.72 | 264.80 | 259.85 | 51.97 |
| 08/29/09 | 51.95 | 10.31 | 174.42 | 493.56 | 115.04 | 207.81 | 189.26 | 0.62 |
| 09/01/09 | 110.16 | 92.81 | 267.35 | 760.88 | 188.14 | 198.04 | 174.52 | 27.23 |
| 09/04/09 | 45.84 | 58.23 | 216.83 | 639.34 | 85.49 | 234.70 | 251.96 | 0.62 |
| 09/07/09 | 48.21 | 124.86 | 165.65 | 624.29 | 18.54 | 76.65 | 45.34 | 60.57 |
| 09/10/09 | 69.29 | 136.11 | 369.47 | 802.45 | 54.44 | 193.03 | 178.18 | 43.31 |
| 09/13/09 | 61.97 | 66.93 | 95.43 | 1453.83 | 24.79 | 43.38 | 80.90 | 15.94 |
| 09/16/09 | 127.28 | 114.92 | 129.75 | 481.16 | 8.65 | 101.33 | 123.57 | 82.79 |
| 09/19/09 | 122.27 | 150.92 | 154.38 | 1158.59 | 23.47 | 96.34 | 117.33 | 140.80 |
| 09/22/09 | 105.05 | 269.19 | 603.40 | 672.30 | 47.02 | 266.94 | 310.20 | 15.29 |

D1. Response to Comments

| Date | Rubidoux (PM _{2.5}) | | | | | | | |
|----------|-------------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 09/25/09 | 179.44 | 236.98 | 553.16 | 470.23 | 87.30 | 315.56 | 356.40 | 112.61 |
| 09/28/09 | 148.36 | 136.00 | 150.83 | 1545.44 | 17.31 | 102.62 | 112.51 | 80.36 |
| 10/01/09 | 174.59 | 251.37 | 595.60 | 142.40 | 24.77 | 231.56 | 188.22 | 79.25 |
| 10/04/09 | 263.02 | 122.58 | 236.48 | 423.44 | 26.00 | 82.96 | 38.38 | 54.10 |
| 10/07/09 | 169.57 | 128.73 | 290.87 | 563.18 | 14.85 | 51.46 | 68.68 | 85.17 |
| 10/10/09 | 106.48 | 130.00 | 294.68 | 1245.56 | 34.67 | 64.38 | 128.77 | 164.67 |
| 10/13/09 | 116.22 | 82.84 | 202.76 | 166.91 | 0.52 | 30.69 | 27.20 | 126.11 |
| 10/16/09 | 187.94 | 337.67 | 798.76 | 225.04 | 77.80 | 453.29 | 466.15 | 89.03 |
| 10/19/09 | 105.13 | 10.31 | 21.03 | 462.59 | 0.63 | 24.74 | 37.11 | 117.50 |
| 10/22/09 | 130.77 | 253.69 | 597.71 | 162.11 | 71.77 | 399.71 | 330.41 | 69.64 |
| 10/25/09 | | | | | | | | |
| 10/28/09 | 246.31 | 500.05 | 1193.19 | 91.59 | 107.68 | 398.56 | 401.03 | 101.59 |
| 10/31/09 | 237.62 | 481.44 | 1169.37 | 159.65 | 157.18 | 629.95 | 599.04 | 138.61 |
| 11/03/09 | 310.39 | 835.94 | 2011.95 | 285.66 | 254.74 | 1316.98 | 964.55 | 135.81 |
| 11/06/09 | 118.67 | 30.90 | 46.97 | 896.17 | 4.94 | 53.15 | 98.89 | 30.79 |
| 11/09/09 | 148.45 | 115.08 | 247.42 | 603.71 | 39.59 | 183.09 | 306.80 | 94.02 |
| 11/12/09 | 143.45 | 104.49 | 215.79 | 439.61 | 34.62 | 185.49 | 244.85 | 85.94 |
| 11/15/09 | 121.36 | 113.93 | 157.28 | 345.20 | 44.58 | 82.97 | 137.46 | 64.40 |
| 11/18/09 | | | | | | | | |
| 11/21/09 | 128.79 | 64.40 | 73.07 | 558.51 | 66.87 | 49.54 | 235.29 | 76.76 |
| 11/24/09 | 194.15 | 148.30 | 304.20 | 86.56 | 7.42 | 159.87 | 143.45 | 60.59 |
| 11/27/09 | 174.61 | 82.97 | 141.18 | 251.39 | 78.02 | 107.74 | 158.51 | 37.15 |
| 11/30/09 | 132.48 | 68.10 | 125.05 | 115.15 | 6.19 | 66.86 | 87.91 | 42.10 |
| 12/03/09 | 146.13 | 49.54 | 91.64 | 724.46 | 47.06 | 81.73 | 189.47 | 65.63 |
| 12/06/09 | 164.71 | 22.30 | 22.40 | 457.34 | 58.22 | 47.07 | -48.11 | -44.59 |
| 12/09/09 | 111.48 | 35.92 | 85.47 | 284.89 | 84.23 | 73.68 | 178.36 | 126.34 |
| 12/12/09 | 138.67 | 10.32 | 22.39 | 120.10 | 35.91 | 26.00 | 64.38 | 48.29 |
| 12/15/09 | 129.99 | 40.85 | 97.80 | 96.56 | 18.57 | 89.14 | 164.65 | 58.09 |
| 12/18/09 | 114.96 | 69.22 | 121.14 | 47.99 | 2.47 | 87.26 | 126.08 | 92.71 |
| 12/21/09 | 141.06 | 97.75 | 205.40 | 153.43 | 33.68 | 152.20 | 300.68 | 86.62 |
| 12/24/09 | 127.69 | 50.83 | 76.86 | 90.50 | 106.61 | 53.26 | 151.96 | 171.07 |
| 12/27/09 | 118.91 | 38.40 | 60.69 | 115.19 | 106.52 | 39.64 | 121.39 | 84.23 |
| 12/30/09 | 133.83 | 59.48 | 76.83 | 234.20 | 69.39 | 75.59 | 100.74 | 55.76 |
| 01/02/10 | 208.88 | 454.84 | 1003.60 | 102.59 | 101.35 | 355.96 | 451.13 | 81.80 |
| 01/05/10 | 152.20 | 121.26 | 248.71 | 75.48 | 24.75 | 210.35 | 217.78 | 129.92 |
| 01/14/10 | 126.33 | 63.16 | 94.13 | 121.37 | 12.39 | 54.49 | 73.81 | 87.93 |
| 01/20/10 | | | | | | | | |
| 01/26/10 | 131.43 | 43.40 | 68.29 | 192.19 | 19.84 | 80.60 | 215.78 | 94.23 |
| 02/01/10 | 110.25 | 60.70 | 66.89 | 447.20 | 34.69 | 80.57 | 199.44 | 146.18 |
| 02/07/10 | 146.21 | 42.13 | 22.41 | 174.70 | 0.52 | 18.59 | 34.69 | 83.01 |
| 02/13/10 | 176.32 | 558.05 | 757.02 | 218.38 | 65.97 | 253.55 | 416.99 | 64.90 |
| 02/19/10 | 131.28 | 10.32 | 71.83 | 805.66 | 3.72 | 33.44 | 60.69 | 71.83 |
| 02/25/10 | 123.77 | 18.07 | 37.45 | 239.93 | 5.12 | 81.94 | 109.83 | 55.40 |
| 03/03/10 | 151.31 | 51.24 | 31.67 | 230.61 | 0.00 | 54.29 | 62.76 | -44.63 |
| 03/09/10 | 114.44 | 27.80 | 39.93 | 240.33 | 0.00 | 34.42 | 46.85 | 53.40 |
| 03/15/10 | 127.36 | 62.98 | 118.48 | 182.51 | 0.00 | 55.82 | 89.18 | 103.40 |
| 03/21/10 | 140.11 | 154.29 | 352.41 | 343.57 | 64.30 | 164.34 | 196.42 | 114.85 |
| 03/27/10 | 172.92 | 244.19 | 647.78 | 221.17 | 51.37 | 285.57 | 197.91 | 126.48 |
| 04/02/10 | 113.75 | 34.25 | 74.31 | 238.05 | 17.76 | 73.26 | 96.10 | 37.10 |
| 04/08/10 | 165.08 | 135.11 | 265.41 | 149.32 | 20.60 | 133.48 | 175.50 | 76.61 |
| 04/14/10 | 140.85 | 68.58 | 102.43 | 436.73 | 10.34 | 67.00 | 123.72 | 51.04 |
| 04/20/10 | 153.25 | 84.45 | 157.23 | 485.11 | 25.95 | 100.23 | 112.93 | 69.96 |
| 04/26/10 | 148.34 | 83.63 | 159.30 | 1238.95 | 25.69 | 80.85 | 136.49 | 82.12 |
| 05/02/10 | 195.80 | 36.62 | 37.93 | 471.54 | 19.33 | 73.37 | -40.98 | 37.70 |
| 05/08/10 | 159.26 | 76.64 | 179.66 | 577.54 | 47.80 | 130.02 | 136.72 | 33.44 |
| 05/14/10 | 245.83 | 94.00 | 126.15 | 945.30 | 45.94 | 106.57 | 120.53 | 67.69 |
| 05/20/10 | 130.10 | 58.68 | 91.35 | 655.21 | 8.21 | 79.01 | 101.29 | 70.37 |
| 05/26/10 | 137.48 | 61.20 | 97.57 | 332.92 | 1.18 | 72.87 | 88.67 | 70.53 |
| 06/01/10 | 171.54 | 40.61 | 76.94 | 819.32 | 43.10 | 87.03 | 64.86 | 66.77 |

B-5

D1. Response to Comments

| Resurrection School (PM _{2.5}) | | | | | | | | |
|--|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| Date | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 04/01/09 | 160.35 | 243.86 | 306.99 | 927.17 | 33.12 | 107.70 | 184.44 | 0.62 |
| 04/07/09 | 50.44 | 231.67 | 284.95 | 867.23 | 32.21 | 80.53 | 442.47 | 0.62 |
| 04/13/09 | 65.60 | 183.19 | 177.00 | 862.71 | 27.23 | 65.60 | 219.08 | 0.62 |
| 04/19/09 | 54.43 | 175.65 | 267.19 | 599.94 | 33.40 | 85.15 | 215.24 | 0.62 |
| 04/25/09 | 138.71 | 188.25 | 155.58 | 635.36 | 23.53 | 75.55 | 66.88 | 0.62 |
| 05/01/09 | 87.86 | 168.30 | 210.37 | 1165.72 | 38.36 | 102.71 | 190.57 | 0.62 |
| 05/07/09 | 129.91 | 217.80 | 258.64 | 613.80 | 176.96 | 102.71 | 200.47 | 0.62 |
| 05/13/09 | 162.01 | 281.97 | 238.69 | 1628.77 | 40.81 | 103.89 | 138.51 | 0.62 |
| 05/19/09 | 37.16 | 177.13 | 214.29 | 1295.62 | 7.43 | 70.60 | 133.77 | 0.62 |
| 05/25/09 | 85.90 | 184.42 | 142.34 | 1432.08 | 6.19 | 51.99 | 51.99 | 0.62 |
| 05/31/09 | 42.07 | 165.82 | 81.67 | 1591.42 | 0.52 | 7.42 | 44.55 | 0.62 |
| 06/06/09 | 28.49 | 137.52 | 96.63 | 317.16 | 0.52 | 18.58 | 69.38 | 0.62 |
| 06/12/09 | 43.89 | 117.85 | 103.85 | 932.93 | 9.27 | 35.24 | 87.78 | 0.62 |
| 06/18/09 | 39.58 | 131.31 | 22.37 | 1609.32 | 6.18 | 53.19 | 51.54 | 103.14 |
| 06/24/09 | 141.06 | 138.59 | 22.38 | 1491.03 | 25.98 | 86.62 | 75.48 | 79.19 |
| 06/30/09 | 168.39 | 217.91 | 22.39 | 1607.10 | 17.33 | 89.15 | 107.72 | 28.48 |
| 07/06/09 | 71.72 | 150.87 | 31.15 | 1141.38 | 137.26 | 75.43 | 129.84 | 110.06 |
| 07/12/09 | 132.30 | 144.67 | 22.36 | 829.68 | 53.17 | 89.03 | 124.88 | 0.62 |
| 07/18/09 | 49.44 | 150.50 | 22.35 | 940.67 | 13.60 | 61.80 | 95.18 | 17.31 |
| 07/24/09 | 87.90 | 158.46 | 22.39 | 1428.66 | 2.48 | 71.80 | 107.71 | 64.38 |
| 07/30/09 | 25.98 | 137.51 | 22.37 | 1009.33 | 0.52 | 45.77 | 66.80 | 71.75 |
| 08/05/09 | 65.40 | 118.46 | 22.31 | 276.40 | 23.44 | 111.05 | 191.26 | 39.19 |
| 08/11/09 | 47.02 | 214.04 | 22.37 | 1577.48 | 1.24 | 48.25 | 86.61 | 40.83 |
| 08/17/09 | 63.08 | 146.38 | 162.03 | 2322.82 | 83.49 | 54.42 | 92.15 | 0.62 |
| 08/23/09 | 45.87 | 90.17 | 107.85 | 1658.68 | 30.99 | 45.87 | 57.02 | 0.62 |
| 08/29/09 | 76.72 | 142.31 | 210.37 | 839.02 | 123.75 | 144.07 | 268.54 | 24.75 |
| 09/04/09 | 85.38 | 10.31 | 22.38 | 809.24 | 69.29 | 92.80 | 126.21 | 0.62 |
| 09/10/09 | 105.17 | 87.84 | 163.32 | 812.87 | 48.25 | 106.40 | 142.28 | 27.22 |
| 09/16/09 | 117.36 | 95.12 | 58.83 | 532.43 | 0.51 | 74.12 | 169.24 | 138.36 |
| 09/22/09 | 148.55 | 123.79 | 109.88 | 851.86 | 32.18 | 132.45 | 263.67 | 85.44 |
| 09/28/09 | 179.68 | 157.37 | 251.55 | 1930.61 | 63.20 | 87.09 | 107.81 | 89.22 |
| 09/28/09 | 179.68 | 157.47 | 251.55 | 1930.61 | 63.20 | 47.09 | 107.81 | 89.22 |
| 10/04/09 | | | | | | | | |
| 10/10/09 | 137.36 | 117.36 | 266.09 | 1079.10 | 17.32 | 35.89 | 65.39 | 115.09 |
| 10/16/09 | | | | | | | | |
| 10/22/09 | 115.08 | 58.16 | 108.89 | 350.18 | 24.75 | 86.62 | 277.17 | 126.21 |
| 10/28/09 | 186.75 | 395.75 | 910.23 | 131.09 | 58.13 | 290.63 | 361.13 | 101.41 |
| 11/03/09 | 116.41 | 92.88 | 148.61 | 696.90 | 27.24 | 126.32 | 402.48 | 128.79 |
| 11/09/09 | 175.72 | 183.15 | 146.02 | 912.03 | 40.84 | 106.42 | 373.72 | 149.74 |
| 11/15/09 | 110.21 | 86.68 | 117.63 | 299.66 | 64.39 | 73.06 | 203.08 | 94.11 |
| 11/21/09 | 97.78 | 34.66 | 18.37 | 439.40 | 33.42 | 44.56 | 181.95 | 85.40 |
| 11/27/09 | 143.61 | 49.52 | 69.95 | 196.84 | 30.95 | 68.09 | 154.13 | 88.52 |
| 12/03/09 | 116.54 | 42.15 | 63.23 | 752.36 | 30.99 | 75.63 | 204.57 | 52.07 |
| 12/09/09 | 145.10 | 62.01 | 32.24 | 329.43 | 17.36 | 47.13 | 132.54 | 102.94 |
| 12/15/09 | | | | | | | | |
| 12/21/09 | 146.21 | 118.95 | 162.31 | 199.48 | 43.37 | 106.56 | 372.95 | 45.84 |
| 12/27/09 | 112.65 | 27.85 | 43.33 | 289.04 | 108.93 | 64.99 | 107.44 | 114.50 |
| 01/02/10 | 146.25 | 54.33 | 68.17 | 80.56 | 42.14 | 45.86 | 184.67 | 95.43 |
| 01/08/10 | 123.81 | 78.62 | 145.48 | 193.15 | 56.95 | 110.81 | 437.06 | 114.53 |
| 01/14/10 | 131.50 | 80.64 | 100.49 | 253.08 | 27.29 | 88.08 | 370.92 | 70.71 |
| 01/20/10 | 158.51 | 45.82 | 22.39 | 75.54 | 8.67 | 42.11 | 80.50 | 74.30 |
| 01/26/10 | 110.29 | 54.52 | 30.81 | 185.87 | 12.39 | 50.81 | 192.07 | 80.55 |
| 02/01/10 | 149.80 | 66.85 | 54.47 | 544.72 | 32.19 | 49.52 | 247.60 | 125.04 |
| 02/07/10 | | | | | | | | |
| 02/13/10 | 130.02 | 39.62 | 71.82 | 236.51 | 42.10 | 50.77 | 789.75 | 61.91 |
| 02/19/10 | 123.94 | 74.36 | 112.79 | 949.39 | 9.92 | 58.25 | 109.07 | 137.57 |
| 02/25/10 | | | | | | | | |
| 03/03/10 | 115.19 | 23.53 | 22.40 | 200.66 | 1.24 | 34.68 | 79.27 | 96.61 |
| 03/09/10 | 131.95 | 8.95 | 15.7 | 231.44 | | 33.34 | 63.7 | 14.88 |

B-6

D1. Response to Comments

| Resurrection School (PM _{2.5}) | | | | | | | | |
|--|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| Date | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 03/15/10 | | | | | | | | |
| 03/21/10 | 135.62 | 110.39 | 241.13 | 1045.31 | 64.01 | 91.27 | 205.13 | 65.59 |
| 03/27/10 | 219.33 | 202.95 | 473.86 | 290.14 | 61.61 | 213.03 | 308.56 | 119.43 |
| 04/02/10 | 164.97 | 67.83 | 54.24 | 317.98 | 7.77 | 46.5 | 115.26 | 44.9 |
| 04/08/10 | 148.76 | 89.1 | 185.61 | 349.47 | 15.43 | 80.54 | 203.5 | 119.05 |
| 04/14/10 | 143.26 | 19.01 | 22.9 | 340.57 | | 24.25 | 78.52 | 74.41 |
| 04/20/10 | 109.73 | 17.60 | 12.5 | 311.88 | | 28.46 | 51.04 | 89.01 |
| 04/26/10 | 105.93 | 59.51 | 40.3 | 963.35 | | 27.13 | 58.59 | 66.02 |
| 05/02/10 | 198.35 | 36.91 | 33.13 | 424.29 | 7.463 | 52.88 | 50.94 | 139.77 |
| 05/08/10 | 236.35 | 55.21 | 109.12 | 523.52 | 31.59 | 95.73 | 115.86 | 102.73 |
| 05/14/10 | 199.76 | 45.69 | 54.47 | 1243.44 | 77.94 | 31.63 | 102.02 | 34.15 |
| 05/20/10 | 122.14 | 21.72 | | | | 10.55 | 3.68 | 167.33 |
| 05/26/10 | 120.77 | 50.39 | 62.37 | 636.52 | | 40.42 | 61.27 | 84.54 |
| 06/01/10 | 170.51 | 35.73 | 45.71 | 1005.54 | 23.79 | 69.81 | 113.38 | 43.15 |

| Resurrection School (TSP) | | | | | | | | |
|---------------------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| Date | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 4/1/2009 | 0.68 | 2.05 | 1.04 | 1.47 | 0.45 | 1.03 | 1.23 | 0.04 |
| 4/7/2009 | 0.41 | 0.86 | 0.46 | 0.36 | 0.18 | 0.50 | 0.64 | ND |
| 4/13/2009 | 0.79 | 1.74 | 0.91 | 0.82 | 0.41 | 1.20 | 1.74 | 0.09 |
| 4/19/2009 | 0.85 | 1.81 | 0.68 | 0.50 | 0.39 | 1.12 | 1.63 | 0.07 |
| 4/25/2009 | 0.56 | 1.61 | 0.83 | 0.74 | 0.37 | 0.75 | 0.86 | 0.03 |
| 5/1/2009 | 0.32 | 2.21 | 1.13 | 1.14 | 0.49 | 1.09 | 1.82 | 0.10 |
| 5/7/2009 | 1.28 | 2.50 | 1.36 | 0.68 | 0.70 | 1.46 | 1.97 | 0.11 |
| 5/13/2009 | 0.24 | 2.3 | 0.95 | 1.59 | 0.51 | 1.19 | 1.57 | 0.05 |
| 5/19/2009 | 0.36 | 0.87 | 0.38 | 0.74 | 0.18 | 0.56 | 0.66 | 0.03 |
| 5/25/2009 | 0.24 | 0.50 | 0.23 | 0.74 | 0.12 | 0.23 | 0.27 | 0.03 |
| 5/31/2009 | 0.41 | 0.93 | 0.51 | 1.67 | 0.17 | 0.42 | 0.60 | 0.04 |
| 6/6/2009 | ND | 0.28 | 0.15 | 0.18 | 0.07 | 0.17 | 0.25 | ND |
| 6/10/2009 | 0.17 | 0.28 | 0.15 | 0.20 | 0.06 | 0.18 | 0.21 | ND |
| 6/12/2009 | 0.31 | 0.48 | 0.19 | 0.33 | 0.11 | 0.28 | 0.37 | ND |
| 6/18/2009 | ND | 0.64 | 0.49 | 0.82 | 0.14 | 0.36 | 0.48 | ND |
| 6/24/2009 | 0.33 | 0.53 | 0.23 | 0.69 | 0.13 | 0.31 | 0.36 | ND |
| 6/30/2009 | 0.79 | 0.52 | 0.72 | 1.75 | 0.11 | 0.28 | 1.64 | 0.04 |
| 7/6/2009 | 0.68 | 0.57 | 0.85 | 1.19 | 0.16 | 0.34 | 2.12 | 0.04 |
| 7/12/2009 | 0.65 | 0.57 | 0.93 | 0.72 | 0.15 | 0.31 | 1.55 | ND |
| 7/18/2009 | 0.44 | 0.55 | 0.82 | 0.80 | 0.12 | 0.31 | 0.99 | 0.03 |
| 7/24/2009 | 0.30 | 1.64 | 2.30 | 1.32 | 0.39 | 1.05 | 1.29 | 0.06 |
| 7/30/2009 | ND | 0.47 | 0.69 | 0.83 | 0.09 | 0.26 | 1.62 | 0.03 |
| 8/5/2009 | ND | 0.45 | 0.71 | 0.35 | 0.09 | 0.27 | 1.01 | 0.03 |
| 8/11/2009 | ND | 0.51 | 0.77 | 1.01 | 0.09 | 0.30 | 1.32 | 0.03 |
| 8/17/2009 | 0.24 | 1.35 | 1.86 | 1.75 | 0.39 | 0.89 | 1.03 | 0.05 |
| 8/23/2009 | 0.24 | 0.99 | 1.13 | 1.16 | 0.26 | 0.56 | 0.72 | 0.03 |
| 8/29/2009 | 0.34 | 2.81 | 4.20 | 0.68 | 0.78 | 2.30 | 3.00 | 0.14 |

D1. Response to Comments

| Resurrection School (TSP) | | | | | | | | |
|---------------------------|-------------------------|-------------------------|-------------------------|------------------------|------------------------|-------------------------|-------------------------|-------------------------|
| Date | Mg (ng/m ³) | Al (ng/m ³) | Si (ng/m ³) | S (ng/m ³) | K (ng/m ³) | Ca (ng/m ³) | Fe (ng/m ³) | Ba (ng/m ³) |
| 8/4/2009 | 0.35 | 7.39 | 5.56 | 0.78 | 0.64 | 1.89 | 2.17 | 0.11 |
| 9/10/2009 | 0.32 | 2.30 | 3.25 | 0.95 | 0.56 | 1.87 | 2.13 | 0.11 |
| 9/16/2009 | 0.31 | 1.83 | 2.77 | 0.63 | 0.47 | 1.51 | 1.80 | 0.09 |
| 9/22/2009 | 0.35 | 4.14 | 5.87 | 0.83 | 1.13 | 4.58 | 4.36 | 0.19 |
| 9/28/2009 | 0.25 | 1.76 | 2.52 | 1.41 | 0.47 | 1.30 | 1.58 | 0.07 |
| 10/4/2009 | 0.45 | 2.37 | 3.21 | 0.82 | 0.57 | 1.30 | 1.43 | 0.04 |
| 10/10/2009 | 0.30 | 1.73 | 2.45 | 1.05 | 0.40 | 0.97 | 1.27 | 0.04 |
| 10/16/2009 | | | | | | | | |
| 10/22/2009 | 0.27 | 2.14 | 3.26 | 0.45 | 0.52 | 1.56 | 2.41 | 0.15 |
| 10/28/2009 | 0.44 | 3.82 | 5.51 | 0.21 | 0.74 | 1.89 | 3.05 | 0.06 |
| 11/3/2009 | | | | | | | | |
| 11/9/2009 | 0.27 | 2.43 | 3.68 | 0.67 | 0.58 | 1.86 | 3.06 | 0.15 |
| 11/15/2009 | 0.29 | 2.27 | 3.30 | 0.42 | 0.58 | 1.03 | 2.18 | 0.12 |
| 11/21/2009 | 0.23 | 1.13 | 1.68 | 0.43 | 0.30 | 0.76 | 1.28 | 0.07 |
| 11/27/2009 | 0.33 | 2.01 | 2.83 | 0.40 | 0.49 | 1.28 | 1.72 | 0.09 |
| 12/3/2009 | 0.24 | 1.75 | 2.65 | 0.62 | 0.44 | 1.34 | 1.98 | 0.05 |
| 12/9/2009 | 0.22 | 0.79 | 1.71 | 0.32 | 0.31 | 0.89 | 1.40 | 0.08 |
| 12/15/2009 | | | | | | | | |
| 12/21/2009 | 0.40 | 1.35 | 2.99 | 0.33 | 0.48 | 1.46 | 2.50 | 0.17 |
| 12/27/2009 | 0.21 | 0.79 | 1.65 | 0.32 | 0.55 | 0.77 | 1.38 | 0.09 |
| 1/2/2010 | | | | | | | | |
| 1/8/2010 | 0.44 | 1.50 | 3.27 | 0.32 | 0.56 | 1.77 | 2.92 | 0.17 |
| 1/14/2010 | 0.60 | 2.29 | 4.23 | 0.33 | 0.67 | 1.99 | 3.44 | 0.18 |
| 1/30/2010 | 0.05 | 0.09 | 0.23 | 0.20 | 0.12 | 0.22 | 0.56 | 0.02 |
| 1/26/2010 | 0.17 | 0.64 | 1.39 | 0.21 | 0.24 | 0.69 | 1.24 | 0.08 |
| 2/1/2010 | 0.23 | 0.85 | 1.92 | 0.54 | 0.24 | 0.99 | 1.67 | 0.10 |
| 2/7/2010 | | | | | | | | |
| 2/13/2010 | 0.19 | 0.72 | 1.63 | 0.33 | 0.31 | 0.84 | 1.55 | 0.11 |
| 2/19/2010 | 0.20 | 0.66 | 1.52 | 0.58 | 0.26 | 0.71 | 0.90 | 0.08 |
| 2/25/2010 | 0.19 | 0.61 | 1.35 | 0.25 | 0.26 | 0.69 | 1.18 | 0.06 |
| 3/4/2010 | 0.09 | 0.27 | 0.65 | 0.26 | 0.11 | 0.40 | 0.58 | 0.03 |
| 3/9/2010 | 0.14 | 0.45 | 1.04 | 0.32 | 0.18 | 0.46 | 0.61 | 0.03 |
| 3/15/2010 | 0.34 | 1.22 | 2.54 | 0.26 | 0.39 | 1.34 | 1.76 | 0.11 |
| 3/21/2010 | 0.31 | 1.20 | 2.75 | 0.76 | 0.45 | 1.38 | 1.79 | 0.10 |
| 3/27/2010 | 0.57 | 2.10 | 4.37 | 0.42 | 0.69 | 2.07 | 2.49 | 0.11 |

D1. Response to Comments

APPENDIX C: VOC AND CARBONYL DATA

(-)

D1. Response to Comments

| Central Los Angeles | | | | | | | | | |
|---------------------|--------------------------|---------------|---------------|--------------------|-------------------|----------------|---------------------|------------------|------------------|
| Date | Methylene Chloride (ppb) | Benzene (ppb) | Toluene (ppb) | Ethylbenzene (ppb) | m/p-xylenes (ppb) | o-xylene (ppb) | 1,3-butadiene (ppb) | 2-propenal (ppb) | 2-butanone (ppb) |
| 4/3/2009 | 0.41 | 0.32 | 0.85 | 0.12 | 0.46 | 0.16 | 0.05 | 0.13 | 0.45 |
| 4/7/2009 | 0.21 | 0.31 | 0.84 | 0.13 | 0.5 | 0.17 | 0.06 | 0.1 | 0.28 |
| 4/13/2009 | 0.24 | 0.54 | 1.47 | 0.2 | 0.73 | 0.26 | 0.07 | 0.17 | 0.54 |
| 4/19/2009 | 0.22 | 0.41 | 1.38 | 0.25 | 0.82 | 0.26 | 0.08 | 0.18 | 0.45 |
| 4/25/2009 | 0.16 | 0.18 | 0.38 | 0.06 | 0.23 | 0.08 | 0.02 | 0.07 | 0.19 |
| 5/1/2009 | 0.3 | 0.48 | 1.36 | 0.23 | 0.75 | 0.26 | 0.07 | 0.21 | 0.54 |
| 5/7/2009 | 0.39 | 0.53 | 1.1 | 0.2 | 0.73 | 0.25 | 0.08 | 0.23 | 0.55 |
| 5/13/2009 | 0.39 | 0.31 | 0.84 | 0.14 | 0.47 | 0.17 | 0.04 | 0.12 | 0.41 |
| 5/19/2009 | 0.15 | 0.29 | 0.78 | 0.13 | 0.47 | 0.16 | 0.06 | 0.13 | 0.28 |
| 5/25/2009 | 0.08 | 0.13 | 0.27 | 0.05 | 0.16 | 0.06 | 0.02 | 0.07 | 0.2 |
| 5/31/2009 | 0.13 | 0.2 | 0.45 | 0.06 | 0.2 | 0.07 | 0.02 | 0.2 | 0.47 |
| 6/5/2009 | 0.14 | 0.16 | 0.56 | 0.1 | 0.34 | 0.1 | 0.03 | 0.2 | 0.31 |
| 6/11/2009 | 0.33 | 0.2 | 0.61 | 0.11 | 0.37 | 0.13 | 0.04 | 0.1 | 0.33 |
| 6/17/2009 | 0.38 | 0.28 | 0.9 | 0.14 | 0.5 | 0.16 | 0.04 | 0.13 | 0.43 |
| 6/24/2009 | 0.74 | 0.18 | 0.57 | 0.11 | 0.4 | 0.12 | 0.04 | 0.1 | 0.39 |
| 6/30/2009 | 0.17 | 0.27 | 0.88 | 0.11 | 0.6 | 0.18 | 0.06 | 0.12 | 0.15 |
| 7/5/2009 | 0.7 | 0.32 | 0.95 | 0.15 | 0.57 | 0.17 | 0.07 | 0.17 | 0.39 |
| 7/12/2009 | 0.17 | 0.38 | 1.1 | 0.17 | 0.64 | 0.19 | 0.06 | 0.18 | 0.36 |
| 7/18/2009 | 0.16 | 0.32 | 0.94 | 0.14 | 0.48 | 0.16 | 0.04 | 0.17 | 0.43 |
| 7/24/2009 | 0.36 | 0.1 | 0.86 | 0.13 | 0.48 | 0.17 | 0.04 | 0.16 | 0.73 |
| 7/30/2009 | 2.46 | 0.2 | 0.51 | 0.08 | 0.28 | 0.1 | 0.02 | 0.13 | 0.48 |
| 8/5/2009 | 0.52 | 0.45 | 1.56 | 0.19 | 0.71 | 0.26 | 0.06 | 0.35 | 0.82 |
| 8/11/2009 | 0.24 | 0.24 | 0.72 | 0.11 | 0.39 | 0.14 | 0.04 | 0.14 | 0.51 |
| 8/17/2009 | 0.14 | 0.32 | 0.77 | 0.11 | 0.38 | 0.11 | 0.04 | 0.15 | 0.55 |
| 8/23/2009 | 0.42 | 0.37 | 0.64 | 0.09 | 0.26 | 0.08 | 0.02 | 0.27 | 0.52 |
| 8/29/2009 | 0.16 | 1.05 | 2.82 | 0.4 | 1.59 | 0.58 | 0.19 | 0.65 | 1.36 |
| 9/4/2009 | 0.39 | 0.46 | 1.39 | 0.2 | 0.71 | 0.23 | 0.07 | 0.27 | 0.84 |
| 9/10/2009 | 0.45 | 0.53 | 1.39 | 0.2 | 0.71 | 0.24 | 0.06 | 0.25 | 0.69 |
| 9/16/2009 | 0.23 | 0.46 | 1.36 | 0.18 | 0.57 | 0.22 | 0.04 | 0.22 | 0.77 |
| 9/18/2009 | 0.33 | 0.5 | 1.43 | 0.22 | 0.69 | 0.25 | 0.05 | 0.29 | 0.75 |
| 9/22/2009 | 0.52 | 0.75 | 2.28 | 0.32 | 1.18 | 0.42 | 0.15 | 0.36 | 0.72 |
| 9/28/2009 | 0.25 | 0.36 | 1.03 | 0.11 | 0.51 | 0.16 | 0.06 | 0.28 | 0.74 |
| 10/4/2009 | 0.04 | 0.11 | 0.27 | 0.04 | 0.13 | 0.04 | 0.02 | 0.15 | 0.19 |

D1. Response to Comments

| Date | Central Los Angeles | | | | | | | | |
|------------|--------------------------|---------------|---------------|-----------------|-------------------|----------------|---------------------|------------------|------------------|
| | Methylene Chloride (ppb) | Benzene (ppb) | Toluene (ppb) | Thiophene (ppb) | m/p-xylenes (ppb) | o-xylene (ppb) | 1,3-butadiene (ppb) | 2-propanol (ppb) | 2-butanone (ppb) |
| 1/13/2009 | 0.14 | 0.25 | 0.67 | 0.1 | 0.33 | 0.32 | 0.29 | 0.14 | 0.31 |
| 01/14/2009 | 0.43 | 0.8 | 2.63 | 0.36 | 1.07 | 0.47 | 0.16 | 0.33 | 0.72 |
| 10/22/2009 | 0.76 | 0.75 | 3.56 | 0.35 | 1.29 | 0.44 | 0.16 | 0.33 | 0.54 |
| 10/28/2009 | 0.4 | 0.1 | 0.8 | 0.02 | 0.08 | 0.03 | 0.01 | 0.04 | 0.1 |
| 11/10/2009 | 0.61 | 0.92 | 3.44 | 0.41 | 1.5 | 0.52 | 0.18 | 0.37 | 1.22 |
| 11/14/2009 | 0.39 | 0.85 | 2.43 | 0.24 | 1.11 | 0.42 | 0.19 | 0.4 | 0.79 |
| 11/15/2009 | 0.23 | 0.57 | 1.37 | 0.2 | 0.56 | 0.25 | 0.12 | 0.24 | 0.47 |
| 11/17/2009 | 0.68 | 0.6 | 1.69 | 0.23 | 0.94 | 0.31 | 0.16 | 0.23 | 0.46 |
| 11/23/2009 | 0.25 | 0.48 | 1.1 | 0.21 | 0.82 | 0.26 | 0.13 | 0.21 | 0.42 |
| 12/3/2009 | 0.34 | 0.6 | 1.64 | 0.23 | 0.79 | 0.27 | 0.1 | 0.23 | 0.51 |
| 12/9/2009 | 0.29 | 0.5 | 1.25 | 0.18 | 0.65 | 0.21 | 0.08 | 0.18 | 0.36 |
| 12/15/2009 | 0.33 | 0.6 | 1.72 | 0.26 | 1.08 | 0.42 | 0.15 | 0.18 | 0.47 |
| 12/21/2009 | 1.34 | 0.82 | 2.52 | 0.36 | 1.3 | 0.43 | 0.2 | 0.34 | 0.72 |
| 12/22/2009 | 0.24 | 0.68 | 1.57 | 0.21 | 0.88 | 0.3 | 0.18 | 0.28 | 0.45 |
| 1/2/2010 | 0.17 | 0.41 | 1.28 | 0.15 | 0.59 | 0.19 | 0.1 | 0.14 | 0.3 |
| 1/8/2010 | 0.62 | 0.91 | 3.02 | 0.42 | 1.49 | 0.51 | 0.24 | 0.31 | 0.78 |
| 01/14/2010 | 0.35 | 0.68 | 2.06 | 0.28 | 1.2 | 0.35 | 0.17 | 0.2 | 0.51 |
| 01/20/2010 | 0.34 | 0.33 | 0.63 | 0.1 | 0.38 | 0.13 | 0.07 | 0.07 | 0.23 |
| 02/6/2010 | 0.45 | 0.54 | 1.6 | 0.22 | 0.83 | 0.26 | 0.13 | 0.16 | 0.41 |
| 2/11/2010 | 0.44 | 0.74 | 1.76 | 0.26 | 0.88 | 0.29 | 0.11 | 0.2 | 0.66 |
| 2/17/2010 | 0.14 | 0.31 | 0.68 | 0.1 | 0.38 | 0.12 | 0.06 | 0.11 | 0.2 |
| 2/19/2010 | 2.57 | 0.77 | 3.08 | 0.29 | 1.13 | 0.36 | 0.1 | 0.18 | 0.47 |
| 2/19/2010 | 0.51 | 0.34 | 0.5 | 0.06 | 0.23 | 0.08 | 0.05 | 0.06 | 0.32 |
| 2/24/2010 | 0.41 | 0.54 | 1.78 | 0.29 | 0.65 | 0.21 | 0.1 | 0.3 | 0.21 |
| 3/9/2010 | 0.18 | 0.29 | 0.62 | 0.1 | 0.34 | 0.12 | 0.06 | 0.17 | 0.22 |
| 3/9/2010 | 0.14 | 0.16 | 0.24 | 0.03 | 0.13 | 0.04 | 0.02 | 0.07 | 0.18 |
| 2/15/2010 | 0.58 | 0.59 | 1.65 | 0.33 | 1.2 | 0.32 | 0.13 | 0.21 | 0.27 |
| 02/12/2010 | 0.56 | 0.7 | 1.79 | 0.26 | 0.91 | 0.32 | 0.09 | 0.3 | 1.09 |
| 01/14/2010 | 0.28 | 0.34 | 0.91 | 0.12 | 0.46 | 0.16 | 0.06 | 0.17 | 0.47 |
| 4/23/2010 | 0.17 | 0.31 | 0.63 | 0.09 | 0.26 | 0.1 | 0.02 | 0.13 | 0.64 |
| 3/2/2010 | 0.17 | 0.14 | 0.39 | 0.05 | 0.17 | 0.06 | 0.02 | 0.04 | 0.31 |
| 5/8/2010 | 0.53 | 0.28 | 0.71 | 0.09 | 0.27 | 0.1 | 0.02 | 0.18 | 0.58 |
| 5/14/2010 | 1.21 | 0.25 | 0.55 | 0.09 | 0.29 | 0.13 | 0.01 | 0.11 | 0.34 |

D1. Response to Comments

| Date | Methylene Chloride (ppb) | Benzene (ppb) | Toluene (ppb) | Ruhouls | | | | | |
|------------|--------------------------|---------------|---------------|--------------------|-------------------|----------------|---------------------|------------------|------------------|
| | | | | Ethylbenzene (ppb) | m,p-xylenes (ppb) | o-xylene (ppb) | 1,3-butadiene (ppb) | 2-propanol (ppb) | 2-butanone (ppb) |
| 4/1/2009 | 0.24 | 0.38 | 1.14 | 0.14 | 0.51 | 0.19 | 0.04 | 0.11 | 0.63 |
| 4/7/2009 | 0.15 | 0.31 | 1.01 | 0.12 | 0.5 | 0.18 | 0.06 | 0.11 | 0.36 |
| 4/13/2009 | 0.6 | 0.27 | 1.29 | 0.15 | 0.51 | 0.22 | 0.04 | 0.14 | 0.64 |
| 4/19/2009 | 0.14 | 0.33 | 1.11 | 0.14 | 0.36 | 0.21 | 0.05 | 0.11 | 0.49 |
| 4/25/2009 | 0.49 | 0.15 | 0.38 | 0.05 | 0.28 | 0.07 | 0.02 | 0.05 | 0.32 |
| 5/1/2009 | 0.83 | 0.34 | 1.11 | 0.15 | 0.49 | 0.19 | 0.03 | 0.21 | 0.73 |
| 5/7/2009 | 0.61 | 0.36 | 1.29 | 0.15 | 0.55 | 0.2 | 0.04 | 0.19 | 0.82 |
| 5/13/2009 | 0.2 | 0.21 | 0.59 | 0.07 | 0.3 | 0.08 | 0.01 | 0.14 | 0.57 |
| 5/19/2009 | 0.1 | 0.31 | 1.12 | 0.14 | 0.48 | 0.19 | 0.04 | 0.18 | 0.58 |
| 5/25/2009 | 0.42 | 0.11 | 0.25 | 0.04 | 0.12 | 0.05 | 0.01 | 0.06 | 0.34 |
| 5/31/2009 | 0.17 | 0.19 | 0.44 | 0.05 | 0.15 | 0.07 | 0.01 | 0.14 | 0.47 |
| 6/6/2009 | 0.11 | 0.1 | 0.27 | 0.04 | 0.13 | 0.05 | 0.01 | 0.13 | 0.29 |
| 6/12/2009 | 0.95 | 0.08 | 0.24 | 0.03 | 0.29 | 0.04 | 0 | 0.07 | 0.1 |
| 6/18/2009 | 0.18 | 0.18 | 0.6 | 0.08 | 0.24 | 0.09 | 0.03 | 0.1 | 0.43 |
| 6/24/2009 | 0.24 | 0.14 | 0.44 | 0.06 | 0.19 | 0.07 | 0.02 | 0.08 | 0.35 |
| 6/30/2009 | 0.19 | 0.3 | 1.09 | 0.12 | 0.46 | 0.17 | 0.04 | 0.13 | 0.63 |
| 7/6/2009 | 0.22 | 0.24 | 0.85 | 0.1 | 0.35 | 0.12 | 0.02 | 0.11 | 0.62 |
| 7/12/2009 | 0.12 | 0.15 | 0.54 | 0.12 | 0.44 | 0.14 | 0.03 | 0.1 | 0.53 |
| 7/18/2009 | 0.37 | 0.28 | 1 | 0.14 | 0.43 | 0.15 | 0.02 | 0.13 | 0.63 |
| 7/24/2009 | 0.73 | 0.16 | 0.39 | 0.06 | 0.29 | 0.08 | 0.02 | 0.16 | 0.68 |
| 7/30/2009 | 1.76 | 0.3 | 0.41 | 0.05 | 0.17 | 0.07 | 0.01 | 0.11 | 0.58 |
| 8/5/2009 | 0.15 | 0.29 | 1.22 | 0.15 | 0.5 | 0.19 | 0.03 | 0.21 | 0.83 |
| 8/11/2009 | 0.21 | 0.24 | 0.69 | 0.08 | 0.26 | 0.1 | 0.02 | 0.19 | 0.57 |
| 8/17/2009 | 0.76 | 0.27 | 0.68 | 0.08 | 0.25 | 0.09 | 0.02 | 0.13 | 0.73 |
| 8/23/2009 | 0.63 | 0.18 | 0.54 | 0.07 | 0.23 | 0.09 | 0.02 | 0.12 | 0.67 |
| 8/29/2009 | 0.15 | 0.49 | 1.89 | 0.23 | 0.9 | 0.34 | 0.07 | 0.25 | 1.23 |
| 9/4/2009 | 0.3 | 0.43 | 1.91 | 0.21 | 0.84 | 0.29 | 0.07 | 0.19 | 0.88 |
| 9/10/2009 | 0.23 | 0.41 | 1.45 | 0.17 | 0.59 | 0.22 | 0.04 | 0.24 | 0.95 |
| 9/16/2009 | 0.7 | 0.3 | 1.11 | 0.13 | 0.41 | 0.14 | 0.02 | 0.19 | 0.84 |
| 9/22/2009 | 0.28 | 0.32 | 1.15 | 0.14 | 0.47 | 0.17 | 0.04 | 0.26 | 0.8 |
| 9/28/2009 | 0.15 | 0.16 | 1.41 | 0.18 | 0.69 | 0.24 | 0.07 | 0.18 | 0.82 |
| 10/4/2009 | 0.14 | 0.27 | 0.85 | 0.1 | 0.36 | 0.12 | 0.04 | 0.13 | 0.71 |
| 10/10/2009 | 0.05 | 0.08 | 0.2 | 0.03 | 0.09 | 0.03 | 0.01 | 0.06 | 0.2 |
| 10/16/2009 | 0.22 | 0.23 | 0.91 | 0.11 | 0.4 | 0.14 | 0.04 | 0.18 | 0.63 |

D1. Response to Comments

| Date | Rubidoux | | | | | | | | |
|------------|--------------------------|---------------|---------------|--------------------|-------------------|----------------|---------------------|------------------|------------------|
| | Methylene Chloride (ppb) | Benzene (ppb) | Toluene (ppb) | Ethylbenzene (ppb) | m+p-xylenes (ppb) | o-xylene (ppb) | 1,1-butadiene (ppb) | 2-propenal (ppb) | 2-butanone (ppb) |
| 10/26/2009 | 0.19 | 0.51 | 1.87 | 0.24 | 0.87 | 0.3 | 0.08 | 0.39 | 0.98 |
| 10/22/2009 | 0.26 | 0.51 | 2 | 0.25 | 1 | 0.33 | 0.13 | 0.24 | 0.79 |
| 10/28/2009 | 0.04 | 0.08 | 0.12 | 0.02 | 0.08 | 0.03 | 0.01 | 0 | 0.11 |
| 11/3/2009 | 0.04 | 0.74 | 2.67 | 0.34 | 1.25 | 0.43 | 0.15 | 0.15 | 1.21 |
| 11/9/2009 | 0.26 | 0.63 | 2.18 | 0.27 | 0.97 | 0.35 | 0.12 | 0.27 | 1.04 |
| 11/15/2009 | 0.2 | 0.32 | 0.75 | 0.1 | 0.3 | 0.11 | 0.02 | 0.12 | 0.46 |
| 11/21/2009 | 0.48 | 0.44 | 1.21 | 0.15 | 0.54 | 0.21 | 0.08 | 0.23 | 0.74 |
| 11/27/2009 | 0.56 | 0.36 | 1 | 0.13 | 0.5 | 0.17 | 0.07 | 0.18 | 0.53 |
| 12/3/2009 | 0.28 | 0.46 | 1.16 | 0.15 | 0.54 | 0.18 | 0.08 | 0.22 | 0.74 |
| 12/9/2009 | 0.51 | 0.53 | 1.46 | 0.19 | 0.73 | 0.24 | 0.13 | 0.21 | 0.86 |
| 12/13/2009 | 0.54 | 0.4 | 1.21 | 0.15 | 0.6 | 0.2 | 0.1 | 0.15 | 0.62 |
| 12/21/2009 | 0.23 | 0.68 | 2.24 | 0.3 | 1.21 | 0.4 | 0.19 | 0.26 | 0.75 |
| 12/27/2009 | 0.1 | 0.61 | 1.56 | 0.22 | 0.86 | 0.29 | 0.18 | 0.24 | 0.47 |
| 1/2/2010 | 0.06 | 0.17 | 0.34 | 0.05 | 0.19 | 0.06 | 0.02 | 0.06 | 0.22 |
| 1/8/2010 | 0.17 | 0.42 | 1.36 | 0.18 | 0.72 | 0.21 | 0.11 | 0.14 | 0.55 |
| 1/14/2010 | 0.08 | 0.73 | 0.68 | 0.08 | 0.25 | 0.09 | 0.02 | 0.04 | 0.39 |
| 1/20/2010 | 0.06 | 0.2 | 0.35 | 0.04 | 0.16 | 0.05 | 0.02 | 0.03 | 0.24 |
| 1/26/2010 | 0.26 | 0.61 | 1.88 | 0.25 | 0.92 | 0.3 | 0.14 | 0.14 | 0.8 |
| 2/1/2010 | 0.54 | 0.58 | 1.63 | 0.22 | 0.74 | 0.25 | 0.08 | 0.15 | 0.78 |
| 2/13/2010 | 0.35 | 0.45 | 1.28 | 0.2 | 0.74 | 0.21 | 0.11 | 0.1 | 0.42 |
| 2/19/2010 | 0.78 | 0.44 | 1.31 | 0.22 | 0.77 | 0.24 | 0.11 | 0.1 | 0.44 |
| 2/19/2010 | 0.59 | 0.18 | 0.34 | 0.05 | 0.15 | 0.06 | 0.04 | 0.1 | 0.37 |
| 3/3/2010 | 1.44 | 0.22 | 0.51 | 0.07 | 0.26 | 0.09 | 0.02 | 0.14 | 0.43 |
| 3/9/2010 | 1.28 | 0.19 | 0.37 | 0.05 | 0.17 | 0.06 | 0.02 | 0.06 | 0.23 |
| 3/15/2010 | 0.32 | 0.16 | 0.38 | 0.03 | 0.21 | 0.07 | 0.02 | 0.03 | 0.41 |
| 3/21/2010 | 0.43 | 0.41 | 1.08 | 0.15 | 0.5 | 0.19 | 0.04 | 0.25 | 0.85 |
| 3/27/2010 | 0.08 | 0.18 | 0.3 | 0.06 | 0.13 | 0.05 | 0.01 | 0 | 0.32 |
| 4/2/2010 | 7.71 | 0.29 | 0.61 | 0.12 | 0.27 | 0.11 | 0.07 | 0.15 | 0.72 |
| 4/8/2010 | 4.94 | 0.12 | 0.21 | 0.04 | 0.09 | 0.04 | 0 | 0.09 | 0.43 |
| 4/14/2010 | 1.08 | 0.33 | 0.83 | 0.13 | 0.42 | 0.15 | 0.04 | 0.2 | 0.58 |
| 5/2/2010 | 8.27 | 0.13 | 0.32 | 0.06 | 0.16 | 0.07 | 0.02 | 0.08 | 0.42 |
| 5/8/2010 | 6.2 | 0.26 | 0.8 | 0.12 | 0.34 | 0.14 | 0.02 | 0.16 | 0.71 |
| 5/11/2010 | 6.45 | 0.2 | 0.62 | 0.1 | 0.27 | 0.1 | 0.02 | 0.11 | 0.61 |
| 5/20/2010 | 4.11 | 0.22 | 0.79 | 0.12 | 0.36 | 0.13 | 0.03 | 0.13 | 0.62 |

D1. Response to Comments

| Resurrection School | | | | | | | | | |
|---------------------|--------------------------|---------------|---------------|--------------------|-------------------|----------------|---------------------|------------------|------------------|
| Date | Methylene Chloride (ppb) | Benzene (ppb) | Toluene (ppb) | Ethylbenzene (ppb) | m-p-xylenes (ppb) | o-xylene (ppb) | 1,3-butadiene (ppb) | 2-propanol (ppb) | 3-butanone (ppb) |
| 4/1/2009 | 0.17 | 0.35 | 0.01 | 0.13 | 0.27 | 0.21 | 0.07 | 0.15 | 0.48 |
| 4/7/2009 | 0.37 | 0.34 | 0.29 | 0.16 | 0.64 | 0.22 | 0.09 | 0.10 | 0.44 |
| 6/13/2009 | 0.33 | 0.65 | 2.19 | 0.28 | 1.12 | 0.40 | 0.73 | 0.21 | 0.96 |
| 4/25/2009 | 0.9 | 1.22 | 0.69 | 0.09 | 0.38 | 0.13 | 0.04 | 0.07 | 0.35 |
| 8/4/2009 | 0.31 | 4.53 | 1.30 | 0.21 | 0.83 | 0.30 | 0.10 | 0.18 | 0.68 |
| 8/7/2009 | 0.52 | 3.47 | 1.81 | 0.21 | 0.77 | 0.28 | 0.57 | 0.21 | 0.97 |
| 5/7/2009 | 0.16 | 0.32 | 0.84 | 0.11 | 0.37 | 0.14 | 0.22 | 0.13 | 0.67 |
| 5/9/2009 | 0.36 | 1.26 | 0.77 | 0.10 | 0.50 | 0.13 | 0.03 | 0.16 | 0.68 |
| 5/25/2009 | 0.08 | 0.56 | 0.44 | 0.07 | 0.24 | 0.09 | 0.01 | 0.09 | 0.35 |
| 6/30/2009 | 0.38 | 0.30 | 1.19 | 0.15 | 0.75 | 0.24 | 0.07 | 0.07 | 1.23 |
| 7/6/2009 | 0.28 | 0.32 | 1.10 | 0.16 | 0.57 | 0.18 | 0.06 | 0.02 | 1.13 |
| 7/12/2009 | 0.21 | 0.40 | 1.33 | 0.19 | 0.69 | 0.22 | 0.06 | 0.06 | 1.16 |
| 7/18/2009 | 0.24 | 0.35 | 1.16 | 0.16 | 0.35 | 0.18 | 0.05 | 0.57 | 1.21 |
| 7/26/2009 | 0.35 | 0.30 | 0.96 | 0.12 | 0.43 | 0.17 | 0.07 | 0.14 | 1.49 |
| 8/1/2009 | 0.30 | 0.31 | 0.97 | 0.13 | 0.38 | 0.21 | 0.04 | 0.25 | 1.25 |
| 8/13/2009 | 0.20 | 0.38 | 0.88 | 0.12 | 0.27 | 0.13 | 0.03 | 0.00 | 1.23 |
| 8/27/2009 | 0.13 | 0.23 | 0.62 | 0.09 | 0.31 | 0.11 | 0.04 | 0.19 | 0.82 |
| 8/29/2009 | 0.81 | 0.33 | 3.39 | 0.35 | 1.74 | 0.57 | 0.20 | 0.22 | 1.91 |
| 9/10/2009 | 0.54 | 0.38 | 1.87 | 0.25 | 0.92 | 0.43 | 0.09 | 0.40 | 1.57 |
| 9/16/2009 | 0.37 | 0.40 | 1.53 | 0.22 | 0.84 | 0.29 | 0.12 | 0.20 | 0.93 |
| 9/22/2009 | 1.24 | 0.26 | 2.54 | 0.35 | 1.33 | 0.16 | 0.17 | 0.31 | 1.13 |
| 9/28/2009 | 0.19 | 0.42 | 1.01 | 0.17 | 0.60 | 0.21 | 0.07 | 0.34 | 1.04 |
| 10/4/2009 | 0.07 | 0.17 | 0.43 | 0.06 | 0.24 | 0.08 | 0.04 | 0.14 | 0.41 |
| 10/10/2009 | 0.14 | 0.22 | 0.54 | 0.10 | 0.32 | 0.11 | 0.03 | 0.27 | 0.60 |
| 10/16/2009 | 0.49 | 0.27 | 2.37 | 0.33 | 1.09 | 0.41 | 0.11 | 0.40 | 1.16 |
| 10/22/2009 | 0.12 | 0.37 | 3.11 | 0.46 | 2.02 | 0.66 | 0.21 | 0.23 | 1.03 |
| 10/28/2009 | 0.05 | 0.15 | 0.31 | 0.06 | 0.25 | 0.08 | 0.04 | 0.04 | 0.15 |
| 11/5/2009 | 0.30 | 1.18 | 1.58 | 0.35 | 2.06 | 0.31 | 0.21 | 0.45 | 2.07 |
| 11/9/2009 | 0.71 | 1.21 | 3.26 | 0.32 | 2.03 | 0.69 | 0.32 | 0.44 | 1.06 |
| 11/15/2009 | 0.17 | 0.74 | 1.00 | 0.24 | 1.10 | 0.30 | 0.20 | 0.23 | 0.62 |
| 11/21/2009 | 0.24 | 0.73 | 2.00 | 0.30 | 1.11 | 0.38 | 0.16 | 0.19 | 0.64 |
| 11/27/2009 | 0.18 | 0.64 | 1.91 | 0.29 | 1.18 | 0.38 | 0.17 | 0.21 | 0.51 |
| 12/2/2009 | 0.23 | 0.73 | 2.05 | 0.33 | 1.19 | 0.48 | 0.13 | 0.13 | 0.68 |

D1. Response to Comments

| Resurrection School | | | | | | | | | |
|---------------------|--------------------------|---------------|---------------|--------------------|-------------------|----------------|---------------------|------------------|------------------|
| Date | Methylene Chloride (ppb) | Benzene (ppb) | Toluene (ppb) | Ethylbenzene (ppb) | m,p-xylenes (ppb) | o-xylene (ppb) | 1,3-butadiene (ppb) | 2-propanol (ppb) | 2-butanone (ppb) |
| 12/9/2009 | 0.29 | 0.63 | 1.70 | 0.25 | 0.99 | 0.32 | 0.13 | 0.20 | 0.34 |
| 12/13/2009 | 0.33 | 0.64 | 1.87 | 0.28 | 1.13 | 0.37 | 0.16 | 0.18 | 0.47 |
| 12/17/2009 | 0.41 | 1.03 | 3.28 | 0.41 | 2.09 | 0.66 | 0.28 | 0.33 | 0.79 |
| 12/27/2009 | 0.18 | 0.85 | 2.00 | 0.30 | 1.16 | 0.39 | 0.22 | 0.31 | 0.55 |
| 1/2/2010 | 0.21 | 0.66 | 1.91 | 0.33 | 1.09 | 0.35 | 0.15 | 0.22 | 0.54 |
| 1/8/2010 | 0.54 | 1.22 | 4.13 | 0.59 | 2.77 | 0.76 | 0.44 | 0.39 | 0.91 |
| 1/14/2010 | 0.69 | 1.04 | 3.5 | 0.49 | 1.99 | 0.62 | 0.1 | 0.29 | 1.05 |
| 1/20/2010 | 0.16 | 0.42 | 1.16 | 0.17 | 0.67 | 0.21 | 0.12 | 0.12 | 0.23 |
| 1/26/2010 | 0.26 | 0.7 | 2. | 0.3 | 1.17 | 0.47 | 0.16 | 0.16 | 0.47 |
| 2/1/2010 | 0.28 | 0.84 | 2.21 | 0.34 | 1.23 | 0.4 | 0.16 | 0.24 | 0.36 |
| 2/7/2010 | 0.18 | 0.56 | 1.42 | 0.22 | 0.87 | 0.27 | 0.16 | 0 | 0.28 |
| 2/13/2010 | 0.46 | 0.94 | 2.71 | 0.39 | 1.43 | 0.47 | 0.19 | 0.26 | 1.77 |
| 2/19/2010 | 0.33 | 0.33 | 1.01 | 0.14 | 0.5 | 0.16 | 0.06 | 0.13 | 0.83 |
| 2/25/2010 | 0.51 | 0.53 | 1.54 | 0.24 | 0.96 | 0.77 | 0.12 | 0.36 | 0.89 |
| 3/3/2010 | 0.36 | 0.36 | 0.78 | 0.12 | 0.47 | 0.15 | 0.07 | 0.21 | 0.52 |
| 3/9/2010 | 0.1 | 0.21 | 0.33 | 0.05 | 0.19 | 0.06 | 0.02 | 0.06 | 0.23 |
| 3/15/2010 | 0.31 | 0.74 | 2.33 | 0.34 | 1.34 | 0.42 | 0.21 | 0.27 | 0.86 |
| 3/21/2010 | 0.51 | 0.77 | 2.36 | 0.34 | 1.17 | 0.4 | 0.14 | 0.31 | 1.7 |
| 3/27/2010 | 0.13 | 0.38 | 0.79 | 0.1 | 0.28 | 0.07 | 0.07 | 0.12 | 0.46 |
| 4/7/2010 | 0.22 | 0.38 | 0.9 | 0.13 | 0.44 | 0.16 | 0.15 | 0.22 | 0.59 |
| 4/13/2010 | 0.28 | 0.41 | 1.25 | 0.17 | 0.63 | 0.21 | 0.11 | 0.3 | 0.87 |
| 4/20/2010 | 0.26 | 0.25 | 0.71 | 0.1 | 0.02 | 0.11 | 0.02 | 0.21 | 0.7 |
| 4/26/2010 | 0.26 | 0.32 | 0.86 | 0.12 | 0.41 | 0.14 | 0.03 | 0.23 | 1.1 |
| 5/2/2010 | 0.1 | 0.22 | 0.49 | 0.08 | 0.26 | 0.1 | 0.02 | 0.12 | 0.51 |
| 5/8/2010 | 0.33 | 0.32 | 0.83 | 0.11 | 0.34 | 0.13 | 0.02 | 0.24 | 0.96 |
| 5/14/2010 | 0.34 | 0.25 | 0.72 | 0.1 | 0.35 | 0.12 | 0.03 | 0.14 | 0.51 |
| 5/20/2010 | 0.1 | 0.24 | 0.99 | 0.12 | 0.38 | 0.15 | 0.02 | 0.1 | 0.88 |
| 5/26/2010 | 0.09 | 0.13 | 0.53 | 0.04 | 0.27 | 0.09 | 0.02 | 0.04 | 0.57 |
| 6/1/2010 | 0.08 | 0.17 | 0.79 | 0.11 | 0.49 | 0.12 | 0.02 | 0.1 | 0.62 |

D1. Response to Comments

| Central Los Angeles | | | | Central Los Angeles | | | |
|---------------------|--------------------|--------------------|---------------|---------------------|--------------------|--------------------|---------------|
| Date | Formaldehyde (ppb) | Acetaldehyde (ppb) | Acetone (ppb) | Date | Formaldehyde (ppb) | Acetaldehyde (ppb) | Acetone (ppb) |
| 4/1/2009 | 2.80 | 1.00 | 4.03 | 11/21/2009 | 2.80 | 1.30 | 5.75 |
| 4/7/2009 | 1.80 | 1.00 | 3.73 | 11/27/2009 | 3.30 | 1.50 | 4.92 |
| 4/13/2009 | 2.70 | 1.70 | 4.84 | 12/3/2009 | 3.30 | 1.50 | 9.42 |
| 4/19/2009 | 3.60 | 2.20 | 5.74 | 12/9/2009 | 2.40 | 1.20 | 5.19 |
| 4/25/2009 | 0.80 | 0.40 | 2.59 | 12/15/2009 | 2.80 | 1.20 | 8.62 |
| 5/1/2009 | 2.40 | 1.60 | 7.96 | 12/21/2009 | 4.70 | 2.30 | 10.36 |
| 5/7/2009 | 3.80 | 2.00 | 7.42 | 12/27/2009 | 3.40 | 1.80 | 4.98 |
| 5/10/2009 | 2.90 | 1.00 | | 1/2/2010 | 2.90 | 1.30 | 3.24 |
| 5/13/2009 | 1.40 | 1.00 | 4.89 | 1/8/2010 | 4.60 | 2.50 | 11.72 |
| 5/19/2009 | 1.10 | 1.00 | 5.33 | 1/14/2010 | 3.40 | 1.60 | 7.9 |
| 5/25/2009 | 0.50 | 0.40 | 2.14 | 1/20/2010 | 2.10 | 0.60 | 2.97 |
| 5/31/2009 | 0.70 | 0.60 | 4.44 | 1/26/2010 | 3.40 | 1.30 | 6.01 |
| 6/6/2009 | 0.50 | 0.40 | 3.17 | 2/1/2010 | 3.50 | 1.80 | 6.76 |
| 6/12/2009 | 1.60 | 0.50 | 3.58 | 2/7/2010 | 1.40 | 0.70 | 3.08 |
| 6/18/2009 | 1.20 | 1.00 | 5.03 | 2/13/2010 | 3.30 | 1.80 | 6.65 |
| 6/24/2009 | 0.70 | 0.50 | 3.85 | 2/19/2010 | 1.60 | 0.60 | 2.85 |
| 6/30/2009 | 1.20 | 1.10 | 4.84 | 2/25/2010 | 2.80 | 1.20 | 5.67 |
| 7/6/2009 | 3.90 | 1.50 | 4.04 | 3/3/2010 | 1.40 | 0.50 | 3.32 |
| 7/12/2009 | 5.10 | 1.80 | 4.95 | 3/9/2010 | 0.80 | 0.30 | 3.87 |
| 7/18/2009 | 4.50 | 1.50 | 5.22 | 3/15/2010 | 3.60 | 1.90 | 6.84 |
| 7/24/2009 | 4.10 | 1.30 | 6.67 | 3/21/2010 | 4.70 | 2.60 | 9.98 |
| 7/30/2009 | 2.80 | 0.80 | 5.18 | 3/27/2010 | 3.00 | 1.50 | |
| 8/5/2009 | 4.00 | 1.80 | 8.45 | 4/2/2010 | 2.10 | 0.90 | |
| 8/11/2009 | 1.80 | 1.20 | 6.37 | 4/8/2010 | 3.00 | 1.30 | |
| 8/17/2009 | 1.80 | 1.40 | 5.60 | 4/14/2010 | 2.40 | 1.10 | 5.7 |
| 8/23/2009 | 1.00 | 1.00 | 5.28 | 4/20/2010 | 1.60 | 0.60 | |
| 8/29/2009 | 4.70 | 3.70 | 16.02 | 4/26/2010 | 2.90 | 1.20 | 7.52 |
| 9/4/2009 | 6.00 | 1.70 | 11.21 | 5/2/2010 | 1.80 | 0.60 | 3.69 |
| 9/10/2009 | 5.10 | 1.90 | 9.16 | 5/8/2010 | 2.90 | 1.20 | 6.44 |
| 9/16/2009 | 4.30 | 1.60 | 9.44 | 5/14/2010 | 2.40 | 1.00 | 5.39 |
| 9/22/2009 | | | 10.92 | 5/20/2010 | 2.50 | 1.00 | |
| 9/28/2009 | 5.70 | 2.20 | 13.55 | 5/26/2010 | 1.70 | | |
| 9/28/2009 | 4.20 | 1.60 | 7.57 | 6/1/2010 | 1.00 | 0.80 | |
| 10/4/2009 | 1.50 | 0.40 | 2.79 | | | | |
| 10/10/2009 | | | 5.75 | | | | |
| 10/16/2009 | | | 13.57 | | | | |
| 10/22/2009 | | | 12.99 | | | | |
| 10/28/2009 | | | 4.51 | | | | |
| 11/3/2009 | | | 16.36 | | | | |
| 11/9/2009 | 5.30 | 2.50 | 11.34 | | | | |
| 11/15/2009 | 3.30 | 1.60 | 6.54 | | | | |

D1. Response to Comments

| Rubidoux | | | | Rubidoux | | | |
|------------|--------------------|--------------------|---------------|------------|--------------------|--------------------|---------------|
| Date | Formaldehyde (ppb) | Acetaldehyde (ppb) | Acetone (ppb) | Date | Formaldehyde (ppb) | Acetaldehyde (ppb) | Acetone (ppb) |
| 4/1/2009 | 3.30 | 1.40 | 4.89 | 11/3/2009 | 6.80 | 3.70 | 13.87 |
| 4/2/2009 | 3.60 | 1.40 | 3.8 | 11/9/2009 | 5.20 | 2.70 | 9.04 |
| 4/13/2009 | 4.30 | 1.90 | 5.25 | 11/15/2009 | 1.60 | 0.90 | 4.43 |
| 4/19/2009 | 5.10 | 2.00 | 3.87 | 11/21/2009 | 3.60 | 1.60 | 5.93 |
| 4/25/2009 | 1.70 | 0.50 | 3 | 11/27/2009 | 2.90 | 1.20 | 4.31 |
| 5/1/2009 | 1.60 | 1.40 | 7.74 | 12/3/2009 | 3.40 | 1.60 | 7.37 |
| 5/7/2009 | 2.30 | 2.30 | 7.04 | 12/9/2009 | 1.70 | 1.00 | 4.91 |
| 5/13/2009 | 4.10 | 1.40 | 6.14 | 12/15/2009 | 1.80 | 0.80 | 4.59 |
| 5/19/2009 | 5.20 | 2.10 | 6.3 | 12/21/2009 | 3.50 | 1.80 | 6.23 |
| 5/25/2009 | 2.80 | 0.90 | 2.45 | 12/27/2009 | 2.80 | 1.50 | 2.98 |
| 5/31/2009 | 3.70 | 1.30 | 3.58 | 1/2/2010 | 1.20 | 0.50 | 2.47 |
| 6/6/2009 | 2.00 | 0.60 | 3.12 | 1/8/2010 | 2.30 | 1.00 | 4.17 |
| 6/12/2009 | 2.20 | 0.50 | 2.8 | 1/14/2010 | 0.90 | 0.50 | 2.37 |
| 6/18/2009 | 4.60 | 1.60 | 5.3 | 1/20/2010 | 0.80 | 0.30 | 1.82 |
| 6/24/2009 | 3.50 | 1.10 | 3.98 | 1/26/2010 | 2.30 | 1.40 | 5.59 |
| 6/30/2009 | 5.10 | 1.90 | 7.63 | 2/1/2010 | 2.60 | 1.40 | 4.89 |
| 7/6/2009 | 5.20 | 1.90 | 5.23 | 2/7/2010 | 1.20 | 0.60 | 3.73 |
| 7/12/2009 | 5.80 | 2.10 | 4.7 | 2/13/2010 | 2.00 | 1.00 | 4.69 |
| 7/18/2009 | 8.30 | 2.00 | 5.97 | 2/19/2010 | 1.30 | 0.50 | 3.21 |
| 7/24/2009 | 4.80 | 0.90 | 6.4 | 2/25/2010 | 1.20 | 1.00 | |
| 7/30/2009 | 4.90 | 1.30 | 6.75 | 3/3/2010 | 1.20 | 0.60 | 3.66 |
| 8/5/2009 | 5.30 | 1.90 | 7.59 | 3/9/2010 | 0.90 | 0.40 | 2.6 |
| 8/11/2009 | 6.40 | 2.00 | 8.52 | 3/15/2010 | 1.30 | 0.60 | 3.72 |
| 8/17/2009 | 5.40 | 1.70 | 6.09 | 3/21/2010 | 3.30 | 1.70 | 7.51 |
| 8/23/2009 | 5.10 | 1.40 | 4.62 | 3/27/2010 | 1.00 | 0.50 | 2.77 |
| 8/29/2009 | 9.50 | 3.50 | 9.72 | 4/2/2010 | 1.90 | 0.90 | 7.26 |
| 9/4/2009 | 7.20 | 2.20 | 9.1 | 4/8/2010 | 2.10 | 1.40 | 3.47 |
| 9/10/2009 | 7.30 | 2.60 | 10.13 | 4/14/2010 | 3.30 | 1.00 | 8.2 |
| 9/16/2009 | 5.80 | 2.00 | 8.68 | 4/20/2010 | 1.70 | 0.70 | |
| 9/16/2009 | | | 9.22 | 4/26/2010 | 1.80 | 1.90 | |
| 9/22/2009 | 3.20 | 1.90 | 6.86 | 5/2/2010 | 1.50 | 0.70 | 3.32 |
| 9/28/2009 | 5.70 | 2.00 | 7.43 | 5/8/2010 | 3.30 | 1.50 | 6.4 |
| 10/4/2009 | 1.90 | 0.50 | 2.59 | 5/14/2010 | 2.70 | 1.20 | 5.57 |
| 10/10/2009 | 4.00 | 1.50 | 6.78 | 5/20/2010 | 3.40 | 1.50 | 6.47 |
| 10/16/2009 | | | 8.67 | 5/26/2010 | 1.90 | 0.80 | |
| 10/22/2009 | 5.10 | 2.20 | 9.18 | 6/1/2010 | 2.70 | 1.10 | |
| 10/28/2009 | | | 1.49 | | | | |

D1. Response to Comments

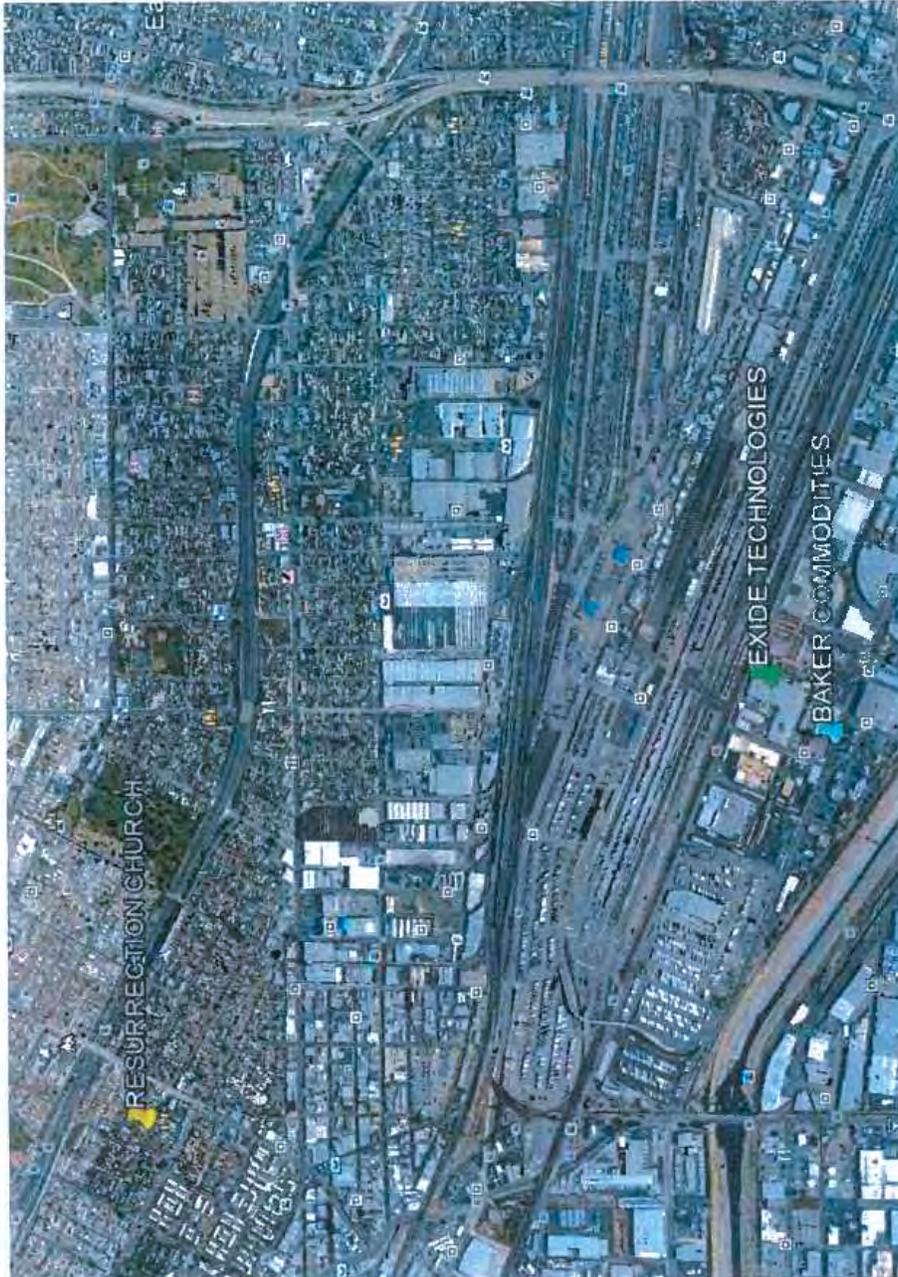
| Resurrection School | | | | Resurrection School | | | |
|---------------------|--------------------|--------------------|---------------|---------------------|--------------------|--------------------|---------------|
| Date | Formaldehyde (ppb) | Acetaldehyde (ppb) | Acetone (ppb) | Date | Formaldehyde (ppb) | Acetaldehyde (ppb) | Acetone (ppb) |
| 4/1/2009 | | | 4.95 | 11/9/2009 | 5.66 | 2.81 | 12.98 |
| 4/7/2009 | | | 5.40 | 11/15/2009 | 3.53 | 2.04 | 7.59 |
| 4/13/2009 | 4.24 | 2.61 | 7.56 | 11/21/2009 | 3.16 | 1.60 | 7.09 |
| 4/25/2009 | 2.01 | 1.12 | 3.15 | 11/27/2009 | 3.59 | 1.71 | 6.21 |
| 5/1/2009 | 4.40 | 2.33 | 6.50 | 12/3/2009 | 3.33 | 1.63 | 11.00 |
| 5/7/2009 | 4.96 | 2.78 | 8.76 | 12/9/2009 | 2.62 | 1.40 | 5.10 |
| 5/13/2009 | 3.38 | 1.75 | 6.35 | 12/15/2009 | | | 7.01 |
| 5/19/2009 | 3.22 | 1.47 | 6.71 | 12/21/2009 | 5.58 | 2.78 | 12.65 |
| 5/25/2009 | | | 3.46 | 12/27/2009 | 3.83 | 1.95 | 5.33 |
| 5/27/2009 | 4.04 | 1.95 | | 1/2/2010 | | | 5.4 |
| 5/31/2009 | 2.96 | 1.60 | | 1/8/2010 | 5.40 | 2.87 | 19.52 |
| 6/12/2009 | 2.61 | 1.14 | | 1/14/2010 | 4.26 | 1.56 | 13.51 |
| 6/18/2009 | 3.34 | 1.09 | | 1/20/2010 | 1.74 | 0.63 | 4.18 |
| 6/24/2009 | 2.60 | 0.80 | | 1/26/2010 | 2.87 | 1.46 | 5.55 |
| 6/30/2009 | 2.98 | 1.02 | 9.84 | 2/1/2010 | 3.83 | 1.82 | 8.4 |
| 7/6/2009 | 3.82 | 1.50 | 7.52 | 2/7/2010 | | | 3.1 |
| 7/12/2009 | 4.82 | 1.83 | 7.73 | 2/13/2010 | 2.72 | 1.65 | 9.95 |
| 7/18/2009 | 4.06 | 1.40 | 9.49 | 2/19/2010 | 0.69 | 0.42 | 8.33 |
| 7/24/2009 | 3.86 | 1.24 | 10.24 | 2/25/2010 | 2.94 | 1.31 | 9.37 |
| 7/30/2009 | NA | NA | | 3/3/2010 | 1.83 | 0.67 | 5.17 |
| 8/5/2009 | 4.65 | 1.72 | | 3/9/2010 | 1.06 | 0.40 | 2.28 |
| 8/11/2009 | 3.48 | 1.17 | 10.82 | 3/15/2010 | 4.02 | 1.82 | 8.49 |
| 8/17/2009 | 3.90 | 1.41 | 4.40 | 3/21/2010 | | | 14.43 |
| 8/23/2009 | 3.41 | 1.10 | 6.72 | 3/27/2010 | 4.09 | 1.88 | 4.28 |
| 8/29/2009 | 8.75 | 3.78 | 16.75 | 4/2/2010 | 2.24 | 0.95 | 7.04 |
| 9/4/2009 | 5.36 | 2.22 | | 4/8/2010 | 5.36 | 1.42 | 8.94 |
| 9/10/2009 | 4.59 | 1.94 | 12.04 | 4/14/2010 | 3.03 | 1.72 | |
| 9/16/2009 | 3.77 | 1.76 | 10.42 | 4/20/2010 | 1.93 | 0.66 | 6.76 |
| 9/22/2009 | 5.28 | 2.44 | 14.01 | 4/26/2010 | 3.21 | 1.34 | 9.06 |
| 9/28/2009 | 3.94 | 1.70 | 9.98 | 5/2/2010 | 2.00 | 0.70 | 5.16 |
| 10/4/2009 | 1.35 | 0.59 | 4.22 | 5/8/2010 | 3.46 | 1.28 | 9.03 |
| 10/10/2009 | 2.69 | 1.07 | 8.02 | 5/14/2010 | 2.51 | 0.91 | 6.96 |
| 10/16/2009 | | | 13.57 | 5/20/2010 | 3.02 | 1.03 | 8.46 |
| 10/22/2009 | 5.07 | 2.55 | 14.67 | 5/26/2010 | 2.00 | 0.64 | 5.26 |
| 10/28/2009 | 1.38 | 0.66 | 2.91 | 6/1/2010 | 1.89 | 0.52 | 5.37 |
| 11/3/2009 | | | 21.09 | | | | |

D1. Response to Comments

ATTACHMENT 8

33-41

D1. Response to Comments



D1. Response to Comments

ATTACHMENT 9 | 3.3-42

D1. Response to Comments

UNIVERSITY OF CALIFORNIA

Los Angeles

Characterization of Odor Nuisance

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Environmental Science and Engineering

by

Jane Curren

2012

D1. Response to Comments

Sectors in which actual sources are difficult to identify may benefit from more intensive community based approaches to identify odor sources and resolve odor problems. An example of such an area is Sector B. In this case, one school is complaining about odors on a regular basis, but no unique source has been identified. A pilot community monitoring program including community surveys and training in the use of odor wheels could be developed and implemented to help determine odor sources. This program would include the training of community members to characterize odors and document odor events. If a greater number of community members were filing complaints, it would be easier to evaluate patterns and distributions of odor events.

2. Known Sources

In October 2008 AQMD adopted Rule 410 which mandating the use odor control measures at transfer station uniformly across the industry. Since the adoption of the rule there has been a 10-20% reduction in odor complaints alleging transfer stations as the source of odors. Due to the success of this rule AQMD is interested in identifying other industries where similar regulation would be an effective tool for the reduction of odor complaints and odor nuisance. This investigation is a starting point in the identification of such industries. Rules similar to Rule 410 would most effectively be targeted at industries that are a source of a high number of complaints and large number of Rule 402 violations. The sources that were identified were Landfill, Transfer Station/Recycling, Foundry/Metal Processing, and Refinery/Fossil Fuel. Despite the lower number of odor

D1. Response to Comments

complaints, Rendering/Cremation sources were identified as a potential candidate for rule development because of the difficulty in identifying facility unique odor source among similar facilities and that public comments about odors from these facilities were not logged as complaints in CLASS.

While Wastewater and Autobody sources were also the subject of a high number of complaints they were not identified for further investigation. The large number of odor complaints about Autobody sources were distributed across a large number of sources. Odor problems could often be linked to malfunctioning spray booths and were often controlled through existing permit requirements. Complaints about Wastewater sources could primarily be attributed to odors from a single source. Source-specific odor rules for these industries were considered unnecessary for Wastewater sources and unlikely to substantially reduce complaints about Autobody sources.

E. References

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D1. Response to Comments

Odour Impact

Odour release, dispersion and influence on human well-being with specific focus on animal production

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Alnarp*

Doctoral thesis

**Swedish University of Agricultural Sciences
Alnarp 2004**

D1. Response to Comments

Introduction

General introduction

Our sensory systems provide us with information essential for our behaviour and protection. Of the very large amount of information gathered by our senses only a limited amount passes through our consciousness and for the sense of smell a factor 10^3 has been mentioned (Neretranders, 1999). This tiny fraction is the input to our conscious reactions to odours. Such reactions may be essential to us in some cases. Odours may be a warning that triggers avoidance behaviour, they may also trigger approach behaviour (CEN, 1999). Odour can be defined as an "organoleptic attribute perceptible by the olfactory organ on sniffing certain volatile substances" (CEN, 1999). The "substances which stimulate the human olfactory system so that an odour is perceived" are named odorants (Hangartner *et al.*, 1989). The sense of smell identifies odours and odorants and tells us something about our environment. Concerning food intake, the sense of smell (olfaction) and the sense of taste (gustation) are important for the protection of the body. Odours and taste are identified by different senses but odorants may change the intensity and character of a specific taste (Djordjevic *et al.*, 2004; Prescott *et al.*, 2004; Schifferstein & Verlegh, 1996). A well-functioning sense of smell can be essential for food intake and anosmia may lead to loss of appetite.

Our environment must fulfil a number of requirements if it is to be attractive to us. Aesthetic, social and psychological aspects are important here (Nasar, 1998), but also factors like the sound environment and air quality may be significant. In a Dutch study of the urban environment, air pollution was included as one of the most important attributes for the perceived quality of the neighbourhood (van Peil, 1997). Odours, being a part of air pollution, may affect the quality of life of exposed individuals. It is mentioned that less than 2% of the population in Sweden report annoying odours at the site of their dwellings but odours are in spite of this one of the most common causes for environmental complaints (Forsberg & Lindvall, 2004). Potential influence on well-being and health may be a main factor for annoyance due to odours but also other factors like a drop or expected drop in the value of houses and other dwellings at sites affected by environmental odours may be a reason for annoyance.

This thesis deals with the odour impact on the society and on human individuals. The aim of the thesis is to contribute to improved well-being and health and to a reduced number of conflicts by identifying factors important for odour release, by studying odour dispersion and by improving the knowledge of important factors and mechanisms triggering human reactions to odours.

Odour complaints can be related to operations like, for example, waste water treatment plants, composting plants, rendering plants, paper mills, and livestock and poultry operations. There is much annoyance over odour from animal production giving rise to a good deal of conflict between individuals in the neighbourhood of livestock and poultry operations and farmers. The present work

D1. Response to Comments

deals primarily with odour related to this sector although the underlying principles are, to a great extent, general.

Olfaction

The main olfactory system mediates what we usually call odour sensations (Doty, 2001). The odour receptors cells are located in the olfactory epithelium situated in a small region at the top of the two nasal cavities below the eyes. A large number of different receptors are connected to the olfactory bulbs at the base of the brain. Compared to many mammals, the human olfactory system is far less efficient. The size of the olfactory epithelium and the number of receptors may be a good indicator of its sensitivity. An olfactory epithelium surface area of 10 cm² in humans can be compared to 170 cm² in dogs (Hear *et al.*, 1996) and the total number of 12 million olfactory receptor cells in humans can be compared to 4 billion in bloodhounds (Shier *et al.*, 2004).

The 2004 Nobel Prize winners in medicine, Richard Axel and Linda Buck, have contributed greatly to the understanding of the mechanisms involved in olfaction. They searched for receptor proteins on the hair-like cilia connected to each olfactory neuron and found genes containing instructions for proteins in the olfactory epithelium (Axel, 1995a; Axel, 1995b; Buck, 1996; Buck, 1993; Buck & Axel, 1991a; Buck & Axel, 1991b). It is assumed that there are about 500-1000 different genes of this type in humans, giving rise to the same number of different olfactory receptor proteins. The receptor proteins bind odorants and signals are sent to the brain. It is suggested that combined stimulation from different types of receptors can enable the brain to identify a large number of different odours. The literature mentions that humans are capable of recognizing 10 000 odours or more.

Apart from the main olfactory system (1), there are also other neural systems in the nasal chambers of most mammals, *i.e.* the trigeminal somatosensory system (2), the vomeronasal system (VNO) (3), the terminal nerve (4), and the septal organ (5) (Doty, 2001). The trigeminal somatosensory system, also named the common chemical sense, mediates chemical sensations such as stinging when compounds like ammonia or capsaicin (from pepper) are present. It also mediates non-chemical sensations like tickling. An odorant like ammonia can cause an odour to be detected by the main olfactory system at low concentrations and a chemical sensation mediated by the trigeminal system at a higher concentration (Dutton, 2002). The existence of a functioning VNO in humans is debated (Berliner *et al.*, 1996; Doty, 2001; Monti-Bloch *et al.*, 1998; Monti-Bloch *et al.*, 1994; Smith *et al.*, 2001; Smith *et al.*, 1998). However, it is shown to be important for a number of animal species, mediating social and sexual signals. The terminal nerve might play a role for the function of the VNO (Wiang-Wiesmann & Lepri, 1991), however, its function in humans is questioned (Doty, 2001). The septal organ observed in many mammals may have the same function as the main olfactory system (Doty, 2001).

D1. Response to Comments

Odor Thresholds and Irritation Levels of Several Chemical Substances: A Review

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A collection of odor threshold data for approximately 450 chemical substances is presented. The range of odor thresholds reported in the literature is shown along with any reported threshold of irritation to humans. These data can assist the industrial hygienist in determining when an "odor" may be in excess of the Threshold Limit Value[®], when an organic vapor respirator is not acceptable due to the lack of an odor warning at the end of a cartridge life, and where odors may not indicate a hazard due to extremely low odor thresholds which may be well below the respective TLVs.

Introduction

Although the sense of smell cannot be relied upon to evaluate the hazards of chemicals used in the workplace, the industrial hygienist can use the odor threshold of a chemical in the recognition phase as a rough estimation of airborne concentration. The purpose of this effort is to gather together, in one listing, the odor threshold and irritation level data published in several less accessible formats. The range from the lowest reported odor threshold to the highest reported odor threshold is reported. A brief review of the information available on our sense of smell and odors is presented along with a short review of several methods of defining a threshold of odor. Through an understanding of how the odor data have been developed and knowing the range of odor thresholds, the industrial hygienist can use these odor thresholds intelligently as a tool in the recognition of potential hazards.

Methodology

The odor thresholds and irritation levels of several hundred chemicals were taken from the industrial hygiene literature⁽¹⁻¹⁰⁾ and other compilations of odor threshold data.⁽¹¹⁻²⁴⁾ The odor thresholds were recorded as a range from the lowest to the highest concentration reported. Whenever information was discovered with a reported odor threshold lower or higher than the current data base range, the appropriate value was changed. The concentration level where irritation begins was recorded where available. Subjective descriptions of the odors were also included where they have been determined. Finally, the American Conference of Governmental Industrial Hygienists - Threshold Limit Value⁽²⁵⁾ was added to the computer data base where a TLV has been assigned. These data were entered into a personal computer data base program (Apple II+ using DB Master software) for manipulation (conversion of ppm data into mg/m³), alphabetization and custom report generation (e.g., potential for separation of chemicals into groups with odors below the TLV vs. those with odors above the TLV).

In Table I, the data are presented in alphabetical order with both the lowest and highest thresholds given in mg/m³. The range of odor thresholds reported for a given chemical

should allow the industrial hygienist to interpret the odor with a proper sense of caution. A description of the odor and the threshold of irritation are also presented. The TLVs, available in the computer data base, have not been included in Table I since they are not directly used in this format for the data.

History

In early times, Plato categorized odors as either pleasant or unpleasant. Several centuries later, Linnaeus, a Swedish scientist, proposed seven odoriferous qualities: 1) aromatic, 2) fragrant, 3) musky, 4) garlicky, 5) goaty, 6) repulsive, and 7) nauseous. A 20th Century Dutch physiologist added ethereal (fruity) and empyreumatic (burnt organic matter) plus several subdivisions to the previous classifications.⁽²⁶⁾ In those early times, the research consisted of categorizing various chemicals based on the description of their odor quality. More recent research has concentrated on determination of the odor threshold, or the quantitative amount of chemical in air which can be detected by the human sense of smell.

Physiology of Smell

For a person to smell something, air containing odoriferous molecules must reach a tiny cluster of specialized nerve cells well inside the nasal cavity. These nerve cells, the olfactory neurons, are at the top of the nose, just above the bridge, and are positioned out of the major airstream. Each nasal cavity has about five million of these receptors which are the only nerve cells in the body which have the ability to regenerate. Inhaled air first passes across a series of small bones, the turbinates, which create turbulence and cause a small amount of air to reach the odor receptors. Sniffing creates strong eddy currents that force more air into the upper portion of the nose and greatly increases the sense of smell.^(17,26) Together with the actual flow rate of the air in the nose, it has been shown that air temperature and relative humidity also affect the perception of odors.⁽²¹⁾

D1. Response to Comments

The ten million olfactory neurons can perceive some 4000 different odors.⁽¹⁷⁾ A Yale University study has shown that the average person can correctly name only a handful of common odors. This limitation, however, seems to be a result of an inability to think of the name of the substance rather than a failure to detect the differences between the odors.⁽²⁰⁾ Although women are not better able to detect odors than men, they are more aware of the odor environment and can identify more odors than men.⁽²⁰⁾ Constant exposure to odors can induce non-perception as the olfactory neurons become fatigued. People tend to become accustomed to odors, even those which they initially find unpleasant. Two different odors presented simultaneously can be distinguished from one another if their characteristic odors are sufficiently different from each other. Chemicals used to mask odors can eventually be detected separately from the odor these chemicals were supposed to be masking.

Determination of Threshold

The method of defining and determining the threshold of odor varies widely, giving rise to a significant range from low to high in the odor thresholds reported. A wide variation in threshold definition, sample presentation, panel selection, purity of chemicals used and data interpretation have resulted in data that seem to lack consistency.⁽²¹⁾

A classical definition of odor threshold is the minimum concentration of an odorant which produces a noticeable change in the odor of the system.⁽²¹⁾ The threshold is often designated as the lowest concentration perceived after no anomalies occur.⁽²¹⁾ Common anomalies are the perception of an odor when a blank or zero concentration sample is presented and not perceiving an odor at a concentration

higher than that at which an odor was previously noticed. Another definition sometimes used is the recognition odor threshold: the minimum concentration at which the odor quality (description of smell) of the compound can be described. Minor differences in concentration are beyond olfactory discrimination. It takes approximately a 30% to 50% increase in the concentration to allow the subject panel to consistently identify the higher concentration as higher.^(17,21)

Samples may be presented in several fashions. Most simply, the odor concentrations may be presented in simple order of increasing concentration from zero to the concentration level first perceived. Another protocol randomly mixes blanks, or zero concentration samples, in with the odor samples which are presented otherwise in simple order of increasing concentration. These presentations in order of increasing concentration are called serial tests.⁽²⁰⁾ Finally, the odor concentrations may be presented in a random fashion to minimize any sample order bias. Where odor recognition is the definition of the threshold, a triangle test is used most often, in which two odors are presented and compared.^(20,28) Panel selection ranges from trained "sniffers" to the general population. A quick sniff of the sample yields a better perception of the odor than a slow, even inhalation. Trained "sniffers" would understand how to sniff for the odor and be more experienced in describing the quality of the odor.

Data may be interpreted in several different ways. The odor threshold may be set at the lowest concentration perceived by a single subject (absolute threshold), which, of course, would yield the lowest concentration of an odor threshold. Other researchers determine the threshold as that concentration where 50% of the test subjects notice the odor

TABLE I
Odor Thresholds and Irritation Concentrations of Chemicals

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|----------------------|-------------------------------|--------------------------------|------------------------|---------------------------------------|
| Aconaphthene | 0.5048 | 0.5048 | | |
| Acetaldehyde | 0.0002 | 4.1400 | Green, sweet, fruity | 90.00 |
| Acetic acid | 2.5000 | 250.0000 | Sour, vinegar-like | 25.00 |
| Acetic anhydride | 0.5600 | 1.4400 | Sharp odor, sour acid | 20.00 |
| Acetone | 47.4868 | 1613.8600 | Minty chemical, sweet | 474.67 |
| Acetonitrile | 70.0000 | 70.0000 | Ether-like | 875.00 |
| Aclophenone | 0.8347 | 2.9460 | Sweet, almond | |
| Acetyl acetone | 0.0409 | 0.0409 | | |
| Acetylene | 657.2000 | 557.2000 | | |
| Acrolein | 0.0625 | 37.5000 | Burnt, sweet | 1.25 |
| Acrylic acid | 0.2820 | 3.1200 | Pungent, sweet | |
| Acrylonitrile | 8.1000 | 78.7500 | Onion-Garlic pungency | |
| Aldrin | 0.2536 | 0.4027 | | |
| Allyl alcohol | 1.9500 | 5.0000 | Pungent, musty | 12.50 |
| Allyl Alcohol (N-) | 150.0000 | 150.0000 | | |
| Allyl amine | 14.5080 | 14.5080 | | 187.20 |
| Allyl chloride | 1.4100 | 75.0000 | Green, garlic, oniony | 75.00 |
| Allyl disulfide | 0.0005 | 0.0005 | | 30.06 |
| Allyl glycidyl ether | 44.0000 | 44.0000 | Sweet | 1144.00 |
| Allyl isocyanate | 0.0510 | 5.4240 | Sweet, repulsive | 17.02 |
| Allyl isothiocyanate | 0.0325 | 1.7052 | Mustard oil | 17.05 |
| Allyl mercaptan | 0.0002 | 0.0515 | Garlic-like | 454.50 |
| Allyl sulfide | 0.0007 | 0.0007 | | 6500.64 |
| Ammonia | 0.0255 | 59.6000 | Pungent, irritating | 72.00 |

D1. Response to Comments

ODOR THRESHOLDS AND IRRITATION LEVELS: A REVIEW

TABLE I
Odor Thresholds and Irritation Concentrations of Chemicals

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|--|-------------------------------|--------------------------------|-------------------------|---------------------------------------|
| Carbon tetrachloride from CH ₂ | 300.0000 | 1500.0000 | Sweet, pungent | |
| Caryophyllene | 0.5350 | 0.5350 | | |
| Cellosolve | 2.8350 | 185.0000 | | |
| Cellosolve acetate | 0.0024 | 270.0000 | Sweet, musty | |
| Cellosolve solvent | 1.1040 | 2.0240 | | |
| Chloral | 0.2825 | 0.2825 | Sweet | |
| Chloroform | 0.0584 | 0.0419 | | |
| Chlorinated Camphene Toxaphene | 2.3689 | 2.3689 | | |
| Chlorine | 0.0300 | 15.0000 | Blaschy, pungent | 9.00 |
| Chlorine Dioxide | 0.3000 | 9.3000 | Sharp, pungent | 15.00 |
| Chloroacetaldehyde | 3.0000 | 3.0000 | Sharp, irritating | 3.00 |
| Chloroacetophenone (alpha-) | 0.1020 | 0.1500 | Sharp, irritating | 0.05 |
| Chlorobenzene | 0.9800 | 280.0000 | Sweet, almond-like | 933.33 |
| Chlorobenzylidene malonitrile (ortho-) | | | Peppery | 1.52 |
| Chlorobromomethane | 2100.0000 | 2100.0000 | Sweet | |
| Chloroform | 250.0000 | 1000.0000 | | 20480.00 |
| Chlorophenol | 0.0189 | 5.5224 | Medicinal, camphur-like | 6801.16 |
| Chloropicrin | 5.4600 | 7.7000 | Sharp, penetrating | 2.10 |
| Chlorotoluene | 0.2350 | 0.2350 | Pungent, irritating | |
| Citral | 0.3738 | 0.3738 | | |
| Coumarin | 0.0020 | 0.0120 | Pleasant, vanilla | |
| Cresol | 0.0012 | 22.0000 | Sweet, cresol-like, far | |
| Crotonaldehyde | 0.1050 | 3.0000 | Pungent, sulfoating | 23.01 |
| Cumene | 0.0892 | 8.3700 | Sharp, aromatic | |
| Cyanogen | 500.0000 | 500.0000 | Pungent | 32.00 |
| Cyanogen chloride | 2.0000 | 2.0000 | | |
| Cyclobutylamine | 87.1750 | 340.8800 | | |
| Cycloheptylamine | 308.2500 | 573.4000 | | |
| Cyclohexane | 1.4350 | 1.4350 | Sweet, aromatic | 1050.00 |
| Cyclohexanol | 400.0000 | 400.0000 | Camphor-like | 200.00 |
| Cyclohexanone | 0.4800 | 400.0000 | Sweet, pepperminty | 100.00 |
| Cyclohexylamine | 106.0000 | 448.0000 | | |
| Cyclopentadiene | 5.0667 | 5.0667 | | |
| Cyclopentyl acetate | 0.1031 | 0.1031 | | |
| Cyclopentylamine | 876.4000 | 2278.4000 | | |
| Cyclopropylamine | 153.5170 | 153.5170 | | |
| DDT | 5.0725 | 5.0725 | | |
| Decaborane | 0.3600 | 0.3600 | | |
| Decalin | 565.0000 | 565.0000 | | 565.00 |
| Decanoic acid | 11.9510 | 112.4300 | | |
| Decanal | 0.0006 | 43.2820 | | |
| Decetone alcohol | 1.3440 | 480.0000 | Sweet | 240.00 |
| Diacetyl | 0.0035 | 0.0380 | | |
| Diallyl sulphide | 0.0005 | 0.1490 | Garlicky | |
| Dibenzofuran | 0.7752 | 1.6150 | | |
| Diborane | 2.0000 | 4.0000 | Repulsively sweet | |
| Dibromo-3-chloropropane (1,2-) | 0.0955 | 0.2695 | | 1.93 |
| Dibutylamine | 0.4224 | 1.4256 | | |
| Dibutylamine (N-) | 0.4232 | 2.5392 | Fishy, amine | |
| Dichloroacetic acid | 1.2144 | 1.2144 | | |
| Dichloroarsite (2,6-) | 0.0003 | 0.0003 | | |
| Dichlorobenzene (ortho-) | 12.0000 | 300.0000 | | 150.00 |
| Dichlorobenzene (para-) | 90.0000 | 180.0000 | Mothballs | 240.00 |
| Dichloroethane | 445.5000 | 810.0000 | Chloroform-like | |
| Dichloromethyl ether | 80.0000 | 2150.0000 | | 600.00 |
| Dichloroethylene (1,2-) | 0.3358 | 1975.0000 | Acrid, ethereal | |
| Dichlorophenol (2,4-) | 1.4097 | 1.4097 | | |
| Dicyclopentadiene | 0.0297 | 0.0540 | Sharp, sweet | 2.70 |
| Diethyl disulfide | 0.0195 | 0.0195 | | |
| Diethyl ethanamine | 0.0538 | 0.1943 | Amine | |
| Diethyl ketone | 3.1725 | 49.3500 | | |
| Diethyl pyrazine (2,5-) | 0.0336 | 0.1120 | | |
| Diethyl selenide | 0.0817 | 0.0817 | Putrid | |

Am. Ind. Hyg. Assoc. 4 (47)

MARCH

D1. Response to Comments

TABLE I (cont.)

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|--|-------------------------------|--------------------------------|---------------------------|---------------------------------------|
| Amyl acetate (N-) | 0.0265 | 37.1000 | Fruity, bananas, pear | 500.00 |
| Amyl acetate (sec-) | 0.9107 | 0.9107 | | |
| Amyl alcohol (iso-) | 25.2000 | 25.2000 | | |
| Amyl alcohol (N-) | 0.4332 | 72.7000 | Sweet | |
| Amyl alcohol (tert-) | 0.8303 | 0.8303 | | |
| Amyl amine (N-) | 56.8040 | 132.0750 | | |
| Amyl mercaptan | 0.0001 | 0.0018 | | |
| Amyl mercaptan (iso-) | 0.0018 | 0.0018 | | |
| Aniline | 0.0002 | 350.0000 | Pungent, amine-like | |
| Anisole | 0.2210 | 0.2210 | | |
| Apocoe | 0.0670 | 0.0570 | | |
| Arsine | 0.8400 | 2.0000 | Garlic-like | |
| Azeldine | 51.8200 | 189.9200 | | |
| Azine | 31.8460 | 68.2400 | | |
| Azore | 134.2800 | 236.9200 | | |
| Benzaldehyde | 0.0008 | 0.1823 | Pleasant, bitter | 20.01 |
| Benzene | 4.5000 | 270.0000 | Sweet, solventy | 9000.00 |
| Benzene hexachloride | 0.0016 | 149.8000 | | |
| Benzenethiol | 0.0012 | 279.0000 | | |
| Benzothiazole | 0.4474 | 2.2120 | | |
| Benzyl chloride | 0.2350 | 1.5500 | Solventy | 41.00 |
| Benzyl mercaptan | 0.0132 | 0.2024 | Unpleasant | 22.81 |
| Benzyl sulfide | 0.0184 | 0.0184 | Sulfidy | |
| Biphenyl | 0.0052 | 0.3500 | | 7.50 |
| Boron trifluoride | 4.5000 | 4.5000 | Pungent, irritating | |
| Bromine | 0.2290 | 24.5000 | Disagreeable, penetrating | 2.10 |
| Bromacetophenone | 0.1221 | 1.3000 | Unpleasant | 0.33 |
| Bromochloromethane | 1680.0000 | 1680.0000 | | |
| Bromoform | 5300.0000 | 5300.0000 | Similar to chloroform | |
| Butadiene (1,3-) | 0.3520 | 2.8500 | | |
| Butadiene dioxide | 17.6000 | 17.6000 | | 30.20 |
| Butane | 2.8500 | 14.5300 | | |
| Butanethiol (2-) | 0.0004 | 0.0004 | | |
| Butyl acetate (iso-) | 0.0090 | 30.0000 | Pleasant, fruity | 1850.00 |
| Butyl acetate (N-) | 33.1333 | 94.0506 | Fruity | 473.30 |
| Butyl acrylate (iso-) | 0.0110 | 0.0260 | Sweet, musty | |
| Butyl alcohol (iso-) | 0.9500 | 225.0000 | Mild, non-residual | 300.00 |
| Butyl alcohol (N-) | 0.3600 | 190.0000 | Sweet | 75.00 |
| Butyl alcohol (secondary-) | 131.1500 | 131.1500 | Strong, pleasant | |
| Butyl alcohol (tertiary-) | 219.0000 | 219.0000 | Camphor-like | |
| Butyl amine (N-) | 0.2400 | 6.0000 | Ammoniacal | 30.00 |
| Butyl cellosolve | 0.4800 | 288.0000 | Sweet, ester | |
| Butyl cellosolve acetate | 0.7194 | 1.3090 | Sweet, ester | |
| Butyl chloride (N-) | 3.3662 | 6.3293 | Pungent | |
| Butyl ether (N-) | 0.3731 | 2.6051 | Fruity, sweet | |
| Butyl formate | 70.8800 | 83.4000 | | |
| Butyl furan (2-) | 50.8000 | 50.8000 | | |
| Butyl lactate (N-) | 35.0000 | 35.0000 | | |
| Butyl mercaptan | 0.0018 | 0.0033 | Straw-like | |
| Butyl sulfide | 0.0897 | 0.0897 | | |
| Butyl toluene (p-, tertiary-) | 30.0000 | 30.0000 | Gasoline-like | 48.00 |
| Butylamine | 3.0300 | 378.0000 | Ammoniacal, fishy | 30.00 |
| Butylene | 54.8600 | 54.8600 | Gaseous | |
| Butylene oxide | 0.2068 | 2.0374 | Sweet, alcohol | |
| Butylthiazole (2, iso-) | 0.0202 | 0.0202 | | |
| Butyraldehyde | 0.0136 | 28.5500 | Sweet, rancid | |
| Butyric acid | 0.0010 | 9.0000 | Sour, perspiration | |
| Butyric acid (iso-) | 29.1600 | 29.1600 | | |
| Camphor (synthetic) | 7.5000 | 1200.0000 | | 10.60 |
| Capro lactam | 28.0000 | 28.0000 | | |
| Capryl alcohol | | | Sweet, pungent | |
| Carbital | 1.1500 | 8.0260 | Sweet, musty | |
| Carbital acetate | 0.1272 | 1.8936 | Sweet | |
| Carbon disulfide | 0.0243 | 23.1000 | Disagreeable, sweet | |
| Carbon tetrachloride from CS ₂ | 60.0000 | 125.8000 | Sweet, pungent | |

Am. Hyg. Assoc. J. 47,

March, 1936

A-145

D1. Response to Comments

ODOR THRESHOLDS AND IRRITATION LEVELS: A REVIEW

TABLE I (cont.)

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|-----------------------------------|-------------------------------|--------------------------------|----------------------------|---------------------------------------|
| Diethyl sulphide | 0.0177 | 0.0117 | Foul, garlic-like | |
| Diethyl trisulfide | 0.0044 | 0.0044 | | |
| Diethylamine | 0.0600 | 114.0000 | Fishy, ammoniacal | 150.00 |
| Diglycidyl ether | 25.0000 | 25.0000 | | 50.00 |
| Diisobutyl carb. noi | 0.1085 | 0.3424 | Sweet, alcohol | |
| Diisobutyl ketone | 0.6920 | 1.6000 | Sweet, ester | 150.00 |
| Diisopropyl amine | 0.5200 | 3.4000 | Fishy, amine | 100.00 |
| Dimethoxy dimethyl pyrazine | 1.2365 | 1.2366 | | |
| Dimethyl acetamide | 161.0000 | 163.8000 | | |
| Dimethyl amine | 0.0348 | 0.0348 | | 174.60 |
| Dimethyl disulfide | 0.0091 | 0.3465 | | |
| Dimethyl ethanalamine | 0.0548 | 0.1638 | Amine | |
| Dimethyl formamide (N,N-) | 300.0000 | 330.0000 | | |
| Dimethyl naphthalene | 0.0428 | 0.0428 | | |
| Dimethyl sulfide | 0.0025 | 0.0508 | Decayed cabbage | |
| Dimethyl trisulfide | 0.0062 | 0.0062 | | |
| Dimethyl trithiocarbonate | 0.0031 | 0.0031 | | |
| Dimethylacetamide (N,N-) | 153.8000 | 183.8000 | Amine, burnt, oily | |
| Dimethylamine | 0.0378 | 35.8000 | Fishy, ammoniacal | |
| Dimethylformamide (N,N-) | 300.0000 | 300.0000 | Fishy, pungent | |
| Dimethylhydrazine (1,1-) | 12.0000 | 20.0000 | Ammoniacal, amine-like | |
| Dioxane (1,4-) | 0.1008 | 612.0000 | Ether-like | 782.00 |
| Dioxane (para-) | 20.1600 | 972.0000 | | 720.00 |
| Dioxolane (1,3-) | 44.5400 | 325.3600 | Sweet, musty Lemon-like | |
| Dipentene | | | | |
| Diphenyl ether (perfume) | 0.6950 | 0.6950 | Pleasant, geraniums | |
| Diphenyl sulfide | 0.0026 | 0.0358 | Burnt, rubbery | |
| Dipropylamine | 0.0828 | 227.1500 | Ammoniacal, amine | |
| Dipropylamine (N-) | 0.4140 | 0.8280 | Ammoniacal, amine | |
| Dipropylene glycol methyl ether | 210.0000 | 600.0000 | Ether-like | 450.00 |
| Dodecanol (1-) | 0.0152 | 0.0533 | | |
| Dodecyl Mercaptan (N-) | 4222.8000 | 4222.8000 | | |
| Dowthorn A | 0.7200 | 7.0000 | Aromatic, disagreeable | 21.00 |
| Endrin | 0.2808 | 8.3963 | | |
| Enchlorohydrin | 50.0000 | 80.0000 | Chloroform-like | 325.00 |
| Ethane | 164.8000 | 1105.7700 | | |
| Ethanolemine | 5.3333 | 10.6666 | Ammonia | 13.33 |
| Ethoxy 3,4 dihydro 1,2 pyran (2-) | 3.1440 | 3.1440 | Sweet, fruity | |
| Ethoxy 3,4-dihydro 1,2 pyran | 0.1048 | 3.1440 | Sweet, fruity | |
| Ethyl acetate | 0.0198 | 665.0000 | Fruity, pleasant | 330.00 |
| Ethyl acrylate | 0.0098 | 22.0000 | Earthy, acid, plastic | 16.00 |
| Ethyl alcohol (synthetic) | 0.3420 | 9690.0000 | Sweet, alcoholic | 9500.00 |
| Ethyl amine | 0.4860 | 386.0000 | Sharp, ammoniacal | 180.00 |
| Ethyl amyl ketone | 31.2000 | 31.2000 | Mild, fruity | 260.00 |
| Ethyl benzene | 8.7000 | 870.0000 | Aromatic | 870.00 |
| Ethyl benzoate | 3.2088 | 3.8068 | | |
| Ethyl bromide | 890.0000 | 880.0000 | Ether-like | 28925.00 |
| Ethyl butanol (2-) | 0.2919 | 3.2109 | Musty, sweet | |
| Ethyl ether | 0.9900 | 3.0000 | Sweet, ether-like | 300.00 |
| Ethyl formate | | | Fruity | 990.00 |
| Ethyl hexanol (2-) | 0.8990 | 0.7342 | Musty | |
| Ethyl hexyl acetate | 0.5132 | 1.4769 | Sweet | |
| Ethyl hexyl acrylate (2-) | 0.8497 | 1.3554 | Sharp, waxy | |
| Ethyl isothiocyanate | 6.0520 | 6.0520 | Mustard, unpleasant | 60.15 |
| Ethyl lactate | 67.8200 | 67.8200 | | |
| Ethyl mercaptan | 3.2 x 10 ⁻³ | 0.0920 | Garlic | |
| Ethyl methyl disulfide | 0.0487 | 0.0487 | | |
| Ethyl methylamine | 21.6000 | 79.5300 | | |
| Ethyl morpholine (N-) | 0.3630 | 1.1500 | Ammonia | 184.00 |
| Ethyl phenylacetate | 4.3615 | 4.3615 | | |
| Ethyl propyl amine | 60.5200 | 181.5600 | | |
| Ethyl selenide | 0.0003 | 0.009 | | |
| Ethyl selenomercaptan | 6.0 x 10 ⁻³ | 0.0054 | Foul | |
| Ethyl silole | 722.5000 | 722.5000 | Alcohol-like, sharp | 5950.00 |
| Ethyl sulfide | 0.0009 | 0.0103 | | |

A-146

Can. Ind. Hyg. Assoc. J. (47)

March

D1. Response to Comments

TABLE I (cont.)

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|----------------------------|-------------------------------|--------------------------------|------------------------|---------------------------------------|
| Ethyl valerate | 0.0265 | 0.0265 | | |
| Ethyl vinyl ketone | 0.0064 | 0.0064 | | |
| Ethylene | 258.0000 | 4600.0000 | Olefinic | |
| Ethylene diamine | 2.5000 | 28.0000 | Ammoniacal, musty | 250.00 |
| Ethylene dibromide | 76.8000 | 76.8000 | Mild, sweet | |
| Ethylene dichloride | 24.0000 | 440.0000 | Sweet | |
| Ethylene glycol | 62.5000 | 62.5000 | Sweet | |
| Ethylene glycol dinitrate | | | | 0.18 |
| Ethylene oxide | 520.0000 | 1400.0000 | Sweet, olefinic | |
| Ethylenediamine | 25.0000 | 28.0000 | Musty, ammoniacal | 500.00 |
| Ethylenimine | 4.0000 | 4.0000 | Ammoniacal | 200.00 |
| Ethylidene norbornene | 0.0700 | 0.3650 | Sweet, aromatic | 30.00 |
| Fluorine | 6.0000 | 6.0000 | | 50.00 |
| Formaldehyde | 1.4700 | 73.5000 | Pungent, hay | 1.50 |
| Formamide | 150.0000 | 150.0000 | | |
| Formic acid | 0.0450 | 37.8000 | Pungent, penetrating | 27.00 |
| Furfural | 0.0240 | 20.0000 | Almonds | 48.00 |
| Furfuryl alcohol | 32.0000 | 32.0000 | | |
| Glycol diacetate | 0.5562 | 1.8628 | Fruity, acid | |
| Heptachlor | 0.3060 | 0.3060 | | |
| Heptane | 0.0140 | 0.0532 | | |
| Heptane | 200.0000 | 1260.0000 | Gasoline-like | |
| Heptyl alcohol (N-) | 98.3250 | 98.3250 | | |
| Heptyl isobutyrate | 0.0989 | 0.0989 | | |
| Heptyl propionate | 0.0281 | 0.0281 | | |
| Hexachlorobutadiene | 12.0000 | 12.0000 | | |
| Hexachlorocyclopentadiene | 1.5000 | 3.3000 | | |
| Hexadecane | 1.6750 | 27.3000 | | |
| Hexane (N-) | | | | 1800.00 |
| Hexanol (1-) | 0.0417 | 21.6840 | Sweet, alcohol | |
| Hexyl acetate (secondary-) | 0.0120 | 600.0000 | Unpleasant | 600.00 |
| Hexyl isobutyrate | 0.0422 | 0.0422 | | |
| Hexyl propionate | 0.0514 | 0.0514 | | |
| Hexylene glycol | 250.0000 | 250.0000 | | 250.00 |
| Hydrazine | 3.0000 | 4.0000 | Ammoniacal, fishy | |
| Hydrochloric acid | 7.0000 | 49.0000 | Irritating, pungent | 49.00 |
| Hydrofluoric acid | 0.0333 | 0.1333 | Strong, irritating | 4.17 |
| Hydrogen bromide | 8.6867 | 8.6867 | Sharp, irritating | 10.00 |
| Hydrogen cyanide | 0.9000 | 5.0000 | Bitter almond | |
| Hydrogen peroxide | | | Slightly sharp | 150.00 |
| Hydrogen selenide | 0.0016 | 12.0000 | Decayed horse radish | 8.00 |
| Hydrogen sulfide | 0.0097 | 0.0140 | Rotten eggs | 14.00 |
| Iodine | 9.0000 | 9.0000 | | 2.00 |
| Iodoform | 0.0962 | 0.0433 | | |
| Ionone | 4.53 x 10 ⁻³ | 573.0500 | | |
| Isobutyl alcohol | 36.0000 | 126.0000 | | 360.00 |
| Isobutyl 2-methoxypyrazine | 13.5000 | 13.5000 | | |
| Isobutyl 3-methoxypyrazine | 1.3 x 10 ⁻³ | | | |
| Isobutyl 3-methyl pyrazine | 0.2146 | 0.2146 | | |
| Isobutyl butyrate | 12.3690 | 17.6700 | | |
| Isobutyl mercaptan | 0.0020 | 0.0020 | | |
| Isobutyl pyrazine (2-) | 2.2080 | 2.2080 | | |
| Isodecanol | 0.1292 | 0.2713 | Musty, alcohol | |
| Isopentanoic acid | 0.0209 | 0.1004 | Gassy | |
| Isophorone | 1.0000 | 50.0000 | Sharp, objectionable | 50.00 |
| Isopropyl acetate | 0.1900 | 1820.0000 | Fruity | 380.00 |
| Isopropyl alcohol | 7.8400 | 490.0000 | Pleasant | 490.00 |
| Isopropyl amine | 0.5040 | 490.0000 | Pungent, ammonia | 24.00 |
| Isopropyl ether | 0.0714 | 1260.0000 | Sweet, sharp, ether | 1260.00 |
| Isopropyl glycidyl ether | 1440.0000 | 1440.0000 | | |
| Kerosene | 0.5517 | 0.5517 | | 122.60 |
| Ketene | | | Sharp | 41.40 |
| Lauraldehyde | 0.0151 | 0.0151 | | |
| Linallyl acetate | 60.9260 | 60.9260 | | |
| Malathion | 13.5000 | 13.5000 | | |
| Maleic anhydride | 1.3400 | 1.9600 | Acrid | 5.48 |

D1. Response to Comments

ODOR THRESHOLDS AND IRRITATION LEVELS: A REVIEW

TABLE I (cont.)

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|---|----------------------------|-----------------------------|-----------------------|------------------------------------|
| Mercaptobenzothiazole | 12.0208 | 12.0208 | | |
| Mercaptoethanol | 0.3828 | 2.0418 | | |
| Methyl Oxide | 0.0680 | 100.0000 | Sweet | 100.00 |
| Methyl 2, cyanoacrylate | 4.0000 | 12.0000 | | 12.00 |
| Methyl acetate | 510.0000 | 819.0000 | Fragrant, fruity | 30499.00 |
| Methyl acetylene-propadiene MAPP gas | 150.0000 | 160.0000 | Foul, objectionable | |
| Methyl acrylate | 70.0000 | 70.0000 | Sharp, sweet, fruity | 262.50 |
| Methyl acrylonitrile (alpha-) | 6.0000 | 42.0000 | | 6.00 |
| Methyl alcohol | 13.1150 | 26810.0000 | Sweet | 22875.00 |
| Methyl amine | 0.0252 | 12.0000 | | 24.00 |
| Methyl amyl acetate | 0.4123 | 2.3550 | Sweet, ester | |
| Methyl amyl alcohol | 1.3761 | 2.1684 | Sweet, alcohol | |
| Methyl anthranilate | 0.0581 | 0.0581 | | |
| Methyl benzyl alcohol | 7235.5000 | 5235.5000 | | |
| Methyl bromide | 80.0000 | 4000.0000 | Sweetish | |
| Methyl butanol (2-) | 0.0450 | 0.8280 | Sour, sharp | |
| Methyl butanoic acid (2-) | 0.0528 | 0.6528 | Body odor | |
| Methyl butyl acetate | 0.0266 | 0.0266 | | |
| Methyl cellosolve | 0.2893 | 288.0000 | Mild, non-residual | 368.00 |
| Methyl cellosolve acetate | 1.8320 | 240.0000 | Sweet, ester | |
| Methyl chloride | 21.0000 | 21.0000 | Sweet, ethereal | 1050.00 |
| Methyl chloroform | 542.8570 | 3800.0000 | Chloroform-like | 5428.57 |
| Methyl cyclohexane | 2000.0000 | 2000.0000 | Faint, benzene-like | |
| Methyl cyclohexanol | 2350.0000 | 2350.0000 | Weak, coconut oil | 2350.00 |
| Methyl disulfide | 0.0012 | 0.0038 | | |
| Methyl ethanamine | 3.0700 | 10.4380 | Musty, ammoniacal | |
| Methyl ethyl ketone | 0.7375 | 147.5000 | Sweet, acetone-like | 593.00 |
| Methyl ethyl pyridine | 0.0297 | 94.0500 | Sour, pungent | |
| Methyl formate | 509.0000 | 6875.0000 | Pleasant | 6750.00 |
| Methyl furan (2-) | 80.4500 | 80.4500 | | |
| Methyl glycol | 188.8000 | 279.9000 | | |
| Methyl heptanoate | 0.0238 | 0.0238 | | |
| Methyl hexyl ketone | 1299.5200 | 1299.5200 | | |
| Methyl hydrazine | 1.7500 | 5.2500 | | |
| Methyl iodide | | | | 21500.00 |
| Methyl isoamyl alcohol | 0.2919 | 0.8340 | Pungent | |
| Methyl isobutyl ketone | 0.0570 | 0.3360 | | |
| Methyl isobutyl carbimol | 2.0800 | 200.0000 | Sweet, mild odor | 100.00 |
| Methyl isobutyl ketone | 0.4100 | 192.7000 | Sweet, sharp | 410.00 |
| Methyl isocyanate | | | | 5.00 |
| Methyl isopropenyl ketone | 1.0222 | 1.0222 | | |
| Methyl mercaptan | 4.0 x 10 ⁻² | 0.0820 | Stinky | |
| Methyl methacrylate | 0.2050 | 1.3940 | Arid, fruity, sulfidy | 697.00 |
| Methyl n-amyl carbimol | 0.0909 | 0.3378 | Sweet, alcohol | |
| Methyl n-amyl ketone | 0.0940 | 0.0940 | | |
| Methyl n-propyl ketone | 28.0000 | 45.6000 | | |
| Methyl naphthalene (2-) | 0.0581 | 0.2905 | | |
| Methyl parathion | 0.1328 | 0.1328 | | |
| Methyl pentadecyds (2-) | 0.3681 | 0.5552 | Sweet, rancid | |
| Methyl pentane (2-) | 0.2888 | 0.2888 | | |
| Methyl propenol (2-) | 0.0027 | 0.1303 | | |
| Methyl propene (2-) | 45.8000 | 45.8000 | Bassy | |
| Methyl pyrazine (2-) | 231.0000 | 231.0000 | | |
| Methyl salicylate | 0.5220 | 0.3708 | | |
| Methyl styrene (alpha-) | 0.2486 | 580.0000 | Sweet, aromatic | 960.00 |
| Methyl thiocyanate | 0.7475 | 0.7475 | Sweet, unpleasant | 480.19 |
| Methyl vinyl ketone | 0.5720 | 0.5720 | | |
| Methylamine | 0.0252 | 12.0000 | Fishy, pungent | 30.00 |
| Methylene chloride | 340.0000 | 2160.0000 | Sweet | 8280.00 |
| Methylene chlorobromide | 2120.0000 | 2120.0000 | | |
| Methylene glycol | 76.2000 | 76.2000 | | |
| Mineral spirit | 157.5000 | 787.5000 | | |
| Monochlorobenzene | 0.9800 | 0.9800 | Chlorinated, moliball | |
| Morpholine | 0.0350 | 0.4900 | Fishy, amine | |

A-148

Am. Ind. Hyg. Assoc. J. (1974)

March, 1986

D1. Response to Comments

TABLE I (cont.)

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|---------------------------------|-------------------------------|--------------------------------|------------------------|---------------------------------------|
| Musk oil | 3.8 x 10 ⁻⁴ | 0.0487 | | |
| Mustard gas | 0.0180 | 0.0180 | | |
| Myrcene | 0.0723 | 0.0723 | | |
| Naphthalene | 1.5000 | 25.0000 | Mothball, tar-like | 75.00 |
| Nickel carbonyl | 0.2100 | 21.0000 | Musty | |
| Nitric acid | 0.7500 | 7.5000 | | 155.00 |
| Nitric oxide | 0.8600 | 1.2000 | | |
| Nitrobenzene | 0.0235 | 8.5000 | Shoe polish, pungent | 250.00 |
| Nitroethane | 520.0000 | 820.0000 | Mild, fruity | 310.00 |
| Nitrogen dioxide | 2.0000 | 10.0000 | Sweetish, acrid | 20.00 |
| Nitromethane | 250.0000 | 250.0000 | Mild, fruity | 500.00 |
| Nitropropane (1-) | 1030.0000 | 1030.0000 | Mild, fruity | 380.00 |
| Nitropropane (2-) | 17.5000 | 1029.0000 | | |
| Nonane | 3412.5000 | 3412.5000 | | |
| Nonanol (2-) | 0.0005 | 20.8150 | | |
| Octadiene (1,3-) | 54.0000 | 90.0000 | | |
| Octane | 725.0000 | 1208.3300 | Gasoline-like | 1450.00 |
| Octyl alcohol | 0.6918 | 0.6918 | | |
| Oxygen difluoride | 0.2000 | 1.0000 | Foul | |
| Ozone | 0.0010 | 1.0200 | Pleasant, clover-like | 2.00 |
| Parathion | 0.4760 | 0.4760 | Garlic-like | |
| Pentaborane | 2.5000 | 2.5000 | Strong, pungent | |
| Pentachlorophenol | | | Pungent when hot | 10.90 |
| Pentane | 8.6000 | 3000.0000 | Gasoline-like | |
| Pentane-1,3-diene | 0.0408 | 0.0482 | Sour, rancid | |
| Perfeneol (n-) | 0.7560 | 1.1160 | Sweet, alcohol | |
| Perchloroethylene | 31.3560 | 488.0000 | Chlorinated solvent | 1340.00 |
| Perchloromethyl mercaptan | 0.0075 | 0.0075 | | |
| Perchloryl fluoride | 48.8888 | 48.0000 | Sweet | |
| Phenol | 0.1788 | 22.4200 | Medicinal, sweet | 182.40 |
| Phenyl ether | 0.0070 | 0.7000 | Disagreeable | 21.00 |
| Phenyl ethyl alcohol (beta-) | 35.0000 | 35.0000 | | |
| Phenyl sulfide | 0.0028 | 0.0358 | | |
| Phenylacetaldehyde | 0.0010 | 0.0196 | | |
| Phosgene | 2.0000 | 3.0000 | Musty hay, green corn | 8.00 |
| Phosphine | 0.0280 | 3.6000 | Oniony, mustard, fish | 10.57 |
| Phthalic Anhydride | | | | 30.00 |
| Picoline (2-) | 0.0532 | 0.1748 | Sweet | |
| Picric acid | 0.0865 | 0.0005 | | |
| Propane | 1800.0000 | 38001.0000 | | |
| Propionaldehyde | 0.0225 | 0.4029 | Sweet, ester | |
| Propionic acid | 0.0840 | 60.0000 | Sour | |
| Propyl acetate (n-) | 0.2100 | 105.0000 | Sweet, ester | |
| Propyl alcohol | 75.0000 | 500.0000 | | 13750.00 |
| Propyl alcohol (n-) | 0.0750 | 150.0000 | Sweet, alcohol | |
| Propyl mercaptan | 0.0002 | 0.0745 | | |
| Propyl nitrate (1-) | 210.0000 | 210.0000 | Ether-like | |
| Propyl sulfide | 0.0531 | 0.0531 | | 2801.50 |
| Propylene | 38.5600 | 116.2720 | Aromatic | |
| Propylene diamine | 0.0424 | 0.2030 | Sharp, amine | |
| Propylene dichloride | 1.1867 | 806.8800 | Sweet | |
| Propylene glycol dinitrate | 1.2000 | 1.5000 | | |
| Propylene glycol isobutyl ether | 60.5000 | 60.5000 | | 121.00 |
| Propylene glycol methyl ether | 360.0000 | 360.0000 | | 3600.00 |
| Propylene oxide | 24.7800 | 500.0000 | Sweet, alcoholic | 1125.00 |
| Pyridine | 0.0090 | 15.0000 | Burnt, sickening | 90.00 |
| Pyrolidone | 53.0000 | 187.3400 | | |
| Quinone | 0.4000 | 0.4000 | Acid | 2.00 |
| Rotenone | 5.7960 | 5.7960 | | |
| Saltrol | 1.4586 | 1.4586 | | |
| Silicon tetrafluoride | 4.2500 | 4.2500 | | 42.50 |
| Skatole | 4.0 x 10 ⁻³ | 0.2880 | Perfume | |
| Stoddard solvent | 5.2800 | 57.5000 | Kerosene-like | 2100.00 |
| Styrene (inhibitor) | 0.4300 | 660.0000 | Solventy, rubbery | 4300.00 |
| Styrene (uninhibited) | 0.2321 | 860.0000 | Solventy, rubbery | 4300.00 |
| Styrene oxide | 0.3093 | 1.9640 | Sweet | |

D1. Response to Comments

ODOR THRESHOLDS AND IRRITATION LEVELS: A REVIEW

TABLE I (cont.)

| Chemical Compound | Odor Low mg/m ³ | Odor High mg/m ³ | Description of Odor | Irritating Conc. mg/m ³ |
|--------------------------------------|-------------------------------|--------------------------------|------------------------|---------------------------------------|
| Sulfur dichloride | 0.0042 | 0.0042 | Sulfidy | |
| Sulfur dioxide | 1,1750 | 12,5000 | Yeasty | 5.00 |
| Sulfur monochloride | | | Nauseating | 12.00 |
| Sulfuric acid | 7,0000 | 1,0000 | | 1.10 |
| Tetrachloroethane (1,1,2,2-) | 21,0000 | 35,0000 | Slightly sweet | 1302.00 |
| Tetrachloroethylene | 31,3560 | 468,0000 | Chlorinated solvent | 710.20 |
| Tetraethylorthosilicate | 30,5360 | 61,2720 | Sweet, alcohol | |
| Tetrahydrofuran | 7,3750 | 177,0000 | Ether-like | |
| Tetraol | 97,2000 | 97,2000 | | |
| Tetramethylenediamine | 79,2000 | 79,2000 | | |
| Thiophane | 0,0026 | 0,0026 | Aromatic | |
| Thiophenyl mercaptan | 0,0012 | 382,5000 | | |
| Toluene petroleum | 0,0250 | 150,0000 | Rubbery, naphthalene | 750.00 |
| Toluene from coke | 17,5500 | 262,5000 | Floral, pungent | 750.00 |
| Toluene 2,4 dithiocyanate (DI) | 3,2000 | 17,1200 | Sweet, fruity, acidic | 4.00 |
| Toxaphene | 2,3660 | 2,3660 | | |
| Trichloro fluoromethane | 28,0070 | 1170,4000 | Sweet | |
| Freon 11 | | | | |
| Trichloro trifluoroethane | 342,0000 | 1026,0000 | Sweet | |
| Freon 113 | | | | |
| Trichlorobenzene (1,2,4-) | 24,0000 | 24,0000 | | 40.00 |
| Trichloroethylene | 1,1340 | 2150,0000 | Solventy | 864.00 |
| TCE | | | | |
| Trichloropropane (1,2,3-) | | | Strong, acrid | 300.00 |
| Tricycloketone | 1,8660 | 670,8000 | | |
| Triglycyl amine | 0,3000 | 1,1200 | Fishy, amine | 200.00 |
| Trimethyl amine | 0,0008 | 0,0008 | Fleshy, pungent | |
| Trimethyl phosphite | 0,0005 | 0,0005 | Pyridine-like | |
| Trimethylenediamine | 3757,2000 | 11968,8000 | | |
| Trintra tert-butylxylene musk oil | 3.8×10^{-6} | 0,0487 | | |
| Turpentine | 560,0000 | 1120,8000 | | 560.00 |
| Valeric acid | 0,0026 | 0,0026 | | |
| Vanillin | 2.0×10^{-7} | | Perfume | |
| Vinyl acetate | 0,3600 | 1,6500 | Sour, sharp | |
| Vinyl amyl ketone | 0,5150 | 0,5150 | | |
| Vinyl butyl ketone | 0,0321 | 0,0321 | | |
| Vinyl propyl ketone | 0,0231 | 0,0231 | | |
| Vinyl pyridine | 1,1670 | 1,9450 | Nauseating | |
| Vinyl toluene | 240,0000 | 240,0000 | Disagreeable | 240.00 |
| Vinylisene chloride | 2000,0000 | 4000,0000 | Sweet, chloroformish | |
| VM&P naphtha | 3,8700 | 3,8700 | | |
| Xylene | 0,3430 | 174,0000 | Sweet | 435.00 |
| Xyldene | 0,0240 | 0,0240 | Weak, amine-like | |

or recognize and describe the odor. Finally, some researchers look for a 100% panel response. This latter method would generate higher concentration levels as the defined threshold. One study, which reported both the absolute threshold and the 100% recognition threshold, showed the 100% recognition threshold to be approximately two to ten times higher than the absolute threshold.⁽²⁴⁾

The influence of chemical contaminants may explain some of the variation in thresholds observed.⁽²¹⁾ Note the differences in odor thresholds in Table I of toluene manufactured from two different raw materials, or carbon tetrachloride from different sources, or inhibited vs. uninhibited styrene. There has been a tendency for lower thresholds to be identified in the more recent research, which has been attrib-

uted to greater purity of samples and better techniques of sample presentation.

Discussion

It must be remembered that the data listed in Table I are essentially for the single chemical constituent with no other chemicals present in the air. Mixtures of different chemicals have received very little study.⁽²⁸⁾ The question is whether two chemicals at concentrations below their odor thresholds (R_A and R_B) can add up to constitute one combined "odor" (R_{AB}) which is perceived, or whether the olfactory receptors react very specifically to each chemical so that no odor is perceived.⁽¹⁷⁾ (Figure 1 - Independence). There have been several studies where two mixed chemicals, each at 50% of its

D1. Response to Comments

odor threshold, have produced an odor which was perceived by test subjects¹⁷⁾ (Figure 1 - Addition). While mixed chemicals may be totally independent of one another or produce simple additive effects, it is also possible that the mixture produces an enhanced or a suppressed reaction from what might be predicted. An enhanced reaction would result from two mixed chemicals, each at less than 50% of its odor threshold, which produce a perceived odor (Figure 1 - Synergism). A suppressed reaction, or counteraction, would result when two mixed chemicals, each at 100% of its odor threshold, fail to produce a perceptible odor among test subjects (Figure 1 - Counteraction).

Independence:
 $R_{AB} = R_A \text{ or } R_B$

Addition:
 $R_{AB} = R_A + R_B$

Synergism:
 $R_{AB} > R_A + R_B$

Counteraction:
 $R_{AB} < R_A \text{ or } R_B$

where R_{AB} = odor threshold of mixture of chemical A and chemical B,

R_A = odor threshold of pure chemical A, and
 R_B = odor threshold of pure chemical B.

Figure 1 — Mixed Chemicals Odor Relationships.²⁹⁾

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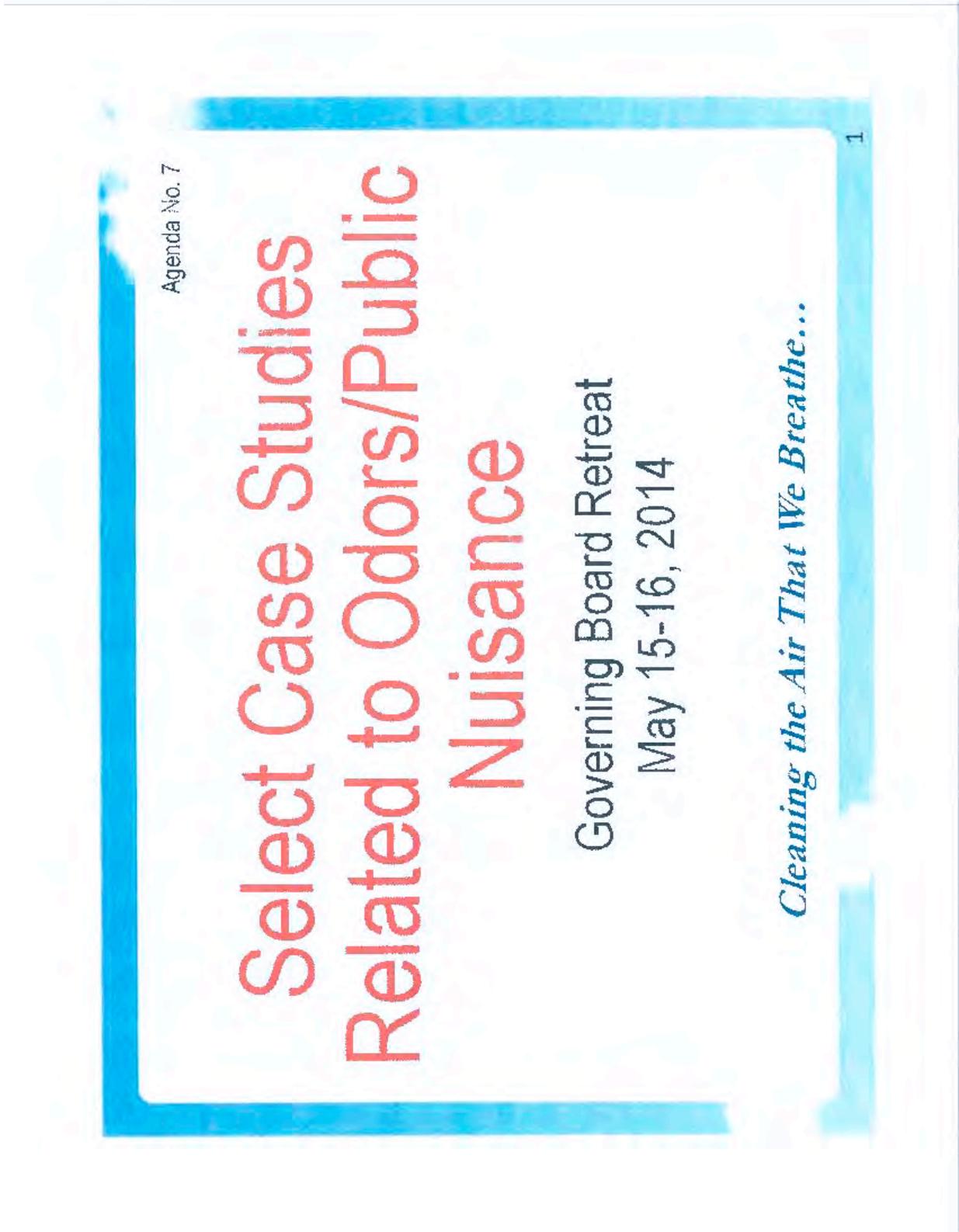
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D1. Response to Comments

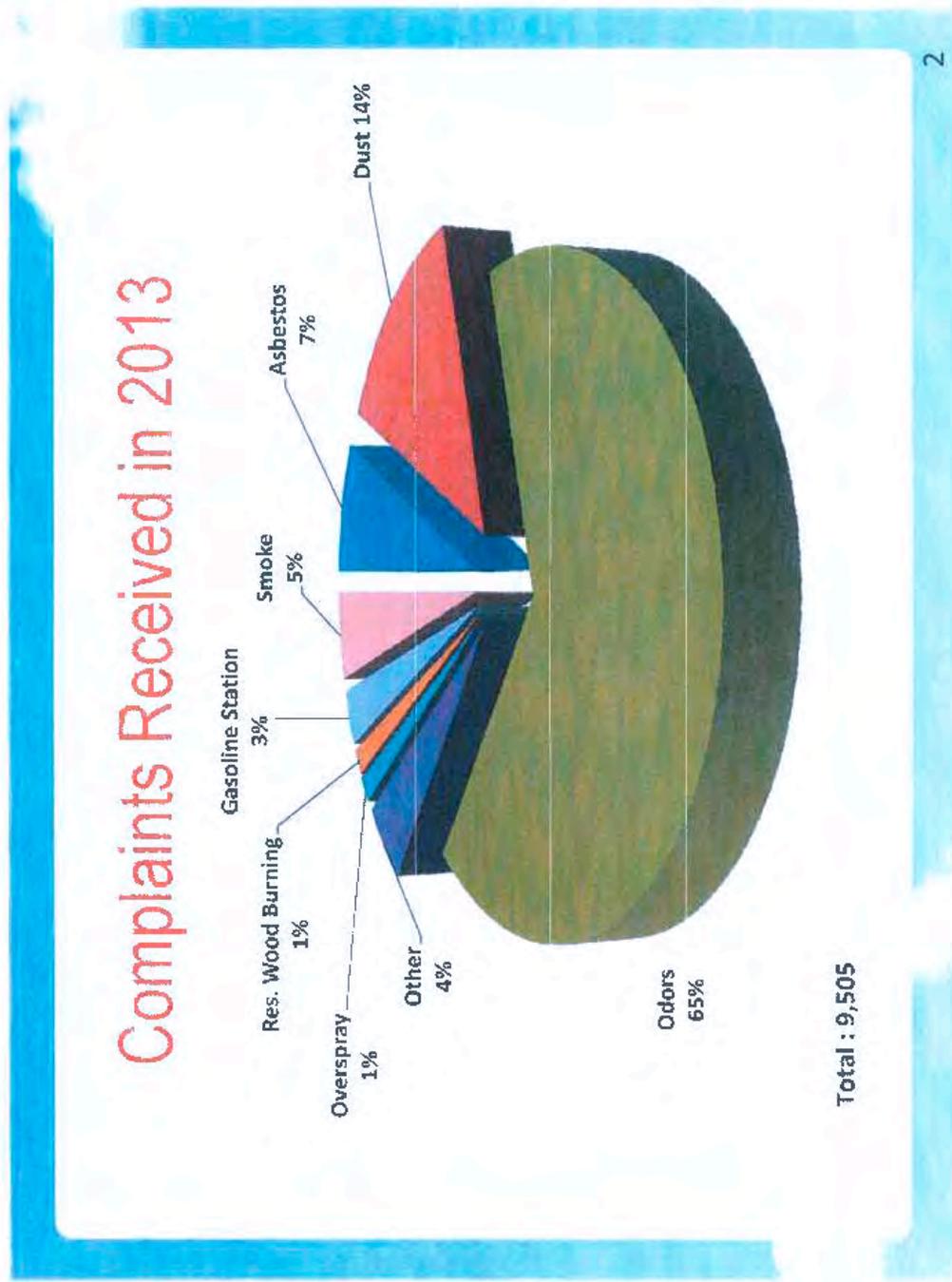
ATTACHMENT 10

3.3-43

D1. Response to Comments



D1. Response to Comments



D1. Response to Comments

Common Sources of Odors

| | | |
|--|---|--|
|  |  |  |
| Landfills | Petroleum Operations | Recycling Facilities |
|  |  |  |
| Composting | Water Treatment/Storage | Rendering Plants |

3

D1. Response to Comments

Complaint Response Program

- Response commensurate with nature and scope of problem
- Regular business hours, deploy:
 - community based inspectors and/or
 - specialized industry-specific inspectors
- After hours, supervisors receive and assign complaints
- Bring in additional inspectors, engineers, source testing, as needed

4

D1. Response to Comments

Public Nuisance

“...a person shall not discharge from any source whatsoever quantities of air contaminants or other material that **cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.**”

Health & Safety Code 41700 (a) and Rule 402

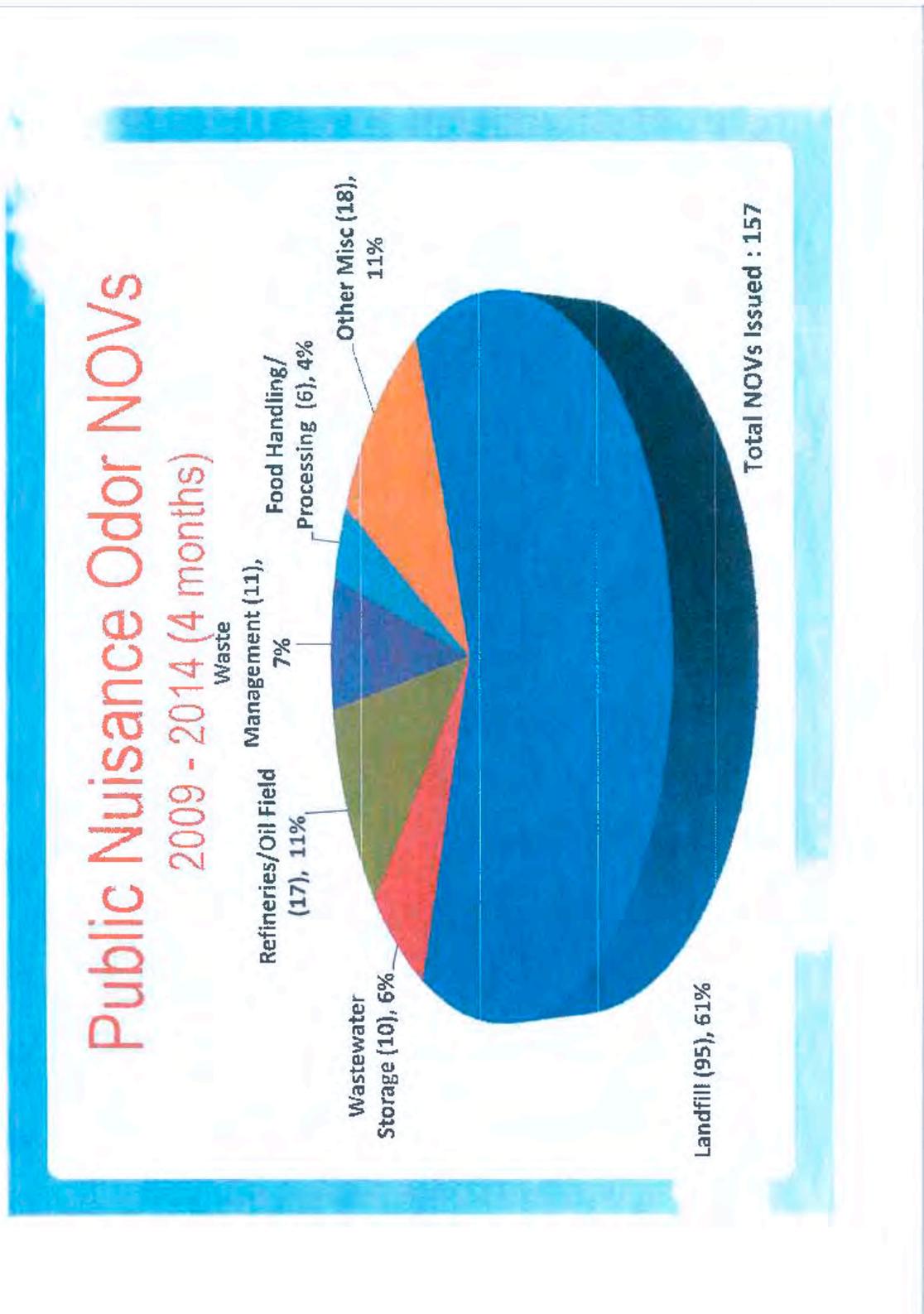
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D1. Response to Comments

Confirming a Public Nuisance

- Generally six or more separate households or businesses
- Odors must be:
 - confirmed by inspector with the complainants
 - traced back to the source
- Complainant must sign a form and either complete a declaration or be willing to testify in court if necessary
- Less than one percent of odor-related complaints result in NOV for public nuisance

D1. Response to Comments

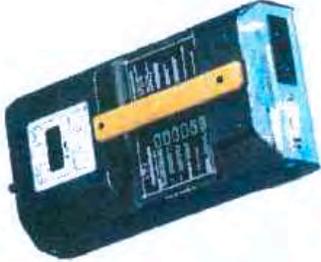


D1. Response to Comments

In Field Instrumentation



Portable GC/MS – hydrocarbons



Hydrogen sulfide meter

8

D1. Response to Comments

Sampling for Odor Problems



Canisters - hydrocarbons



Tedlar bag - sulfur compounds



Trailer - continuous hydrocarbons, hydrogen sulfide, particulates

D1. Response to Comments

The slide features a white background with a blue border. At the top, the title "Analysis for Odors" is written in a large, red, sans-serif font. Below the title, there are two photographs of laboratory equipment. The first photograph, on the left, shows a GC/MS system with a computer monitor displaying data. Below this image is the text "GC/MS - hydrocarbons" in a black, sans-serif font. The second photograph, on the right, shows a sulfur-specific GC system, also with a computer monitor. Below this image is the text "Sulfur-specific GC" in a black, sans-serif font.

D1. Response to Comments

Case Study – Cal BioMass

- Thermal, in operation since 1997
- Composting operation
- Complaints received from more than 50 different households
- Odors reported: rancid grease, compost, green waste, manure
- Four NOVs for public nuisance due to odors

| Year | # of Complaints |
|--------------|-----------------|
| 2011 | 14 |
| 2012 | 623 |
| 2013 | 320 |
| Total | 957 |

D1. Response to Comments



D1. Response to Comments

Actions to Resolve

- Over 100 inspections, surveillance
- Off-hour complaint response
- Canisters given to residents
- Ambient air monitoring and other sampling in community
- Riverside County, including leadership by Supv. Benoit
- Facility stopped accepting odorous materials, moved piles and closed down Thermal location



D1. Response to Comments

Case Study – Allenco Energy, Inc.

- Los Angeles, operating since 1960s
- Oil production wells and water injections wells
- Permits for a crude oil, water, gas separation system and natural gas treating equipment
- Six NOVs issued for public nuisance due to odors
- Facility voluntarily shut down and is making changes and improvements

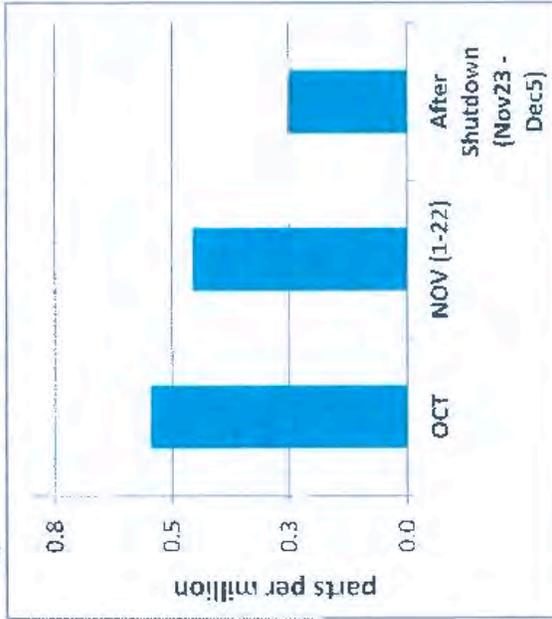
| Year | # of Complaints |
|--------------|-----------------|
| 2010 | 8 |
| 2011 | 192 |
| 2012 | 22 |
| 2013 | 56 |
| 2014 | 9 |
| Total | 293 |

14

D1. Response to Comments

Air Monitoring

Average Non-Methane Hydrocarbon Concentrations



- Trailer with continuous methane and hydrocarbon samplers
 - triggered canister samples if high concentrations; brought to lab for analysis
 - 24 hour detailed hydrocarbon analysis
 - hydrogen sulfide, particulate matter
- Additional canisters (24 hour samples) in two locations

D1. Response to Comments



D1. Response to Comments

Actions Taken by Allenco

- Voluntarily ceased operations in Nov 2013 until all necessary repairs and operational changes are completed
- Removed and capped wastewater sump vent pipe
- Pumped out contents of several storage tanks
- Removed remaining residue and inspected tanks for leaks
- Repaired/replaced corroded tanks
- Removed trench and sump from service



17

D1. Response to Comments

Work in Progress at Allenco

- Hard pipe all tank discharges to a separate tank with air pollution controls
- Redesign and upgrade the air pollution control system
- Additional odor mitigation during well maintenance



D1. Response to Comments

Case Study – Sunshine Canyon Landfill

- Sylmar, located near homes and an elementary school
- Landfill started accepting waste in 1958, major home building in 1968 and 1979
- County and City landfills combined, landfill gas collection system inadequate
- Complaints from over 150 different locations
- 95 NOVs issued for public nuisance due to odor

| Year | # of Complaints |
|--------------|-----------------|
| 2008 | 13 |
| 2009 | 295 |
| 2010 | 627 |
| 2011 | 1,534 |
| 2012 | 1,518 |
| 2013 | 1,156 |
| 2014 | 350 |
| Total | 5,493 |

D1. Response to Comments



20

D1. Response to Comments

SCAQMD Actions

- Increased inspections at landfill (~200 in 2013)
 - Off- hour complaint response and surveillance
 - Surface monitoring and sample collection
- Permits for new landfill gas to energy plant
- Permits for flare and other changes at landfill
- Interagency Cooperation
 - Los Angeles County Public Works
 - Los Angeles City and County Planning
 - Local Enforcement Agency (LEA)
 - Recommendations for each agency to implement Abatement Order



D1. Response to Comments

Abatement Order – Landfill Actions

- April 22, 2010 – December 31, 2013
- Adjust trash delivery times in mornings
- Studies: meteorological; neutralizer; delivery alternatives; working face; odor control consultation
- Work plans: odor and damage prevention for gas collection system
- Hire Corrective Action Manager and Environmental Monitor
- Air monitoring at school and landfill for one year
- Improvements to collection system

D1. Response to Comments

Improvements Made



- \$ 20 million dollars spent in the last 2.5 years
- Operated a temporary flare until two new flares on line
- Replaced gas header and isolation valves around complete gas system to improve overall suction and balancing control
- Installed 200 new and replacement gas extraction wells and associated connection pipes to improve subsurface collection of landfill gas
- Construction of new landfill gas to energy plant

D1. Response to Comments

Additional Work in Progress



- Part of settlement of NOVs, landfill paid SCAQMD to hire two consultants to improve gas collection system, operation, and other measures
- Started early May

D1. Response to Comments

Case Study - Huy Fong Foods



- Irwindale hot sauce manufacturer, moved from Rosemead in 2012
- 70 complaints to SCAQMD from 21 households in last six months
- Multiple inspections, complaint response, engineering team visits
- Working with facility and City of Irwindale
- Facility evaluating potential options for control equipment
- SCAQMD staff will do additional air monitoring and testing during next grinding season

D1. Response to Comments

Analyzing the Problem

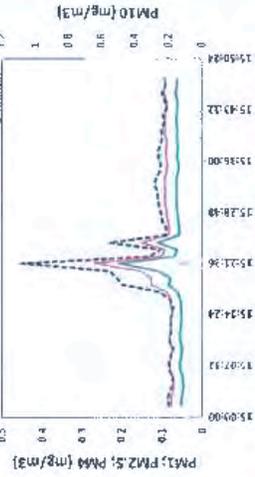


Two DustTraks (DRX)
Four PM fractions



Condensation Particle Counter
Ultrafine particles

- Staff took measurements to identify where odors coming from
- Know that grinding was an odor source
- Highest PM found in mixing room



D1. Response to Comments

Evaluating Potential Solutions



- Six people inside the mixing room wore respirators with different filter material
- Ranked odors on scale of 0-5 for each filter type
- Activated carbon would be the best control option



P100 HEPA MultiPleat Activated N95 Chemically Treated
MERV 8 MERV 8 Carbon Carbon Activated Carbon

D1. Response to Comments

Summary - SCAQMD Programs to Address Odors

- Complaint response, inspections, team approach as needed
- Clean Communities Plan
- Current rules
 - Rule 402 – Nuisance (H&S Code §41700)
 - Rule 410 - Odors from Transfer Stations and Material Recovery Facilities

D1. Response to Comments

ATTACHMENT 4

D1. Response to Comments

July 7, 2015

VIA OVERNIGHT MAIL

Ms. Sandra McDaniel
 South Coast AQMD
 21865 Copley Drive
 Diamond Bar, CA 91765

Re: Set Hearing for PR 415, Odors from Rendering Facilities

Dear Ms. McDaniel:

Baker Commodities, Inc. (Baker) is a family-owned company founded in 1937 and operated by three generations of the Andreoli family. Baker has 215 union and non-union employees at the Vernon rendering facility, 101 of which belong to three unions: Teamsters Local 63, UFCW Local 770, and Operating Engineers Local 501. Baker is already heavily regulated by nine other agencies. South Coast Air Quality Management District's (SCAQMD) Proposed Rule 415 (PR 415) unjustly penalizes Baker even though it has had no odor violations since September 3, 1998 – **almost seventeen years ago**.

3.4-1

On Friday, July 10, 2015, SCAQMD staff will ask the SCAQMD to vote in favor of setting a public hearing for PR 415 in September 2015. Baker urges the SCAQMD to vote no for the following reasons:

1. Baker will be forced to shut down its rendering operation in Vernon. Baker estimates that the initial capital costs to comply with PR 415 will be about \$27 million and will increase annual operating costs by \$2.5 million. 215 jobs, including 101 union jobs, in south central Los Angeles will be lost even though Baker has had no NOVs for the last 17 years, and SCAQMD has not traced by any scientific method the odors in Boyle Heights to Baker.
2. The severe impacts of PR 415 are not limited to Baker and the other four rendering companies. Only Baker and one other renderer in Vernon accept material from third-party businesses (like restaurants, grocery store delis, and packing houses). In the event that Baker is forced to shut down, the other renderer does not have the capacity to accept all of the material that Baker currently handles. Furthermore, even if it could accept all of the material, historically, having two rendering facilities in the area has been crucial when one of the facilities inevitably suffers a breakdown and is incapable of processing material. Rendering material cannot be landfilled. Without Baker, an unhealthy situation will result as material piles up at dairy, cattle, poultry, and hog farms, restaurants, hotels, grocery stores, meat markets, schools, military bases, prisons, etc. These facilities may need to curtail their operations, resulting in higher costs to consumers, loss of jobs and productivity, and lost revenue to governmental entities.

3.4-2

3.4-3

D1. Response to Comments

- 3. SCAQMD determined the cause of the odors in the Boyle Heights community is rendering despite the fact that its year-long study of the Boyle Heights neighborhood, conducted by Dr. Fine in 2012, proved that Baker could not be the cause. (See Attachment 1.) According to SCAQMD, sulfur compounds are one of the causes of the odors. The smell of sulfur is the same no matter the source. Because SCAQMD refused to inventory the area to identify other possible sources of the sulfur compounds, Baker conducted its own preliminary study of potential sources that emit hydrogen sulfide within the 710-Olympic-Bandini-Santa Fe area. The findings show that more than 130 such sources exist and over 100 are not regulated by SCAQMD. (See Attachment 2.) Baker's research also indicates that at least 48 unpermitted potential sources are located in a smaller corridor bounded by Bandini Boulevard-Downey Road-Olympic Avenue-Townsend Avenue running south to West Coast Rendering and Baker. 3.4-4

- 4. Baker does not doubt that the Boyle Heights community is affected by various odors. It is surrounded by freeways, rail yards, and heavy industrial operations. However, the SCAQMD's approach of pre-selecting the "culprits" for regulation under PR 415 will not resolve the Boyle Heights community's concerns. If SCAQMD was serious about addressing the odor issues, it would conduct a complete inventory of all potential sources and determine whether these sources contribute to the odor issues. What happens when the odor situation in Boyle Heights is not resolved by PR 415; will SCAQMD target another industry, and another, and so on until all alleged sources causing odors in Boyle Heights are regulated? 3.4-5

- 5. PR 415 is an attack on agriculture. Because SCAQMD has not been able to prove the renderers are the cause of the odors and issue NOVs to the renderers under Rule 402 (Public Nuisance), SCAQMD is proposing in PR 415 to impose a lesser nuisance standard for renderers that requires no scientific proof of wrongdoing. SCAQMD has no legal authority to take this action and, in fact, it is pre-empted by Civil Code section 3482.6, the "Right to Farm" law. (See Attachment 3.) 3.4-6

It is unprecedented that SCAQMD staff would propose a rule with no scientific basis that would close down legitimate businesses and eliminate union jobs. Staff has indicated several times to Baker that it is up to the Board to sort these issues out and decide whether PR 415 should be enacted. As such, Baker requests that the Board not set a public hearing for PR 415. 3.4-7

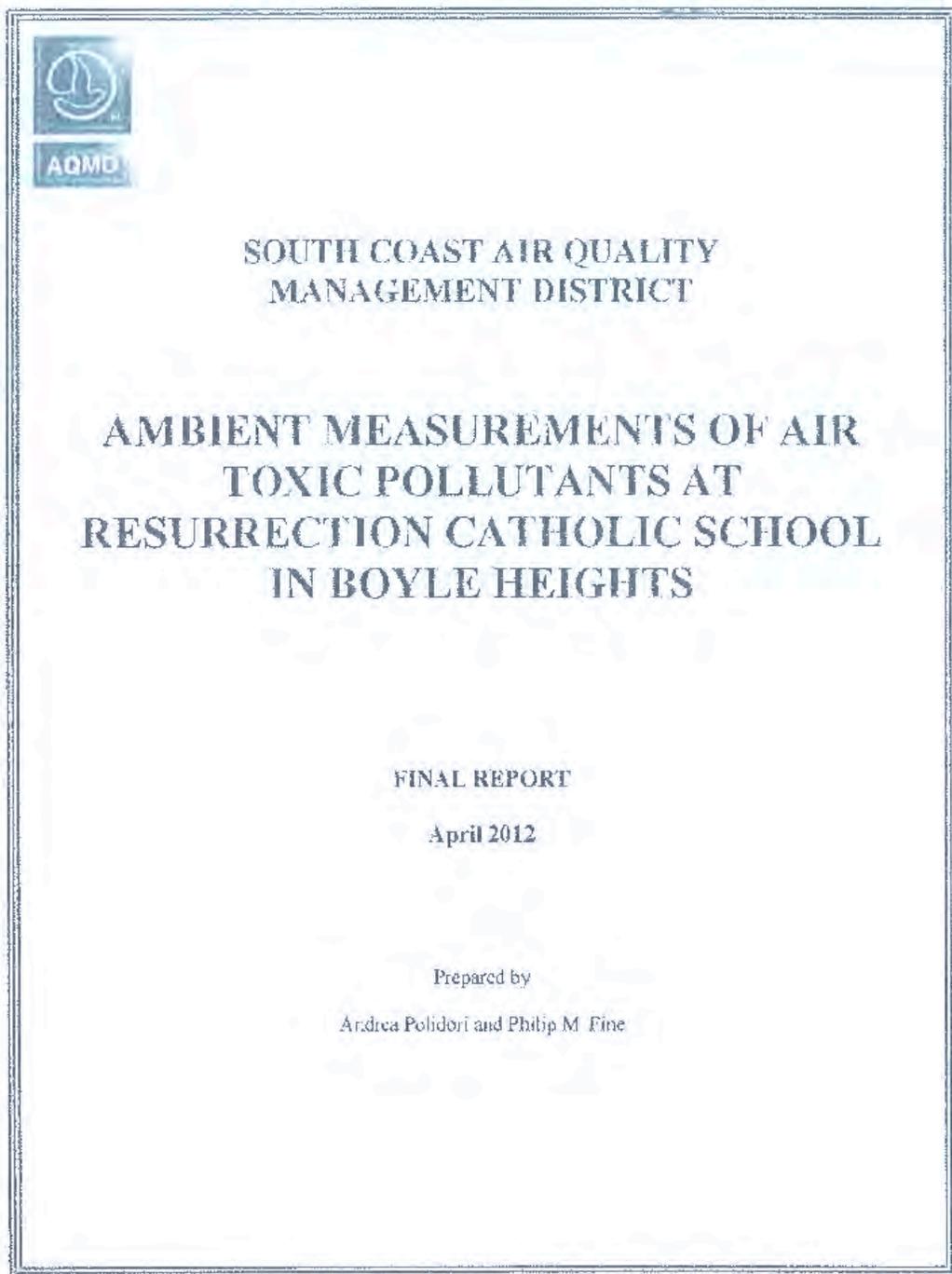
Sincerely,

Andy Andreoli

Andy Andreoli
President

wFnel

D1. Response to Comments



34-8

D1. Response to Comments

SUMMARY REPORT

BACKGROUND AND OBJECTIVES

Boyle Heights is a neighborhood located on the eastern bank of the Los Angeles River, east of downtown Los Angeles. The extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights, allowing access to the Golden State (I-5), Hollywood (U.S. Route 101), Pomona (SR 60), San Bernardino (I-10), Santa Ana (I-5), and Santa Monica (I-10) freeways. The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of Long Beach and Los Angeles. Boyle Heights is also bordered by heavy industrial areas such as the city of Vernon, home to facilities such as Exide Technologies (a lead-acid battery recycling facility) and rendering plants such as Baker Commodities, D&D Disposal Inc, West Coast Rendering, and Darling International. Local residents and community groups have expressed concern about increased levels of air toxics emitted from on-road and off-road vehicles (heavy duty diesel trucks and trains in particular) and industrial facilities, and the potential health consequences related to exposure to such pollutants, especially among children.

Following numerous requests from concerned residents and community leaders, AQMD began a comprehensive year-long monitoring study in April of 2009 of air toxic levels at the Resurrection Catholic School in Boyle Heights, in an area impacted by both local and regional pollution sources. This report discusses the air quality data collected at the Resurrection School and compares them to those obtained in other parts of the South Coast Air Basin during the same time period.

METHODS

Sampling was conducted from 04/01/09 to 06/01/10 at a monitoring station located in the parking lot of the Resurrection Catholic School (3324 East Opal Street, Los Angeles, CA 90023), about 320 m south of the intersection between the Interstate 5 (I-5) and South Lorena Street (Figure 1). The monitors at Resurrection were located immediately above and only a few meters from East 8th Street. Thus, the measured levels may reflect this very local traffic influence that does not exist to the same extent in other areas of Los Angeles. Since many residents in Boyle Heights, including the children at Resurrection School, live, work or play in similar proximity to traffic sources, the Resurrection site can be considered representative of typical exposures in the area. Several particle and gaseous pollutants were monitored at this location including: fine and coarse particulate matter ($PM_{2.5}$ and PM_{10} , respectively), elemental carbon (EC, an indicator of diesel particulate emissions), hexavalent chromium (Cr^{6+}), lead (Pb), volatile organic compounds (VOCs) and carbonyl compounds. Data collected at the Resurrection School site were then compared to those obtained at the Central Los Angeles and Rubidoux monitoring stations during the same time period. The Central Los Angeles and Rubidoux sites are two permanent AQMD's network stations used to monitor air quality where air toxics are measured year-round.

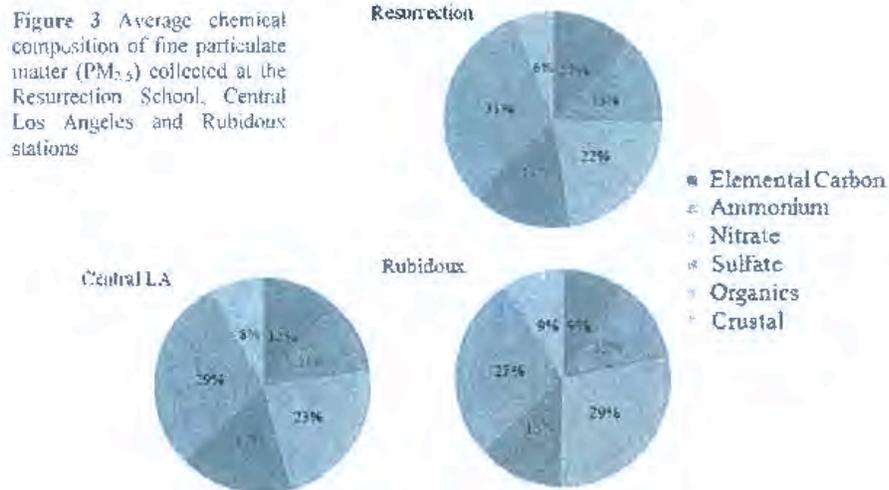
D1. Response to Comments

average $PM_{2.5}$ mass concentration was measured in Rubidoux ($16.7 \mu\text{g}/\text{m}^3$), probably because the atmospheric levels of this air pollutant is primarily influenced by regional particles that are formed chemically in the atmosphere. However, emissions from motor vehicles, industrial facilities and other local PM contributions can also be important. The study average $PM_{2.5}$ concentration at both the Resurrection School and Rubidoux stations exceeded the annual NAAQS for this pollutant set by the U.S. EPA ($15 \mu\text{g}/\text{m}^3$). Also, the daily average $PM_{2.5}$ levels at these two locations were higher than the corresponding 24-hr average NAAQS ($35 \mu\text{g}/\text{m}^3$) on more than one occasion.

The study average concentration of EC found in fine particles ($PM_{2.5}$ EC) was slightly higher at the Resurrection School site ($2.04 \mu\text{g}/\text{m}^3$) than at the Central Los Angeles and Rubidoux stations (1.72 and $1.63 \mu\text{g}/\text{m}^3$, respectively) (Figure 2c). Elemental carbon is an indicator of diesel PM, considered by the State of California to be an air toxic. Although the EC levels at Resurrection School are similar to those observed in other dense urban areas of the Los Angeles Basin, they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.

Fine PM samples were analyzed for their chemical composition, which can provide information on the origin of the particles. The $PM_{2.5}$ collected at the Resurrection Church, Central Los Angeles and Rubidoux stations had a similar chemical composition, probably because of the presence of similar emission sources at all three locations (Figure 3). There were slightly higher levels of crustal material and nitrate at Rubidoux as expected for an inland, dustier location. Higher levels of EC at Resurrection and Central Los Angeles reflect the proximity of those sites to diesel sources.

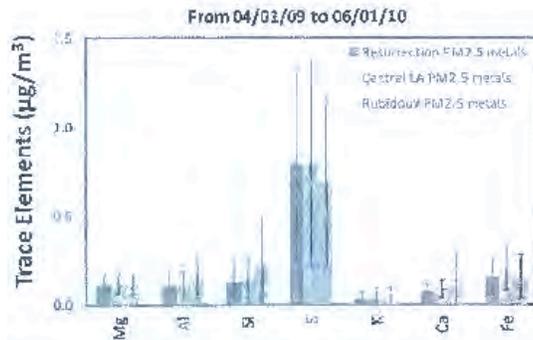
D1. Response to Comments



Airborne lead is measured by collecting and analyzing all particulate in the air, known as total suspended particulate (TSP). Like PM, airborne lead is regulated by the U.S. EPA with associated NAAQS. The highest study average lead concentration (16.8 ng/m³) was measured at the Resurrection School site. The corresponding average lead levels at the Central Los Angeles and Rubidoux stations during the same time period were 9.6 and 7.3 ng/m³ (Figure 4). Increased lead concentrations in the Boyle Heights area may be due to re-suspension of historically deposited dust accumulated on or near the nearby freeways. While lead has been completely removed from gasoline for over 30 years, some studies have shown higher lead levels leftover in soils next to busy roadways. Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blew from the Exide plant toward the Resurrection School site. In addition, the lead data collected at the Resurrection School site are not well correlated to those measured right next to the Exide plant during the same time period. In October 2008 the U.S. EPA strengthened the NAAQS for lead, lowering it from 1500 ng/m³ (quarterly average) to a more stringent 150 ng/m³ (rolling 3-month average). Although higher than the other sites, the lead levels at Resurrection School were still very low and none of the daily average or three-month average concentrations measured at the three monitoring sites during this study were close to or above the current NAAQS for lead.

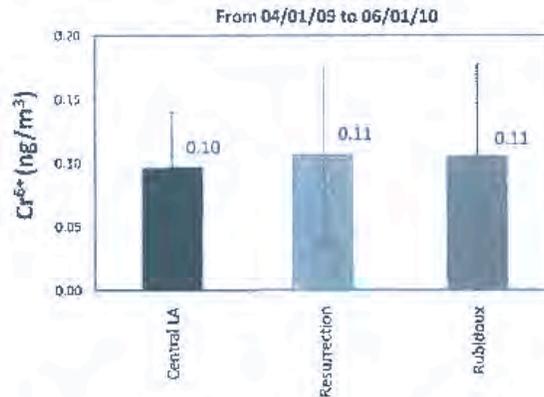
D1. Response to Comments

Figure 5 Study average concentrations of selected trace elements in PM_{2.5} samples collected at the Resurrection School site and at the Central Los Angeles and Rubidoux stations.



*Trace Element TSP data at the Resurrection School site are only available between 04/01/11 and 03/27/11

Figure 6 Study average hexavalent chromium (Cr⁶⁺) concentrations at the Resurrection School site and at the Central Los Angeles and Rubidoux stations.

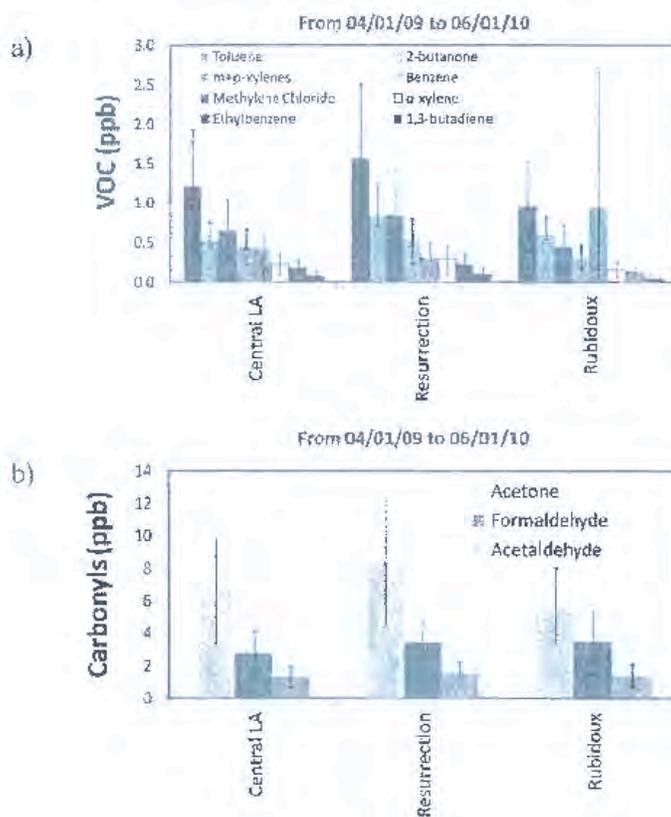


Volatile organic compounds and carbonyls are organic gases, some of which are considered air toxics. They are emitted from a variety of sources, including motor vehicles and industrial facilities. With the exception of methylene chloride, the concentrations of the most abundant VOCs and carbonyls measured at the Resurrection School site were comparable to those observed at the other two monitoring stations in Central Los Angeles and Rubidoux.

D1. Response to Comments

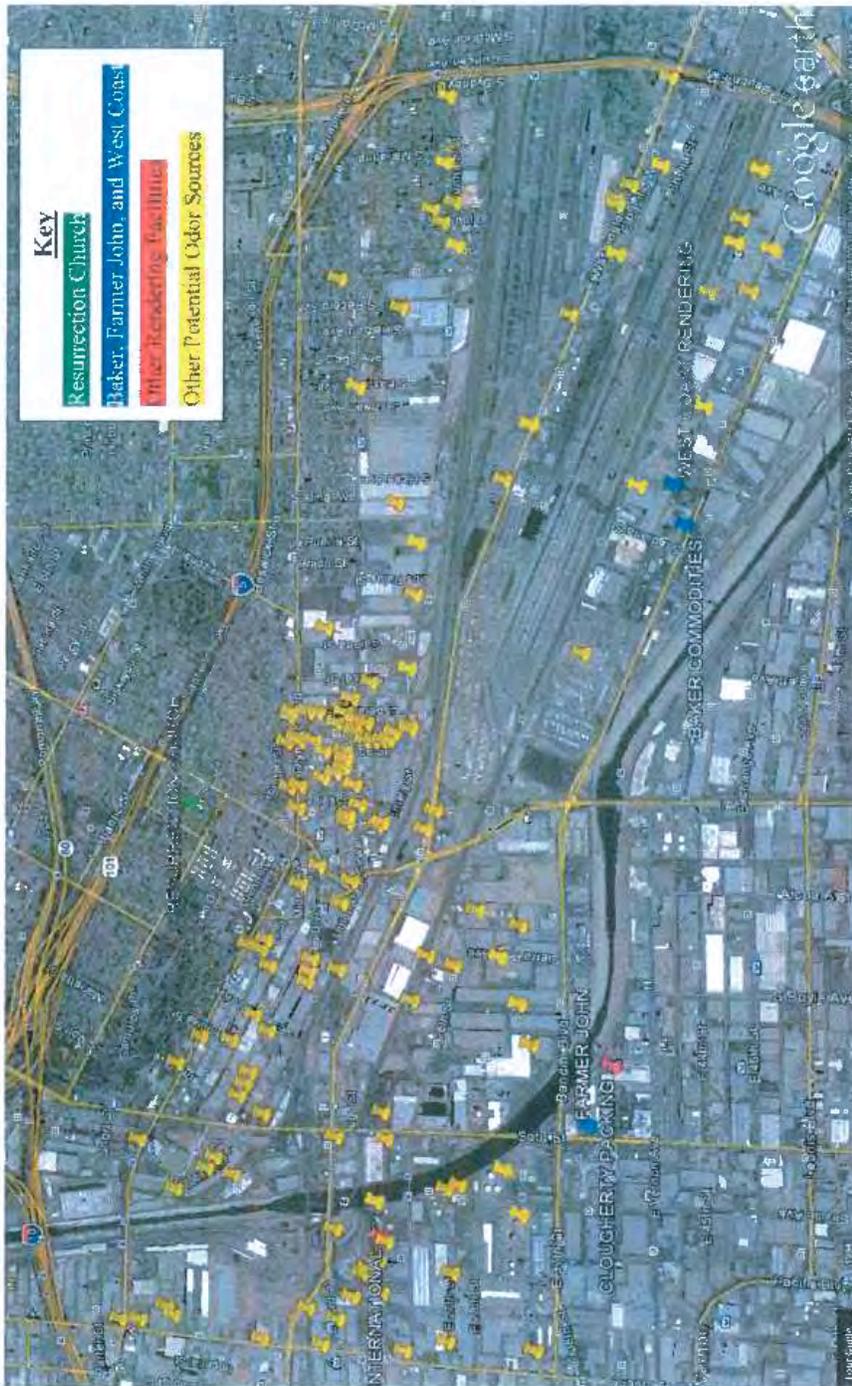
(Figure 7) This is probably because gaseous emissions from motor vehicles are likely to be the predominant source of these volatile species at all three monitored locations and throughout the entire South Coast Air Basin. The slightly higher atmospheric levels of toluene, 2-butanone, m+p-xylenes and other VOCs measured at Resurrection School might be explained by the close proximity of this site to the I-5 and/or to nearby surface streets. The potential contribution of emissions from nearby industrial facilities cannot be excluded, but this pattern of VOC levels is consistent with mobile source emissions.

Figure 7 Study average concentrations of a) selected volatile organic compounds (VOCs) and b) carbonyl compounds at the Resurrection School site and at the Central Los Angeles and Rubidoux stations



D1. Response to Comments

Potential Odor Sources in the Boyle Heights Neighborhood



34.9

D1. Response to Comments

5/13/2015 Law Section

California LEGISLATIVE INFORMATION

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CIVIL CODE - CIV
 DIVISION 4. GENERAL PROVISIONS [3274 - 9566] (Heading of Division 4 amended by Stats. 1988, Ch. 160, Sec. 16)
 PART 3. NUISANCE [3479 - 3508.2] (Part 3 enacted 1872.)
 TITLE 1. GENERAL PRINCIPLES [3479 - 3486.6] (Title 1 enacted 1872.)

3482.6. (a) No agricultural processing activity, operation, facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in continuous operation for more than three years if it was not a nuisance at the time it began.

(b) If an agricultural processing activity, operation, facility, or appurtenances thereof substantially increases its activities or operations after January 1, 1993, then a public or private nuisance action may be brought with respect to those increases in activities or operations that have a significant effect on the environment. For increases in activities or operations that have been in effect more than three years, there is a rebuttable presumption affecting the burden of producing evidence that the increase was not substantial.

(c) This section does not supersede any other provision of law, except other provisions of this part, if the agricultural processing activity, operation, facility, or appurtenances thereof, constitute a nuisance, public or private, as specifically defined or described in the provision.

(d) This section prevails over any contrary provision of any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993. However, nothing in this section precludes a city, county, city and county, or other political subdivision of this state, acting within its constitutional or statutory authority and not in conflict with other provisions of state law, from adopting an ordinance that allows notification to a prospective homeowner that the dwelling is in close proximity to an agricultural processing activity, operation, facility, or appurtenances thereof and is subject to provisions of this section consistent with Section 1102.6a.

(e) For the purposes of this section, the following definitions apply:

(1) "Agricultural processing activity, operation, facility, or appurtenances thereof" includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food and Agricultural Code and collection centers licensed pursuant to Section 19300.5 of the Food and Agricultural Code, the canning or freezing of agricultural products, the processing of dairy products, the production and bottling of beer and wine, the processing of meat and egg products, the drying of fruits and grains, the packing and cooling of fruits and vegetables, and the storage or warehousing of any agricultural products, and includes processing for wholesale or retail markets of agricultural products.

(2) "Continuous operation" means at least 30 days of agricultural processing operations per year.

(3) "Proper and accepted customs and standards" means the compliance with all applicable state and federal statutes and regulations governing the operation of the agricultural processing activity, operation, facility, or appurtenances thereof with respect to the condition or effect alleged to be a nuisance.

(f) This section does not apply to any litigation pending or cause of action accruing prior to January 1, 1993.
 (Amended by Stats. 1993, Ch. 329, Sec. 1. Effective January 1, 2000.)

34-10

http://leginfo.ca.gov/faocs/codes_displaySection.html?lawCode=CIV§ionNum=3482.6

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 1 of 4

01-11-2015 10:56:56 AM

FROM: JUDICIAL COMMITTEE
Adam B. Schiff, Chairman
100-100 Regular Session

SB 1274
Author: Debra
Effective Date: April 26, 1999
Hearing Date: April 27, 1999
Food and Agricultural Code
DATE: 1/11/15

SUBJECT

Agricultural Nurseries (amended); Handling and Collection Centers

DESCRIPTION

This bill would clarify what handling and collection centers are agricultural processing activities for purposes of providing their activities in the handling exemption for occupational activities from public and private nuisance laws.

DISCUSSION

State law dating back to the 1870's declares that nothing done or maintained upon the premises of a person can be deemed a nuisance. More recently, the exploding urban population's potential conflict with some agricultural activities resulted in the passage of "right to farm" laws. In particular, SB 1000 (Thomas) ch. 16, Stats. of 1981, created a general protection from nuisance findings for those farmers, ranchers, and processors in operation for three years without incident. This legislation was expanded in 1992 by SB 1199 (Hendrick) ch. 57, Stats. of 1992, to include agricultural processing facilities.

CHANGES TO EXISTING LAW

1. Existing law provides that no agricultural premises, activity, operation, facility, or equipment thereon, that are conducted or maintained for commercial purposes,

Page 2

shall be or become a nuisance, private or public, and no any changed condition in or about the vicinity thereof, has such an continuous operation for more than three years if it was not a nuisance at the time it began;

This bill would add handling plants and collection centers licensed under the Food and Agriculture Code to the specific categories of agricultural processors.

2. Existing law requires every person engaged in the business of handling to obtain a license from the Secretary of Food and Agriculture for each handling plant and collection center operated.

This bill would require:

Every person engaged in the business of handling to obtain a license from the Department of Food and Agriculture for each handling plant.

Every person engaged in the business of operating a collection center to obtain a license from the Department of Food and Agriculture for each collection center operated.

3. Existing law authorizes the Secretary of Food and Agriculture, in lieu of any civil action and in lieu of any prosecution, to levy a civil penalty against a person who violates certain of these provisions, or any regulations adopted, to an amount not to exceed \$1,000.

Section 6 civil penalty is levied. The person charged with the violation shall receive notice of the nature of the violation and shall be granted an opportunity to be heard, which shall include the right to review evidence and the right to present evidence on his or her own behalf.

http://leginfo.ca.gov/pub/99-00/bill/sen/sb_1251-1300/sb_1274_0fa_19990428_111203_sen... 6/9/2015

D1. Response to Comments

This bill would provide, instead, that before a civil penalty is levied, the person charged with the violation shall receive notice of the nature of the violation and shall be granted the right to review the department's evidence, and for up to 30 days following the issuance of the notice, opportunity to present written evidence and evidence to the department as to why the civil penalty

Page 3

should not be imposed or should be reduced.

The bill would further specify that when provisions do not require the department to conduct either a formal or informal hearing, and that instead the department may dispose of the matter upon review of the documentation presented.

Comments

1. Spoken word for bill

The sponsor states his belief that rendering operations and collection centers are included in the types of agricultural related processing existing law not intended to cover. This bill is needed, he asserts, to specifically include rendering operations and collection centers. The rendering industry is a key component of the state's waste disposal system, recycling billions of pounds of various waste byproducts from the food and agricultural industries into useful, food products each year. But science and policy have advanced beyond the rendering to dispose of animals that die each day the products of political science. Only a handful of rendering plants are left in California to process these stock and only about a dozen collection centers. My bill is limited in scope to affect only a very small, but necessary, industry.

2. Summary

The sponsor of the bill, California State and Food Association, states the bill is needed, "to clarify the department's jurisdiction of collection centers under the rendering law. These centers are required facilities for animal carcasses and/or kitchen waste from food processing plants. The bill gives authority to the department to promulgate necessary regulations for collection centers to make certain they are operated in a way that protects food safety and environmental quality."

The bill's other sponsor, Western United Outfitters, writes to say "The bill requires that several hundred animals are sent throughout the state, this in addition to livestock owned by other economic industries. These

Page 4

animals can only be processed for non-human consumption. By-products are used within the livestock and animal industries for food for animals. Deaths of large animals, in particular 1,200-pound dairy animals, require a beneficial and health protection way to dispose of their carcasses in the most efficient, and for the most part, the only acceptable legal way to make necessary only from human health concerns."

3. The bill's sponsor and critics on the process

David Burtis, a top the county boardman, should anyone buying a head and an existing technology plant in collection facilities be presumed aware of its operations and its ability before they purchase? When you purchase the house in November the only way you have would be that, but some restrictions the animal is with public. Should you have a legal responsibility the bill proposed on the law which says, "No."

Section 3619 of the Civil Code defines a "disturbance" as "anytime which is tortious in nature, or is indirect or aggressive to the person, or an obstruction to the free use of property, or an interference with the inalienable enjoyment of life or property, or unlawfully obstructs the free passage of air on the highway, or any body of water, street, or other public place."

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 3 of 4

Section 510 defines a "public nuisance" as "one which affects the same class or entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal."

In the policy determination of whether an enterprise should be excused from nuisance law, an aggrieved party may attempt to show that the nuisance is "public." The question frequently arises, whether the plaintiff assumes the risk and is barred from recovery by the fact that he has "come to the nuisance" by purchasing land and moving to near it after it is already an existence of operation. The prevailing rule is that in the absence of prescriptive rights, the defendant cannot overcome the presumption to reduce the nuisance, and that the plaintiff

Page 3

is entitled to immediate use and enjoyment of his land to the same extent as any owner, so long as he keeps it in good faith and not for the mere purpose of a speculative investment. There are cases, however, which have held that the plaintiff is barred by his voluntary choice of a place to live, particularly where the defendant's activity is one in which the public has a major interest, and the safer and more accurate statement would appear to be that "coming to the nuisance" is merely one factor, although clearly not the most important one, to be weighed in the scale along with the other elements which enter upon the question of reasonable use." Weaver, *Nuisances of the Law of Torts*, 1st ed. at 111.

In California, we have such a prescription right to which the State refers, section 512.4 of the Civil Code, which imposes restrictions on the ability to declare agricultural activities to be nuisances. This "right to farm" statute provides that, if an agricultural processing activity, operation, facility, or establishment therein has existed for more than three years and it was not a nuisance when it was first operation, and it continues to be conducted in a manner consistent with the custom and standards of the locality, it cannot be declared a nuisance because of changed conditions in the area. However, houses have been built near the plant.

4. Regulations for collection of fees for agricultural processing

The Food and Agriculture Code defines "processing" as the conversion of packhouse, waste, dead animal carcasses, and other wastes into animal feed and other suitable for human consumption and other products suitable for human consumption. "Collection center" means a collecting area for the temporary storage of animal carcasses, packhouse waste or other products before transportation to a licensed rendering plant, while "meat facilities" have an obvious relationship to agriculture. They also relate to industrial activities, particularly in the collection and processing of non-combustible kitchen wastes.

The author argues that these facilities are indeed

Page 3

agricultural, as the predominant component of their "product" is farm manure and rendering related processing. In addition, he points out, the product derived from rendering is also agricultural, since he produces feed. He further argues that the enforcement of sanitary standards conducted by the Meat and Poultry Inspection Branch of the FDA as a form of meat processing.

In reviewing the legislative history of this section of law, the approval of AB 1094 (Assembly) included Senate Bill, Hearings/Staff Reports and Committee Report, as well as the Meat Institute and Food Processing Association. The Food Processing Association of these companies aims at least as "industrial" as processing dead animals and manure into animal feed.

5. Food-related legislation: a violation of regulations

http://leginfo.ca.gov/pub/99-00/bills/sen/sb_1251-1300/sb_1274_cfa_19990428_111203_sen... 6/9/2015

D1. Response to Comments

SB 1274 Senate Bill - Bill Analysis

Page 4 of 4

OF NON-SPECIFIC APPLICATION

In 1982, AB 1100 (Hawley) Ch. 97, Stats. of 1982, amended the existing provisions then contained for Terrestrial and Marine Aquaculture, to cover agricultural processing activities as well. The bill provided a date certain of January 1, 1983 for these provisions to begin. SB 1274 would use the same date and would, therefore, cover activities of processing facilities and collection centers - both were in place as of January 1, 1983.

REMOVE RESTRICTIVE APPLICATION OF CLERK TO NEW ACTIVITIES OF REGULATING FISH AND COLLECTION CENTERS

SHOULD THE BILL BE PROSPECTIVE ONLY, SINCE "COLLECTION CENTERS" WOULD BE A FUTURELY ANTICIPATED ACTIVITY ONLY WITH THE PASSAGE OF THIS BILL?

6. Legal nature of liability and non-legal issues **RESCIND**

The bill allows a person charged with violation of this article to challenge the decision through an internal process within 30 days following issuance of notice of violation before a fine is levied. The bill expressly declares that the administrative procedures for these up-

>
from ?

apply to those parties appeals. Thating law also allows a challenge, but does not place a statute of limitations upon the party's time for challenging the decision.

The limitations period under the Administrative Procedures Act is 30 days. For many state agencies, the period is prescribed in statute, such as in other sections of the Food and Agriculture Code 45 days to contest commodity inspection decisions (Section 109.106, CCR 190 days for withholding order for legal labor time (30 days Worker's Compensation (45 days). However, these limitations periods are the challenge to some extent. This bill would allow a person to present their side of a case before a fine is imposed, there seem to be no due process issues raised that the bill's proposed 30-day limitations period.

SUPPORT: California Poultry Industry Federation; California Cattlemen's Association; California Farm Bureau Federation; Pacific Egg and Poultry Association

Opposition: None

HISTORY

Source: Western United Dairyman and California Cattle and Feed Association

Related pending legislation: None known

Other legislation: AB 1100 (Hawley) Ch. 97, Stats. of 1982

http://leginfo.ca.gov/pub/99-00/bill/sen/sb_1251-1500/sb_1274_cfa_19990428_111203_sen... 6/9/2015

D1. Response to Comments

ATTACHMENT 5

D1. Response to Comments



July 17, 2015

| | |
|-------------|--------------------|
| Direct Dial | 949.851.7492 |
| Email | alaben@jdtplaw.com |
| Reply to: | Irvine Office |
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Via E-Mail (tgoss@aqmd.com; jinabinct@aqmd.com)

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Mr. Jeffrey Inabinct
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Re: Proposed Rule 415: Odors from Rendering Facilities

Dear Messrs. Goss and Inabinct:

We represent Baker Commodities, Inc. ("Baker"), a family-owned company founded in 1937 and operated by three generations of the Andrcolt family. Baker recently attended South Coast Air Quality Management District's ("SCAQMD") June 30, 2015 public consultation meeting to discuss the June 23rd version of Proposed Rule ("PR") 415, and the Governing Board meeting on July 10, 2015. It is apparent from the comments at the public consultation meeting that the Boyle Heights community has issues that are not caused by rendering operations, and that many community members recognize that there are other sources of odors impacting the community that are not related to or caused by rendering operations. SCAQMD staff does not understand that rendering is an essential public service, reduces greenhouse gas emissions, and produces biofuels necessary to implement SCAQMD and California Air Resources Board ("CARB") requirements.

35-1

Baker's comments herein address only the recent changes to PR 415. To avoid duplication, the comments and questions in Baker's previous letters (including the July 8 and July 17 letters to the Governing Board and handouts given to the Board on July 10th) still apply, and are incorporated by reference. In summary, the June 23rd version of the proposed rule does not address Baker's concerns and does little to alleviate the initial capital costs required to comply with PR 415 as well as increased annual operating costs. If the June 23rd version of the rule is passed in its current form, Baker will be forced to shut down its rendering business in Southern California. There is no science to support the SCAQMD's allegations that the odor

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D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 July 17, 2015
 Page 2

issues in Boyle Heights are the sole responsibility of five rendering operations. There is no science behind the proposed rule requirements. There is no basis for adopting an odor standard that is much less stringent than Rule 402, the public nuisance rule.

Baker submits these comments on the June 23rd version of PR 415, the revised staff report, and pending California Environmental Quality Act ("CEQA") document, and requests that this letter (and Baker's previous letters including, but not limited to, the July 8 and July 17 letters to the Governing Board and handouts given to the Board on July 10th) be included in the administrative record for PR 415. Baker reserves the right to submit additional comments on PR 415, the staff report, and CEQA and socioeconomic documents in the future.

3.5-1
 Cont'd

1. The Definitions Remain Vague and Ambiguous.

The definition of a confirmed odor event incorporates a vague and ambiguous term that grants SCAQMD staff unfettered discretion. There is no explanation or document stating the scope of training for "District personnel" or why non-inspectors are granted the authority to issue violation notices and make important and costly determinations about the facilities. Is SCAQMD proposing to utilize support staff or the Executive Officer to verify odors? What are odor inspection techniques? Are these in place now or will they be developed after the Governing Board approves the rule? If they exist, the odor inspection techniques should be released to the public.

3.5-2

A new definition was added, "Odor Control System." The definition is vague and ambiguous. For example, is it the odor control system or the permanent enclosure that is designed to reduce odors? What does "serving" mean?

3.5-3

The definition of "Odor Generating Source" now treats each process as a source instead of the entire operation. SCAQMD has produced no science proving that the entire rendering operation is causing odors in Boyle Heights, let alone each process.

3.5-4

2. Odor Best Management Practices ("BMP") are Unreasonable.

It is not possible to implement the entire odor BMPs within 90 days of rule adoption. Some of the BMPs propose different deadlines than 90 days, which makes the scheme confusing and unintelligible.

3.5-5

Baker cannot force transport vehicles it does not own to enclose or tarp the cargo area, or utilize trucks with pressure relief valves. Ninety (90) days is not sufficient to make the changes

3.5-6

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 July 17, 2015
 Page 3

to vent delivery trucks to odor control equipment (SCAQMD cannot issue permits that fast, for one), or construct a permanent enclosure of a closed system. SCAQMD has produced no scientific basis demonstrating that these sources contribute to odor issues in Boyle Heights. 3.5-6
 Cont'd

The washing requirements are excessive and could require changes to on-site wastewater treatment facilities and associated permits, which could not be accomplished within 90 days. The washing requirements will increase wastewater-associated emissions. SCAQMD has produced no scientific basis demonstrating that washing will reduce odors in Boyle Heights. SCAQMD imposes these requirements without any consideration of California's drought and limitations that may be imposed on this type of water use. 3.5-7

The holding times for delivery and processing of raw rendering materials are not realistic and display SCAQMD's lack of knowledge about how rendering facilities operate. SCAQMD has produced no scientific basis demonstrating that these limits on holding times will reduce odors in Boyle Heights. 3.5-8

The requirements to repair the raw material receiving area are vague and ambiguous. Who determines when patching, repair and repaving are necessary? There is no feasible way to eliminate all standing water or puddles. Notably, SCAQMD itself has not found a way to do this in its own parking lot. SCAQMD has produced no scientific basis demonstrating that repaving will reduce odors in Boyle Heights. 3.5-9

Ninety (90) days is not sufficient to construct a closed system of conveyance and using odor-tight containers to transport material is not feasible in a continuous operation. Ninety (90) days is not sufficient to make the changes required for tanker truck deliveries of trap grease. SCAQMD has produced no scientific basis demonstrating that these requirements will reduce odors in Boyle Heights. 3.5-10

3. Permanent Enclosure, Ventilation, Closed Systems and Odor Control Standards are Unreasonable

SCAQMD's requirements do not take into consideration the length of time Baker has been operating, or the fact that no violation notices have been issued to Baker in the last 17 years. There is no scientific proof that Baker's operation is contributing to odor issues in Boyle Heights. Despite these facts, SCAQMD intends to impose requirements upon Baker that will cause it to shut down. This is an unconstitutional exaction and taking of Baker's property. 3.5-11

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabnel
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 July 17, 2015
 Page 4

SCAQMD is imposing a permanent enclosure requirement upon all facilities, regardless of whether the facility qualifies as a closed system operation. There is no scientific proof that the raw rendering material receiving areas, or any of the other areas identified in the proposed rule, contribute to odors in Boyle Heights. There is no reason for SCAQMD to micro manage the enclosure and ventilation requirements. For example, the limitations on venting the enclosures may not be sufficient to exhaust vehicle fumes. SCAQMD would likely oppose any variance. Will Baker be permitted to operate without any penalty until SCAQMD revises the rule? Or, will SCAQMD simply force Baker to shut down? There is insufficient time to demolish existing structures, conduct engineering and develop building plans, obtain all necessary permits, and construct the building. It appears that the buildings must be large and tall enough for trucks to unload and maneuver in the structure. This could necessitate removing structures that are not part of the unloading operation and increase costs.

3.5-12

Baker has repeatedly requested that SCAQMD determine whether its existing operation complies with the closed system standards. SCAQMD refuses to respond. Instead, SCAQMD has made the requirements more vague and ambiguous by allowing an undefined alternative if approved by the Executive Officer. However, there are no standards to guide the Executive Officer's approval, constituting an unlawful grant of authority to the Executive Officer and unfettered discretion on which alternatives to select.

3.5-13

There is no scientific basis for establishing the requirements that an odor control system meet 70% efficiency for nitrogen and sulfur compounds. Is this standard achievable? How much odor will be reduced in Boyle Heights as a result of this standard and the proposed rule? Is there any scientific evidence that these compounds are causing odors in Boyle Heights? If so, are these the only compounds that cause odors in Boyle Heights? Will these standards and this rule alleviate the entire odor issue in Boyle Heights? The proposed SCAQMD testing methods are not designed for addressing odor issues, and to Baker's knowledge have not been utilized in rendering operations.

3.5-14

4. The Odor Mitigation Plan ("OMP") Still Suffers from the Same Infirmities Identified in Baker's Previous Letters.

The additions of subdivisions (h)(3)(C) and (D) do not alleviate Baker's concerns. In fact, the revisions make the proposed rule worse. SCAQMD has stated the purpose of the OMP is to address odor complaints in Boyle Heights. Yet, the OMP requirements do not set odor reduction in Boyle Heights as the standard for approving an OMP and leaves it to the complete

3.5-14
Cont'd

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinet
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 July 17, 2015
 Page 5

discretion of the Executive Officer with no discernible standards. Further, the revised language adds more violation notice traps. 3.5-14
 Cont'd

5. There is No Scientific Basis for the Exemptions Nos. 2 and 3.

There is no reason to exempt one facility from meeting the wastewater treatment enclosure requirements or rule requirements altogether. SCAQMD appears to be granting favoritism to one facility at the expense of another facility. SCAQMD staff is deciding whose businesses will survive or not survive by the granting of these exemptions. 3.5-15

6. The Staff Report Does Not Address Baker's Concerns.

The staff report provides no scientific proof that Baker is causing odor in Boyle Heights. SCAQMD has conducted no analysis of its own and instead relies upon old studies conducted in other states. Further, staff improperly justifies its rulemaking based on unconfirmed odor complaints, hearsay, unconfirmed allegations, and staff feelings or beliefs. The staff report is lacking in its responses to Baker's concerns and its recognition of the facts that rendering is an essential public service, reduces greenhouse gas emissions, and produces biofuels necessary to implement SCAQMD and CARB requirements. There is no disclosure of what will happen if Baker shuts down, or if the rule does not produce the results SCAQMD is promising the Boyle Heights community? In fact, the staff report gives no credence to Baker's factual statements that it will shut down if the proposed rule is adopted. 3.5-16

SCAQMD staff's extraordinary interpretation of Health and Safety Code sections 40702 and 41700 would allow SCAQMD to regulate *anything* to protect the public's comfort. Staff's interpretation would not limit SCAQMD's authority to preventing criteria or toxic airborne emissions. This rulemaking is in excess of SCAQMD's statutory authority and sets a dangerous precedent. SCAQMD lacks authority to prevent the discharge of odors before they cause a nuisance or annoyance to the public. The location of the City of Vernon and any impacts it may cause to the Boyle Heights neighborhood is strictly a land use that SCAQMD has no statutory authority to regulate. SCAQMD's authority over odors is limited to Rule 402's provisions that address actual public nuisance situations, not anticipated situations. Further, the statutory protections afforded the agriculture industry from nuisance complaints under Civil Code section 3432.6 have been ignored by SCAQMD staff. 3.5-17

The staff report admits that "[o]dor events from rendering facilities in the Vernon area rarely rise to the level of public nuisance as defined under Rule 402 and H&SC § 4170. . . . In 3.5-18

D1. Response to Comments

Mr. Tracy A. Goss, P.E.
 Mr. Jeffrey Inabinct
 Planning Rule Development & Area Sources
 South Coast Air Quality Management District
 July 17, 2015
 Page 6

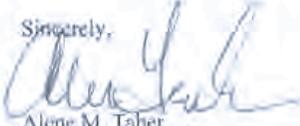
fact, a verified public nuisance is so rare that since 2000, only a single notice of violation (NOV) has been issued for public nuisance odors from a rendering facility in the South Coast Air Basin." This statement proves renderers are not the problem in Boyle Heights. 3.5-18 Cont'd

The fact that other states may regulate rendering facilities is not a basis for SCAQMD to regulate rendering businesses this region. These other regulations are not proof that rendering operations in Vernon are causing an odor problem in Boyle Heights that warrants the PR 415 response. Further, the staff report does not disclose the basis for the rules, whether the facilities being regulated are new enough to accommodate the changes, etc. 3.5-19

The odor complaint discussion is limited to the five rendering operations and excludes any evaluation of other permitted and unpermitted sources which Baker has shown to exist and be possible sources of the odors in Boyle Heights. Further, the conclusions in the staff report regarding the meteorological data conflict with the findings in Dr. Fine's Air Toxic Pollutants Study, dated April 2012. Finally, there is no health study linking odors from rendering operations to health effects in communities several miles away for the alleged sources. 3.5-20

7. Conclusion.

The proposed rule remains seriously flawed. There is a complete lack of scientific support for the rule or statutory authority. If the current version of PR 415 is adopted by the SCAQMD Governing Board, Baker will shut down its rendering operation and go out of the rendering business in Southern California. Baker respectfully requests that SCAQMD provide a written response to each of the questions raised in the letter and the previous letters. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you. 3.5-21

Sincerely,

 Alene M. Taber

D1. Response to Comments

ATTACHMENT 6

D1. Response to Comments



Baker Commodities Inc.
Quality and Pride... Worldwide.

July 17, 2015

VIA OVERNIGHT MAIL

Janice Rutherford
385 N. Arrowhead Ave., 5th Floor
San Bernardino, CA 92415

Re: July 10, 2015 Meeting to Set a Hearing for Proposed Rule 415 - Odors from Rendering Facilities (PR 415)

Dear Ms. Rutherford:

Baker Commodities, Inc. (Baker) would like to thank each of the South Coast Air Quality Management District's (SCAQMD) Governing Board Members for allowing Baker the time necessary to discuss its concerns about PR 415 at the July 10, 2015 meeting. As you may recall, Baker is a family-owned company founded in 1937 and employs 215 union and non-union people at the Vernon rendering facility, 101 of which belong to three unions: Teamsters Local 63, UFCW Local 770, and Operating Engineers Local 501. Baker has had no odor violations since September 3, 1998 – **almost seventeen years ago.**

3.6-1

The Governing Board raised several important issues at the July 10th meeting that Baker briefly responds to below.

1. Tracing Subjective Odors. PR 415 lacks a scientific basis. This is confirmed by Dr. Pine's statements at the July 10th meeting agreeing odors are subjective and technology to test odors is lacking. It is unprecedented for SCAQMD to impose tens of millions of dollars of control requirements upon five businesses without a scientific basis for doing so. The June 23, 2015 version of PR 415 identifies for the first time odorous markers, ammonia and hydrogen sulfide, which are compounds that can be measured. An odor rule should not be adopted until SCAQMD staff proves with well recognized scientific methods that there are odorous compounds in Boyle Heights above background concentrations levels and traces the compounds back to the originating sources responsible for the odors.
2. Reducing Odor Complaint Requirements for Renderers. Because odors are subjective, SCAQMD requires when implementing Rule 402 (the public nuisance rule) six or more separate odor complaints about a single incident

3.6-2

3.6-3

D1. Response to Comments



Baker Commodities Inc.

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and the same odor from this incident must be confirmed by the trained inspector with the complainants and traced back to the source. (Attachment 1.) When implementing Rule 402, SCAQMD requires complainants to legally attest that the odors are a genuine nuisance by signing a form and either completing a declaration or be willing to testify in court. PR 415 lacks the rigor of Rule 402. Under the June 23rd version of PR 415, a confirmed odor event is established if there are three separate odor complaints and the source is verified by trained District personnel. (PR 415(c)(4).) That's it! The complaints do not have to be about a single incident, they just have to occur within 180 days. (PR 415(d)(2)(B).) The odor does not have to be confirmed by the trained inspector with the complainants and traced back to the source. Complainants do not have to legally attest that the odors are a genuine nuisance. PR 415 makes it easy for people to target renderers, because only renderers will be required to post odor complaint signs. (PR 415(d)(1)(E).) Under PR 415, a violation notice may be issued for three complaints and an odor mitigation plan is required. (PR 415(d)(2)(B).)

36-3
Cont'd

SCAQMD staff insists that the lessor PR 415 standard is necessary because they cannot issue violation notices to renderers under the more stringent Rule 402 standard. This is not correct. SCAQMD has received 69 odor complaints about Darling International, Inc. and issued seven (7) violation notices under Rule 402.

3. Dr. Fine's Air Toxic Pollutants Study, April 2012. At the July 10th Governing Board meeting, Dr. Fine did not completely disclose to the Board Members the Study's findings. Dr. Fine's study concluded:

Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, *this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blew from the Exide plant toward the Resurrection School.*

36-4

(Emphasis added; Attachment 2 (pg. 5 of Study).) Exide is across the street, northeast of Baker, and closer to Resurrection School than Baker. (Attachment 3.) Thus, for the same reasons SCAQMD finds it unlikely that emissions from Exide travel toward Resurrection School, emissions from

D1. Response to Comments



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Baker are unlikely to affect Resurrection School.

The Fine Study also found the following:

The extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights... The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of Long Beach and Los Angeles.

Elemental carbon is an indicator of diesel PM, considered by the State of California to be an air toxic. Although the EC levels at Resurrection School are similar to those observed in other dense urban areas of Los Angeles, they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.

(Attachment 2 (pgs. 1, 3, of Study).) Hydrogen Sulfide is typically smogged on busy highways from diesel trucks and whenever cars slow down or stop after a period of high speed cruising.

4. **Odorless Vernon.** An odor free Vernon is not realistic. Vernon was incorporated to be an industrial city meant to create jobs. While the Dow Chemical facility no longer operates in Vernon, there are many other industrial facilities that may contribute to region's odor. Some of the industries in Vernon include:

- Cargill, Inc.
- Exide Technologies (battery manufacturer) – *operational during Boyle Heights Pilot Study Working Group*
- AMVAC Chemical Corp.
- Oak Manufacturing Company
- Atlas Galvanizing Co.
- Pacific Coast Chemicals
- CCI Chemical Corporation
- Bill Bailey Meat Packing Co.
- Jobber Meat Packing Co.
- Vivion Inc. (chemicals distributor)
- Rehrig Pacific Co. (plastic fabrication company)

3.6-4
Cont'd

3.6-5

D1. Response to Comments



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- Cortez Furniture Manufacturing
- Paper Source Covering & Manufacturing
- Joe's Plastics (plastic manufacturing company)
- Mechanical Drives & Belting (rubber company)
- Air Products & Chemicals Inc. (industrial gas supplier)
- Nanka Seimen Co. (food processing and manufacturing)
- Dean Distributors Inc. (specialty food products manufacturer)
- Norman Fox & Co. (manufacturer)
- Holiday Rock (concrete, asphalt, aggregate supplier)
- Vernon Machine & Foundry (machine shop)
- Modern Patter & Foundry Co. (sand and investment casting)
- All American Manufacturing (tool & dye, stamping, plating)
- Gasser-Olds Company, Inc. (bronze foundry)
- Commercial Die Casting Co.
- Charman Manufacturing Inc. (PVC manufacturing)
- Lara Muffler & Welding (welder)

3.6-5
Cont'd

5. Bio-Fuels. Consistent with AB 32 and California's policy to de-carbonize fuels, Baker produces a non-toxic biodegradable diesel fuel substitute from renewable resources including rendering materials. Biodiesel is the only EPA advanced clean-burning alternative fuel which, when used in place of, or in blends with, petroleum diesel can reduce greenhouse gas emissions by as much as 78%.

3.6-6

Baker appreciates the Governing Board's willingness to consider Baker's concerns about PR 415.

Sincerely,

Jimmy Andreoli II
Assistant Vice President

cc: Andrew Silva, Boardmember Assistant
Andrew.silva@cao.sbcounty.gov

w/Encl.

D1. Response to Comments

ATTACHMENT 1 | 367

D1. Response to Comments

Agenda No. 7

**Select Case Studies
Related to Odors/Public
Nuisance**

Governing Board Retreat
May 15-16, 2014

Cleaning the Air That We Breathe...

1

D1. Response to Comments

Confirming a Public Nuisance

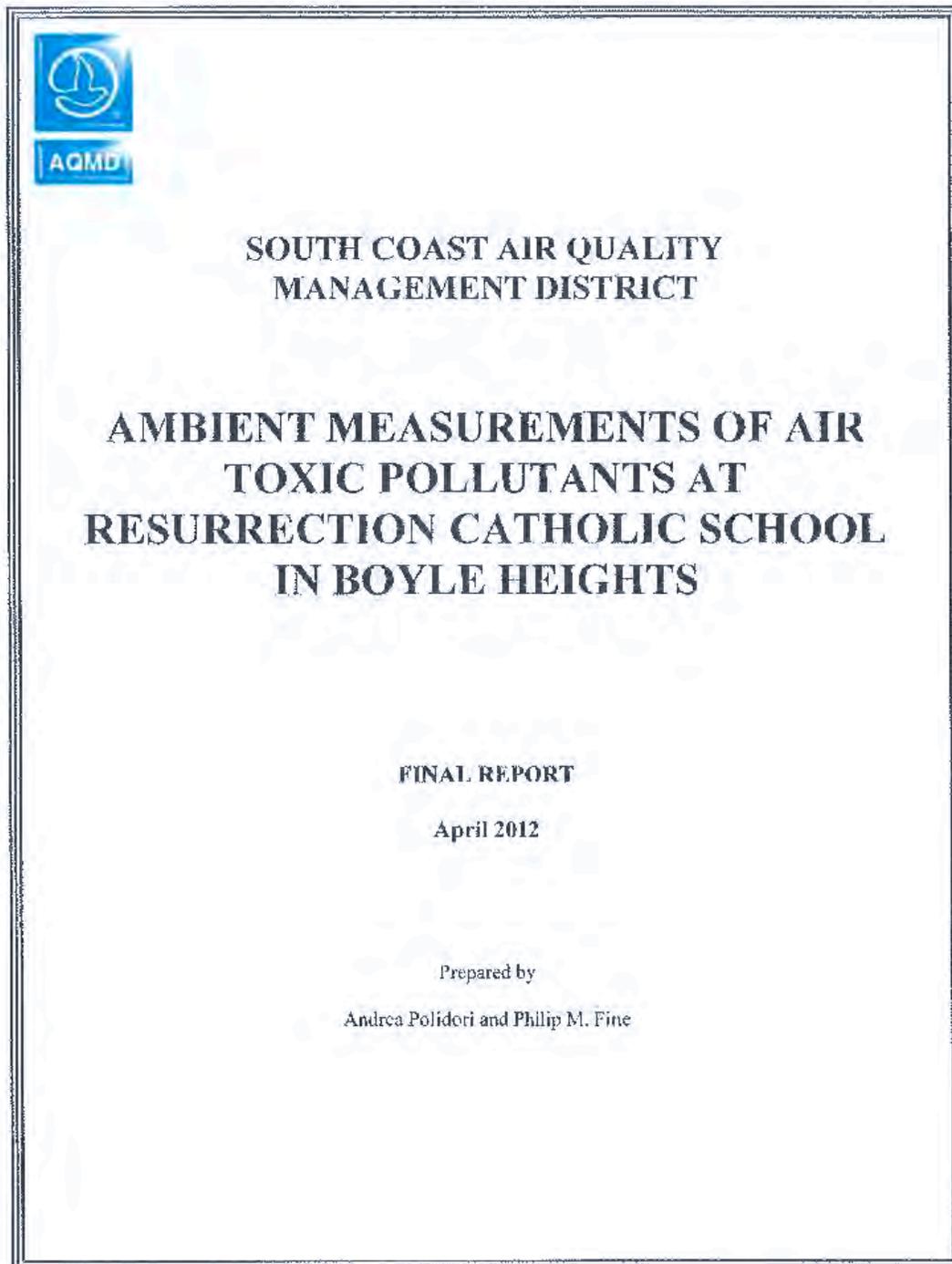
- Generally six or more separate households or businesses
- Odors must be:
 - confirmed by inspector with the complainants
 - traced back to the source
- Complainant must sign a form and either complete a declaration or be willing to testify in court if necessary
- Less than one percent of odor-related complaints result in NOV for public nuisance

6

D1. Response to Comments

ATTACHMENT 2 | 36-8

D1. Response to Comments



D1. Response to Comments

SUMMARY REPORT

BACKGROUND AND OBJECTIVES

Boyle Heights is a neighborhood located on the eastern bank of the Los Angeles River, east of downtown Los Angeles. The extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights, allowing access to the Golden State (I-5), Hollywood (U.S. Route 101), Pomona (SR 60), San Bernardino (I-10), Santa Ana (I-5), and Santa Monica (I-10) freeways. The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of Long Beach and Los Angeles. Boyle Heights is also bordered by heavy industrial areas such as the city of Vernon, home to facilities such as Exide Technologies (a lead-acid battery recycling facility) and rendering plants such as Baker Commodities, D&D Disposal Inc, West Coast Rendering, and Darling International. Local residents and community groups have expressed concern about increased levels of air toxics emitted from on-road and off-road vehicles (heavy duty diesel trucks and trains in particular) and industrial facilities, and the potential health consequences related to exposure to such pollutants, especially among children.

Following numerous requests from concerned residents and community leaders, AQMD began a comprehensive year-long monitoring study in April of 2009 of air toxic levels at the Resurrection Catholic School in Boyle Heights, in an area impacted by both local and regional pollution sources. This report discusses the air quality data collected at the Resurrection School and compares them to those obtained in other parts of the South Coast Air Basin during the same time period.

METHODS

Sampling was conducted from 04/01/09 to 06/01/10 at a monitoring station located in the parking lot of the Resurrection Catholic School (3324 East Opal Street, Los Angeles, CA 90023), about 320 m south of the intersection between the Interstate 5 (I-5) and South Lorena Street (Figure 1). The monitors at Resurrection were located immediately above and only a few meters from East 8th Street. Thus, the measured levels may reflect this very local traffic influence that does not exist to the same extent in other areas of Los Angeles. Since many residents in Boyle Heights, including the children at Resurrection School, live, work or play in similar proximity to traffic sources, the Resurrection site can be considered representative of typical exposures in the area. Several particle and gaseous pollutants were monitored at this location including: fine and coarse particulate matter (PM_{2.5} and PM₁₀, respectively), elemental carbon (EC, an indicator of diesel particulate emissions), hexavalent chromium (Cr⁶⁺), lead (Pb), volatile organic compounds (VOCs) and carbonyl compounds. Data collected at the Resurrection School site were then compared to those obtained at the Central Los Angeles and Rubidoux monitoring stations during the same time period. The Central Los Angeles and Rubidoux sites are two permanent AQMD's network stations used to monitor air quality where air toxics are measured year-round.

D1. Response to Comments

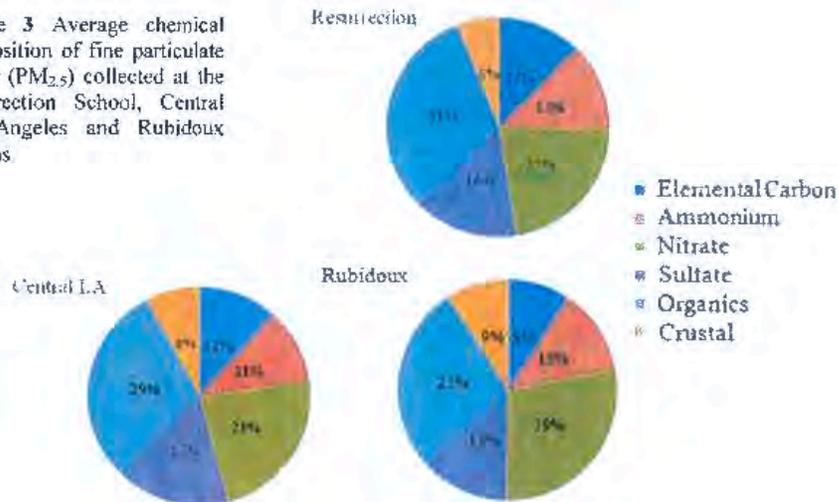
average $PM_{2.5}$ mass concentration was measured in Rubidoux ($16.7 \mu\text{g}/\text{m}^3$), probably because the atmospheric levels of this air pollutant is primarily influenced by regional particles that are formed chemically in the atmosphere. However, emissions from motor vehicles, industrial facilities and other local PM contributions can also be important. The study average $PM_{2.5}$ concentration at both the Resurrection School and Rubidoux stations exceeded the annual NAAQS for this pollutant set by the U.S. EPA ($15 \mu\text{g}/\text{m}^3$). Also, the daily average $PM_{2.5}$ levels at these two locations were higher than the corresponding 24-hr average NAAQS ($35 \mu\text{g}/\text{m}^3$) on more than one occasion.

The study average concentration of EC found in fine particles ($PM_{2.5}$ EC) was slightly higher at the Resurrection School site ($2.04 \mu\text{g}/\text{m}^3$) than at the Central Los Angeles and Rubidoux stations (1.72 and $1.63 \mu\text{g}/\text{m}^3$, respectively) (Figure 2c). Elemental carbon is an indicator of diesel PM, considered by the State of California to be an air toxic. Although the EC levels at Resurrection School are similar to those observed in other dense urban areas of the Los Angeles Basin, they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.

Fine PM samples were analyzed for their chemical composition, which can provide information on the origin of the particles. The $PM_{2.5}$ collected at the Resurrection Church, Central Los Angeles and Rubidoux stations had a similar chemical composition, probably because of the presence of similar emission sources at all three locations (Figure 3). There were slightly higher levels of crustal material and nitrate at Rubidoux as expected for an inland, dustier location. Higher levels of EC at Resurrection and Central Los Angeles reflect the proximity of those sites to diesel sources.

D1. Response to Comments

Figure 3 Average chemical composition of fine particulate matter (PM_{2.5}) collected at the Resurrection School, Central Los Angeles and Rubidoux stations.



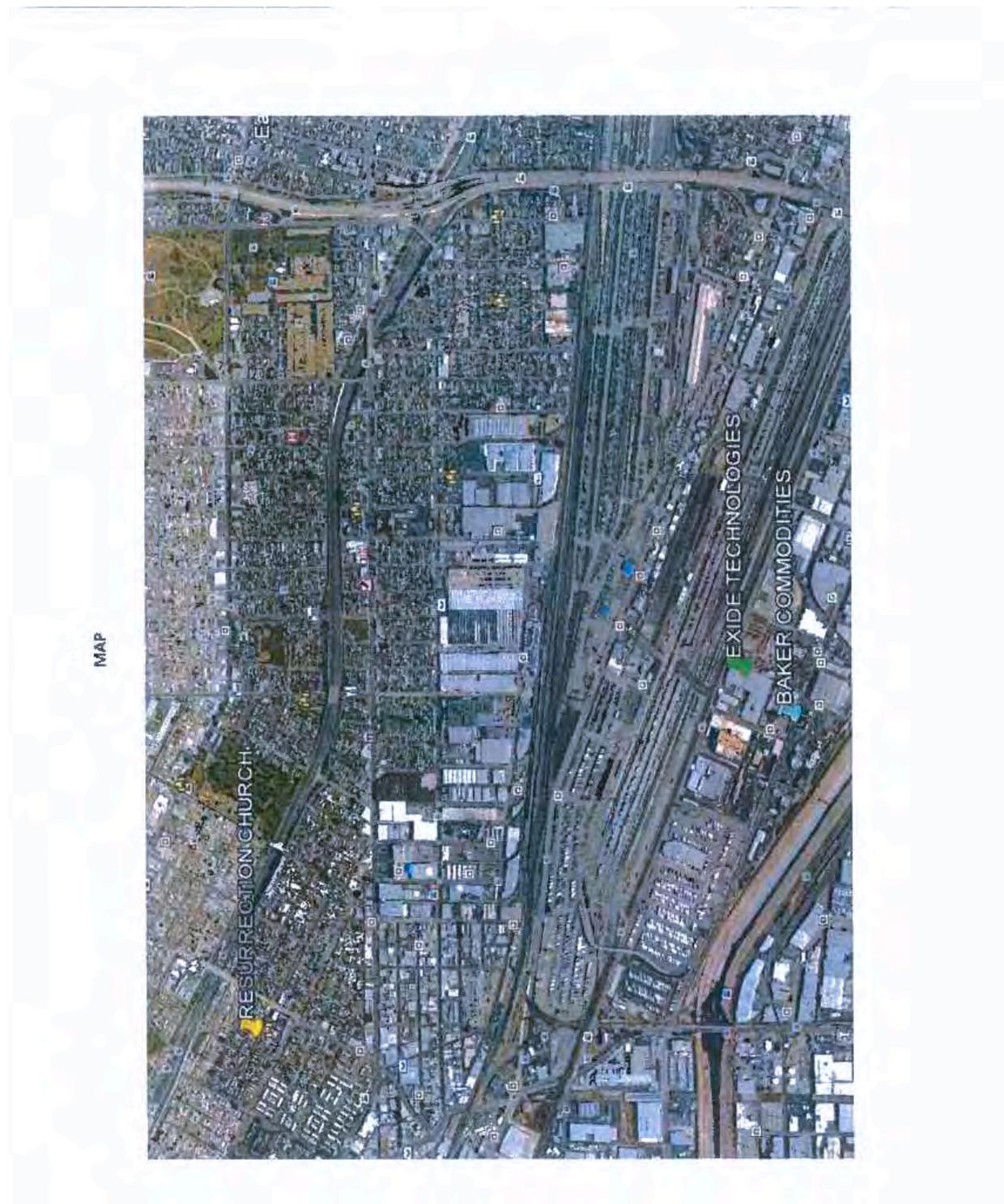
Airborne lead is measured by collecting and analyzing all particulate in the air, known as total suspended particulate (TSP). Like PM, airborne lead is regulated by the U.S. EPA with associated NAAQS. The highest study average lead concentration (16.8 ng/m³) was measured at the Resurrection School site. The corresponding average lead levels at the Central Los Angeles and Rubidoux stations during the same time period were 9.6 and 7.3 ng/m³ (Figure 4). Increased lead concentrations in the Boyle Heights area may be due to re-suspension of historically deposited dust accumulated on or near the nearby freeways. While lead has been completely removed from gasoline for over 30 years, some studies have shown higher lead levels leftover in soils next to busy roadways. Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blew from the Exide plant toward the Resurrection School site. In addition, the lead data collected at the Resurrection School site are not well correlated to those measured right next to the Exide plant during the same time period. In October 2008 the U.S. EPA strengthened the NAAQS for lead, lowering it from 1500 ng/m³ (quarterly average) to a more stringent 150 ng/m³ (rolling 3-month average). Although higher than the other sites, the lead levels at Resurrection School were still very low and none of the daily average or three-month average concentrations measured at the three monitoring sites during this study were close to or above the current NAAQS for lead.

D1. Response to Comments

ATTACHMENT 3

36-9

D1. Response to Comments



D1. Response to Comments

ATTACHMENT 7 | 3.7-1

D1. Response to Comments

APPENDIX C

AQMD PUBLIC NUISANCE INVESTIGATION
POLICIES & PROCEDURES

D1. Response to Comments

Appendix C

South Coast Air Quality Management District Policies & Procedures

Subject: Public Nuisance Investigation

Date: May 1, 1989
No. C-1

1.0 POLICY

The District will investigate public nuisance complaints and issue Notices of Violation for public nuisances. This document identifies the District's authority in these areas and provides guidelines for gathering evidence to substantiate public nuisance complaints.

2.0 GENERAL

An inspector usually conducts a public nuisance investigation in response to complaints from the public. To prosecute a public nuisance violation successfully, the chief prosecutor's office needs documented evidence that the activity or condition is in violation of Health and Safety Code Section 41700. The District is both the investigative and enforcement agency for public nuisance complaints.

3.0 HEALTH AND SAFETY CODE, SECTIONS 41700 AND 41705

The complete texts of Sections 41700 and 41705 are given below. In substance, the text of Rule 402 is a restatement of

Sections 41700 and 41705.

41700. Except as otherwise provided in Section 41705, no person shall discharge from any source whatsoever such quantities of air contaminants or other material which can cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

41705. Section 41700 shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

4.0 PUBLIC NUISANCE INVESTIGATION GUIDELINES

The inspector will conduct a public nuisance complaint investigation in accordance with the following guidelines:

- a. The inspector will check the complainant's premises or adjacent areas for the emissions

2010 Clean Communities Plan

C-1

D1. Response to Comments

Appendix C

complained of (examples: odors, dust fallout, paint overspray). This may require driving around in the area surrounding the source. The inspector will write in the Violation Notice Report that this was done. Additionally, the inspector will note in the report whether or not another potential source of the emission was found.

1. If evidence of emissions is found, the inspector will track the emissions upwind from the complainants by visual or olfactory observations.
2. If no evidence of emissions is found, the inspector will ask the complainants for a description of the emissions and for other information which may help to determine their source.

b. After identifying the emissions and source, the inspector, using the process of elimination, will check all possible areas surrounding the alleged or known source to exclude any other potential source.

The inspector will inspect the source premises and establish the specific equipment or process responsible for the emissions. This involves inspecting all vents, stacks, and openings where the emissions occur or may occur, obtaining

samples of emissions if possible, and checking for Permits Operate.

c. The inspector will list all persons contacted at the source premises by full name and title (Mr., Mrs., Ms.), and will also include phone number, responsibility in the incident, and information to which each person can testify if called by the prosecutor as a witness.

The inspector may ask the complainants whether they know of other persons in the neighborhood who have complained of the emissions. If so, the inspector will request the complainants to tell these other persons to contact the District.

d. After establishing the source, the inspector will contact all complainants and, if possible, obtain samples of emissions from the complainants' premises. In more complex cases, the inspector may require a source test, air monitoring, and perhaps assistance from local health officials to establish health endangerment or natural tendency to cause injury or damage to business or property.

e. If a violation is indicated, the inspector will obtain the completed complaint forms from the complainants.

2010 Clean Communities Plan

C-2

D1. Response to Comments

Appendix C

5.0 DISTRIBUTING AND COLLECTING COMPLAINT FORMS

- a. Whenever possible, the investigating inspector will personally distribute a complaint form to each complainant. The inspector's report must include the time, place, and date such forms were distributed and collected.
- b. The inspector will interview each complainant either at the time of the complaint or when the declaration form is collected.

- c. Inspectors who assist the investigating inspection to distribute or collect nuisance complaint forms must comply with the requirements of steps a and b above.

6.0 COMPLETING THE COMPLAINT FORM

- a. The complainant must list a residence location on the complaint form (attached), not a post office box number. The business address and telephone number should indicate where the complainant can be contacted from 8:00 a.m. to 4:30 p.m. Monday through Friday.
- b. The complainant must complete items 1 through 8 on the form. If the information is not known or is not applicable, the complainant will

indicate "not known" or "not applicable" in the space provided.

- c. The inspector will check that the signature is the complainant's legal name. If the answer to item 8 is "No," the complainant must complete the declaration on the reverse side, using printing rather than hand writing.
- d. The inspector will review the form and complete the "APCID USE ONLY" block.

7.0 REQUIREMENTS FOR ISSUING A PUBLIC NUISANCE VIOLATION NOTICE

- a. Before a public nuisance violation notice is issued, the investigating inspector must observe, identify, or otherwise establish evidence of the emissions complained of at or near the complainants' location.
- b. The investigating inspector must establish the source of the emissions and eliminate other potential sources.
- c. A multiple complaint condition must be documented. As a rule, District Legal Counsel prefers that it be based on a minimum of six (6) to ten (10) complainants from separate households. However, special circumstances

D1. Response to Comments

Appendix C

may dictate that a Notice of Violation be issued if supported by fewer complainants. For example, if property damage or a potential health hazard exists, a husband and wife living at the same residence may be considered as separate complainants. A Notice should not be issued only on the basis of complaints from members of a single family living at one location.

- d. The investigating inspector should complete the Notice of Violation form. In some instances another inspector may serve the notice.
- e. The inspector who establishes the public nuisance violation will write all of the supporting documentation, clearly demonstrating that each element of the violation has been met. Any inspectors who assist in gathering evidence or interviewing witnesses will prepare separate reports, coordinated by the lead inspector on the violation.

D1. Response to Comments

ATTACHMENT 8 | 3.8-1

D1. Response to Comments



Rendering: A Global Model of Sustainability

By: C. Ross Hamilton, Ph.D., Darling International Inc.

According to the U.S. Environmental Protection Agency (EPA), sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony and allows the social, economic and other requirements of present and future generations to be fulfilled. Indeed, Sustainability is frequently depicted as consisting of three distinct, but overlapping components: Social, Environmental and Economic. The relationship among these components is shown in Figure 1. The region in the center of the figure where all three components intersect is commonly used to depict sustainable practices.

The rendering industry in the U.S. annually processes more than 59 billion pounds of food materials from the meat, restaurant and bakery industries that, despite being wholesome, are not typically consumed by humans in the USA. To recycle these food materials, which may contain 60% or more water, the rendering industry must first evaporate or remove the moisture. The dried materials are then further processed to produce useful products that have value as concentrated sources of energy and rich sources of nutrients, such as protein, amino acids, minerals and fatty-acids. Though not well publicized, the recycling services provided by rendering companies such as Darling International Inc. and Griffin Industries LLC ("Darling/Griffin"), including the services provided under our shared DAR PRO Solutions brand, are essential to protecting the environment and in addressing many social and economic issues. To say it simply, rendering is the essence of sustainability. (Figure 2).



Figure 1. Illustration of the components of sustainability

Economic issues: The rendering industry brings value to the food industry by processing food materials that would otherwise be discarded, such as meat products, parts of the animal not consumed as meat, cooking oils and bakery products. Renderers process such materials to produce stable products that can be recycled and safely used as: ingredients in animal feed, pet food and organic fertilizers; chemical components used to make consumer goods; and as renewable fuels. Darling/Griffin is committed to ensuring finished product safety and can demonstrate strict adherence to written procedures that reduce food safety risks and provide for traceability and biosecurity through participation in approved risk management programs. For example, every

D1. Response to Comments

Darling/Griffin production facility is certified through the American Feed Industry Association's (AFIA) Safe Feed/Safe Food program and the Animal Protein Producers Industry's (APPI) Code of Practice program, which are both founded on Hazard Analysis Critical Control Point (HACCP) principles. To receive such certifications, facilities must be compliant to all applicable federal regulations and demonstrate to an independent third-party auditor that written procedures developed to address potential physical, biological and chemical hazards are followed.

The rendering industry is a collection of small and large companies which operate facilities in cities, towns and rural communities. These facilities compete with other local industries to attract good employees to work in management, operations, trucking and sales and to provide technical services to operations. Rendering companies are aggressive in offering competitive compensation and benefit packages, including health insurance and retirement savings plans. Indeed, the rendering industry has a history of attracting and retaining quality employees. In addition to maintaining a full-time staff, rendering facilities also rely on local electricians, plumbers, masons, carpenters, welders, contractors and others for specialized services. Having such a source of financial stability within a community can benefit the local economy, especially during periods of economic downturn.

The rendering industry is also proactive in addressing other economic issues, such as the cost of energy and transportation. The industry has worked to replace its use of heavy petroleum oils and coal as fuels to operate its boilers with lower greenhouse gas emitting fuels, such as natural gas and renewable biofuels made from processed animal and vegetable fats. Many in the industry have replaced aging boilers with modern boilers and/or optimized their boilers to make more efficient use of boiler fuels. Some rendering companies produce low carbon fuels, such as biodiesel and renewable diesel, from recycled animal fats and used cooking oils. The industry operates modern fleets of trucks used to collect raw materials that are frequently equipped with GPS-based equipment for more efficient routing.

Social Issues: Public perception, industry image, plant locations and food chain concerns are all issues the rendering industry must face. For decades, the rendering industry tried to remain out of public view. As society moved away from its agrarian roots and the public lost sight of the valuable services the rendering industry provided, its perception of the rendering industry deteriorated. Rendering's public image was further tarnished as urbanization and revitalization projects led to development of neighborhoods and/or shopping and entertainment districts near, and sometimes adjacent to, rendering plants. To address these concerns, the rendering industry has taken a more visible role in local, state and federal issues. Efforts to educate regulators, politicians and the general public about the essential services rendering provides have been initiated and will continue to be developed. One practical example involves industry collaboration with municipal authorities to encourage the collection of used cooking oils to prevent frying oils from accumulating in and clogging city sewer



Figure 2. Rendering is a global model of sustainability in action.

D1. Response to Comments

systems, thereby protecting these strategically important infrastructures. At the local level, rendering companies are diligently working to be good neighbors. For example, Darling/Griffin alone annually invest millions of dollars in environmental controls and equipment to minimize odors and pollutants. Rendering companies make significant financial and resource donations to their local communities and to charities, children's homes, youth programs such as Junior Achievement, revitalization projects, disaster relief, and other important causes. Many rendering companies are also active in numerous environmental programs such as the Audubon Cooperative Sanctuary Program.

Environmental Issues: The rendering industry is well-equipped and committed to addressing environmental issues such as air and water emissions, water usage and solid waste disposal. In addition to the enhanced environmental controls and energy efficiency improvements already mentioned, the industry continues to make significant investments to improve many other areas that affect the environment, including, but not limited to, storm water control; waste heat recovery; wastewater processing and management; using biomass combustion technology to reduce dependence on petroleum based fuels; recovering methane from anaerobic lagoons to replace fossil fuels in boilers or turbines; and, land applying nutrients recovered from wastewater streams to replace fertilizers made from mined or manufactured components for forage crop production.

Rendering companies are conducting water balance studies that compare water inputs, such as water purchased from municipalities, water from wells and condensate (evaporated water collected when raw food streams are processed) with water outputs, such as treated or processed waste water. In some cases, waste water can be further processed so it is suitable for re-use when cleaning certain areas of a rendering plant and/or to irrigate crops and pastures. The rendering industry continues to consider other technologies that can be used to further improve its water balance.

If not rendered, food materials would decompose rapidly to produce greenhouse gases (GHG) such as carbon dioxide, methane and nitrous oxide. The National Renderers Association (NRA) and the Fats and Proteins Research Foundation (FPRF) commissioned Dr. Charles Gooding, Professor of Chemical Engineering at Clemson University, location of the Animal Co-Products Research and Education Center, to study the rendering industry's carbon footprint and develop a model NRA and FPRF members can use to determine the carbon footprint for their facilities. Dr. Gooding's results indicate rendering to have a very positive carbon footprint when Scope 1 and Scope 2 emissions are considered. Scope 1 emissions are direct emissions, such as burning natural gas on-site to produce steam; Scope 2, or indirect emissions, are attributed to purchased energy, such as electricity, that is generated by a third party. Thus, after offsetting the GHG emitted to collect, transport and process food materials, including fuel burned to generate steam, transportation fuel, waste water treatment and electricity, *a typical rendering plant would recycle 7 out of every 10 carbons processed.*

The rendering industry annually captures and recycles a net of about 3.4 million metric tons of carbon (after offsetting Scope 1 and Scope 2 emissions for a typical rendering plant) and 0.5 million metric tons of nitrogen, which prevents the release of at least 12.2 million metric tons of carbon dioxide equivalents. This example of the net GHG emissions averted by rendering assumes that only carbon dioxide would be produced as food materials decompose. Canadian research (Xu and others) suggests that carbon may be released as carbon dioxide (96%) and methane (4%) and that nitrogen (7%) may be released as nitrous oxide when composting (controlled decomposition) animal remains. Methane and nitrous oxide are more significant GHG. Compared to carbon dioxide, the global warming potential for methane is 23 times greater and nitrous oxide is as much as 310 times greater. Allowing that some methane and nitrous oxide may be produced when food materials decompose suggests that recycling food materials through rendering provides a net benefit (after GHG emissions associated with the rendering process are taken out) of *avoiding the release of about 32.5 million metric tons of carbon dioxide equivalents each year, which is equivalent to the emissions from 6.4 million passenger cars.*

Without rendering, new sources of proteins, fats and other products would have to be produced as replacements for the recycled fats, proteins and bakery products the rendering industry produces each year. Such

D1. Response to Comments

new production would require additional natural resources, such as land, water, and fertilizer, and contribute to, rather than avoid, the production of GHG. Thus, the rendering industry is an important environmental protection tool as a net carbon capture/GHG avoidance technology.

In response to concerns over dwindling landfill capacity, global warming, and more efficient use of the earth's finite resources, many communities have aggressively adopted programs to divert recyclable materials away from landfills. Rendering is consistent with such recycling initiatives. Indeed, food streams that are not sent to rendering are often times disposed of in landfills. It can therefore be concluded that when food streams are sent to a rendering plant for recycling, such materials are diverted from landfills. Rendering is also more efficient at capturing and recycling energy (as calories or as BTUs) from food materials than other technologies, such as anaerobically digesting food materials to produce methane.

The California Legislature publicly recognized the benefits the rendering industry provides to society in the preamble to a 2009 state assembly bill: "The rendering industry is a critical health and safety infrastructure for California. Rendering is an effective tool to eliminate many human and animal disease pathogens, protects our groundwater and air resources, and greatly reduces greenhouse gas emissions compared to other alternative disposal options."

Rendering is a classic example of Sustainability and is a global model of environmental stewardship excellence.

References:

EPA Sustainability website: <http://www.epa.gov/sustainability/basicinfo.htm>

National Renderers Association: <http://nationalrenderers.org/environmental/footprint>

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S. Xu, X. Hao, K. Stanford, J. McAllister and F. Larney, 2007. Greenhouse Gas Emissions during C-Composting of Cattle Mortalities with Manure. *Nutrient Cycling in Agroecosystems*. Vol. 78, pp 177-187.

EPA Greenhouse Gas Equivalencies Calculator:

<http://www.epa.gov/cleanenergy/energy-resources/calculator.html#results>

California Assembly Bill No. 1249, Chapter 280, signed into law October 11, 2009.

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D1. Response to Comments



Rendering and Its Role in Capturing Carbon Emissions

October, 2008

Overview:

Congress has begun deliberations on instituting a national policy to reduce greenhouse gas (GHG) emissions while promoting clean technologies and economic growth. Numerous proposals have been introduced to date with most creating a cap and trade scheme based upon emission allowances.

A major factor in all of these discussions has been cost-containment and the need to minimize impacts on families and businesses. Most legislative proposals being debated allow for some type of offset program for projects that reduce, avoid, or sequester greenhouse gas emissions. Such a program would allow for these qualified, permanent emission reductions to count as emission "credits" and would assist covered entities in reaching compliance while promoting innovation in emission reduction.

Rendering and its Role:

Rendering is the process of converting animal byproducts into fats and proteins. Through the rendering process, inedible wastes that are rich in carbon and nitrogen are recycled into useable materials. This process also averts the release of carbon dioxide and other GHGs that would otherwise be released into the air through the normal decomposition process. Rendering is the most efficient and environmentally sound disposal alternative.

Carbon Removed in the Form of Rendered Products

| | Production | % Carbon | Carbon. (metric ton) | CO ₂ (metric ton) | CO ₂ (US ton) |
|-------------------------|------------|----------|-------------------------|---------------------------------|-----------------------------|
| BFT (animal fat) | 4,515,600 | 75.89% | 3,426,889 | 12,566,516 | 13,852,070 |
| Meat and bone meal | 2,314,600 | 24.27% | 561,661 | 2,059,629 | 2,270,329 |
| Poultry by-product meal | 1,153,500 | 28.68% | 330,801 | 1,213,057 | 1,337,153 |
| Feather meal | 600,900 | 37.50% | 225,350 | 826,364 | 910,901 |
| Pork meal | 720,711 | 25.59% | 184,427 | 676,300 | 745,486 |
| Blood products | 102,512 | 37.50% | 38,444 | 140,976 | 155,397 |
| Total all products | 9,407,823 | | 4,767,571 | 17,482,842 | 19,271,337 |

If all carbon in these waste products were expressed as CO₂, using the EPA estimate of 5.46 metric ton per car, failure to remove these products from the waste stream would be **the same as adding 3,201,986 cars to the nation's roads.**

However, if 20% of the carbon in decaying organic material is expressed as methane and 10% of the nitrogen is expressed as nitrous oxide, then removing these products from the waste stream (because these greenhouse gasses have global warming potentials that are substantially greater than CO₂) would be **the same as removing 12,263,316 cars from the nation's roads.**

D1. Response to Comments

Nitrogen Removed in the Form of Rendered Products

| | Production | % protein | N (metric ton) | N (US ton) |
|-------------------------|------------|-----------|----------------|------------|
| Meat and bone meal | 2,314,600 | 55% | 203,685 | 224,522 |
| Poultry by-product meal | 1,153,500 | 65% | 119,964 | 132,236 |
| Feather meal | 600,900 | 85% | 81,722 | 90,083 |
| Pork meal | 720,711 | 58% | 66,882 | 73,724 |
| Blood products | 102,512 | 85% | 13,942 | 15,368 |
| Total protein meals | 4,892,223 | | 486,195 | 536,933 |

Additionality—What More Could Be Done?

Approximately 55 percent of the cattle that die each year in the U.S. are not rendered, the bulk of which are deposited in landfills or otherwise left to decompose. According to the U.S. Department of Agriculture, approximately 4.3 million cattle died in 2007. To calculate the equivalent emissions released as a result, it takes approximately three mature cattle to produce one metric ton of CO₂ during the decomposition process. Accounting for the discrepancy in mature cattle deaths vs. calf deaths, the resulting release of CO₂ emissions from cattle not already rendered is approximately 492,000 tons per year. Using the Environmental Protection Agency's estimate for average emissions for vehicles, providing the incentives to render these additional animals would equate to taking an additional 82,000 cars off the road each year.

These estimates, however, assume that no methane or nitrous oxide gases are emitted during the decomposition process. If 20% of the carbon is released as methane rather than CO₂ and 10% of the nitrogen in a carcass is given off as nitrous oxide, the annual global warming potential for carcasses that are not rendered increases to 2.1 million tons (1.9 million metric tons) or the equivalent emissions of approximately **another 345,000 cars**.

Recommendation:

As Congress continues to consider the implementation of a national cap and trade scheme, the rendering industry should be considered a viable source of emission offsets. Allowing the rendering industry to participate would create financial incentives for farmers and ranchers to properly dispose of dead animals while avoiding additional greenhouse gases, reducing concerns over the spread of disease and freeing up limited landfill space. Also, discriminating against products already recycled through rendering as "not new," but recognizing protocols for placing fallen animals in anaerobic digesters or in landfills to trap and burn off the methane produced as "new" would put rendering at a competitive disadvantage and drive these organic materials to a much less productive and environmentally advantageous end. The result would be awarding offsets for shifting carbon from recycling to disposal with no net reduction (and a probable increase) in greenhouse gas emissions.

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D1. Response to Comments

Carbon Footprint Calculator for Rendering Operations

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San Francisco, CA
October 20, 2009

D1. Response to Comments

Introduction

Two versions of a Carbon Footprint Calculator have been developed for rendering operations. Each uses an Excel® spreadsheet platform. One version requires the user to input data on raw materials entering a rendering plant. In the other the user enters data on products leaving the plant. If accurate data on both raw materials entering and products leaving a particular plant are available, the two versions should yield nearly identical results. The results can differ slightly because each spreadsheet uses default assumptions about raw material or product compositions that might not match actual plant data. These default compositions can be changed by the user to reconcile small differences between the two alternative versions and provide a more accurate indication of the carbon footprint.

Calculator Documentation

Data input requirements, calculations, and results from the Carbon Footprint Calculator are explained below.

Input Data on Raw Materials Consumed

Annual tonnage can be entered for 13 common categories of raw materials:

- Steer offal and bone
- Cow offal and bone
- Calf offal and bone
- Hog offal and bone
- Sheep offal and bone
- Poultry offal
- Poultry feathers
- Whole cattle
- Whole hogs
- Whole sheep
- Whole poultry
- Raw grease
- Blood

A placeholder row is provided for the user to include a feed that is not among the categories listed. Additional rows can be added easily to include other feeds, and the spreadsheet will adjust the calculated total to include the added rows. If any of the listed categories of feed is not rendered at the plant, the user should enter 0 (zero) in the ton/yr column.

D1. Response to Comments

The numbers currently in the raw material ton/yr column are merely for illustration and are meant to be replaced by the user. To the right of these data columns are provided for the weight % fat, protein, and water in each feed material. These columns contain default estimates derived from information on the Dupps Company web site (1, 2). The default values can be replaced if a renderer has more accurate data for a specific facility. At the bottom of the raw material table, the spreadsheet calculates the total ton/yr and the weighted average fat, protein, and water compositions.

Alternative Input Data on Product Output

In the Product version of the Carbon Footprint Calculator, data can be entered on the annual production of six specific products:

- BFT (animal fat)
- Meat and bone meal
- Poultry byproduct meal
- Feather meal
- Pork Meal
- Blood products

A placeholder row is provided for the user to include a product that is not among the categories listed. Additional rows can be added easily to include other products, and the spreadsheet will adjust the calculated total to include the added rows. If any of the listed categories of products is not produced at the plant, the user should enter 0 (zero) in the ton/yr column.

The illustrative numbers currently in the ton product/yr column are to be replaced by the user. To the right of the ton product/yr, a column is provided for the weight % carbon in each product. The default estimates shown were taken from an NRA white paper (3). These default values can be replaced if a renderer has more accurate data for a specific facility. At the bottom of the product table, the spreadsheet calculates the total ton/yr and the weighted average % carbon.

Input Data on Transportation of Raw Materials to the Plant

In this section the user must input data on the mode of transportation by which raw materials are received at the rendering plant. Two alternatives are currently set up in the table - integrated plants in which raw material is generated on site and no transportation is needed, and truck transportation. Rows could be added to accommodate other means of transportation. The total tonnage should match the total raw material input.

D1. Response to Comments

The Product Output version of the calculator is set up to back-calculate the total annual raw material input from the product rate using an estimated % conversion of raw material to product. The default conversion is 41%, but this estimate can be changed in the spreadsheet calculation (cell B22).

For truck transportation, the user must input the total ton/yr received by truck, the average size of the load, the average one-way distance traveled by the truck, and the average fuel economy of the truck. The numbers shown in the spreadsheet for illustration will be replaced when data are entered for a specific plant.

Input Data on Commuting of Employees to the Plant

This section is similar to the one above. The objective is to estimate total gallons of fuel burned annually by employees commuting to the plant. To arrive at this figure, the user inputs total number of employees, average number of days worked per year, average distance traveled from home to plant, average number of employees per car to account for car poolers, and average fuel efficiency. Again, the numbers shown in the spreadsheet for illustration will be replaced when actual data are entered for a specific plant.

Input Data on Process Fuel Burned and Electric Power Purchased

In this section the user must enter the annual consumption of several different types of fuel burned on site. Certain units of measure are specified. The numbers currently in the annual use column of the spreadsheet are for illustration only. Grease and fat produced and burned on site are entered along with other fuels and are handled appropriately in the calculations that follow. If methane is produced by anaerobic waste water treatment and burned on site, it is not entered here, but is accounted for later in wastewater calculations.

The two columns to the right of the fuel usage list typical lower heating values and weight % carbon for the various fuels. The % carbon in any fuel can be replaced if better data are available. The LHV values are for reference only and are not actually used in the calculations. They can be used to obtain fuel usage estimates from heat input data if necessary.

The total kWh of electricity purchased is also entered in this section. Generally, electricity generated on site by the rendering company should not be included here, but should be included by entering the fuel used to generate it. The amount of carbon dioxide emissions that results from power generation depends on the type of fuel. The default values shown under % generation are national averages. Local data can be substituted, if known. The spreadsheet references a web site

D1. Response to Comments

where regional power generation data can be obtained (4). Default values are shown for lb CO₂/kWh resulting from each type of utility fuel. These estimates are based on typical fuel compositions and mass balance calculations. Renewable fuels are assumed to contribute zero net carbon dioxide to the environment though this may not be valid in every case.

Output: Indicators of Carbon Footprint

CO₂ equivalents in raw materials.

The first line in this section shows ton/yr of CO₂ equivalents in the raw materials that enter the plant. This figure is calculated from the total ton/yr of raw material input and the average % fat and % protein. The calculation is based on the following assumptions:

- Fat is 76 weight % carbon.
- Protein is 27 weight % carbon.
- All carbon entering the plant in raw materials would have been converted into carbon dioxide if it had not been rendered.

The assumed carbon contents of fats and proteins are typical numbers that can be changed by modifying the cell formula if needed. The assumption on the alternative fate of carbon in the raw material is hypothetical, and it deserves further attention. What would happen to this material if it were not rendered? Few studies have been conducted to quantify the chemical fate of buried or composted animals. It is likely that some dead stock left in the field would be eaten by scavengers, but most would be decomposed, primarily into carbon dioxide, water, and residual mineral matter. Nitrogen in the protein would be released primarily as N₂.

Buried animals and composted material decompose in an oxygen limited environment. Some carbon is converted into methane and some nitrogen into nitrous oxide. A comprehensive study conducted in western Canada (5) showed that for every 1000 lb (wet basis) of cattle composted, approximately 630 lb of carbon dioxide, 9 lb of methane, and 4 lb of nitrous oxide were emitted over a period of several months. The small amounts of CH₄ and N₂O emitted are highly significant because these gases are much more potent greenhouse gases than CO₂. On a mass basis, CH₄ is estimated to have 70 times the global warming potential or GWP of CO₂, and N₂O has a GWP that is nearly 300 times that of CO₂ (6). Thus, the total global warming potential of burying or composting could be several times the effect of CO₂ alone.

D1. Response to Comments

CO₂ emissions due to on-site burning of purchased fuels, grease, and fat.

The amount of each fuel burned per year is converted into tons, which is then multiplied by the weight % carbon in the fuel to get tons of carbon burned. This is then multiplied by the molecular weight ratio, 44 tons of CO₂ produced per 12 tons of carbon burned. Burning of grease and fat recovered from rendered materials is counted here because it results in CO₂ emissions just like burning any other fuel. But credit is also taken for the avoidance of the same amount of CO₂ emission when the raw material was brought into the plant rather than being left dead in the field or composted.

To avoid double counting, methane captured from anaerobic wastewater treatment and burned on site is not included in the fuel calculations. See the wastewater treatment section below for further explanation.

CO₂ emissions due to wastewater treatment.

The quantity and concentration of wastewater containing organic material varies considerably from one rendering plant to another. Carbon in the aqueous organic material that goes to wastewater treatment has three potential fates:

- Aerobic conversion into carbon dioxide
- Anaerobic conversion into methane
- Aerobic or anaerobic conversion into solid biomass

Most of the wastewater produced in rendering plants is treated aerobically, and the most common measure of organic material in wastewater is the BOD, or amount of oxygen consumed in the microbiological reactions; literally the Biological Oxygen Demand. A related quantity, carbonaceous BOD or CBOD, excludes oxidation of organic nitrogen, so CBOD is a more direct indicator of potential CO₂ emissions. Sindt (7) estimates that, on average, raw rendering plant wastewaters contain CBOD concentrations in the range of 4000 to 10,000 mg/L. Usually this must be reduced to 10 to 25 mg/L before discharge. Sindt further estimates that the amount of CBOD produced and treated in a typical rendering plant is 5000 lb CBOD per million lb of raw material rendered.

The molar ratio of hydrogen to carbon in fats and proteins is about 2:1, but 1 carbon atom combines with 2 oxygen atoms while 2 hydrogen atoms combine with only 1 oxygen atom. This means that about 1/3 of the oxygen consumed in the degradation of carbon in proteins and fats reacts with hydrogen and is converted into water, and about 2/3 reacts with carbon and is converted into carbon dioxide. When the molecular weights of oxygen and carbon dioxide are taken into account, the net result is that 1 lb of CBOD is equivalent to roughly 1 lb of CO₂ released to

D1. Response to Comments

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D1. Response to Comments

the environment. Combined with Sindt's estimate, this means that about 0.005 tons of CO₂ are emitted/ton of raw material rendered if conventional aerobic wastewater treatment is used. Most of this CO₂ is released within a few days after the water reaches the treatment plant. Carbon converted to biomass may be sequestered for a longer period of time, depending on the method of sludge accumulation or disposal.

Anaerobic treatment plants use different microorganisms, which work in an oxygen-deficient environment to produce a mixture of CO₂ and CH₄. When this method of treatment is used, the gas is usually captured and burned on site, so that all of the carbon is released to the atmosphere as CO₂. Thus anaerobic and aerobic treatment facilities have the same effect on CO₂ emissions.

The Carbon Footprint Calculator uses Sindt's estimate of the quantity of fats and proteins sent to wastewater treatment per ton of raw material rendered. It further assumes that all carbon sent to wastewater treatment is released to the environment as CO₂. This should be a reasonable estimate of the contribution of wastewater treatment to greenhouse gas emissions unless a significant quantity of methane is produced and released directly to the atmosphere. The estimate can be scaled up or down if a particular plant has data indicating that its lb CBOD/lb of rendered material is substantially different from Sindt's approximation.

CO₂ emissions attributed to purchase of electricity.

To determine the CO₂ emissions attributable to the use of purchased electricity, the total kWh of electricity purchased is first apportioned out to different methods of power generation. These results are then multiplied by the lb CO₂ emissions/kWh that applies to each method of generation.

CO₂ emissions due to raw material transport and employee commuting.

The data entered for truck transport of raw materials and for commuting of employees to the rendering plant are used to calculate the total gallons of fuel used in each category annually. One-way mileage is doubled to account for the return trip of the vehicles, and a factor of 19.5 lb CO₂/gallon fuel is applied based on typical composition of diesel fuel and gasoline.

CO₂ reduction ratio.

CO₂ reduction ratio is a logical measure of the beneficial effect that a rendering plant has on greenhouse gas emissions. The ratio is obtained by dividing the CO₂ emissions that would occur if the plant did not exist by the CO₂ emissions that are attributed to operation of the plant. The Carbon Footprint Calculator currently

D1. Response to Comments

assumes that all of the carbon in the raw materials processed by the plant would otherwise be released to the atmosphere as carbon dioxide. With respect to global warming potential or GWP, this estimate is low compared to the more likely result that alternative methods of disposal would release substantial quantities of methane and nitrous oxide. As noted above, the most quantitative study reported to date (5) indicates that the GWP impact of composting dead stock and meat byproducts could be roughly four times higher than the result estimated by the current, conservative version of the carbon footprint calculator.

The denominator of the CO₂ reduction ratio is the carbon footprint of the rendering plant. Carbon footprints are discussed often in the popular press, but there is no universal agreement as to what should be included in this number; i.e., who is responsible for what emissions? Numerous organizations claim expertise in matters of greenhouse gases and climate change. Some have developed and published methodologies for quantifying GHG emissions and carbon footprints. Among these are The Greenhouse Gas Protocol Initiative (8) and The Climate Registry (9). According to information on its web site, the GHG Protocol Initiative seeks “to harmonize GHG accounting and reporting standards internationally” and to “ensure that different trading schemes and other climate related initiatives adopt consistent approaches to GHG accounting.” The GHG Protocol Corporate Standard “provides standards and guidance for companies and other organizations preparing a GHG emissions inventory.” The GHG Project Protocol claims to be “the most comprehensive, policy-neutral accounting tool for quantifying the greenhouse gas benefits of climate change mitigation projects.”

The GHG Protocol requires the reporting of Scope 1 and Scope 2 emissions. Scope 1 “comprises all direct emissions from company controlled sources.” For rendering plants this would normally include emissions that result from burning any kind of fuel on site, from wastewater treatment facilities operated on site, and from transportation of employees, raw materials, and wastes in company vehicles. Scope 2 emissions are those attributable to purchased energy.

The GHG Protocol recommends voluntary reporting of other indirect emissions designated as Scope 3. These emissions are related to company activities, but they originate from sources not controlled by the company. For rendering operations, this would normally include transportation of raw materials to the site, employee commuting and business travel, and transportation of products in contractor vehicles. The Climate Registry recommends a similar General Reporting Protocol. Neither the GHG Protocol nor the Climate Registry addresses GHG emission credits.

D1. Response to Comments

The Carbon Footprint Calculator developed in this work determines the CO₂ reduction ratio using Scope 1 emissions only, Scopes 1 and 2 emissions, and Scopes 1, 2, and 3 emissions, according to the definitions of the GHG Protocol. Transportation of raw material and commuting of employees are assumed to occur in vehicles not owned by the company so they are treated as Scope 3. Business travel and transportation of products are not covered in the calculator, but they could be added as additional Scope 3 emissions if a company has sufficient data to support their estimation.

Obviously, a smaller denominator results in a larger CO₂ reduction ratio. Any value of the ratio greater than 1 indicates that rendering processes have a net beneficial effect on CO₂ emissions. The estimates used for illustration in the Carbon Footprint Calculator show that a typical rendering process releases to the atmosphere only a small fraction of the carbon dioxide that would be released by alternative disposal methods. Most of this CO₂ can be attributed to fuel burning.

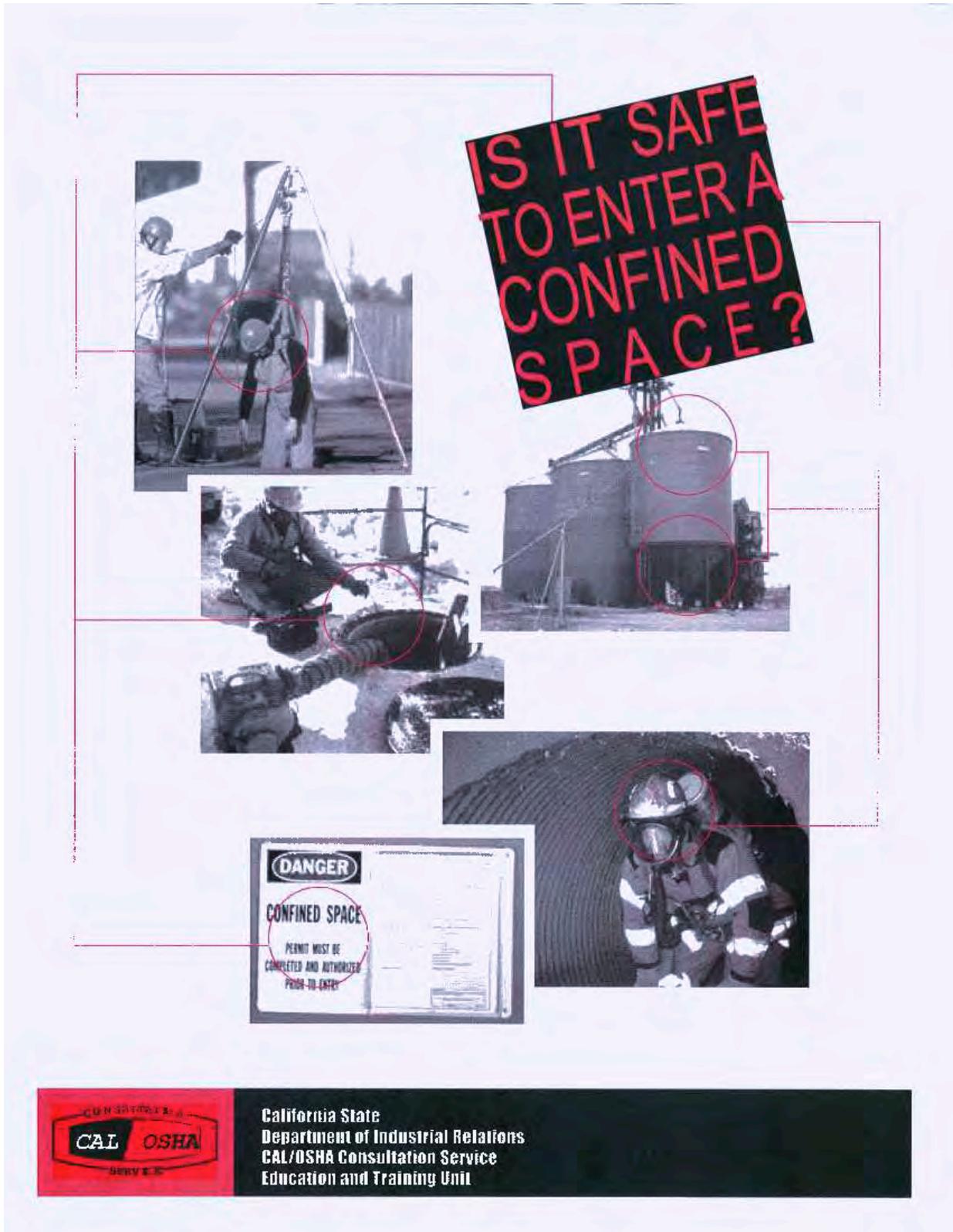
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D1. Response to Comments

ATTACHMENT 9 | 3.9-1

D1. Response to Comments



D1. Response to Comments



IS IT SAFE
TO ENTER A
CONFINED
SPACE?

CONFINED
SPACE GUIDE



Reviewed/Updated
May 2012

California Department of Industrial Relations
CAL/OSHA Consultation Service
Research and Education Unit

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D1. Response to Comments

TABLE OF CONTENTS

| | |
|---|----|
| Acknowledgments | 7 |
| Regulatory Requirements | 1 |
| Introduction | 2 |
| Fatal Facts | 4 |
| Rescue | 5 |
| Emergency | 6 |
| Self-Rescue, Non-Entry, and Entry Rescue | 7 |
| Rescue Training and Plan | 8 |
| On-Site Rescue Team vs. Off-Site Rescue Team | 9 |
| Rescue Equipment | 11 |
| Definitions and Basics | 13 |
| General Terminology | 14 |
| Confined Space; Immediately Dangerous to Life or Health (IDLH); Permissible Exposure Limits (PEL); Entry | |
| Permit Evaluation | 17 |
| Permit-Required vs. Non-Permit Confined Space; Space Reclassification; Alternate Procedures; Permit-Required Confined Space Program (Hot Work and Host Employer-Contractor) | |
| Confined Space Hazards | 24 |
| Atmospheric Hazards | 25 |
| Oxygen Deficiency/Enrichment; Combustible/Flammable/Explosive Gases and Vapors; Combustible Dust; Toxics; Material Safety Data Sheets (MSDS); Monitoring-Air Sampling and Equipment | |
| Physical Hazards | 33 |
| Mechanical; Entrapment; Engulfment; Other Types of Hazards | |
| Hazard Controls | 35 |
| Controls for Atmospheric Hazards | 36 |
| Ventilation; Respiratory Protection; Other Control Measures | |
| Controls for Physical Hazards | 38 |
| Isolation (Mechanical, Electrical, Pressurized Lines, Ducts, or Pipes); Other Control Measures | |
| Personal Protective Equipment and Tools | 40 |
| Communication System | 47 |

D1. Response to Comments

Table of Contents

| | |
|--|-------------------|
| Training and Education | 42 |
| Entry Team | 44 |
| Supervisor; Entrant; Attendant | |
| Frequently Asked Questions | 47 |
| Attachments | 53 |
| A - Hot Work Permit Sample | 53 |
| B - Atmospheric Monitoring Equipment and General Testing Protocol | 54 |
| C - Confined Space Entry Permit Sample | 57 |
| D - Material Safety Data Sheet Sample | 58 |
| E - Setting Up a Permit-Required Confined Space Program | 60 |
| F - Permit-Required Confined Space (PRCS) Decision Flow Chart | 62 |
| References | 63 |
| Evaluation | 65 |
| Cal/OSHA Consultation Service Offices | <i>Back cover</i> |

D1. Response to Comments

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D1. Response to Comments

REGULATORY REQUIREMENTS

UNDER the California Labor Code and the California Occupational Safety and Health Act of 1973, all employers in California have the legal obligation to provide and maintain a safe and healthful workplace for employees. The general requirements for employers to provide an effective Injury and Illness Prevention Program are in Title 8 of the California Code of Regulations (18 CCR), Section 3203.

The specific confined space regulatory requirements are in 18 CCR, Article 108, sections 5156 through 5158. Because confined space work may involve many different hazards, other regulatory requirements may also apply.

| | |
|---------------------|---|
| Section 5156 | Identifies operations and industries that are regulated under Sections 5157 and 5158. |
| Section 5157 | Applies to industries not covered in Section 5158. It contains requirements for practices and procedures to protect employees from the hazards of entry into permit-required confined spaces. |
| Section 5158 | Applies specifically to construction, agriculture, marine terminals, grain handlers, telecommunication, natural gas, and electric utilities. |

Note: Shipyard operations are regulated by Section 8355.

To obtain a free copy of the Injury and Illness Prevention Program or the confined space standard, or for more information on these requirements, please call the nearest Cal/OSHA Consultation Service Office listed on the last page of this publication. Employers needing on-site consultation may also call the Cal/OSHA Consultation Service Office for free professional assistance. Cal/OSHA consultants advise employers of any changes needed to eliminate potential and existing hazards. Consultants do not participate in enforcement activities. When hazards are identified during an on-site consultation visit, consultants do not issue citations or penalties.

California has a confined space requirement since the 1970s. When the federal final rule was published in 1993, section 5157 was revised to be as effective for those general industries covered by the federal final rule. In 1993, the pre-existing California requirements were retained in section 5158 for those industries not covered by the federal final rule.

D1. Response to Comments

INTRODUCTION



Note for Section 5158 Employers

Implementing a permit-required confined space program in accordance with section 5157 shall meet the requirements of section 5158.

This *Confined Space Guide* has been developed to explain the hazards of confined space work and to assist employers in establishing and maintaining an effective confined space program. By implementing such a program, both employers and employees will be able to:

- Recognize, evaluate, and control confined space hazards;
- Save lives and protect employees from job-related injuries and illnesses;
- Promote safe and effective work practices;
- Reduce preventable workers' compensation losses;
- Comply with the law.

The *Confined Space Guide* contains information, definitions, and requirements for entry into permit-required confined spaces (Section 5157). To call the attention of employers whose operations and industries are regulated under Section 5158, the confined space definition and requirements are distinctively highlighted. To clarify and facilitate the understanding of confined space issues, the guide presents the information in the format of questions and answers and includes a list of the most frequently asked questions.

For easy reference, the guide is separated into six distinct main sections:

- **Rescue**, which addresses questions about various types of rescue operations, rescue training, and equipment, along with the importance of well-planned rescue activities.
- **Definitions and Basics**, which contains essential definitions of terms such as confined space, immediately dangerous to life and health (IDLH), and the permissible exposure limit (PEL). This section also addresses entry issues and issues relating to permit evaluation (including permit-required confined space reclassification, alternate procedures, and hot work permits).
- **Confined Space Hazards**, which addresses specific atmospheric and physical problems that can be encountered when working in confined spaces as well as questions relating to Material Safety Data Sheets and atmospheric testing.

D1. Response to Comments

Introduction

- **Hazard Controls**, which addresses means of preventing accidents and controlling other problems by eliminating or controlling confined space hazards.
- **Training and Education**, which addresses the importance of gaining new understanding of critical confined space issues and acquiring practical skills for successful confined space work. This section applies to the supervisor, the entrant, and the attendant.
- **Frequently Asked Questions**, which contains a variety of other questions about miscellaneous confined space issues.

At the back of this guide, there are six attachments intended to further assist employers who are starting to learn about confined spaces or for those who wish to improve an existing program. Attachments A through D provide samples of hot work and permit-required confined space entry forms, Material Safety Data Sheets, atmospheric monitoring equipment information, and general testing protocols. Attachment E, "Setting Up a Permit-Required Confined Space Program," contains easy, step-by-step instructions for required and suggested actions in the implementation of a confined space program that meets regulatory requirements. Attachment F, "Permit-Required Confined Space (PRCS) Decision Flow Chart," helps employers to determine the required entry procedure as defined by the confined space standard.

This guide does not list every conceivable confined space hazard. It is not intended as a legal interpretation of federal or state standards and should not be used as a substitute for training.

Note:

For employers under federal OSHA jurisdiction see Title 29 Code of Federal Regulations section 1910.146 and the accompanying guidance for that federal standard on the OSHA website:

<http://www.osha.gov/SLTC/confinedspaces/index.html>

D1. Response to Comments

FATAL FACTS

Case: Oxygen deficiency
and toxic vapors

**Worker dies of asphyxia in toxic
vapor-filled gasoline delivery manhole**

In El Monte, California, the body of a worker was found in a gasoline delivery manhole measuring 36 inches in diameter by six feet deep. This was a permit-required confined space. The victim had been working in the manhole without any protection and asphyxiated after inhaling gasoline vapors. After an investigation, the employer was cited for failing to conduct or provide (1) a written permit-required confined space program; (2) a hazard evaluation; (3) adequate training; and (4) protective equipment or clothing.

Case: Asphyxiation

**Ill-prepared worker suffocates
in sawdust silo**

A maintenance worker for a furniture manufacturing company died after falling headfirst into a sawdust silo. The silo was 17 feet in diameter, 36 feet high, and had a 24-inch diameter manhole. The victim was responsible for operating the silo. He would normally climb a staircase attached to the side of the silo, remove the manhole cover and rake the sawdust away from the inlet duct with a 10-foot-long aluminum-handled rake. Evidence indicates that the victim slipped and fell seven feet into the sawdust, submerging his torso in the material. He died of suffocation in an upside-down position.

The victim's employer had failed to develop or implement a confined space safety work program for employees who worked in or near confined spaces containing unstable material. Appropriate fall protection equipment was not provided to workers.



D1. Response to Comments

RESCUE

TWO-THIRDS of all confined space fatalities occur among would-be rescuers. For this reason, the rescue section has intentionally been placed near the beginning of this guide. To prevent deaths, it is critical to use good confined space entry practices so that there is no need for rescue operations. Remember, even a well-planned rescue can end up as a body retrieval.

Case: Oxygen deficiency
and cyanide gas

Workers killed by cyanide gas; employer charged with negligence

In Oakland, California, an employee from an electroplating company was overcome by cyanide gas while cleaning the interior of a wastewater treatment tank containing toxic acids and cyanide sludge. When a second employee entered the tank to rescue the co-worker, he was overcome by the cyanide gas and died. Several other employees were hospitalized as a result of their involvement in the rescue and cleanup operations.

Criminal charges were filed through the District Attorney's Office and a \$741,000 fine was assessed. The employer was cited for a number of safety violations, including failing to (1) prevent unauthorized entry into a confined space; (2) develop and implement a confined space program; (3) specify acceptable entry conditions; (4) label tanks to indicate their contents; and (5) test for oxygen deficiency.

D1. Response to Comments



Rescue

1. *Why have confined spaces killed so many people?*

Confined spaces are deceiving. A confined space often appears to be harmless; no danger signs are apparent and the space may have been entered on prior occasions without incident. However, a worker cannot assume that conditions have not changed and that the space is safe for entry each time.

2. *What is an emergency?*

An emergency is any occurrence inside or outside the space, including failure of hazard control or monitoring equipment, that may endanger authorized confined space entrants.

3. *Why do so many fatalities result from emergency rescues?*

Fatalities can occur when the rescuers:

- Do not know the hazards involved,
- Do not have a plan of action,
- Lack confined space rescue training.

4. *Is it important to inform confined space workers and rescuers of the four-minute limitation?*

Absolutely. It is important to know that the period of time for successful rescue is very limited. Otherwise, a rescue attempt will become body retrieval. *After only four minutes without oxygen, it is very likely that a worker will experience asphyxiation, which may result in brain damage or death.*



5. *What can be done to prevent confined space rescuers from having fatal accidents?*

Precautions must include:

- Planning,
- Designation of rescue team members and respective duties,
- Training of personnel in order to give them the understanding, knowledge, and skills necessary for safe rescue from confined spaces.

6. *What shall confined space rescue training encompass?*

At a minimum, training must include:

- Recognition of permit space hazards,
- Control of permit space hazards,
- Use of atmospheric monitoring equipment,
- Use and maintenance of personal protective equipment (PPE),
- Use and maintenance of rescue equipment,
- Annual practice of permit space rescues,
- Proficiency in first aid and cardiopulmonary resuscitation (CPR),
- Documentation of training,



D1. Response to Comments

Rescue

**Important rescue planning considerations:**

- Ensure that the rescuer does not travel a greater distance than allowed by the air supply, self-contained breathing apparatus (SCBA), and escape cylinders. Analyze distance, space configurations, physical obstacles, and total time needed to enter the space, perform rescue operations, and leave the space.
- Leave the space *immediately* whenever a problem arises with respiratory protection equipment or whenever the attendant orders evacuation.



Confined space
rescue training

7. *What does one need to assume in any rescue operation?*

Everyone involved in a rescue should assume that *the space is deadly* and that *entry rescue may be required in the worst case!*

8. *Who can be a rescuer?*

Rescues can be performed by another employee or a professional rescuer so long as at least one rescuer is immediately available onsite and all rescuers are fully trained, familiar with the space and qualified to act as a rescuer. Qualifications include knowledge of and experience working with all hazards associated with rescue and confined space entry operations.

9. *What are the different types of rescue operations?*

Depending on the severity of the emergency, different rescue methods can be employed. Self-rescue is the first approach to consider if the entrant is capable of performing a self-rescue with communication and possible assistance of the standby person.

D1. Response to Comments

Rescue

Attention

Because of the speed at which confined space hazards can incapacitate and kill, *self-rescue* is the preferred plan. The self-rescue plan provides entrants with the best chance of escaping a permit space when hazards are present. Whenever authorized entrants recognize their own symptoms of exposure to a dangerous atmosphere, or when a prohibited condition is detected, entrants are still able to escape from the space unaided and as quickly as possible.

Non-entry rescue is the next-best approach when self-rescue is not possible because non-entry rescue can be started right away and prevents additional personnel from being exposed to unidentified and/or uncontrolled confined space hazards. Usually, equipment and other rescue aids are employed to assist in removing endangered entrants. In situations where configuration of the space or other elements prevent the removal of the worker, entry rescue may be the only solution.

Entry rescue involves rescuers entering the space to retrieve the entrant and/or provide the victim with emergency assistance such as CPR, first aid, and air via SCBA or a supplied air respirator (SAR), if needed. *An entry rescue plan needs to be developed ahead of time in the event of an emergency for which the non-entry rescue plan is not appropriate.*

10. Why is self-rescue so important?

Self-rescue is vital because the entrant is:

- Conscious and alert.
- Able to recognize his or her own signs and symptoms.
- Still physically able to evacuate space more rapidly than waiting for someone else to rescue him or her.
- Able to alert fellow workers of impending dangers.
- Not endangering anyone else.

11. What information needs to be immediately available to rescuers?

Rescuers will need to know:

- Number of victims and location of emergency.
- Length of time victims have been exposed to hazard.
- Suspected cause of accident.
- All information on entry permit, including:
 - Atmospheric testing results.
 - Isolation procedures.
 - Material Safety Data Sheet (MSDS) information.

D1. Response to Comments

| Rescue | |
|---|--|
| <i>12. What elements should be contained in a rescue plan?</i> | <p>A thorough rescue plan includes:</p> <ul style="list-style-type: none"> • A barricade area for crowd control. • Additional ventilation options. • Control of other hazards (cave-ins, traffic, etc.). • Protective clothing and equipment. • Appropriate lighting equipment (explosion-proof). • Methods of communication. • A standby rescue team. • Victim removal procedures and devices. • Available emergency vehicles. • Medically trained personnel. |
| <i>13. How often should rescue simulations be performed?</i> | <p>Rescue practices in simulated or actual spaces should be performed <i>at least once every 12 months, or more frequently if deemed necessary.</i></p> |
| <i>14. When does a rescue plan need to be re-evaluated?</i> | <p>Re-evaluate the plan whenever:</p> <ul style="list-style-type: none"> • Conditions change within the space. • Workers discover any new hazards. • There are changes in the rescue personnel and/or personnel availability. • New equipment is purchased. • Routine proficiency training results are unsatisfactory. • A rescue plan is found to be deficient (e.g., a failed simulated rescue). |
| <i>15. How can the facility owner prepare for an emergency?</i> | <p>As an employer, you must have on-site rescue ability; however, you can also supplement your rescue operation with an off-site rescue team.</p> <p>On-Site Rescue</p> <p>At least one on-site employee shall be trained in first aid and CPR. Each member of the rescue team shall be trained to:</p> <ul style="list-style-type: none"> • Properly use and maintain PPE and rescue equipment. • Act as a rescuer in annual simulated emergencies. • Assume individual roles and take on any emergency. |

D1. Response to Comments



Rescue

Off-Site Rescue

If off-site rescue cannot be provided quickly enough, it is not a real option!

- Remember that while the window of opportunity for a rescue is very brief—only four minutes—the response time for an off-site rescue team may be considerably longer. After four minutes have lapsed, the victim could suffer brain damage or die. In some emergencies, rescuers may have even less than four minutes to act. Other situations may allow more time.
- Arrange for ahead of time any offsite rescue services and ensure such service can adequately supplement your onsite capabilities. Supply the number and description of each permit- required confined space in the facility ahead of time.
- Disclose all known hazards associated with the space(s) so that appropriate rescue plans can be developed.
- Provide access to the space so that off-site rescue personnel can familiarize themselves with the site, develop a rescue plan in advance, and practice rescue operations.



Off-site rescue team

16. Why does an employer have to verify the availability of the off-site rescue service each time a permit space entry is scheduled or attempted?

The employer has overall responsibility for employee safety. The verification task is usually assigned to the entry supervisor. If the off-site rescue service indicates for any reason that it would be unable to respond to a rescue summons, *entry must not be authorized unless and until an adequate back-up rescue service is arranged and confirmed.*

D1. Response to Comments

Rescue



17. Will emergency rescue services always go into confined spaces to rescue entrants?

Not necessarily. If the worker is physically able to use rescue equipment (safety retrieval line, rope, wristlets, etc.), rescuers may choose not to enter the space. Instead, they can provide appropriate equipment and assistance necessary to bring the worker out of the space (a non-entry rescue). In situations in which the worker is unresponsive, atmospheric hazards are extremely high, or significant time has elapsed before rescuers arrive at the site, emergency rescue personnel may decide that the risks associated with entering outweigh the potential for a successful rescue. If this is the case, rescuers may elect not to go into the confined space until conditions warrant a safe entry.

18. What are some types of rescue equipment?

Rescue equipment may include:

- Full body harness with retrieval line attached.
- Wristlets (may be used in rescue when it can be shown that they are the safest and most effective means of rescue).
- Hand-cranked mechanical winch and tripod (required when entrant is five feet or more below the entrance).
- Ladder.
- Explosion-proof lighting.
- SCBA/SAR.
- Stretcher.
- Approved head protection.

Attention

Although not required, a winch system or some other mechanical rescue device can be advantageous to the worker when used in confined spaces.



Tripod, winch, and full harness

D1. Response to Comments



Rescue

19. Who is required to wear a full body harness and retrieval lines?

All authorized entrants and rescuers entering permit spaces are required to use full body harnesses and retrieval lines, unless it is determined that the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue operation.

20. What kind of equipment should be used for lowering or lifting entrants?

Only devices designed by the manufacturer and approved for moving humans should be used. The equipment must enable a rescuer to remove the injured employee from the space quickly without injuring the rescuer or further harming the victim.

21. If, during a rescue operation, the readings for oxygen, Lower Explosive Limit (LEL), and carbon monoxide are all normal, should rescuers still wear respirators?

If there is even a remote possibility of other atmospheric contaminants, even though these readings appear to be within the normal ranges, rescuers should still use appropriate respiratory protection.

Play it safe:

- Wear SCBA or SAR.
- Do not use air purifying respirators for confined space rescue.



Rescuer with self-contained breathing apparatus

D1. Response to Comments

DEFINITIONS AND BASICS

In order to fully understand the information offered in this guide, the reader must first understand the terms used. Following are definitions for scientific and regulatory confined space terms used throughout this publication.

Case: Electrical hazard
and flammable vapors

One painter dies, another suffers severe burns from flash fire explosion

A 41-year-old painter entered the top opening of a 1,300-gallon tank in order to paint the inside with flammable epoxy paint. To provide interior lighting, a co-worker placed a 500-watt, non-explosion-proof halogen lamp close to the opening. The co-worker sat on top of the tank to observe while the painter sprayed the bottom and sides of the tank. As he painted, the spray gun nozzle hit the lamp, broke the sealed beam, ignited the epoxy vapor, and caused a flash fire explosion. Over 40 percent of the painter's body was burned, and he died five days later. His co-worker suffered a broken arm and burns to his face and neck.

The company did not have a formal safety program and no job hazard analysis had ever been done.

D1. Response to Comments



Definitions and Basics

22. What is a confined space?

General Terminology

A confined space, as defined in Section 5157, is a space that has all three of the following characteristics:

- Is large enough and configured such that an employee can bodily enter and perform work; and
- Has limited openings for entry and exit; and
- Is not designed for continuous employee occupancy.

Note for Section 5158 Employers



A confined space is similarly defined as a space that meets both of the following conditions:

- Existing ventilation is insufficient to remove dangerous air contaminants, oxygen enrichment, and/or correct oxygen deficiency; and
- Access to or egress from the space is difficult.

Confined space examples



Silo

Some confined space openings are small in size, making passage difficult for workers, tools, and lifesaving equipment that would be necessary in the event of a rescue operation. In other cases, the size of the confined space is not a problem, but access to the opening requires the use of ladders, hoists, or other equipment. Consequently, entry and escape can be difficult.



Chemical storage tank



Railroad tank

D1. Response to Comments

Definitions and Basics



Atmospheric Hazards in Shopping Malls and Swimming Pools

Confined spaces are found not only in industrial settings but also in public places such as shopping malls and large public swimming pools. Waterfalls and water fountain displays used in malls for beautification may have pump vaults or valve pits that are seldom entered. Some swimming pool pumps are placed in vaults below ground. There have been reports of maintenance employees entering these areas and losing consciousness.

Potential hazards include:

- No ventilation (pits and vaults seldom opened).
- Leaking chlorine gas (which is heavier than air) can accumulate in low-lying spaces.
- Oxygen depletion can be caused by:
 - Rotting vegetation and decaying dead animals.
 - Corroding or rusting machinery.

23. *Why are confined spaces dangerous to entrants?*

By nature, confined spaces can be hazardous due to:

- Space configurations such as small openings and inwardly converging walls, which can trap an entrant, restrict easy entry and exit, or impede rescue.
- Atmospheric hazards such as gasoline tank vapors, combined with limited ventilation. Such conditions can cause asphyxiation or explosion.
- Physical hazards, such as unstable grain contained in silos, which can engulf a worker.
- All other serious hazards associated with general industry, such as electrical equipment, moving machinery, falling objects, and wet or slippery surfaces.

24. *What does immediately dangerous to life or health (IDLH) mean?*

This refers to any condition in a permit space that would:

- Cause irreversible adverse health effects; or
- Interfere with self-rescue; or
- Cause immediate or delayed threat to life or health.

D1. Response to Comments



Definitions and Basics

25. *What are the PELs?*

Permissible exposure limits, or PELs, are occupational exposure standards that refer to the maximum concentration of airborne chemicals to which nearly all healthy persons can be exposed day after day without adverse health effects. Workers' exposure to concentration of materials in excess of the PEL can result in detrimental health effects, including illness and/or death.

26. *What are the LEL (LFL) and UEL (UFL)?*

For practical purposes, the term flammability limits (LFL, UFL) and explosive limits (LEL, UEL) are used interchangeably.

The lower explosive limit, or LEL, is the lowest atmospheric concentration of fuel in the fuel-air mixture at which a gas or vapor can explode (the similar and often interchangeable term lower flammable limit, or LFL, is the lowest concentration at which the gas or vapor will burn). Fuel concentrations below the LEL and LFL are too lean and will not explode or burn.

The highest atmospheric concentration of a gas or vapor in the fuel-air mixture that can explode is called the upper explosive limit, or UEL. Above this concentration, the mixture will not explode because it is too rich (the mixture has too much fuel). The UFL is the maximum fuel concentration above which the mixture will not burn.

The composition of a fuel vapor and air mixture can change over time and may fluctuate within a space. Fluctuations occur because the fuel-air mixture moves around the space, particularly when people or other things create air currents that disturb the atmosphere. Consequently, the mixture is not uniformly distributed within the space.

Gas-Air Mix



27. *What is "entry"?*

An entry is considered to have occurred when *any* part of a person's body crosses the plane of an opening into the space.



A worker crosses the plane of entry into a confined space.



Note for Section 5158 Employers

Confined spaces with side and top openings shall be entered by the side openings when practical. Side openings are those located within three-and-a-half feet of the bottom.

D1. Response to Comments

Definitions and Basics



28. *Is confined space entry always necessary, or is it possible to complete the task from the outside?*

Each employer should ask these questions at the onset of each project. If possible, *avoid entering a confined space*. Every consideration should be given to completing the task from the outside.

Permit Evaluation

Permit-Required vs. Non-Permit Confined Spaces

29. *Is a permit always needed in order to enter a confined space?*

Not necessarily. There are two types of confined spaces. Those that require a permit for entry are classified as *permit-required confined spaces* (PRCS) and those that can be entered without a permit are called *non-permit confined spaces* (NPCS).



Note for Section 5158 Employers

No permit system is required to enter and work in confined spaces. However, similar written operating and rescue procedures are needed. Also, results of atmospheric testing of the space shall be written and maintained at the work site for all affected employees to review.

30. *What is the difference between permit-required and non-permit confined spaces?*

A *permit-required confined space* fits the definition of a confined space and has one or more of the following characteristics:

- Contains or has a potential to contain a hazardous atmosphere (e.g., paint thinner).
- Contains a material that has a potential for engulfing the entrant (e.g., liquid, soil).
- Contains inwardly converging walls or a floor that slopes downward and tapers to a smaller cross-section where an entrant could be trapped or asphyxiated.
- Contains any other recognized serious safety or health hazard (e.g., unsafe temperature, electrical shock, corrosive chemicals).

A *non-permit confined space* fits the definition of a confined space, but does not contain or have the potential to contain any atmospheric hazard capable of causing death or serious physical harm.

Attention

When you are working in a confined space, you should always wear your safety harness and fall protection. You should also wear your safety glasses and hard hat. You should also wear your safety shoes and gloves. You should also wear your safety vest and safety cap. You should also wear your safety goggles and safety mask. You should also wear your safety helmet and safety boots. You should also wear your safety harness and safety lanyard. You should also wear your safety fall arrest system. You should also wear your safety rescue kit. You should also wear your safety communication system. You should also wear your safety lighting system. You should also wear your safety ventilation system. You should also wear your safety gas detection system. You should also wear your safety oxygen monitoring system. You should also wear your safety temperature monitoring system. You should also wear your safety humidity monitoring system. You should also wear your safety dust monitoring system. You should also wear your safety noise monitoring system. You should also wear your safety vibration monitoring system. You should also wear your safety radiation monitoring system. You should also wear your safety magnetic field monitoring system. You should also wear your safety electric field monitoring system. You should also wear your safety electromagnetic interference monitoring system. You should also wear your safety static electricity monitoring system. You should also wear your safety lightning protection system. You should also wear your safety surge protection system. You should also wear your safety ground fault circuit interrupter system. You should also wear your safety residual current device system. You should also wear your safety differential circuit breaker system. You should also wear your safety fuse system. You should also wear your safety circuit breaker system. You should also wear your safety switch system. You should also wear your safety outlet system. You should also wear your safety plug system. You should also wear your safety cord system. You should also wear your safety cable system. You should also wear your safety rope system. You should also wear your safety chain system. You should also wear your safety hook system. You should also wear your safety shackle system. You should also wear your safety pin system. You should also wear your safety nut system. You should also wear your safety washer system. You should also wear your safety lock system. You should also wear your safety pin system. You should also wear your safety nut system. You should also wear your safety washer system. You should also wear your safety lock system. You should also wear your safety pin system. You should also wear your safety nut system. You should also wear your safety washer system. You should also wear your safety lock system.

D1. Response to Comments

Definitions and Basics

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| <p>31. What if the spaces in the facility are non-permit confined spaces and entry is necessary?</p> | <p>Entry into a NPCS must still be done in accordance with the employer's Injury and Illness Prevention Program and other applicable regulations in order to ensure that employees comply with safe and healthful work practices.</p> |
| <p>32. What shall employers do if the workplace contains permit-required confined spaces?</p> | <p>Inform exposed employees and other employees working in the area of the existence, specific location, and dangers of PRCS by posting danger signs or by any other means that ensures <i>effective communication</i> with employees. Employers who have non-English-speaking employees may also have signs printed in other languages.</p> <p>If the employer decides that employees <i>will not enter</i> permit spaces, the employer must implement effective measures to prevent entry, including the installation of physical barriers and permanently closing the space by bolting and locking. Reinforce the non-entry policy through employee training. The steps taken by the employer must <i>effectively prevent employees from entering permit spaces</i>.</p> <p>If the employer decides that employees <i>will enter</i> permit spaces, the employer must develop and implement a written <i>permit-required confined space program</i> (see Attachment E, "Setting Up a Permit-Required Confined Space Program").</p> |
| <p>33. Once it has been determined that a workplace contains permit-required confined spaces and that entry is necessary, what procedures must be followed?</p> | <ol style="list-style-type: none"> 1. If you are unable to institute alternate procedures or reclassify to a non-permit space status, follow the requirements of a permit-required confined space entry (see Attachment F, "Permit-Required Confined Space Decision Flow Chart"). 2. Use alternate procedures if you are able to effectively control atmospheric hazards solely by continuous forced-air ventilation. 3. Reclassify the PRCS as a NPCS if you are able to eliminate all hazards. <p style="margin-top: 10px;">Reclassification</p> <p>If the permit space poses no actual or potential atmospheric hazard and if all hazards within the space are eliminated without entry, the space may be reclassified as a NPCS for as long as the non-atmospheric hazards remain eliminated.</p> |
| <p>34. When can a permit-required confined space be reclassified as a non-permit confined space?</p> | <p>If the permit space poses no actual or potential atmospheric hazard and if all hazards within the space are eliminated without entry, the space may be reclassified as a NPCS for as long as the non-atmospheric hazards remain eliminated.</p> |



10

D1. Response to Comments

Definitions and Basics

35. *What happens if hazards arise in a space that has been declassified from permit-required to non-permit?*

If hazards arise:

1. All employees must *immediately* leave the confined space; and
2. The space shall be evaluated to determine how the hazardous atmosphere developed; and
3. Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.

36. *Will a non-permit confined space always be classified as such?*

Not necessarily. Whenever there are changes in the use or configuration of an NPCS that might increase the hazards to entrants, the employer shall re-evaluate that space, and, if necessary, reclassify it as a PRCs. New work, such as painting inside a confined space, can create new hazards that may not have been accounted for in the initial space classification. Consequently, the space may no longer be safe for entry and must be reclassified.

Alternate Procedures

37. *What if the only hazards or potential hazards of the space are atmospheric contaminants that can be eliminated by continuous forced air?*

As specified in section 5157(c)(5), an employer may use the alternate procedures in subsection 5157(c)(5)(B) for entering a permit space under the conditions set forth in subsection 5157(c)(5)(A). Alternate procedures can be used to enter the space when:

- No other hazards exist; and
- Atmospheric hazards can be effectively removed and controlled by forced ventilation; and
- Workers can safely enter and do work in the space; and
- All testing results and monitoring data are documented, retained, and made available to each employee who enters the space.

38. *What is the "safe for entry" level as defined by the alternate procedures?*

The employer must perform the pre-entry measures specified in section 5157(c)(5)(B) and provide a written certification that the space is safe to enter.

This is a general safety guideline of 50 percent of the permissible flammable level or permissible toxic substance level recommended during confined space entry under the alternate procedures (Source: "Employer Guide and Model Permit – Required Confined Space Entry Plan", NY State Dept. of Labor).



Ventilation is essential when working under alternate procedures.

D1. Response to Comments

Definitions and Basics

39. Why is it so important to observe the “safe for entry” level before entering a confined space under the alternate procedures?

The “safe for entry” level is a guideline that offers additional protection to the worker whose safety is totally dependent upon an effective ventilation system.

Remember that under the alternate procedures, permit space safety is maintained solely by continuous forced-air ventilation. It is important to prevent the atmosphere inside the confined space from reaching hazardous concentrations to ensure that, in the event of ventilation failure (such as a fan breakdown), the employees will still have enough time to recognize the hazards and leave the space.

40. How will an employer determine a “safe for entry” level for contaminants under the alternate procedures?

It is permissible to enter a PRCS when the atmosphere is at or below 10 percent of the LEL; however, in order to protect entrants from fluctuations in the concentration of gases, it is recommended that gaseous levels be reduced by an additional 50 percent. If toxic substances are present, the “safe for entry” guideline recommends that concentration of toxics be reduced to 50 percent of the PEL (*Source: “Employer Guide and Model Permit – Required Confined Space Entry Plan”, NY State Dept. of Labor*).

41. What are the elements of a written permit-required confined space program?



Employers shall consult with affected employees and their authorized representatives on the development and implementation of all aspects of a permit-required confined space program.

Permit-Required Confined Space Program

At a *minimum*, the written permit-required confined space program must address:

- Posting of warning signs.
- Preventing unauthorized entry.
- Hazard identification procedures.
- Workplace evaluation procedures.
- Procedures, practices, and means necessary for safe permit space entry and closure operations.
- An entry permit system.
- Employee training for entrants, attendants, and entry supervisors.
- Providing work equipment and PPE at no cost to employees.
- A system for ensuring that:
 - Pre-entry testings are performed.
 - Pre-entry preparations are completed.
 - Acceptable conditions are attained.
- Monitoring the space as needed.
- Developing and implementing rescue and emergency measures.

D1. Response to Comments

Definitions and Basics

42. *What is an entry permit?*

An entry permit is a document prepared by the employer or employer representative. It is designed to be used as a checklist to document the completion of all steps necessary to prepare for safe entry and work in a confined space.

The entry supervisor shall sign the entry permit to ensure that acceptable conditions have been attained in the permit space and to authorize entry. Further, the permit shall be posted near the confined space entry for entrants to verify that pre-entry procedures have been completed.

43. *What is included in the entry permit?*

The entry permit should include:

- The location of the permit space to be entered.
- The purpose of the entry.
- The date and the authorized duration of the entry permit.
- The names of authorized entrants, attendants, and entry supervisors.
- The hazards of the permit space.
- The measures used to eliminate, isolate, or control permit space hazards before entry.
- The acceptable entry conditions.
- The results of initial and periodic tests performed, along with the names of the testers and when these tests were performed.
- The verified rescue and emergency services to be summoned.
- The communication system.
- The equipment to be used during entry.
- Any additional information necessary to ensure employee safety.
- Any additional permits issued to authorize special work in the space (such as hot work).



D1. Response to Comments



Definitions and Basics

44. How does an employer get an entry permit?

Each employer needs to develop his or her own entry permit that addresses the specific hazards and controls for that particular confined space entry.

An entry permit is not a form issued by Cal/OSHA. Employers do not need to apply for or submit a completed permit to Cal/OSHA (see Attachment C, “Confined Space Entry Permit Sample” and appendices D-1 and D-2 of T8 CCR, “Confined Space Regulations”).

45. When is an entry permit valid?

The entry permit is valid once it has been signed by the entry supervisor.

46. Is a permit valid for more than one shift?

An entry permit is valid for more than one shift if information documented in the entry permit contains provisions that cover the shifts:

- Names of all involved employees (entry team plus next shift).
- Clearly delineated transfer of responsibilities from one shift to another.
- Acceptable entry conditions are maintained.
- Entry operations remain consistent with terms of the entry permit.

Attention

Employers should ensure that the entry permit is valid for the duration of the entry operation. If the entry operation spans multiple shifts, the permit should be updated to reflect the changes in personnel and responsibilities.

47. How long should a facility owner keep the entry permit?

The entry permit should be kept on file for one year.

48. Why are employers required to review canceled permits annually?

The annual review of canceled permits allows employers to assess and revise, if needed, their permit space program to ensure that confined space workers are protected from space hazards.

49. What is “hot work”?

“Hot work” includes any operation capable of providing a source of ignition. Examples include electrical tools with open brushes and commutators or any device that produces sparks, arc, flame or could become an ignition source. One of the dangers of hot work operations is the increased risk of fire and explosion because of the introduction of an ignition source into a space with an already-hazardous atmosphere (see Attachment A, “Hot Work Permit Sample”).



D1. Response to Comments

Definitions and Basics

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| <p>50. <i>Do hot work operations require special considerations?</i></p> | <p>Yes. "Hot work" is prohibited within a confined space or any adjacent space with a common wall, floor or ceiling, which contains, or is likely to develop, oxygen enrichment or dangerous air contamination due to flammable and/or explosive substances. Employers must evaluate existing hazards within the space <i>and</i> potential hazards created from hot work operations, and then:</p> <ul style="list-style-type: none"> • Take special precautions (such as improving ventilation, inspecting for frayed wires, implementing fire-suppression measures or using low-voltage, non-sparking tools) to reduce potential hazards; and • Have a written hot work permit for every hot work operation as specified by section 5157(f)(15) along with other applicable Title 8 standards for hot work. |
| <p>51. <i>What responsibility does the owner have when hiring a contractor to do work in a confined space within the facility?</i></p> | <p>The owner must inform the contractor during the entry operation</p> <ul style="list-style-type: none"> • That the space is a confined space and that entry must be by permit only; and • About all known/created hazards; and • About any precautions or procedures that you, as the owner, are already instituting for the protection of employees. |
| <p>52. <i>Once the job is complete, is the contractor required to confer with the host employer?</i></p> | <p>Yes. The contractor is obligated to inform the host employer of his or her experience with the space including, any hazards confronted, and any additional hazards that may have been created by the work.</p> |
| <p>53. <i>What if some of the site owner's employees are doing work in the confined space alongside the contractor's employees?</i></p> | <p>In this case, it is critical that employees of one employer do not endanger the employees of any other employers. The site owner needs to coordinate entry operations with the contractor so that both understand the type of work and hazards involved. Such work can create new hazards, and everyone working inside the confined space must be alerted. If working together is unsafe, the two teams may have to plan a different strategy.</p> <p>For multi-employer worksites, the procedures shall address how all the affected employers will coordinate their work activities.</p> |

D1. Response to Comments

CONFINED SPACE HAZARDS

MANY confined space accidents occur because the workers did not realize the dangers or potential dangers within or nearby the space, or simply did not take into account the new hazards and other conditions created during work in confined spaces. Thus, it is crucial to carefully identify all confined space hazards before entering a space. This section addresses the two main categories of hazards: *atmospheric*, or those that involve problems with the air in the space (lack of oxygen, the presence of other gases in the space, etc.) and *physical*, or those that are caused either by equipment (rotors, sparks, etc.) or by other dangerous conditions (slippery surfaces, heat, etc.).

Case: Asphyxiation due to CO₂ and O₂ displacement

Lack of safety measures leads to death of employee

A 35-year-old employee of an alcohol and mash plant was lying down on the top of a fermentation tank while hosing it out. He dropped his hat, which fell through the 18-inch tank opening. In an attempt to retrieve the hat, he fell into the tank and struck his head. The foreman was unable to reach the victim, although he tried to pull him out with a rope. By the time the rescue squad was able to pull the worker out two hours later, the man had already died of asphyxiation due to the high levels of carbon dioxide (a by-product of the fermentation process) in the tank.

The employer was cited for not having a comprehensive safety program and for failing to test or ventilate the space. The worker had only been on the job for three weeks.

D1. Response to Comments

| Confined Space Hazards | |
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| 54. What kinds of hazards are most likely to be encountered in confined spaces? | <p>Usually, confined space incidents are caused by multiple factors. There are two primary categories of hazards: <i>atmospheric</i> and <i>physical</i>. It is critical to <i>identify all the hazards</i> in a space and determine how they can impact the health and safety of workers who enter this space.</p> |
| 55. What does "hazardous atmosphere" mean? | <p style="text-align: center;">Atmospheric Hazards</p> <p>A hazardous atmosphere is any atmosphere that may incapacitate, injure, or impair an employee's self-rescue or lead to acute illness or death to workers and rescuers who enter confined spaces.</p> <p>The following are examples of hazardous atmospheres:</p> <ul style="list-style-type: none"> • Flammable or explosive gas, vapor, or mist in a concentration greater than 10 percent of its lower flammable limit (LFL) or lower explosive limit (LEL). • Combustible dust at a concentration that meets or exceeds its LFL. This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less. • Atmospheric oxygen concentration levels below 19.5% (oxygen deficiency) or above 23.5% (oxygen enrichment) at sea level. • Atmospheric concentration of any substance with an acutely toxic effect above its PEL, and any other atmospheric condition that is IDLH. <p>This does not include atmospheric concentrations of substances that are not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness.</p> <p>Dangerous air contaminant levels for flammable atmospheres are defined as greater than 20 percent of the LEL. Dangerous combustible particle levels are defined as greater than 20 percent of the minimum explosive concentration of the particulate.</p> |
| 56. What are acceptable atmospheric conditions for air contaminants for which permissible exposure limits are not published? | <p>For guidance, refer to sources of information such as MSDS that comply with Section 5194, published scientific and industry information, and National Consensus Standards from organizations such as the American Conference of Governmental Industrial Hygienists (ACGIH) and the National Institute for Occupational Safety and Health (NIOSH).</p> |

D1. Response to Comments



Confined Space Hazards

57. *What is oxygen deficiency?*

Air normally contains 21 percent oxygen. Oxygen deficiency is created when the oxygen level falls below 19.5 percent at sea level.

58. *How do oxygen-deficient environments develop?*

Oxygen deficiency can be caused by:

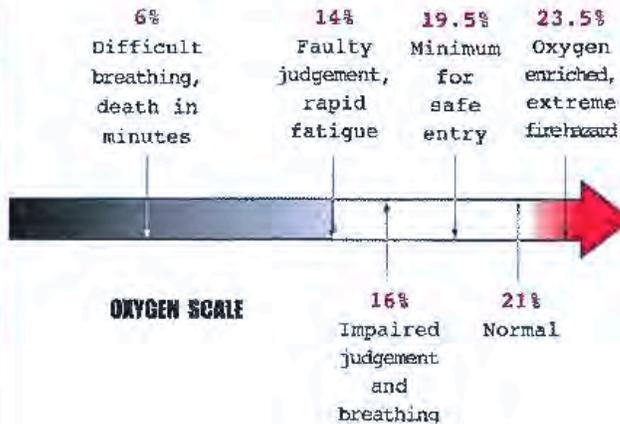
- Combustion (fire, welding, and operation of internal combustion engines all consume oxygen).
- Formation of rust (consumes oxygen).
- Decomposition of organic matter (consumes oxygen and produces flammable methane gas, which can also displace oxygen).
- Displacement by a heavy gas that has settled in a low-lying space or by another vapor (an inert gas such as argon, carbon dioxide, or nitrogen) used to purge the space.

59. *How does oxygen deficiency affect a person who enters a confined space without protection?*

Oxygen deficiency impairs judgment and breathing, often making self-rescue difficult or impossible. A severe oxygen deficiency can lead to loss of consciousness and eventual death.

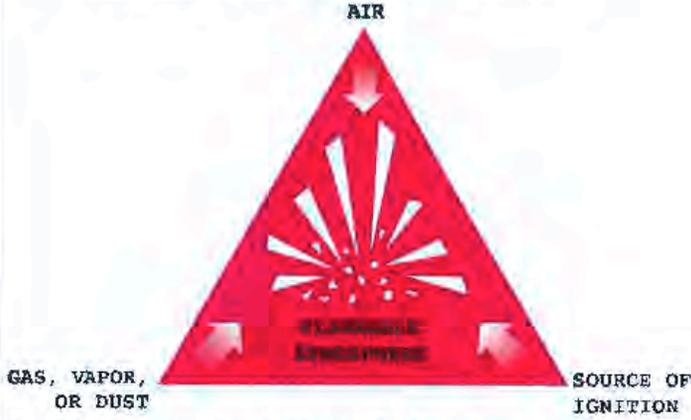
Attention

To learn more about confined space hazards, visit www.osha-slc.com or call 1-800-368-5888. For more information, visit www.osha-slc.com.



D1. Response to Comments

Confined Space Hazards


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| <p>60. What is oxygen enrichment?</p> | <p>Oxygen enrichment refers to air containing more than 23.5 percent oxygen. This dangerous condition is an extreme fire hazard in which static electricity from materials such as hair or clothing can provide the ignition source needed to start a fire. This environment also allows any fire to burn more readily. Oxygen enrichment does not occur naturally and should be investigated.</p> |
| <p>61. What can cause oxygen enrichment?</p> | <p>Oxygen enrichment can be caused by leaking oxygen cylinders or hoses that have been brought into or near the space. Always ventilate confined spaces with normal, ambient air. <i>Never use pure oxygen.</i></p> |
| <p>62. Why are combustible and flammable gases and vapors dangerous?</p> | <p>Atmospheres containing combustible or flammable gases or vapors can be dangerous because of the threat of fire and explosion. Three ingredients are necessary for an atmosphere to become flammable or explosive: an ignition source (heat or flame), fuel (combustible gas or vapor), and oxygen. However, the proportions of fuel and oxygen in a mixture must be within the flammable range for this mixture to be readily ignitable.</p> <div style="text-align: center; margin: 10px 0;">  </div> <p><i>Remember, the atmosphere inside a confined space can change rapidly and unexpectedly. Also, any ignition source (such as sparks from grinding or welding equipment, static electricity, or unapproved electrical equipment that is not non-sparking or even smoking) can initiate an explosion.</i></p> |

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D1. Response to Comments

|  Confined Space Hazards | |
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| 63. <i>When are vapors or gases combustible or explosive?</i> | Gases or vapors can only be combustible or explosive between their LFL and UFL. This is called the <i>flammable range</i> . Substances with a wide flammable range are considered to be more hazardous since they are readily ignitable over a wider range. However, <i>any</i> concentration of combustible gas or vapor should be of serious concern in a confined space. Workers should be especially careful when ventilating a space containing a gas or vapor above its UFL. In order to reduce the concentration below the LEL, this procedure will first bring the gas or vapor within its flammable range. |
| 64. <i>How do combustible dust atmospheres develop?</i> | Finely powdered dust from combustible materials such as wood, metal, or grain can be fuel for powerful explosions. Dust clouds can develop as result of handling dusty materials or when solid materials are reduced to smaller particles from processes such as grinding, drilling, or crushing. |
| 65. <i>How can airborne combustible/explosive dust concentrations be determined?</i> | Airborne sampling must be conducted to determine if combustible dust concentrations are at or exceeds its LFL. This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet or less. |
| 66. <i>How do toxic atmospheres develop in confined spaces?</i> | <ul style="list-style-type: none"> ▶ The work performed within the confined space (such as welding, degreasing, painting, or sanding) may produce toxic atmospheres. ▶ Toxic gases and vapors from adjacent areas can migrate to and collect in the confined space. ▶ Vapors may be released from the sludges on the bottom or scales on walls of emptied confined spaces, such as storage tanks, that previously contained flammable or toxic chemicals. Vapor release may be accelerated by wall scraping and sludge removal from confined spaces. <p><i>Remember,</i> atmospheric changes may occur due to the work procedure, the product stored, or a nearby gas line leak. The atmosphere may be safe upon entry, but can change very quickly.</p> |
| 67. <i>Why do toxic substances become much more dangerous in confined spaces?</i> | Confined spaces prevent toxic substances from escaping, diluting, or readily dissipating. Instead, substances can become trapped and a buildup occurs, whereby the concentrations of toxic substances reach dangerous levels. |

D1. Response to Comments

Confined Space Hazards

68. What are the three most commonly found toxic gases in confined spaces?

Carbon monoxide (CO) results from incomplete combustion processes in equipment such as gasoline engines. CO is a colorless and odorless gas that prevents uptake of oxygen in the blood and can cause headaches, dizziness, unconsciousness, asphyxiation, and death.

Hydrogen sulfide (H₂S) is encountered in sewers, sewage treatment plants, and other locations where organic material (dead animals, leaves, etc.) decomposes. It has a distinct odor of rotten eggs at low concentrations but can cause olfactory fatigue (a deadened sense of smell) at high levels. H₂S can block respiration, causing rapid loss of consciousness, and possible death.

Methane (CH₄) is a natural gas produced from the decay of organic matter. It is a flammable, explosive, colorless, and odorless gas. It can displace oxygen to the point of oxygen deficiency in a confined space, causing dizziness, unconsciousness, and asphyxiation.



Be aware of any chemicals used in or generated by your specific industry, such as carbon dioxide in bakeries and breweries. Cleaning solvents and residues remaining in vessels can also be dangerous.

69. How can one learn about the hazards of chemical substances that are used within or introduced into confined spaces?

Read the product label and/or the MSDS. Labels provide general product information, and the MSDS gives useful information on proper use and handling, special precautions, and first aid treatment (see Attachment D, "Material Safety Data Sheet Sample"). When a chemical product is purchased, the manufacturer or supplier of the product provides an MSDS. The MSDS must be readily available to any employee who wishes to learn about a product that he or she comes into contact with.

If you have any questions, contact your company's safety and health professional, the manufacturer or supplier of the product, the *NIOSH Pocket Guide to Chemical Hazards*, or a Cal/OSHA consultant.

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| Material Safety Data Sheet Sample May be used to comply with OSHA's Hazard Communication Standards 29 CFR 1910.1200, Standards, and the California Hazard Communication Regulations 8 CCR 1527. | | U.S. Department of Labor Occupational Safety and Health Administration (Non-Management Area) Permit Required OSHA No. 1219-1022 | |
| IDENTIFY the contents (chemical name) | | Check that each hazard is properly identified by its hazard classification, its signal word, and its pictogram. | |
| Supplier | | Emergency Telephone Number | |
| Manufacturer/Supplier | | Telephone Number for Information | |
| A revised MSDS must be provided if the contents change. | | Date Revised | |

Material Safety Data Sheet sample

D1. Response to Comments

|  Confined Space Hazards | |
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| 70. <i>Why can't a worker rely on sight and sense of smell to detect toxic atmospheres?</i> | There are unseen and odorless contaminants (or oxygen-deficient atmospheres) that can kill or incapacitate workers. Of those contaminants that have odor, some can be detected by our senses only at low concentration. Hydrogen sulfide, for example, will deaden the sense of smell at high concentrations. Because of this, employees might assume that a confined space is safe when it is not. <i>There is no substitute for testing the air in a confined space prior to entry.</i> A worker can also be exposed to a contaminant through skin contact while working in a confined space. |
| 71. <i>When should continuous atmospheric monitoring be performed?</i> | Atmospheric monitoring is necessary whenever: <ul style="list-style-type: none"> • A safe atmosphere cannot be ensured. • An existing hazardous atmosphere cannot be removed. • The confined space cannot be physically isolated from the penetration of hazardous materials. • There is reason to suspect the development of a hazardous atmosphere during work activity. |
| 72. <i>Why must atmospheric testing of confined spaces follow a certain order?</i> | <ol style="list-style-type: none"> 1. Oxygen is tested first because most combustible gas and toxic atmosphere meters are oxygen-dependent and will not provide reliable readings when used in oxygen-deficient atmospheres. In addition, both oxygen-deficient and oxygen-enriched atmospheres are <i>extremely hazardous to workers' health and safety.</i> 2. Combustible gases and vapors are tested next because the threat of fire and explosion is both more immediate and more life-threatening, in most cases, than exposure to toxic gases and vapors. 3. Toxic atmospheres are tested last. <p>Many modern direct-reading instruments provide simultaneous readings of multiple gases.</p> |
| 73. <i>Can confined spaces be entered for air sampling?</i> | <i>Don't go inside the space to do the initial air sampling!</i> To the extent feasible, pre-entry testing should be conducted with equipment that allows air to be tested remotely. If entry into the space is required to obtain further verification of acceptable entry conditions, entry is performed in accordance with a permit-required confined space program. |

D1. Response to Comments

Confined Space Hazards


74. *Why is it recommended that manhole atmospheric readings be taken through the “weep hole”?*

This practice prevents employee exposure to:

- Potentially dangerous or deadly vapors or gases that may have built up under the manhole cover.
- Potential explosion due to the ignition of a flammable or explosive atmosphere by sparks generated while removing the cover.

75. *Why is it important to thoroughly test any confined space?*

Testing must be done at *all depths* because some gases are heavier than others and gases are not uniformly mixed within a confined space. Air sampling should be done in four-foot increments vertically and horizontally, including *corners and low spots*, to ensure that all potential hazards are identified. Make sure that you allow time to accommodate sampling speed and detector response. See Attachment B, “Atmospheric Monitoring Equipment and General Testing Protocol,” for guidelines on atmospheric testing.



Monitoring equipment

76. *Why is it necessary to conduct continuous or periodic monitoring during the occupation of a confined space?*

Monitoring is the only way to detect whether a hazardous atmosphere has developed during entry. If this is the case, employees will be alerted to the change so they can leave the space immediately.

77. *Why is atmosphere retesting necessary when re-entering a confined space after only an hour break?*

The atmosphere within confined spaces can change rapidly. A worker should assume that every confined space may contain a hazardous atmosphere. Therefore, perform testing before each entry.

D1. Response to Comments



Confined Space Hazards

78. *May employees and their representatives see the results of the air sampling and exposure monitoring?*

Yes. Test results that show the composition of an atmosphere to which employees are actually exposed (even if the employees are using respirators) are called “exposure records” under T8 CCR, Section 3204, “Access to employee exposure and medical records.” These records must be accessible immediately.

79. *What are the two major types of direct-reading instruments used for atmospheric monitoring of confined spaces?*

Electronic gas detectors and color-indicator gas detector tubes are the most common types of instruments used for determining oxygen content, lower explosive limit, and toxic atmospheres. See Attachment B, “Atmospheric Monitoring Equipment and General Testing Protocol.”



Taking an accurate reading is a matter of life or death.

80. *What features should be considered before purchasing monitoring equipment?*

Before purchasing equipment, evaluate the instrument’s:

- Accuracy.
- Environmental operating range:
 - Remote sampling capability.
 - Operating temperature.
 - Relative humidity.
- Safety for use in explosive/flammable atmospheres as per T8 CCR Section 2540.2 (for electronic/thermal devices).
- Specificity for contaminant of interest.
- Warm-up time.
- Response time.
- Ruggedness.
- Ease of use and maintenance and vendor support.
- Sensor and battery life.
- Data-logging capabilities.

D1. Response to Comments

Confined Space Hazards

Physical Hazards

81. *What are some types of mechanical hazards that may be encountered in confined spaces?*

Moving equipment or parts and energized or pressurized systems can be dangerous. Examples include shafts, couplings, gears, belts, conveyors, mixers, rotors, and compressing devices.

82. *What is an entrapment hazard?*

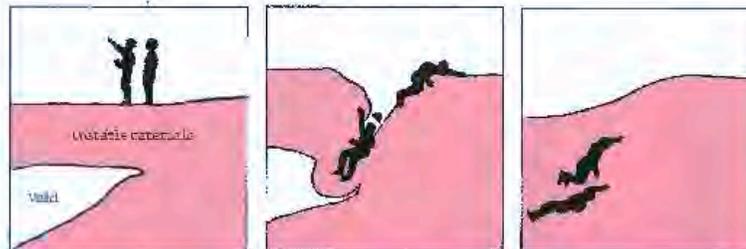
Examples of entrapment hazards in confined spaces include inwardly converging walls or floors that slope downward and taper to a smaller cross-section (such as air plenums).

83. *What is engulfment?*

This refers to the surrounding or burial of the worker in a liquid or loose, finely divided solid material, such as sand or grain. Such materials can suffocate a worker. For grain, refer to Section 5178 for more information.

Examples include:

- Accidental dumping of a product on a worker.
- A worker walking on unstable material such as settled grain. Such materials could conceal a void underneath that gives way under the weight of the worker, resulting in engulfment.



84. *What are thermal hazards?*

A thermal hazard is a dangerous condition caused by excessive heat or cold or a hot surface.

Employees engaged in continuous heavy work while wearing PPE (e.g., body suit and respirator) in warm surroundings are particularly susceptible to thermal hazards. Heat stress may lead to heat exhaustion, heat cramps, heat stroke, loss of consciousness, or death.



A confined space entry permit must address any hazards from heat or cold within confined spaces.

D1. Response to Comments



Confined Space Hazards

- | | |
|---|---|
| <p>85. <i>How does noise impact confined space workers?</i></p> | <p>Sounds generated by tools and heavy machinery can be magnified and reverberated within confined spaces. Noise may impede verbal communication between the entrants and attendants or rescue personnel. Over time, excessive noise may also impair a worker's hearing. If noise levels are high, a hearing conservation program may need to be implemented. For more information, refer to T8 CCR, sections 5096, 5097, 5098, and 5099, or see the Cal/OSHA <i>Noise Control</i> publication.</p> |
| <p>86. <i>What other general safety hazards should confined space workers consider?</i></p> | <p>Snakes, rodents, spiders, poor lighting, obstructions, falling objects, wet surfaces, trip/slip and fall hazards, electrical shock, and acute chemical hazards may also need to be addressed.</p> |



D1. Response to Comments

HAZARD CONTROLS

ONCE hazards are identified, it is critical to institute appropriate control measures for the elimination (or, if not possible, the reduction) and control of hazards. Remember, acceptable entry conditions must be attained before entry *and* maintained throughout the duration of an entry. This section explains some of the procedures and precautions that should be in place to safeguard entrants while they are working in the space.

Case: Hazardous atmosphere

Lack of safety controls leads to tragedy for well cleaners

Three self-employed well cleaners arrived at a home to clean a 40-foot-deep well. They first used a portable gasoline pump, and then a sump pump, to remove the standing water from the well. One employee was lowered into the well with a cable and a homemade hoist. Soon after, the second worker called down to the first worker and received no response. The third man asked the homeowner to call for help, and tried to lower the second man into the well with a board. During the rescue attempt, the board began to crack, so the third man halted his efforts and decided to wait for the rescue team.

Unfortunately, by the time the rescue team arrived, the well had filled with water and the first worker had drowned. The second worker was taken to the hospital but later died of asphyxiation (oxygen in the space had been displaced by carbon monoxide) and cold water exposure.

The atmosphere had not been tested or ventilated prior to entry, and the workers had failed to use personal protective equipment (PPE). This is a prime example of why employers—as well as workers who are self-employed—must develop and implement a comprehensive confined space entry program.

D1. Response to Comments



Hazard Controls

87. *Why is it important to ventilate confined spaces?*

Attention

When working in a confined space, it is important to ensure that the atmosphere is safe. This can be done by testing the atmosphere for oxygen, toxic gases, and flammable vapors before entering the space.

Controls for Atmospheric Hazards

One primary control measure effective in preventing toxic hazardous atmospheres from developing in the first place is the use of less toxic products that vaporize less readily. Keep less of the product at the site and keep containers closed inside the confined space at all times.

Ventilation helps to:

- Provide adequate oxygen to the air in the space.
- Control atmospheric contaminants.
- Prevent fire and explosion hazards.
- Control heat and humidity.

Once it has been determined that the confined space contains a harmful atmosphere, the next step is to clear it. Ventilation blows out oxygen-deficient or contaminated atmospheres and replaces harmful vapors with clean, fresh air. Make sure to ventilate the space thoroughly so that there are no contaminated pockets left, and then test the atmosphere again.

Welding, cutting, burning, and continuous brazing generate hazardous fumes and dusts that can be more effectively removed by local exhaust ventilation systems at or near the point of generation.



Continuous ventilation and testing are critical in any confined space with a harmful atmosphere.

D1. Response to Comments

Hazard Controls



88. What considerations should be made to ensure the space is properly ventilated?

Initially determine:

- Number and size of openings.
- Volume and configuration of the space to be entered.
- Capacity and positioning of the ventilation equipment to be used.
- Existing and potential atmospheric hazards.

After beginning ventilation:

- Routinely test the confined space until levels stabilize at acceptable entry conditions.

Once entry and work start:

- Continue ventilation and frequent atmospheric testing for the entire duration of entry.
- Consider atmospheric hazards created by work in the space.

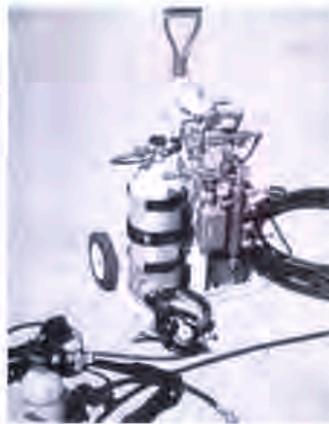
89. When should respiratory protection be used?

Respiratory protection is needed whenever:

- An emergency exists and entry cannot be delayed. Assume that an IDLH atmosphere exists.
- There is an inert atmosphere or testing shows that an IDLH exists and additional ventilation cannot reduce concentrations to safe levels.
- Current testing indicates atmosphere to be safe, but unsafe conditions could reasonably be expected to develop at any time.



To help you determine which respiratory equipment is appropriate, refer to Section 5144 and request the Cal/OSHA *Guide to Respiratory Protection* publication.



Be familiar with your respiratory equipment.

D1. Response to Comments



Hazard Controls

90. *What if flammable atmospheres cannot be controlled by ventilation?*

Consider “inerting.” Ventilation may not control all atmospheric hazards. In some cases, the introduction of air may bring the fuel-air mixture into the flammable range. Instead, it may be necessary to fill the confined space with an inert gas such as nitrogen to control vapor or gases that have the potential to ignite.

Remember that while inert gases eliminate the hazard of combustion or explosion, they also create an oxygen deficiency hazard that is immediately dangerous to life and shall not be entered.

91. *What does isolation of equipment involve?*

Isolation includes:

- Identifying potential mechanical hazards.
- Completing the de-energizing of all electrical, mechanical, pneumatic, and hydraulic systems and all other energy sources.
- Locking out and tagging out all electrical circuits and valves.
- Blocking or otherwise securing equipment that could have stored energy.
- Guarding or removing equipment from the area.
- Ensuring isolation procedures are fully implemented.



For more information, refer to Section 3314 and request the Cal/OSHA *Lockout/Blockout* publication.

92. *How can workers be safeguarded against most mechanical hazards?*

The best safeguards include:

- Physical guards that preclude contact with moving parts.
- Isolation and/or barricading of machinery or equipment that may be accidentally contacted or activated.

93. *What do “lockout” and “tagout” mean?*

Lockout of a machine refers to the use of devices, positive methods and procedures, which will result in the effective isolation or securing of prime movers, machinery and equipment from mechanical, hydraulic, pneumatic, chemical, electrical, thermal or other hazardous energy sources. Tagout refers to the attaching of a sign or label to the isolated machine, which warns others not to operate it. Refer to section 3314 for more information.

D1. Response to Comments


Hazard Controls


94. *How can workers be safeguarded against electrical hazards?*

In order to avoid electrical hazards:

- Inspect all electrical equipment and circuits for proper classification (wet locations or areas otherwise classified as being hazardous).
- Use ground fault circuit interrupters (GFCI) where required and ensure proper grounding for all circuits.
- De-energize circuits and implement lockout/tagout programs where required.
- Use only explosion-proof equipment and spark-proof tools where required.
- Ensure that all electrical parts are properly covered, protected, and maintained.

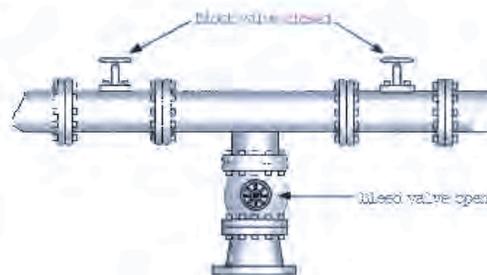


Lock out devices

95. *What safeguards can be used to protect from pressurized lines, ducts, or pipes?*

Blanking or blinding refers to the absolute closure of a pipe, line, or duct. This is done by completely covering the bore with a fastened solid plate that is capable of withstanding the maximum pressure of the pipe, line, or duct without leaking.

Double block and bleed refers to the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.



Double block and bleed

D1. Response to Comments



Hazard Controls

96. *What steps are necessary in order to safeguard workers against engulfment hazards?*

In order to avoid engulfment hazards:

- Remove material prior to entry.
- Institute isolation procedures to keep out any potential hazardous substances.
- Wear full body harnesses and retrieval lines.
- Allow entry only if entrant can be rapidly pulled out.

97. *How can slips, trips, and falls be prevented?*

In order to prevent slips, trips, and falls:

- Practice good housekeeping. Residues, unnecessary scraps, debris, and water should be removed from the floor and work areas.
- Keep ladders in good working order and ensure that proper ladder safety practices are followed.
- Ensure that guardrails protect all open sides of elevated work areas.
- Ensure that appropriate fall arrest equipment is provided and properly used where required.

98. *What can be done to make the space safe from explosive hazards?*

Aside from ventilating or taking other precautions to control hazardous atmospheres, *remove* all potential sources of ignition from the space. Institute a no-smoking rule and use only approved electrical equipment.



Personal Protective Equipment and Tools

99. *Who is responsible for providing and using personal protective equipment (PPE)?*

Employers are responsible for providing the proper PPE to their workers and for replacement and repairs as necessary. Employers are also responsible for providing adequate training on the proper use of the equipment, and for enforcing its use and wear.

100. *Who can provide assistance in the selection of PPE and equipment?*

Consult qualified persons, such as:

- Industrial hygienists.
- Safety engineers.
- Safety and health professionals.
- Other trained and experienced personnel.

D1. Response to Comments


 Hazard Controls

Communication System

101. Why is communication important in confined space work?

Proper communication:

- Verifies that the work is proceeding well and the situation is normal.
- Alerts the entrant to any change, including those in surroundings or atmospheres, and allows the attendant to order immediate evacuation in the event of imminent danger.
- Reduces effects of claustrophobia.

102. What communication system should be used?

Effective methods of communication include:

- Verbal.
- Hand signals.
- Two-way radios.
- Signaling through safety lines when oral communication is not possible.
- Intercom system.
- Light signals.
- Tapping or rapping codes.

Remember: all electronic equipment must:

- Be intrinsically safe (there must be no chance of becoming an ignition source).
- Not interfere with atmospheric monitors.
- *Always* be backed up by a non-electronic communication system.

D1. Response to Comments

TRAINING AND EDUCATION

EMLOYEE training is essential for successful confined space work and is an integral part of a confined space program. The goal is to work safely and effectively while preventing problems. All employees including entrants, standby persons, attendants and supervisors shall be trained in the operating and rescue procedures, including instructions as to the hazards they may encounter. Proper training is critical, as having prior knowledge of hazards and being prepared for potential problems can divert tragedy.

Case: Explosive atmosphere and "hot work"

Welding sparks ignite explosion, killing man

A repairman and an assistant entered an 8,500-gallon cargo tank to do pre-treatment work in preparation for spot-welding a leak on the tanker wall. The tanker had previously contained lacquer thinner but had been steam cleaned in order to remove trapped chemicals and vapors. Although the assistant commented on the strong fumes, the repairman decided to go ahead with the repairs rather than taking the time to clean the area again. When he began welding, the sparks ignited the vapors, causing an explosion. The repairman was killed.

The employer had a written safety program that required the use of an explosion meter; however, the victim did not follow the safety policy.

D1. Response to Comments

Training and Education

103. Why is employee training important for confined space work?

Employee training *prior* to confined space work is a key part of any successful confined space program. Lack of hazard awareness can result in death or serious physical harm. Untrained rescuers attempting to help victims may become victims themselves due to lack of awareness of confined space hazards and safe rescue procedures.

104. What must confined space training include?

The elements included are characteristics of the space as well as specific duties of the entrant, attendant, supervisor, and rescuer:

- Atmospheric monitoring and ventilation.
- Communication.
- Emergency, self-rescue, and rescue operations.
- Hazard communication—MSDS.
- Hazard recognition and control.
- Injury and Illness Prevention Program.
- Permit program.
- Personal protective equipment, first aid, and CPR.
- Signs, symptoms, and consequences of exposures.

105. What other training topics should be included?

Depending upon the work activities and hazards associated with a particular industry, training may emphasize other areas such as:

- Respiratory protection.
- Electrical safety.
- Lockout/tagout.
- Equipment-specific issues.
- Fall protection.
- Noise.



Confined space training in the field

D1. Response to Comments



Training and Education

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| <p><i>106. How does training help?</i></p> | <p>Proper training:</p> <ul style="list-style-type: none"> • Familiarizes employees with established entry procedures and the reasons why those procedures must be followed. • Encourages employee teamwork and cohesiveness. • Informs employees that only authorized personnel are allowed to enter confined spaces. |
| <p><i>107. Who must be trained?</i></p> | <p>Entrants, standby persons, attendants, entry supervisors, and rescuers must all receive proper and thorough training.</p> |
| <p><i>108. When must confined space training be provided?</i></p> | <p>Training shall be held:</p> <ul style="list-style-type: none"> • Before doing work within a confined space. • Whenever there is change of work. • Whenever the conditions and hazards within the space change. • Whenever an employer has a reason to believe that an employee is not following established guidelines. • Whenever there are new procedures or operational changes. • Annually for rescue team members. |
| <p><i>109. What should training documentation include?</i></p> | <p>Once training is completed, document the names of the trainer and trainees, as well as the date and subject of training. Keep all records in a secure location. Employees who participated in the training may also receive certificates of completion.</p> |
| <p><i>110. What is the "entry team"?</i></p> | <p>Entry Team</p> <p>The entry team is the group of employees assigned to complete a task within a confined space. A typical entry team consists of an entrant, an attendant, and the entry supervisor. Depending on the employer's permit entry program, attendants may or may not perform entry rescue.</p> <p>However, at least one attendant or standby person shall be onsite and immediately available to perform rescues with an additional person available nearby as backup in case the rescue requires entry.</p> |

D1. Response to Comments

Training and Education

111. What are the general responsibilities of the entry team?

Responsibilities include:

- Pre-entry work.
- Entry and egress.
- Work to be accomplished on site.
- Tools to be used.
- Potential hazards.
- Personal protective equipment.
- Recognition of symptoms following exposure and what to do when it does occur.
- Communication.
- Emergency procedures and equipment.

112. What is the role of the attendant?

The attendant:

- Does not enter the confined space.
- Is prepared to perform non-entry rescue or call for a rescue team.
- Performs entry rescue only when the employer's permit entry program authorizes attendant to do so.
- Knows the hazards or potential hazards of the space.
- Maintains accurate count of authorized entrants in the space.
- Stays alert to possible behavioral changes of entrants.
- Monitors activities inside and outside the space to ensure that it is safe for entrants to remain in the area.
- Remains outside the confined space until relieved by another attendant and prevents entry of unauthorized personnel.
- Communicates with entrants.
- Orders evacuation if prohibited or hazardous conditions arise.



Entrance into confined space with assistance of an attendant

D1. Response to Comments



Training and Education

113. What are the duties of the entry supervisor?



The entry supervisor:

- Knows confined space hazards.
- Ensures that atmospheric testing and proper confined space preparations have been done prior to entry.
- Verifies that safe conditions have been attained.
- Ensures that acceptable entry conditions are maintained.
- Ensures that proper equipment is on site and operational.
- Makes sure that site is clear of unauthorized personnel.
- Verifies emergency plan and confirms rescue team availability.
- Signs permit.
- Cancels permit once operation is completed.

114. What are the responsibilities of an authorized entrant?

An authorized entrant:

- Knows confined space hazards, exposure routes, signs, symptoms, and adverse health effects that could result from exposure.
- Uses adequate PPE.
- Uses proper entry equipment.
- Follows proper entry procedures.
- Performs assigned job.
- Is alert to any prohibited condition.
- Communicates with attendant.
- Evacuates immediately, if necessary.

115. Prior to entering a confined space, how can workers confirm that pre-entry preparations have been completed?

Workers who enter confined spaces, shall have the opportunity to observe pre-entry testing. Once all of the pre-entry measures have been taken and all the hazards have been eliminated, the employer certifies in writing - before entry - that the space is safe for entry. This certification shall be made available to each employee entering the confined space (see Attachment C).

Also, the entrants can check the permit and contact the entry supervisor in order to make sure that conditions within the confined space have been fully investigated and appropriate control measures have been taken.

D1. Response to Comments

FREQUENTLY ASKED QUESTIONS

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| <p><i>116. Is physical survey of a confined space required in order to determine whether a permit is needed?</i></p> | <p>Not necessarily. The survey requirement may be met through existing records and knowledge of the space, provided this information is adequate to make the determination required by the standard. For example, a telecommunications company may have records showing that the hazards of all manholes in one section of the region can be addressed by Section 5158 procedures and that the manholes in another section of the region may contain toxins due to ground water contamination. Only man-holes in the latter section would need to be surveyed. This approach can be used for any industry that has a number of identical spaces and records to support its determinations. Telecommunications employers must also follow Section 8616 in addition to Section 5158.</p> |
| <p><i>117. What is the difference between maintenance and construction activities?</i></p> | <p>Generally speaking, refurbishing of existing equipment and space is considered "maintenance." This includes cleaning, fixing, replacing parts, repainting or similar projects. Reconfiguration of space or installation of substantially new equipment (as for a process change) is usually considered "construction." Those spaces identified under Section 5157 as permit spaces that are undergoing maintenance and do <i>not</i> involve construction would be subject to the requirements of Section 5157.</p> |
| <p><i>118. Under what circumstances will stairs or ladders constitute a limited or restricted means of egress under the standard?</i></p> | <p>Ladders and temporary, movable, spiral, or articulated stairs will usually be considered a limited or restricted means of egress. Fixed industrial stairs that meet Cal/OSHA standards will be considered a limited or restricted means of egress when the conditions or physical characteristics of the space, in light of the hazards present in it, would interfere with an entrant's ability to exit or be rescued in a hazardous situation.</p> |
| <p><i>119. How would Cal/OSHA determine whether a surface such as a pit—which is entirely open on one plane—has limited or restricted means for entry or exit?</i></p> | <p>When determining whether a space has limited or restricted means for entry or exit, Cal/OSHA will evaluate the overall characteristics of the space to determine if an entrant's ability to escape in an emergency would be hindered. Thus, a pit, shaft, or tank that is entirely open on one plane can be considered a confined space if the means for entering the space (stairway, ladder, etc.) are narrow, twisted, or otherwise configured in such a way that would hinder an entrant's ability to quickly escape. Similarly, the pit, shaft, or tank itself may be confining because of the presence of pipes, ducts, baffles, equipment, or other factors that would hinder an entrant's ability to escape.</p> |

D1. Response to Comments

|  Frequently Asked Questions | |
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| <p><i>120. Does the fact that a space has a door mean that the space does not have limited or restricted means of entry or exit and therefore is not a "confined space"?</i></p> | <p>A space has limited or restricted means of entry or exit if an entrant's ability to escape in an emergency would be hindered. The dimensions of a door and its location are factors in determining whether an entrant can easily escape; however, the presence of a door does not in and of itself mean that the space is not a confined space. Examples of such spaces could include bag houses or crawl spaces that have doors leading into them, but also have pipes, conduits, ducts, equipment, or other materials that an employee would be required to crawl over or under or squeeze around in order to escape. This would qualify as limited or restricted means of exit.</p> |
| <p><i>121. If the presence of water alone is not considered a hazard characteristic that would trigger the classification of a permit-required confined space, what would?</i></p> | <p>The presence of water alone would not be a sufficient reason to apply the PRCS standard; there must be a quantity sufficient either to endanger the life of the entrant by engulfment or to interfere with escape from the space. For example, if the water could contact an electrical source or conceal trip and fall hazards such as abandoned machine pads or floor holes and openings, the combination of conditions may very well cause the confined space to be classified as a permit space.</p> |
| <p><i>122. When workers enter a confined space only to retrieve a tool, is this considered confined space entry?</i></p> | <p>Yes. Regardless of the reason, once the plane of entry has been crossed, the confined space has been entered.</p> |
| <p><i>123. Does the characteristic "contains or has a potential to contain a hazardous atmosphere" in the definition of "permit-required confined space" refer only to those atmospheres that pose an acute hazard?</i></p> | <p>Yes, the PRCS standard is intended to protect entrants against acute hazards (not exposures at or below the PEL). However, the standard does not exempt employers from the responsibility to control harmful exposures to toxic substances at concentrations less than those immediately dangerous to life or health.</p> |
| <p><i>124. How can a worker determine if testing and monitoring instruments are working correctly?</i></p> | <p>Employees using instruments to test confined space atmospheres must follow manufacturers' directions to properly calibrate, operate, and maintain the instruments. The equipment can also be field-tested against a gas mixture containing the substance of interest at a known concentration. See Attachment B, "Atmospheric Monitoring Equipment and General Testing Protocol," for additional information regarding test equipment.</p> |

D1. Response to Comments

Frequently Asked Questions

125. What does testing or monitoring “as necessary” mean as required by Section 5157(d)(5)(B)?

The employer must determine the degree and the frequency of testing or monitoring to ensure that acceptable entry conditions are being maintained throughout the entry operation. Some of the factors that affect frequency are:

- Pre-entry testing results.
- The regularity of entry (daily, weekly, or monthly).
- The uniformity of the permit space (the extent to which the configuration, use, and contents vary).
- The documented history of previous monitoring activities.
- Knowledge of the hazards that affect the permit space.

126. During rescue, how can a victim receive air when the confined space is very large, there is oxygen deficiency, and there is no time to ventilate the space?

If victim is responsive provide an airline or SCBA respirator. If victim is unresponsive position a fresh air hose (air cone) near the victim's face or above the head to introduce fresh air to the victim while continuing to set up the rescue operation. This approach may be used as a temporary measure of limited value when, in spite of good preparation, rescue is going to be significantly delayed.

127. Is it possible to have a toxic atmosphere at vapor concentrations that are considered “safe” from a fire and explosion perspective?

Yes. Carbon disulfide is an example of this. Its LEL is 1.3 percent. At 1 percent by volume, or 10,000 parts per million (ppm), 1.3 percent equates to 13,000 ppm. Thus, 10 percent of the LEL (13,000 ppm) is 1,300 ppm. Cal/OSHA's PEL for carbon disulfide is 4 ppm. At 10 percent of the LEL, the levels of carbon disulfide in the air would exceed Cal/OSHA's PEL by 325 times!

128. A worker is six feet, two inches tall and the confined space is only five feet deep. Why should the worker be concerned with hazardous atmospheres in the confined space when he can breathe fresh air while he is standing in the confined space?

Any hazardous atmosphere should be of *serious* concern to confined space entrants and rescuers. Gases can distribute unevenly in confined spaces. If the assignment requires the worker to bend down, he may inhale toxic gases, be readily overcome, and possibly asphyxiated. Even when standing erect, his movements may cause upwelling of settled gases, causing him to inhale toxic fumes, become dizzy, and possibly drop or collapse to the bottom of the space.

D1. Response to Comments



Frequently Asked Questions

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| <p><i>129. Why is there a “one entrant—one padlock” rule for equipment lockout/tagout?</i></p> | <p>This rule is intended to protect employees not only from equipment malfunction but also from the unexpected or accidental energization of equipment or machinery within a confined space. If there are multiple entrants, each worker should have his or her own lock to ensure de-energization and to prevent re-energization of machinery by other employees.</p> |
| <p><i>130. Does the implementation of an appropriate lockout procedure, which blocks out potentially hazardous atmospheres, remove the potential for an atmospheric hazard?</i></p> | <p>No. Even if a worker has implemented a lockout procedure to block flowable materials and subsequent evaluation of the space shows that there are no apparent atmospheric hazards, the worker should <i>always be alert to any hazard</i>, including physical symptoms that could be caused by a hazardous atmosphere. Continuous ventilation used to ensure that a hazardous atmosphere is not created is considered to be a control method rather than elimination of an atmospheric hazard. It is important to understand the distinction between elimination and control.</p> |
| <p><i>131. Does an authorized entrant/representative have the right to request that a space be re-evaluated?</i></p> | <p>Yes. If the entrant/representative has reason to believe that the evaluation of the space may not have been adequate, the employer shall re-evaluate the space in their presence.</p> |

D1. Response to Comments



It is Cal/OSHA's aim to increase awareness of confined space hazards and contribute to greater confined space work safety. Although considerable material has been included in this guide, the unique nature of each job site mandates that this information be used only as a general guide and that a confined space permit program specific to each job location be established and followed. Because of the acute hazards associated with confined space work, and the fact that workers' lives are at stake, it must be remembered that regulatory requirements are only *minimum* standards and that employers and employees must strive to exceed them at all times.



D1. Response to Comments

Attachment A
Hot Work Permit Sample
(attach to Entry Permit)

XYZ Company

| | | |
|---------------------------------|-------------------|------------------------|
| Date: _____ | Issue time: _____ | Expiration time: _____ |
| Location of permit space: _____ | | Work tasks: _____ |
| | | |

| | |
|---|---|
| <p><i>Potential Hazards</i></p> <input type="checkbox"/> Toxic <input type="checkbox"/> Electrical <input type="checkbox"/> Corrosive <input type="checkbox"/> Mechanical <input type="checkbox"/> Flammable/Explosive <input type="checkbox"/> Fire/heat <input type="checkbox"/> Radioactive <input type="checkbox"/> Spills <input type="checkbox"/> Energy release <input type="checkbox"/> Oxygen Enrichment <input type="checkbox"/> Stored energy | <p><i>Authorized Workers</i></p> Entrants: _____ Attendant(s): _____ Fire/safety watch: _____ |
|---|---|

| | | |
|---|--|---|
| <p><i>Procedures/Precautions</i></p> <input type="checkbox"/> Procedures <input type="checkbox"/> Communications <input type="checkbox"/> Entry permit <input type="checkbox"/> Ventilation <input type="checkbox"/> Training <input type="checkbox"/> CPR/first aid <input type="checkbox"/> Rescue plan <input type="checkbox"/> Sprinkler system in service <input type="checkbox"/> Charged fire hose <input type="checkbox"/> Surfaces wetted down <input type="checkbox"/> Shower/eyewash located <input type="checkbox"/> _____ <input type="checkbox"/> _____ | <p><i>Safety Equipment</i></p> <input type="checkbox"/> Hard hat <input type="checkbox"/> Eye protection <input type="checkbox"/> Hearing protection <input type="checkbox"/> Foot/hand protection <input type="checkbox"/> Protective clothing <input type="checkbox"/> SCBA <input type="checkbox"/> Respirator _____ <input type="checkbox"/> Tripod <input type="checkbox"/> Barricade/cones <input type="checkbox"/> Communication devices <input type="checkbox"/> First aid kit <input type="checkbox"/> Fire extinguisher <input type="checkbox"/> _____ | <p><i>Vessel Prep/Isolation</i></p> <input type="checkbox"/> Cleaning/purging <input type="checkbox"/> Ventilation <input type="checkbox"/> Signs/barriers <input type="checkbox"/> Tagging cloths/tarps <input type="checkbox"/> Lockout/tagout <input type="checkbox"/> Blanking/bleeding <input type="checkbox"/> Disconnect mechanical linkages <input type="checkbox"/> Secure moving parts <input type="checkbox"/> _____ <input type="checkbox"/> _____ <input type="checkbox"/> _____ |
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| | |
|---|--|
| <p><i>Special Tools</i></p> <input type="checkbox"/> Low voltage <input type="checkbox"/> Non-sparking <input type="checkbox"/> Tools inspected for frayed/broken wires <input type="checkbox"/> Lighting - intrinsically safe <input type="checkbox"/> _____ <input type="checkbox"/> _____ | <p><i>Special Work Procedures</i></p> <input type="checkbox"/> Never bring gas cylinders or other large equipment into space <input type="checkbox"/> Never block entry/exit with equipment <input type="checkbox"/> Shut down during breaks or overnight <input type="checkbox"/> Fire watch to remain 30 minutes after completion of hot work <input type="checkbox"/> _____ |
|---|--|

| | |
|---|-------|
| Entry authorizer (name, title, date): _____ | _____ |
| Emergency contact: _____ | _____ |
| _____ | _____ |

D1. Response to Comments

ATTACHMENT B**Atmospheric Monitoring Equipment and
General Testing Protocol**

DANGEROUS concentrations of gases and vapors may exist in a confined space; such hazards cannot be seen and may not be smelled. Therefore, air monitoring equipment is necessary to properly test the space prior to entry.

Direct reading instruments are portable units that can be carried by hand or worn on a belt. There are two major types of direct reading atmospheric testing equipment: electronic gas detectors and gas detector tubes. These devices may be subject to cross-sensitivity, which means that more than one chemical can produce the same or a similar reading. Interfering chemicals may give a positive or negative deflection from the true atmospheric concentrations. Other factors, which are discussed later in this section, may have a direct influence on the proper use and reliability of this equipment. Therefore, it is very important that the individual performing the tests be properly trained on the actual use, maintenance, limitations, and proper selection of the appropriate instrument.

Electronic Gas Detection Monitors

Electronic gas detection instruments are battery-powered, direct-reading devices capable of providing continuous monitoring of a permit space. Oxygen monitors measure atmospheric concentrations that range from 0 percent to 25 percent oxygen in air.

Most combustible gas monitors display concentrations as percent of the lower explosive limit (LEL), although some display concentration as percent by volume and some display both. Instruments that measure the percent of the LEL are generally easier to use. For example, the LEL of methane is 5 percent by volume; the upper explosive limit (UEL) is 15 percent by volume. When the concentration in a space reaches 2.5 percent by volume, it is 50 percent

of the LEL. When the concentration reaches 5 percent by volume, it is 100 percent of the LEL.

Toxic gas monitors use special electrochemical cells to measure substances such as carbon monoxide, hydrogen sulfide, chlorine, and ammonia. The instruments are direct reading, available with either meters or digital read-outs and may also be equipped with alarms. Some instruments are equipped with a single sensor while others have multiple sensors to simultaneously measure a variety of gases. These devices are commonly referred to as 2-in-1, 3-in-1, or 4-in-1 monitors. It is very important to select an instrument that is appropriate for the specific applications to be encountered. Whenever contaminants have been identified at a site, substance-specific detectors should be used.

Special consideration must also be given to the use and interpretation of the results obtained from electrical gas meters under certain circumstances. The operator must be aware of situations that could interfere with the collection of accurate monitoring data. Instrument familiarization by the operator is needed for accurate atmospheric testing. A thorough understanding of the manufacturer's written operating instructions is crucial for the safe and effective use of the instrument. Employees who use this equipment also must receive hands-on training.

Operators should be aware of the following facts concerning electrical gas monitors:

1. The instrument must be certified as intrinsically safe for use in Class I, Division I, Groups A, B, C, and D hazardous locations.
2. Some combustible gas meter sensors are Wheatstone bridge-type sensors. This type of sensor can be easily contaminated by silicone vapors, leaded gasoline, sulfur compounds, and repeated exposure to halogenated hydrocarbons. This desensitization will cause erroneous low readings and reduce the life expectancy of the sensor.

D1. Response to Comments

ATTACHMENT B

3. The instrument selected must be specific to the substances likely to be found.
4. High relative humidity (90 percent to 100 percent) may cause reduced sensitivity and erratic behavior in the instrument. Humidity can also cause the instrument to fail to properly calibrate.
5. Sensors have a limited lifespan (for example, oxygen sensors typically have a one-year lifespan). Exposure to corrosive substances such as acid gases can significantly reduce sensors' life expectancy.
6. Erroneously low readings can result from the absorption of substances such as chlorine, hydrogen sulfide, sulfur dioxide, and ammonia, which condense in the sampling line or sensors. In drying ovens or unusually hot locations, solvent vapors with high boiling points also may condense in the sampling lines.
7. Battery maintenance is very important. There are three types of batteries currently used: nickel cadmium, alkaline, and sealed lead-acid. Each has advantages and disadvantages that should be researched through the manufacturer at the time of battery purchase.
8. Make sure the instrument has remote sampling capabilities.
9. Electronic gas detectors must be checked and calibrated prior to use each day. The inspection should include hoses, batteries, and any pumps the equipment might have. The unit must also be field-tested using test gas cylinders containing known amounts of the substance to be encountered.

Oxygen meters should be calibrated in fresh air to 21 percent. An operator can test a meter by holding his or her breath and then exhaling into the sensor; the sensor reading should drop to approximately 16 percent.

If the equipment does not calibrate properly, the unit must be removed from service. Replace the sensor or return the unit to the factory for repair and/or laboratory recalibration.

Operators should consult with the manufacturer's instructions or calibration curves when sampling for

gases and vapors for which the instrument was not calibrated against.

Detector Tube Pump Method

Detector tube pumps are portable instruments that use different detector tubes to measure the concentration of a wide variety of substances. The operating principle consists of drawing a known volume of air through a detector tube designed to measure the concentration of the substance of interest.

Detector tubes are easy to use and provide a relatively good idea of the concentration of a substance within a space. The length of stain or degree of color change corresponds to the relative concentration of the substance tested. The tubes are generally specific to the toxic substance of concern. However, accuracy can be affected by cross-sensitivity. Therefore, the results must be interpreted in relation to *all* substances in the space.

Limitations of detector tubes include:

- Tubes cannot be interchanged with different brand pumps.
- Tubes may lack specificity and cross-sensitivity with other compounds is possible. Refer to the manufacturer's manual for information on the effects of interfering substances.
- Detector tubes give only instantaneous results.
- Tubes have a limited shelf-life (approximately one to two years). Refrigeration can extend the shelf-life. However, tubes should not be used beyond their expiration date.
- Accuracy ranges vary with each detector tube.
- Tube accuracy is significantly affected by cold temperatures. In cold temperatures, try to keep the tubes in a pocket close to the body to keep them warm.

Calibrations and Maintenance

Operators are reminded to consult the manufacturer's instructions for specific procedures for the calibration and maintenance of the instrument.

D1. Response to Comments

ATTACHMENT B

General recommendations regarding the conducting of atmospheric testing

1. Use only monitoring instruments that have been properly calibrated and maintained and are intrinsically safe.
2. Only trained operators who are skilled and knowledgeable about the use and limitations of the instrument should do the testing.
3. Check the area around the confined space opening for any hazardous gas or vapor concentrations.
4. Extreme care must be exercised when opening any confined space that may contain an explosive atmosphere.

Some spaces may contain an atmosphere that is too rich to burn. But when the space is opened, entering air can quickly change the atmosphere, making it explosive. Sparks created by removing the hatch or cover could ignite the vapors in the space. Therefore, when possible, insert the test probe into a vent hole. If the manhole cover or hatch has no vent opening, open the cover just enough to insert the probe into the space. Spark-proof tools must be used. *All levels and remote areas of the space need to be tested. An extension device should be used for this purpose.* If a hazardous atmosphere is detected, purge and ventilate the space. Avoid having employees lean over the opening or breathe the air in the space.

5. Always test oxygen content first. Make sure sufficient oxygen (a minimum of 16 percent) is available to support the use of the combustible gas monitor. The sampling protocol requires that combustible gas levels in the confined space be checked next. Flammable gases or vapors must not exceed 10 percent of the lower flammability limit (LFL).
6. Toxic substances are measured next in parts per million (ppm). Again, the equipment used must be specific to the substance likely to be found in the space. Never use a standard flammable gas monitor sensor to test for a toxic substance. The results could be deadly, as the following example will show.

Hydrogen Sulfide

| Percentage of LFL | PPM |
|-------------------|----------|
| 100% | 43,000 |
| 10% | 4,300 |
| 5% | 2,150 |
| 0.7% | 100 IDLH |
| 0.02% | 10 PEL |

Hydrogen sulfide is a common toxic gas encountered in many permit space locations. Hydrogen sulfide has an LFL of 4.3 percent, or 43,000 ppm. The standard requires maintaining an environment of less than 10 percent of the LFL in order to avoid an explosion. Hydrogen sulfide also has a permissible exposure limit (PEL) of 10 ppm and an immediate danger to life and health (IDLH) concentration of 100 ppm. For example, if the LFL is found to be 5 percent, though the testing indicates no explosive hazard, it indicates a level of approximately 2,150 ppm, which exceeds both the PEL and IDLH.

7. Some toxic substances may not respond well to electrical gas sensors or detector tubes. If this is the case, more specialized test equipment or laboratory analysis may be necessary.
8. Depending on their densities, gases may be heavier, lighter, or nearly the same weight as air. As a result, gases and vapors will stratify within a given confined space. The only safe way to test the atmosphere of a confined space is to sample all levels (top, middle, and bottom) with properly calibrated equipment. When monitoring for entries involving a descent into atmospheres that may be stratified, the atmospheric envelope should be tested at a distance of approximately four feet (1.22 meters) in the direction of travel and to each side. If a sampling probe is used, the entrant's rate of progress should be slowed to accommodate the sampling speed and detector response.

D1. Response to Comments

Attachment C
Confined Space Entry Permit Sample
(Enhanced Title 8 Version)

Permit valid for 8 hours only. All copies of permit will remain at job site until job is completed.

Date: _____ Time: _____
 Site location and description: _____
 Purpose of entry: _____

NATURE OF CONFINED SPACE HAZARD

- | | | |
|---|---|---|
| <input type="checkbox"/> Oxygen deficiency (less than 19.5%) <input type="checkbox"/> Flammable gases/vapors above 10% of lower explosive limit (LEL) <input type="checkbox"/> Mechanical hazards | <input type="checkbox"/> Oxygen over 23.5% <input type="checkbox"/> Toxic gases or vapors greater than permissible exposure limit (PEL) <input type="checkbox"/> Electrical shock | <input type="checkbox"/> Materials harmful to skin <input type="checkbox"/> Electrical lockout entrapment <input type="checkbox"/> Valve out/isolation <input type="checkbox"/> Other(s) |
|---|---|---|

BOLD DENOTES MINIMUM REQUIREMENTS TO BE COMPLETED AND REVIEWED PRIOR TO ENTRY

| PREPARATION COMPLETED | DATE | TIME | REQUIREMENTS COMPLETED | DATE | TIME |
|---|------|------|-----------------------------------|------|------|
| Lock out/de-energize/try-out | | | Full body harness w/ "D" ring | | |
| Line(s) broken/capped/blanked | | | Emergency escape retrieval equip. | | |
| Secure area (post and flag) | | | Lifelines | | |
| Breathing apparatus | | | Lighting (explosion-proof) | | |
| Resuscitator/inhalator | | | Protective clothing (PPE) | | |
| Cleaned, drained, washed, & purged | | | Respiratory equipment | | |
| Ventilation for fresh air | | | Specify _____ | | |
| Emergency response team available | | | Communication equipment | | |
| Employers informed of specific hazards | | | Specify _____ | | |
| Procedures reviewed with each employee | | | Rescue equipment | | |
| Atmospheric test in compliance | | | Specify _____ | | |
| Hot work permit attached (if required) | | | Rescue Service | | |
| Continuous monitoring required | | | Phone# _____ | | |
| Other(s) | | | | | |

| CONTINUOUS MONITORING TEST(S) TO BE TAKEN | PERMISSIBLE ENTRY LEVEL | RECORD MONITORING RESULTS/TIME |
|---|-------------------------|--------------------------------|
| Percent of Oxygen | 19.5% to 23.5% | _____ |
| Lower flammable limit | Under 10% | _____ |
| Carbon Monoxide | 25 ppm | _____ |
| Aromatic Hydrocarbon | 1 ppm - 5 ppm | _____ |
| Hydrogen Cyanide | 4.7 ppm (S) | _____ |
| Hydrogen Sulphide | 10 ppm* 15 ppm** | _____ |
| Sulphur Dioxide | 2 ppm* 5 ppm** | _____ |
| Ammonia | 25 ppm* 35 ppm** | _____ |
| Other(s) | | _____ |

* 8 hr. time-weighted avg.; Employee can work in area 8 hrs (longer with appropriate respiratory protection).
 ** Short-term exposure limit; Employee can work in the area up to 15 minutes.

REMARKS:

| GAS TESTER NAME & CHECK# | INSTRUMENT(S) USED | MODEL &/OR TYPE | SERIAL &/OR UNIT # |
|--------------------------|--------------------|-----------------|--------------------|
| | | | |

SAFETY STANDBY PERSON IS REQUIRED FOR ALL CONFINED SPACE WORK

| Confined space entrants | Entry time | Exit time | Safety standby person(s) | Ambulance# | Fire# |
|-------------------------|------------|-----------|--------------------------|------------|-------|
| | | | | | |

SUPERVISOR AUTHORIZATION:

I certify that all required precautions have been taken and necessary equipment is provided for safe entry and work in this confined space.

| | | | |
|------------------------|-------------|-------------|------------------|
| Name (print) _____ | Time: _____ | Date: _____ | Signature: _____ |
| Permit cancelled _____ | Time: _____ | Date: _____ | Signature: _____ |

D1. Response to Comments

ATTACHMENT D

Material Safety Data Sheet Sample
 May be used to comply with
 OSHA's Hazard Communication Standards,
 29 CFR 1910.1200. Standard must be
 consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072



IDENTITY (As Used on Label and List) *Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.*

Section I

| | |
|--|----------------------------------|
| Manufacturer's Name | Emergency Telephone Number |
| Address (Number, Street, City, and ZIP Code) | Telephone Number for Information |
| | Date Prepared |
| | Signature of Preparer (optional) |

Section II—Hazardous Ingredients/Identity Information

| Hazardous Components (Specific Chemical Identity; Common Name(s)) | OSHA PEL | ACGIH TLV | Other Limits Recommended | % (optional) |
|---|----------|-----------|--------------------------|--------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
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| | | | | |
| | | | | |
| | | | | |

Section III—Physical/Chemical Characteristics

| | | | |
|-------------------------|--|---|--|
| Boiling Point | | Specific Gravity (H ₂ O = 1) | |
| Vapor Pressure (mm Hg.) | | Melting Point | |
| Vapor Density (AIR = 1) | | Evaporation Rate (Butyl Acetate = 1) | |
| Solubility in Water | | | |
| Appearance and Odor | | | |

Section IV—Fire and Explosion Hazard Data

| | | | |
|------------------------------------|------------------|-----|-----|
| Flash Point (Method Used) | Flammable Limits | LEL | UEL |
| Extinguishing Media | | | |
| Special Fire Fighting Procedures | | | |
| Unusual Fire and Explosion Hazards | | | |

(Reproduce locally)

OSHA 174, Sept. 1985

D1. Response to Comments

Attachment D (continued)

| Section V—Reactivity Data | | | |
|---|-------------------------------|------------------|---------------------|
| Stability | Unstable | | Conditions to Avoid |
| | Stable | | |
| Incompatibility (<i>Materials to Avoid</i>) | | | |
| Hazardous Decomposition or Byproducts | | | |
| Hazardous Polymerization | May Occur | | Conditions to Avoid |
| | Will Not Occur | | |
| Section VI—Health Hazard Data | | | |
| Route(s) of Entry: | Inhalation? | Skin? | Ingestion? |
| Health Hazards (Acute and Chronic) | | | |
| | | | |
| Carcinogenicity: | NTP? | IARC Monographs? | OSHA Regulated? |
| Signs and Symptoms of Exposure: | | | |
| | | | |
| Medical Conditions Generally Aggravated by Exposure: | | | |
| | | | |
| Emergency and First Aid Procedures | | | |
| | | | |
| Section VII—Precautions for Safe Handling and Use | | | |
| Steps to Be Taken in Case Material is Released or Spilled | | | |
| | | | |
| Waste Disposal Method | | | |
| | | | |
| Precautions to Be Taken in Handling and Storing | | | |
| | | | |
| Other Precautions | | | |
| | | | |
| Section VIII—Control Measures | | | |
| Respiratory Protection (<i>Specify type</i>) | | | |
| Ventilation | Local Exhaust | Special | |
| | Mechanical (<i>General</i>) | Other | |
| Protective Gloves | | Eye Protection | |
| Other Protection Clothing or Equipment | | | |
| Work/Hygienic Practices | | | |

D1. Response to Comments

ATTACHMENT E

Setting Up a Permit-Required Confined Space Program

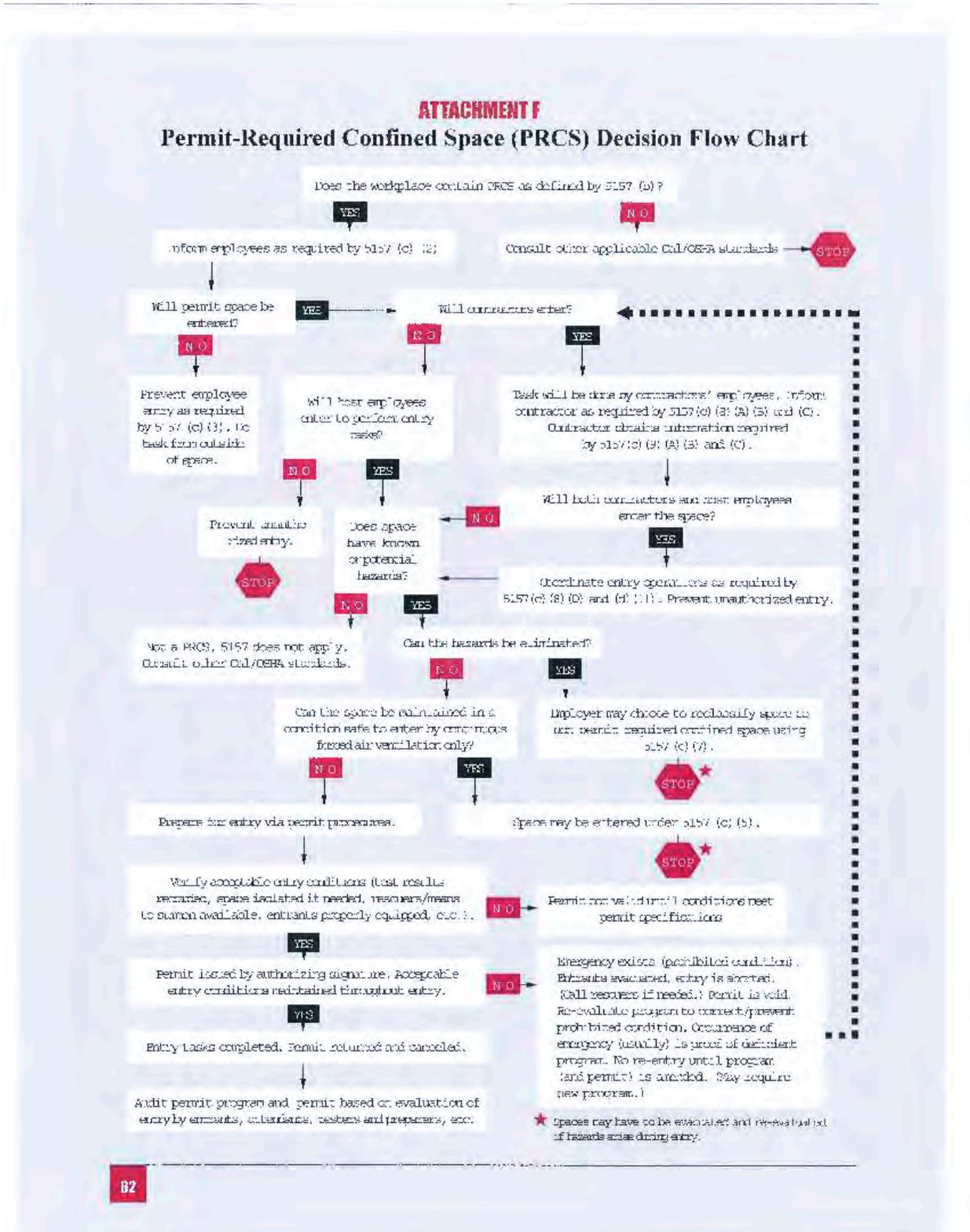
- STEP 1.** Review Confined Space Regulation. Employers can call Cal/OSHA Consultation for a free copy or may access the Internet at the DIR/Standard Board Web site: <www.dir.ca.gov/samples/search/query.htm>.
- STEP 2.** Employers are responsible for implementing and maintaining a written confined space program, but employers can designate qualified employees for developing, implementing and monitoring a permit-required confined space program.
- STEP 3.** Start by assuming that all spaces can be permit-required confined spaces (PRCS). Through a complete survey of your facility, determine *actual and potential* PRCS. Remember that an NPCCS has the potential to become a PRCS because hazards can change or evolve due to processes being used *within* the space, or because of the migration of *external hazards into* the space (e.g., nearby spills/releases of liquids or gases).
- STEP 4.** Post danger signs on all PRCS.
- STEP 5.** Determine if entry is absolutely necessary. If task can be completed from the outside, do so.
- STEP 6.** If employer decides that employees are *not* to enter a permit space, employers must prevent unauthorized entry.
- STEP 7.** If employer determines that employees *must* enter a PRCS, employer must develop and implement *a written permit space program* that includes the means, procedures, and practices for safe permit space entry operation. For complete details see Title 8, CCR, Section 5157(d). The following are some of the highlights:
- * Develop and implement procedures to ensure:
 - a. In-house and off-site rescue service availability.
 - b. Emergency services for rescued employees.
 - c. Pre-entry preparations are completed, where applicable:
 - △ purge △ flush △ wash
 - △ inert △ drain △ ventilate
 - △ isolate (lock out, de-energize, line blank out, etc.)

D1. Response to Comments

ATTACHMENT E

- d. Acceptable entry conditions are attained and maintained, e.g., monitoring throughout entry operation. If a hazardous condition develops, entrants will evacuate, entry will be terminated, permit will be voided, and program will be re-evaluated.
- e. At least one attendant is posted outside the space to ensure entrants are protected from internal and external hazards.
- f. Coordination between host and contractor's employees when working simultaneously.
- g. Employee training for safe entry and duty proficiency on hazard recognition and control, on-site rescue, etc. Train employees on the proper procedures for testing and monitoring, ventilation, communication, lighting, rescue and emergency, and use of any other equipment, including personal protective equipment necessary for safe entry into and rescue from permit spaces. Provide and maintain all necessary tools and equipment at no cost to employees. Be sure to keep training records.
- h. Entry permits address all hazards and controls necessary for safe entry (see Attachment C of this guide for a sample permit). Entry permits must be signed prior to issuance, canceled once entry concludes, and filed for at least one year. These permits are used to review the confined space program.
- i. Confined space entry/rescue programs are reviewed annually, and if necessary, revised to correct any deficiencies in order to ensure that employees entering permit spaces are protected from permit space hazards.

D1. Response to Comments



D1. Response to Comments

REFERENCES

Cal/OSHA Regulations and Guidelines:

Confined Space Hazard Alert

http://www.dir.ca.gov/dosh/dosh_publications/ConfinedSpaceHazardAlert.pdf

Confined Space Regulations, Title 8, Article 108, Sections [5156](#), [5157](#), and [5158](#)

Control of Noise Exposure, Title 8, Article 105, Section [5095](#)

Guide to California Hazard Communication Regulation

http://www.dir.ca.gov/dosh/dosh_publications/hazcom.pdf

Lockout/Blockout

English: http://www.dir.ca.gov/dosh/dosh_publications/lock2005Eng.pdf

Spanish: http://www.dir.ca.gov/dosh/dosh_publications/lock2005Span.pdf

eTool: <http://www.dir.ca.gov/dosh/etools/08-003/index.htm>

Pocket Guide for the Construction Industry

http://www.dir.ca.gov/dosh/dosh_publications/ConstGuideOnline.pdf

Respiratory Protection in the Workplace

http://www.dir.ca.gov/dosh/dosh_publications/respiratory.pdf

National Institute for Occupational Safety and Health (NIOSH)—Pocket Guide to Chemical Hazards (No. 94-116)

New York State Department of Labor, 1994. Employer Guide and Model Permit-Required Confined Space Entry Plan

NIOSH—Worker Deaths in Confined Spaces (No. 94-103)

Occupational Safety and Health Administration (OSHA) References:

Application of the Permit-Required Confined Spaces (PRCS) Standard, 29 CFR 1910.146

Confined Spaces: Atmospheric Testing in Confined Spaces Fact Sheet

http://www.osha.gov/OshDoc/data/Hurricane_Facts/atmospheric_test_confined.pdf

Confined Spaces: Permit-Required Confined Spaces QuickCard™ [English](#) [Spanish](#)

OSHA Confined Spaces Advisor [Download](#) [Online](#)

Occupational Safety and Health Administration (OSHA) Instruction CPL 2.100, May 5, 1995

Permit Required Confined Spaces <http://www.osha.gov/Publications/osha3138.pdf>

Note:

Cal/OSHA is more effective on Section 5158 applying to industries not covered by OSHA standard.

Section 5158 requires at least one onsite rescue standby person for all employers.

D1. Response to Comments

P. 64-blank

D1. Response to Comments



EVALUATION

Dear Reader,

We value and welcome your comments on the *Confined Space Guide*. To better assist employers and employees, Cal/OSHA would like to invite you to participate in a brief evaluation. Please detach this page and fax to (916) 574-2532, or mail to: Cal/OSHA Education and Training Unit, 2211 Park Towne Circle Suite No. 4, Sacramento, CA 95825. **We thank you for your participation!**

| Yes | No | Please <input checked="" type="checkbox"/> and comment. Thank you. |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | 1. Has the guide helped you to understand confined space hazards and requirements? Why or why not? _____ _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | 2. Did we miss any important confined space issues? If yes, what? _____ _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | 3. Has the information contained in the guide encouraged you to: <input type="checkbox"/> Develop a written confined space program in your facility <input type="checkbox"/> Assess an existing confined space program <input type="checkbox"/> Make improvements to your current confined space program |
| <input type="checkbox"/> | <input type="checkbox"/> | 4. Overall, is the guide informative, useful, and easy to understand? Why or why not? _____ _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | 5. Do you have any specific comment(s) regarding the text or sections of this guide? If so, write your comment(s) and refer to specific page number(s), text, or section. _____ _____ _____ |
| <input type="checkbox"/> | <input type="checkbox"/> | 6. Do you have any success stories (avoided accidents, reduced number of injuries, etc.) that you would like to share with us? If so, please provide your company name and a brief description. _____ _____ _____ |

D1. Response to Comments

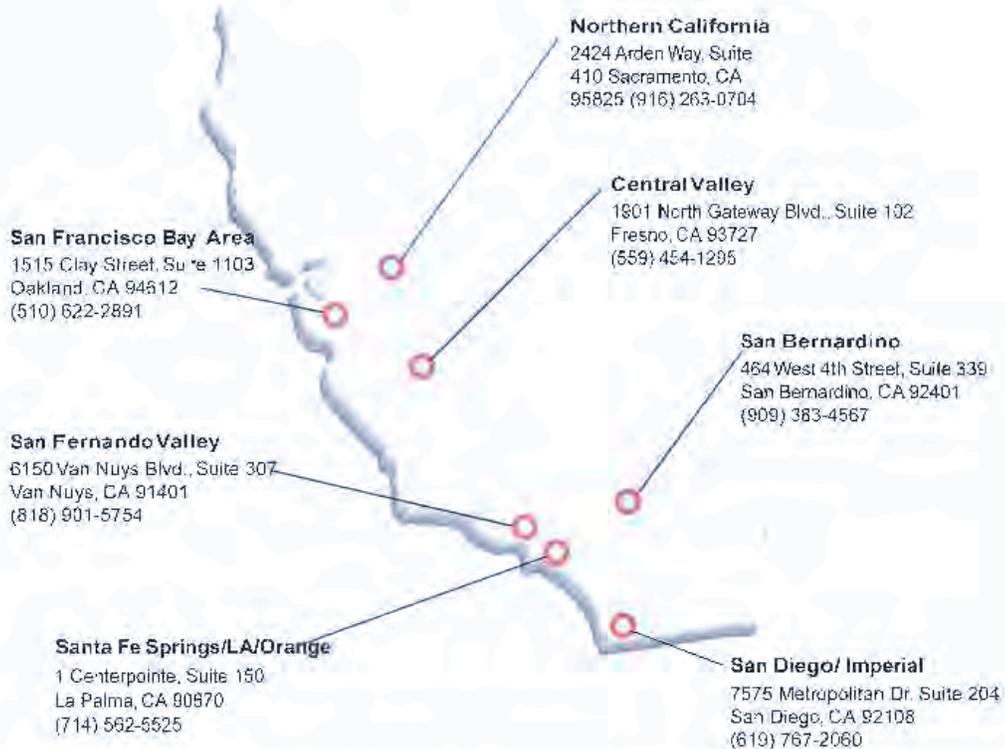


California
Department of
Industrial Relations

Cal/OSHA Consultation Programs

• Toll-free Number: 1-800-963-9424 • Internet: www.dir.ca.gov

On-site Assistance Program Area Offices



Your call will in no way trigger an inspection by Cal/OSHA enforcement.

• **Research and Education Unit**
Sacramento, CA 95825
(916) 574-2528

• **Voluntary Protection Program**
Oakland, CA 94612
(510) 622-1081

D1. Response to Comments

ATTACHMENT 10 | 3.10-1

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157 Permit-Required Confined Spaces.

This information is provided free of charge by the Department of Industrial Relations from its web site at www.dir.ca.gov. These regulations are for the convenience of the user and no representation or warranty is made that the information is current or accurate. See full disclaimer at http://www.dir.ca.gov/od_pub/disclaimer.html.

Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 108. Confined Spaces

[Return to index](#)

[New query](#)

§5157. Permit-Required Confined Spaces.

(a) Scope and application. This section contains requirements for practices and procedures to protect employees from the hazards of entry into permit-required confined spaces. This section applies to employers, as specified in section 5156(b)(1).

(b) Definitions.

Acceptable entry conditions means the conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit-required confined space entry can safely enter into and work within the space.

Attendant means an individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendant's duties assigned in the employer's permit space program.

Authorized entrant means an employee who is authorized by the employer to enter a permit space.

Blanking or blinding means the absolute closure of a pipe, line, or duct by the fastening of a solid plate (such as a spectacle blind or a skillet blind) that completely covers the bore and that is capable of withstanding the maximum pressure of the pipe, line, or duct with no leakage beyond the plate.

Confined space means a space that:

- (1) Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- (2) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.); and
- (3) Is not designed for continuous employee occupancy

<http://www.dir.ca.gov/TITLE8/5157.html>

1/18

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.

Double block and bleed means the closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening and locking or tagging a drain or vent valve in the line between the two closed valves.

Emergency means any occurrence (including any failure of hazard control or monitoring equipment) or event internal or external to the permit space that could endanger entrants.

Engulfment means the surrounding and effective capture of a person by a liquid or finely divided (flowable) solid substance that can be aspirated to cause death by filling or plugging the respiratory system or that can exert enough force on the body to cause death by strangulation, constriction, or crushing.

Entry means the action by which a person passes through an opening into a permit-required confined space. Entry includes ensuing work activities in that space and is considered to have occurred as soon as any part of the entrant's body breaks the plane of an opening into the space.

Entry permit (permit) means the written or printed document that is provided by the employer to allow and control entry into a permit space and that contains the information specified in subsection (f).

Entry supervisor means the person (such as the employer, foreman, or crew chief) responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry as required by this section.

NOTE: An entry supervisor also may serve as an attendant or as an authorized entrant, as long as that person is trained and equipped as required by this section for each role he or she fills. Also, the duties of entry supervisor may be passed from one individual to another during the course of an entry operation.

Hazardous atmosphere means an atmosphere that may expose employees to the risk of death, incapacitation, impairment of ability to self-rescue (that is, escape unaided from a permit space), injury, or acute illness from one or more of the following causes:

- (1) Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
- (2) Airborne combustible dust at a concentration that meets or exceeds its LFL;

NOTE: This concentration may be approximated as a condition in which the dust obscures vision at a distance of 5 feet (1.52 M) or less.

- (3) Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
- (4) Atmospheric concentration of any substance for which a dose is published in Group 14 for Radiation and Radioactivity or a permissible exposure limit is published in section 5155 for Airborne contaminants and which could result in employee exposure in excess of its dose or permissible exposure limit;

NOTE: An atmospheric concentration of any substance that is not capable of causing death, incapacitation, impairment of ability to self-rescue, injury, or acute illness due to its health effects is not covered by this provision.

- (5) Any other atmospheric condition that is immediately dangerous to life or health.

<http://www.dir.ca.gov/Title8/5157.html>

2/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157: Permit-Required Confined Spaces

NOTE: For air contaminants for which a dose is not published in Group 14 for Radiation and Radioactivity or a permissible exposure limit is not published in section 5155 for Airborne contaminants, other sources of information such as: Safety Data Sheets that comply with section 5194, published information, and internal documents can provide guidance in establishing acceptable atmospheric conditions.

Hot work permit means the employer's written authorization to perform operations (for example, riveting, welding, cutting, burning, and heating) capable of providing a source of ignition.

Immediately dangerous to life or health (IDLH) means any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

NOTE: Some materials - hydrogen fluoride gas and cadmium vapor, for example - may produce immediate transient effects that, even if severe, may pass without medical attention, but are followed by sudden, possibly fatal collapse 12-72 hours after exposure. The victim "feels normal" from recovery from transient effects until collapse. Such materials in hazardous quantities are considered to be "immediately" dangerous to life or health.

Inerting means the displacement of the atmosphere in a permit space by a noncombustible gas (such as nitrogen) to such an extent that the resulting atmosphere is noncombustible.

NOTE: This procedure produces an IDLH oxygen-deficient atmosphere.

Isolation means the process by which a permit space is removed from service and completely protected against the release of energy and material into the space by such means as: Blanking or blinding; misaligning or removing sections of lines, pipes, or ducts; a double block and bleed system; lockout or tagout of all sources of energy; or blocking or disconnecting all mechanical linkages.

Line breaking means the intentional opening of a pipe, line, or duct that is or has been carrying flammable, corrosive, or toxic material, an inert gas, or any fluid at a volume, pressure or temperature capable of causing injury.

Non-permit confined space means a confined space that does not contain or, with respect to atmospheric hazards, have the potential to contain any hazard capable of causing death or serious physical harm.

Oxygen deficient atmosphere means an atmosphere containing less than 19.5 percent oxygen by volume.

Oxygen enriched atmosphere means an atmosphere containing more than 23.5 percent oxygen by volume.

Permit-required confined space (permit space) means a confined space that has one or more of the following characteristics:

- (1) Contains or has a potential to contain a hazardous atmosphere;
- (2) Contains a material that has the potential for engulfing an entrant;
- (3) Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross-section; or

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces

(4) Contains any other recognized serious safety or health hazard.

Permit-required confined space program (permit space program) means the employer's overall program for controlling, and, where appropriate, for protecting employees from, permit space hazards and for regulating employee entry into permit spaces.

Permit system means the employer's written procedure for preparing and issuing permits for entry and for returning the permit space to service following termination of entry.

Prohibited condition means any condition in a permit space that is not allowed by the permit during the period when entry is authorized.

Rescue service means the personnel designated to rescue employees from permit spaces.

Removal system means the equipment (including a retrieval line, chest or full-body harness, wristlets, if appropriate, and a lifting device or anchor) used for non-entry rescue of persons from permit spaces.

Testing means the process by which the hazards that may confront entrants of a permit space are identified and evaluated. Testing includes specifying the tests that are to be performed in the permit space. If electronic or thermal equipment is used to perform such tests, and the possibility exists of an explosive substance or a hazardous atmosphere due to flammable gases and vapors, then the testing equipment must be approved for use in such explosive or flammable conditions as required by section 2540.2.

NOTE: Testing enables employers both to devise and implement adequate control measures for the protection of authorized entrants and to determine if acceptable entry conditions are present immediately prior to, and during, entry.

(c) General requirements.

(1) The employer shall evaluate the workplace to determine if any spaces are permit-required confined spaces.

NOTE: Proper application of the decision flow chart in Appendix A would facilitate compliance with this requirement.

(2) If the workplace contains permit spaces, the employer shall inform exposed employees and other employees performing work in the area, by posting danger signs or by any other equally effective means, of the existence, location of and the danger posed by the permit spaces.

NOTE: A sign reading "DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER" or using other similar language would satisfy the requirement for a sign.

(3) If the employer decides that its employees and other employees performing work in the area will not enter permit spaces, the employer shall take effective measures to prevent all such employees from entering the permit spaces and shall comply with subsections (c)(1), (c)(2), (c)(6), and (c)(8).

(4) If the employer decides that its employees will enter permit spaces, the employer shall develop and implement a written permit space program that complies with this section. The written program shall be available for inspection by employees and their authorized representatives.

<http://www.dir.ca.gov/Title8/5157.html>

4/15

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces.

(5) An employer may use the alternate procedures specified in subsection (c)(5)(B) for entering a permit space under the conditions set forth in subsection (c)(5)(A).

(A) An employer whose employees enter a permit space need not comply with subsections (d) through (f) and (h) through (k), provided that:

1. The employer can demonstrate that the only hazard posed by the permit space is an actual or potential hazardous atmosphere;
2. The employer can demonstrate that continuous forced air ventilation alone is sufficient to maintain that permit space safe for entry;
3. The employer develops monitoring and inspection data that supports the demonstrations required by subsections (c)(5)(A)1. and 2.;
4. If an initial entry of the permit space is necessary to obtain the data required by subsection (c)(5)(A)3., the entry is performed in compliance with subsections (d) through (k);
5. The determinations and supporting data required by subsections (c)(5)(A)1., 2. and 3. are documented by the employer and are made available to each employee who enters the permit space under the terms of subsection (c)(5) or to that employee's authorized representative; and
6. Entry into the permit space under the terms of subsection (c)(5)(A) is performed in accordance with the requirements of subsection (c)(5)(B).

NOTE: See subsection (c)(7) for reclassification of a permit space after all hazards within the space have been eliminated.

(B) The following requirements apply to entry into permit spaces that meet the conditions set forth in subsection (c)(5)(A).

1. Any conditions making it unsafe to remove an entrance cover shall be eliminated before the cover is removed.
2. When entrance covers are removed, the opening shall be promptly guarded by a railing, temporary cover, or other temporary barrier that will prevent an accidental fall through the opening and that will protect each employee working in the space from foreign objects entering the space.
3. Before an employee enters the space, the internal atmosphere shall be tested, with a calibrated direct-reading instrument, for the following conditions in the order given:
 - a. Oxygen content,
 - b. Flammable gases and vapors, and
 - c. Potential toxic air contaminants.

<http://www.dir.ca.gov/Title8/5157.html>

516

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.

4. There may be no hazardous atmosphere within the space whenever any employee is inside the space.
 5. Continuous forced air ventilation shall be used, as follows:
 - a. An employee may not enter the space until the forced air ventilation has eliminated any hazardous atmosphere;
 - b. The forced air ventilation shall be so directed as to ventilate the immediate areas where an employee is or will be present within the space and shall continue until all employees have left the space;
 - c. The air supply for the forced air ventilation shall be from a clean source and may not increase the hazards in the space.
 6. The atmosphere within the space shall be periodically tested as necessary to ensure that the continuous forced air ventilation is preventing the accumulation of a hazardous atmosphere.
 7. If a hazardous atmosphere is detected during entry:
 - a. Each employee shall leave the space immediately;
 - b. The space shall be evaluated to determine how the hazardous atmosphere developed; and
 - c. Measures shall be implemented to protect employees from the hazardous atmosphere before any subsequent entry takes place.
 8. The employer shall verify that the space is safe for entry and that the pre-entry measures required by subsection (c)(5)(B) have been taken, through a written certification that contains the date, the location of the space, and the signature of the person providing the certification. The certification shall be made before entry and shall be made available to each employee entering the space or to that employee's authorized representative.
 9. Any employee who enters the space, or that employee's authorized representative, shall be provided an opportunity to observe the pre-entry testing required by subsections (c)(5)(B)3. and 6.
- (6) When there are changes in the use or configuration of a non-permit confined space that might increase the hazards to entrants, the employer shall reevaluate that space and, if necessary, reclassify it as a permit-required confined space.
- (7) A space classified by the employer as a permit-required confined space may be reclassified as a non-permit confined space under the following procedures:
- (A) If the permit space poses no actual or potential atmospheric hazards and if all hazards within the space are eliminated without entry into the space, the permit space may be reclassified as a non-permit confined space for as long as the non-atmospheric hazards remain eliminated.

<http://www.dfr.ca.gov/Title8/5157.html>

16/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces

(B) If it is necessary to enter the permit space to eliminate hazards, such entry shall be performed under subsections (d) through (k). If testing and inspection during that entry demonstrate that the hazards within the permit space have been eliminated, the permit space may be reclassified as a non-permit confined space for as long as the hazards remain eliminated.

NOTE: Control of atmospheric hazards through forced air ventilation does not constitute elimination of the hazards. Subsection (c)(5) covers permit space entry where the employer can demonstrate that forced air ventilation alone will control all hazards in the space.

(C) The employer shall document the basis for determining that all hazards in a permit space have been eliminated through a certification that contains the date, the location of the space, and the signature of the person making the determination. The certification shall be made available to each employee entering the space or to that employee's authorized representative.

(D) If hazards arise within a permit space that has been declassified to a non-permit space under subsection (c)(7), each employee in the space shall exit the space. The employer shall then reevaluate the space and determine whether it must be reclassified as a permit space, in accordance with other applicable provisions of this section.

(8) When an employer (host employer) arranges to have employees of another employer (contractor) perform work that involves permit space entry or confined space entries covered by sections 5158 or 8355, the host employer shall:

(A) Inform the contractor that the workplace contains permit spaces and that permit space entry is allowed only through compliance with a permit space program meeting the requirements of this section, section 5158 or section 8355, depending on which section applies to the contractor;

(B) Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the space, that make the space in question a permit space;

(C) Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near permit spaces where contractor personnel will be working;

(D) Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by subsection (d)(11); and

(E) Debrief the contractor at the conclusion of the entry operations regarding the permit spaced program followed and regarding any hazards confronted or created in permit spaces during entry operations.

(9) In addition to complying with the permit space requirements that apply to all employers, each contractor who is retained to perform permit space entry operations shall:

(A) Obtain any available information regarding permit space hazards and entry operations from the host employer;

(B) Coordinate entry operations with the host employer, when both host employer personnel and contractor personnel will be working in or near permit spaces, as required by subsection (d)(11); and

<http://www.dir.ca.gov/Title8/5157.html>

7/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces.

(C) Inform the host employer of the permit space program that the contractor will follow and of any hazards confronted or created in permit spaces, either through a debriefing or during the entry operation.

(d) Permit-required confined space program (permit space program). Under the permit required confined space program required by subsection (c)(4), the employer shall:

- (1) Implement the measures necessary to prevent unauthorized entry;
- (2) Identify and evaluate the hazards of permit spaces before employees enter them;
- (3) Develop and implement the means, procedures, and practices necessary for safe permit space entry operations, including, but not limited to, the following:
 - (A) Specifying acceptable entry conditions;
 - (B) Isolating the permit space;
 - (C) Purging, inerting, flushing, or ventilating the permit space as necessary to eliminate or control atmospheric hazards;
 - (D) Providing pedestrian, vehicle, or other barriers as necessary to protect entrants from external hazards; and
 - (E) Verifying that conditions in the permit space are acceptable for entry throughout the duration of an authorized entry.
- (4) Provide the following equipment (specified in subsections (A) through (I), below) at no cost to employees, maintain that equipment properly, and ensure that employees use that equipment properly:
 - (A) Testing and monitoring equipment needed to comply with subsection (d)(5);
 - (B) Ventilating equipment needed to obtain acceptable entry conditions;
 - (C) Communications equipment necessary for compliance with subsections (h)(3) and (i)(5);
 - (D) Personal protective equipment insofar as feasible engineering and work practice controls do not adequately protect employees;
 - (E) Lighting equipment needed to enable employees to see well enough to work safely and to exit the space quickly in an emergency;
 - (F) Barriers and shields as required by subsection (d)(3)(D);
 - (G) Equipment, such as ladders, needed for safe ingress and egress by authorized entrants;
 - (H) Rescue and emergency equipment needed to comply with subsection (d)(9), except to the extent that the equipment is provided by rescue services; and

<http://www.dir.ca.gov/Title8/5157.html>

8/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.

- (1) Any other equipment necessary for safe entry into and rescue from permit spaces.
- (5) Evaluate permit space conditions as follows when entry operations are conducted:
- (A) Test conditions in the permit space to determine if acceptable entry conditions exist before entry is authorized to begin, except that, if isolation of the space is infeasible because the space is large or is part of a continuous system (such as a sewer), pre-entry testing shall be performed to the extent feasible before entry is authorized and, if entry is authorized, entry conditions shall be continuously monitored in the areas where authorized entrants are working;
- (B) Test or monitor the permit space as necessary to determine if acceptable entry conditions are being maintained during the course of entry operations, and
- (C) When testing for atmospheric hazards, test first for oxygen, then for combustible gases and vapors, and then for toxic gases and vapors.
- (D) Provide each authorized entrant or that employee's authorized representative an opportunity to observe the pre-entry and any subsequent testing or monitoring of permit spaces;
- (E) Reevaluate the permit space in the presence of any authorized entrant or that employee's authorized representative who requests that the employer conduct such reevaluation because the entrant or representative has reason to believe that the evaluation of that space may not have been adequate;
- (F) Immediately provide each authorized entrant or that employee's authorized representative with the results of any testing conducted in accord with subsection (d).

NOTE: Atmospheric testing conducted in accordance with Appendix B would be considered as satisfying the requirements of this subsection. For permit space operations in sewers, atmospheric testing conducted in accordance with Appendix B, as supplemented by Appendix E, would be considered as satisfying the requirements of this subsection.

- (6) Provide at least one attendant outside the permit space into which entry is authorized for the duration of entry operations;

NOTE: Attendants may be assigned to monitor more than one permit space provided the duties described in subsection (i) can be effectively performed for each permit space that is monitored. Likewise, attendants may be stationed at any location outside the permit space to be monitored as long as the duties described in subsection (i) can be effectively performed for each permit space that is monitored.

- (7) If multiple spaces are to be monitored by a single attendant, include in the permit program the means and procedures to enable the attendant to respond to an emergency affecting one or more of the permit spaces being monitored without distraction from the attendant's responsibilities under subsection (i);
- (8) Designate the persons who are to have active roles (as, for example, authorized entrants, attendants, entry supervisors, or persons who test or monitor the atmosphere in a permit space) in entry operations, identify the duties of each such employee, and provide each such employee with the training required by subsection (g);

<http://www.dir.ca.gov/Title8/5157.html>

9/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.

- (9) Develop and implement procedures for rescuing entrants from permit spaces, for providing necessary emergency services to rescued employees, for summoning additional rescue and emergency services, and for preventing unauthorized personnel from attempting a rescue;
- (10) Develop and implement a system for the preparation, issuance, use, and cancellation of entry permits as required by this section;
- (11) Develop and implement procedures to coordinate entry operations when employees of more than one employer are working simultaneously as authorized entrants in a permit space, so that employees of one employer do not endanger the employees of any other employer. If the requirements of sections 5158 or 8355 apply to one or more of the other employers, then the procedures shall also ensure coordination with those employers, so as not to endanger any exposed employees;
- (12) Develop and implement procedures (such as closing off a permit space and canceling the permit) necessary for concluding the entry after entry operations have been completed;
- (13) Review entry operations when the employer has reason to believe that the measures taken under the permit space program may not protect employees and revise the program to correct deficiencies found to exist before subsequent entries are authorized; and

NOTE: Examples of circumstances requiring the review of the permit space program are: any unauthorized entry of a permit space, the detection of a permit space hazard not covered by the permit, the detection of a condition prohibited by the permit, the occurrence of an injury or near-miss during entry, a change in the use or configuration of a permit space, and employee complaints about the effectiveness of the program.

- (14) Review the permit space program, using the canceled permits retained under subsection (c)(6) within 1 year after each entry and revise the program as necessary, to ensure that employees participating in entry operations are protected from permit space hazards.

NOTE: Employers may perform a single annual review covering all entries performed during a 12-month period. If no entry is performed during a 12-month period, no review is necessary.

Appendix C presents examples of permit space programs that are considered to comply with the requirements of subsection (d).

(e) Permit system

- (1) Before entry is authorized, the employer shall document the completion of measures required by subsection (d)(3) by preparing an entry permit.

NOTE: Appendix D presents examples of permits whose elements are considered to comply with the requirements of this section.

- (2) Before entry begins, the entry supervisor identified on the permit shall sign the entry permit to authorize entry.
- (3) The completed permit shall be made available at the time of entry to all authorized entrants or their authorized representatives, by posting it at the entry portal or by any other equally effective

<http://www.dir.ca.gov/Title8/5157.html>

10/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces

means, so that the entrants can confirm that pre-entry preparations have been completed.

(4) The duration of the permit may not exceed the time required to complete the assigned task of job identified on the permit in accordance with subsection (f)(2).

(5) The entry supervisor shall terminate entry and cancel the entry permit when:

(A) The entry operations covered by the entry permit have been completed; or

(B) A condition that is not allowed under the entry permit arises in or near the permit space.

(6) The employer shall retain each canceled entry permit for at least 1 year to facilitate the review of the permit space program required by subsection (d)(14). Any problems encountered during an entry operation shall be noted on the pertinent permit so that appropriate revisions to the permit space program can be made.

(J) Entry permit. The entry permit that documents compliance with this section and authorizes entry to a permit space shall identify:

(1) The permit space to be entered;

(2) The purpose of the entry;

(3) The date and the authorized duration of the entry permit;

(4) The authorized entrants within the permit space, by name or by such other means (for example, through the use of rosters or tracking systems) as will enable the attendant to determine quickly and accurately, for the duration of the permit, which authorized entrants are inside the permit space;

NOTE: This requirement may be met by inserting a reference on the entry permit as to the means used, such as roster or tracking systems, to keep track of the authorized entrants within the permit space.

(5) The personnel, by name, currently serving as attendants;

(6) The individual, by name, currently serving as entry supervisor, with a space for the signature or initials of the entry supervisor who originally authorized entry;

(7) The hazards of the permit space to be entered;

(8) The measures used to isolate the permit space and to eliminate or control permit space hazards before entry;

NOTE: Those measures can include the lockout or tagging of equipment and procedures for purging, inerting, ventilating, and flushing permit spaces.

(9) The acceptable entry conditions;

(10) The results of initial and periodic tests performed under subsection (d)(5) accompanied by the names or initials of the testers and by an indication of when the tests were performed;

<http://www.dir.ca.gov/Title8/5157.html>

11/181

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces.

(11) The rescue and emergency services that can be provided on-site and additional service that can be summoned and the means such as the equipment to use and the numbers to call) for summoning those services;

(12) The communication procedures used by authorized entrants and attendants to maintain contact during the entry;

(13) Equipment, such as personal protective equipment, testing equipment, communications equipment, alarm systems, and rescue equipment, to be provided for compliance with this section;

(14) Any other information whose inclusion is necessary, given the circumstances of the particular confined space, in order to ensure employee safety, and

(15) Any additional permits, such as for hot work, that have been issued to authorize work in the permit space.

(g) Training.

(1) The employer shall provide training so that all employees whose work is regulated by this section acquire the understanding, knowledge, and skills necessary for the safe performance of the duties assigned under this section.

(2) Training shall be provided to each affected employee:

(A) Before the employee is first assigned duties under this section;

(B) Before there is a change in assigned duties;

(C) Whenever there is a change in permit space operations that presents a hazard about which an employee has not previously been trained;

(D) Whenever the employer has reason to believe either that there are deviations from the permit space entry procedures required by subsection (d)(3) or that there are inadequacies in the employee's knowledge or use of these procedures.

(3) The training shall establish employee proficiency in the duties required by this section and shall introduce new or revised procedures, as necessary, for compliance with this section.

(4) The employer shall certify that the training required by subsections (g)(1) through (g)(3) has been accomplished. The certification shall contain each employee's name, the signatures or initials of the trainers, and the dates of training. The certification shall be available for inspection by employees and their authorized representatives.

(h) Duties of authorized entrants. The employer shall ensure that all authorized entrants:

(1) Know the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;

(2) Properly use equipment as required by subsection (d)(4);

<http://www.dir.ca.gov/Title8/5157.html>

12/15

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.

(3) Communicate with the attendant as necessary to enable the attendant to monitor entrant status and to enable the attendant to alert entrants of the need to evacuate the space as required by subsection (i)(6);

(4) Alert the attendant whenever:

(A) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation, or

(B) The entrant detects a prohibited condition; and

(5) Exit from the permit space as quickly as possible whenever:

(A) An order to evacuate is given by the attendant or the entry supervisor,

(B) The entrant recognizes any warning sign or symptom of exposure to a dangerous situation,

(C) The entrant detects a prohibited condition, or

(D) An evacuation alarm is activated.

(j) Duties of attendants. The employer shall ensure that each attendant:

(1) Knows the hazards that may be faced during entry, including information on the mode, signs, or symptoms, and consequences of the exposure;

(2) Is aware of possible behavioral effects of hazard exposure in authorized entrants;

(3) Continuously maintains an accurate count of authorized entrants in the permit space and ensures that the means used to identify authorized entrants under subsection (f)(4) accurately identifies who is in the permit space;

(4) Remains outside the permit space during entry operations until relieved by another attendant;

NOTE: When the employer's permit entry program allows attendant entry for rescue, attendants may enter a permit space to attempt a rescue if they have been trained and equipped for rescue operations as required by subsection (k)(1) and if they have been relieved as required by subsection (i)(4).

(5) Communicates with authorized entrants as necessary to monitor entrant status and to alert entrants of the need to evacuate the space under subsection (i)(6);

(6) Monitors activities inside and outside the space to determine if it is safe for entrants to remain in the space and orders the authorized entrants to evacuate the permit space immediately under any of the following conditions;

(A) If the attendant detects a prohibited condition;

(B) If the attendant detects the behavioral effects of hazards exposure in an authorized entrant;

(C) If the attendant detects a situation outside the space that could endanger the authorized entrants;

<http://www.dir.ca.gov/Title8/5157.html>

13/16

D1. Response to Comments



D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157. Permit-Required Confined Spaces.

or

(D) If the attendant cannot effectively and safely perform all the duties required under subsection (i);

(7) Initiate on-site rescue procedures and, if necessary, summon additional rescue and other emergency services as soon as the attendant determines that authorized entrants may need assistance to escape from permit space hazards;

(8) Takes the following actions when unauthorized persons approach or enter a permit space while entry is underway:

(A) Warn the unauthorized persons that they must stay away from the permit space;

(B) Advise the unauthorized persons that they must exit immediately if they have entered the permit space; and

(C) Inform the authorized entrants and the entry supervisor if unauthorized persons have entered the permit space;

(9) Performs non-entry rescues or other rescue services as part of the employer's on-site rescue procedure; and

(10) Performs no duties that might interfere with the attendant's primary duty to monitor and protect the authorized entrants.

(j) Duties of entry supervisors. The employer shall ensure that each entry supervisor:

(1) Knows the hazards that may be faced during entry, including information on the mode, signs or symptoms, and consequences of the exposure;

(2) Verifies, by checking that the appropriate entries have been made on the permit, that all tests specified by the permit have been conducted and that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin;

(3) Terminates the entry and cancels the permit as required by subsection (e)(5);

(4) Verifies that rescue services are available and that the means for summoning additional services are operable;

(5) Removes unauthorized individuals who enter or who attempt to enter the permit space during entry operations; and

(6) Determines, whenever responsibility for a permit space entry operation is transferred and at intervals dictated by the hazards and operations performed within the space, that entry operations remain consistent with terms of the entry permit and that acceptable entry conditions are maintained.

(k) Rescue and emergency services. The employer shall ensure that at least one standby person at the site is trained and immediately available to perform rescue and emergency services.

<http://www.dir.ca.gov/Title8/5157.html>

14/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces.

- (1) The following requirements apply to employers who have employees enter permit spaces to perform rescue services:
- (A) The employer shall ensure that each member of the rescue service is provided with, and is trained to use properly, the personal protective equipment and rescue equipment necessary for making rescues from permit spaces.
- (B) Each member of the rescue service shall be trained to perform the assigned rescue duties. Each member of the rescue service shall also receive the training required of authorized entrants under subsections (g) and (h).
- (C) Each member of the rescue service shall practice making permit space rescues at least once every 12 months, by means of simulated rescue operations in which they remove dummies, manikins, or actual persons from the actual permit spaces or from representative permit spaces. Representative permit spaces shall, with respect to opening size, configuration, and accessibility, simulate the types of permit spaces from which rescue is to be performed.
- (D) Each member of the rescue service shall be trained in basic first-aid and in cardiopulmonary resuscitation (CPR). At least one member of the rescue service holding current certification in first aid and in CPR shall be available.
- (2) When an employer (host employer) arranges to have persons other than the host employer's employees perform permit space rescue, the host employer shall:
- (A) Inform the rescue service of the hazards they may confront when called on to perform rescue at the host employer's facility, and
- (B) Provide the rescue service with access to all permit spaces from which rescue may be necessary so that the rescue service can develop appropriate rescue plans and practice rescue operations.
- (3) To facilitate non-entry rescue, retrieval systems or methods shall be used whenever an authorized entrant enters a permit space, unless the retrieval equipment would increase the overall risk of entry or would not contribute to the rescue of the entrant. Retrieval systems shall meet the following requirements:
- (A) Each authorized entrant shall use a chest or full body harness, with a retrieval line attached at a suitable point so that when rescued, the entrant presents the smallest possible profile (for example at the center of the entrant's back near shoulder level, or above the entrant's head). Wristlets may be used in lieu of the chest or full body harness if the employer can demonstrate that the use of a chest or full body harness is infeasible or creates a greater hazard and that the use of wristlets is the safest and most effective alternative.
- (B) The other end of the retrieval line shall be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary. A mechanical device shall be available to retrieve personnel from vertical type permit spaces more than 5 feet deep.
- (4) If an injured entrant is exposed to a substance for which a Safety Data Sheet (SDS) or other similar written information is required to be kept at the worksite, that SDS or written information shall be made available to the medical facility treating the exposed entrant.

<http://www.dir.ca.gov/Title8/5157.html>

15/16

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5157, Permit-Required Confined Spaces.

(f) Employee participation.

(1) Employers shall consult with affected employees and their authorized representatives on the development and implementation of all aspects of the permit space program required by subsection (c).

(2) Employers shall make available to affected employees and their authorized representatives all information required to be developed by this section.

(m) Appendices, Appendices A through E serve to provide information and non-mandatory guidelines to assist employers and employees in complying with the appropriate requirements of this section.

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. Repealer and new section filed 11-24-93; operative 12-24-93 (Register 93, No. 48). For prior history, see Register 79, No. 36.
2. Editorial correction of printing error in subsections (d)(5)(C), (i)(8)(B) and (j) (Register 94, No. 29).
3. Editorial correction of subsection (k)(1)(C) (Register 97, No. 23).
4. Editorial correction of subsection (b)(3) (Register 99, No. 10).
5. Amendment of subsections (c)(5)(A)5., (c)(5)(B)8., (c)(7)(C), (e)(3) and (k)(1)(B), new subsections (c)(5)(B)9., (d)(5)(D)-(F) and (f)-(f)(2) and subsection relettering filed 7-13-99; operative 7-13-99. Submitted to OAL for printing only pursuant to Labor Code section 142.3(a)(3) (Register 99, No. 29).
6. Amendment of subsection (b) -Testing filed 3-23-2000; operative 4-22-2000 (Register 2000, No. 12).
7. Amendment of subsections (c)(2)-(c)(3), (c)(8)-(c)(8)(A) and (d)(11) filed 4-25-2001; operative 5-25-2001 (Register 2001, No. 17).
8. Amendment of subsection (b)(5) - Note and subsection (k)(4) filed 5-5-2014; operative 5-6-2014 pursuant to Government Code section 11343.4(b)(3) (Register 2014, No. 19).

[Appendix A](#)

[Appendix A \(PDF\)](#)

[Appendix B](#)

[Appendix C](#)

[Appendix D1](#)

[Appendix D2](#)

[Appendix E](#)

[Go Back to Article 108 Table of Contents](#)

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5158. Other Confined Space Operations.

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Subchapter 7. General Industry Safety Orders
Group 16. Control of Hazardous Substances
Article 108. Confined Spaces

[Return to
index](#)
[New query](#)

§5158. Other Confined Space Operations.

(a) Scope. For industries and operations specified in section 5156(b)(2) this section prescribes minimum standards for preventing employee exposure to dangerous air contamination, oxygen enrichment and/or oxygen deficiency in confined spaces, as defined in subsection (b).

Note: Implementing a permit-required confined space program in accordance with section 5157 shall meet the requirements of this section.

(b) Definitions.

(1) Confined Space. A space defined by the concurrent existence of the following conditions:

(A) Existing ventilation is insufficient to remove dangerous air contamination, oxygen enrichment and/or oxygen deficiency which may exist or develop.

(B) Ready access or egress for the removal of a suddenly disabled employee is difficult due to the location and/or size of the opening(s).

(2) Dangerous Air Contamination. An atmosphere presenting a threat of causing death, injury, acute illness, or disablement due to the presence of flammable and/or explosive, toxic, or otherwise injurious or incapacitating substances.

(A) Dangerous air contamination due to the flammability of a gas or vapor is defined as an atmosphere containing the gas or vapor at a concentration greater than 20 percent of its lower explosive (lower flammable) limit.

(B) Dangerous air contamination due to a combustible particulate is defined as a concentration greater than 20 percent of the minimum explosive concentration of the particulate.

<http://www.dir.ca.gov/Title9/5158.html>

1/8

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5158, Other Confined Space Operations.

(C) Dangerous air contamination due to the toxicity of a substance is defined as the atmospheric concentration immediately hazardous to life or health.

Note: This definition of dangerous air contamination due to the toxicity of a substance does not preclude the requirement to control harmful exposures, under the provisions of Article 107, to toxic substances at concentrations less than those immediately hazardous to life or health.

(3) Oxygen Deficiency. An atmosphere containing oxygen at a concentration of less than 19.5 percent by volume.

(4) Oxygen Enrichment. An atmosphere containing more than 23.5 percent oxygen by volume.

(c) Operation Procedures and Employee Training. The employer shall implement the provisions of this subsection before any employee is permitted to enter a confined space.

(1) Operating Procedures

(A) Written, understandable operating and rescue procedures shall be developed and shall be provided to affected employees.

(B) Operating procedures shall conform to the applicable requirements of this section and shall include provision for the surveillance of the surrounding area to avoid hazards such as drifting vapors from tanks, piping and sewers.

(C) For multi-employer worksites, the procedures shall address how all the affected employers will coordinate their work activities, so that operations of one employer will not endanger the employees of any other employer. If the permit-required confined space requirements of section 5157 or the requirements of section 8355 apply to one or more of the other employers, then the procedures shall also include coordination with those employers.

(2) Employee Training. Employees, including standby persons required by subsection (e)(1)(D), shall be trained in the operating and rescue procedures, including instructions as to the hazards they may encounter.

(d) Pre-entry. The applicable provisions of this subsection shall be implemented before entry into a confined space.

(1) Lines which may convey flammable, injurious, or incapacitating substances into the space shall be disconnected, blinded, or blocked off by other positive means to prevent the development of dangerous air contamination, oxygen enrichment and/or oxygen deficiency within the space. The disconnection or blind shall be so located or done in such a manner that inadvertent reconnection of the line or removal of the blind are effectively prevented.

Exception: This subsection does not apply to public utility gas distribution systems.

NOTE: This subsection does not require blocking of all laterals to sewers or storm drains. Where experience or knowledge of industrial use indicates materials resulting in dangerous air contamination may be dumped into an occupied sewer, all such laterals shall be blocked.

(2) The space shall be emptied, flushed, or otherwise purged of flammable, injurious or incapacitating

<http://www.dir.ca.gov/Title8/5158.html>

2/8

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5158: Other Confined Space Operations.

substances to the extent feasible.

(3) The air shall be tested with an appropriate device or method to determine whether dangerous air contamination, oxygen enrichment and/or an oxygen deficiency exists. A written record of such testing results shall be made and kept at the work site for the duration of the work. Affected employees and/or their representative shall be afforded an opportunity to review and record the testing results. If an electronic or thermal device is used to test a confined space that contains or is likely to develop a dangerous air contamination due to flammable and/or explosive substances, then the device must be approved for use in such explosive or flammable conditions as required by section 2540.2.

(4) Where interconnected spaces are blinded off as a unit, each space shall be tested and the results recorded, in accordance with subsection (d)(3), and the most hazardous condition so found shall govern procedures to be followed.

(5) If dangerous air contamination, oxygen enrichment and/or oxygen deficiency does not exist within the space, as demonstrated by tests performed in accordance with subsection (d)(3), entry into and work within the space may proceed subject to the following provisions:

(A) Testing, in accordance with subsection (d)(3), shall be conducted with sufficient frequency to ensure that the development of dangerous air contamination, oxygen enrichment and/or oxygen deficiency does not occur during the performance of any operation.

(B) If the development of dangerous air contamination, oxygen enrichment and/or an oxygen deficiency is imminent, the requirements prescribed by subsection (e) shall also apply.

(6) Where the existence of dangerous air contamination, oxygen enrichment and/or oxygen deficiency is demonstrated by tests performed in accordance with subsection (d)(3), existing ventilation shall be augmented by appropriate means.

(7) When additional ventilation provided in accordance with subsection (d)(6) has removed dangerous air contamination, oxygen enrichment and/or oxygen deficiency as demonstrated by additional testing conducted (and recorded) in accordance with subsection (d)(3), entry into and work within the space may proceed subject to the provisions of subsection (d)(5).

(8) No source of ignition shall be introduced until the implementation of appropriate provisions of this section have ensured that dangerous air contamination due to oxygen enrichment, flammable and/or explosive substances does not exist.

(9) Whenever oxygen-consuming equipment such as salamanders, plumbers' torches or furnaces, and the like, are to be used, measures shall be taken to ensure adequate combustion air and exhaust gas venting.

(10) To the extent feasible, provision shall be made to permit ready entry and exit.

(11) Where it is not feasible to provide for ready exit from spaces equipped with automatic fire suppression systems employing harmful design concentrations of toxic or oxygen-displacing gases, or total foam flooding, such systems shall be deactivated. Where it is not practical or safe to deactivate such systems, the provisions of subsection (e) related to the use of respiratory protective equipment shall apply during entry into and work within such spaces.

<http://www.dir.ca.gov/Title8/5158.html>

3/8

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5158, Other Confined Space Operations.

(c) Confined Space Operations.

(1) **Entry Into and Work Within Confined Spaces.** The requirements of this subsection apply to entry into and work within a confined space whenever an atmosphere free of dangerous air contamination, oxygen enrichment and/or oxygen deficiency cannot be ensured through the implementation of the applicable provisions of subsection (d), or whenever, due to the existence of an emergency, it is not feasible to ensure the removal of dangerous air contamination, oxygen enrichment and/or an oxygen deficiency through the implementation of the applicable provisions of subsection (d).

(A) Tanks, vessels, or other confined spaces with side and top openings shall be entered from side openings when practicable.

Note: For the purposes of this Order, side openings are those within 3 1/2 feet of the bottom.

(B) Appropriate, approved respiratory protective equipment, in accordance with Section 5144, shall be provided and worn.

(C) An approved safety belt with an attached line shall be used. The free end of the line shall be secured outside the entry opening. The line shall be at least 1/2-inch diameter and 2,000-pounds test.

Exception: Where it can be shown that a safety belt and attached line would further endanger the life of the employee.

(D) At least one employee shall stand by on the outside of the confined space ready to give assistance in case of emergency. At least one additional employee who may have other duties shall be within sight or call of the standby employee(s).

1. The standby employee shall have appropriate, approved, respiratory protective equipment, including an independent source of breathing air which conforms with Section 5144(i), available for immediate use.

2. A standby employee (or employees) protected as prescribed by subsection (e)(1)(D) 1. may enter the confined space but only in case of emergency and only after alerting at least one additional employee outside of the confined space of the existence of an emergency and of the standby employee's intent to enter the confined space.

(E) When entry must be made through a top opening, the following requirements shall also apply:

1. The safety belt shall be of the harness type that suspends a person in an upright position

2. A hoisting device or other effective means shall be provided for lifting employees out of the space.

(F) Work involving the use of flame, arc, spark, or other source of ignition is prohibited within a confined space (or any adjacent space having common walls, floor, or ceiling with the confined space) which contains, or is likely to develop, oxygen enrichment or dangerous air contamination due to flammable and/or explosive substances.

<http://www.dfr.ca.gov/Title8/5158.html>

4/8

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5158, Other Confined Space Operations.

(G) Whenever gases such as nitrogen are used to provide an inert atmosphere for preventing the ignition of flammable gases or vapors, no flame, arc, spark, or other source of ignition shall be permitted unless the oxygen concentration is maintained at less than 20 percent of the concentration which will support combustion.

1. Testing of the oxygen content shall be conducted with sufficient frequency to ensure conformance with this paragraph.
2. A written record of the results of such testing shall be made and kept at the work site for the duration of the work.
3. Affected employees and/or their representative shall be provided an opportunity to review and record the testing results.

(H) Only approved lighting and electrical equipment, in accordance with the Low-Voltage Electrical Safety Orders, shall be used in confined spaces subject to oxygen enrichment or dangerous air contamination by flammable and/or explosive substances.

(I) Employees working in confined spaces which have last contained substances corrosive to the skin or substances which can be absorbed through the skin shall be provided with, and shall be required to wear, appropriate personal protective clothing or devices in accordance with Article 10.

(J) When an employer (host employer) arranges to have employees of another employer (contractor) perform work that involves a confined space entry covered by this standard or by sections 5157 or 8355, the host employer shall:

1. Inform the contractor that the workplace contains a confined space and that confined space entry is allowed only through compliance with a confined space program meeting the requirements of this section, section 5157 or section 8355, depending on which section applies to the contractor;
2. Apprise the contractor of the elements, including the hazards identified and the host employer's experience with the confined space, that make the space in question a confined space;
3. Apprise the contractor of any precautions or procedures that the host employer has implemented for the protection of employees in or near the confined space where the contractor's personnel will be working;
4. Coordinate entry operations with the contractor, when both host employer personnel and contractor personnel will be working in or near the confined space, as required by subsection (c)(1)(C); and
5. Debrief the contractor at the conclusion of the confined space operation regarding the confined space program followed and any hazards confronted or created in the confined space during entry operations.

(K) In addition to complying with the confined space requirements that apply to all employers, each contractor who is retained to perform confined space entry operations shall:

<http://www.dir.ca.gov/Title8/5158.html>

5/6

D1. Response to Comments

8/12/2015

California Code of Regulations, Title 8, Section 5158, Other Confined Space Operations.

1. Obtain any available information regarding confined space hazards and entry operations from the host employer;
2. Coordinate entry operations with the host employer, when both host employer personnel and contractor personnel will be working in or near a confined space, as required by subsection (c)(1)(C); and
3. Inform the host employer of the confined space program that the contractor will follow and of any hazards confronted or created in the confined space, either through a debriefing or during the entry operation.

(2) Precautions for Emergencies Involving Work in Confined Spaces.

(A) At least one person trained in first aid and cardiopulmonary resuscitation (CPR) shall be immediately available whenever the use of respiratory protective equipment is required subsection (e)(1). Standards for CPR training shall follow the principles of the American Heart Association or the American Red Cross.

(B) An effective means of communication between employees inside a confined space and a standby employee shall be provided and used whenever the provisions of subsection (c)(1) require the use of respiratory protective equipment or whenever employees inside a confined space are out of sight of the standby employee(s). All affected employees shall be trained in the use of such communication system and the system shall be tested before each use to confirm its effective operation.

Note: Authority cited: Section 142.3, Labor Code. Reference: Section 142.3, Labor Code.

HISTORY

1. New section filed 9-14-78; effective thirtieth day thereafter (Register 78, No. 37).
2. Change without regulatory effect of subsection (k) pursuant to section 100, Title 1, California Code of Regulations filed 5-1-90 (Register 90, No. 23).
3. Amendment filed 11-24-93; operative 12-24-93 (Register 93, No. 48).
4. Amendment of subsections (d)(3) and (e)(1)(F) filed 3-23-2000; operative 4-22-2000 (Register 2000, No. 12).
5. Amendment filed 4-25-2001; operative 5-25-2001 (Register 2001, No. 17).
6. Amendment of subsection (e)(1)(D)1. filed 8-30-2010; operative 9-29-2010 (Register 2010, No. 36)

[Go Back to Article 108 Table of Contents](#)

D1. Response to Comments

ATTACHMENT 11

3.11-1

D1. Response to Comments

8/12/2015

Office of Governor Edmund G. Brown Jr. - Newsroom



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MULTIMEDIA
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APPOINTMENTS
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ISSUES

GOVERNOR BROWN DECLARES DROUGHT STATE OF EMERGENCY



1-17-2014



SAN FRANCISCO – With California facing water shortages in the driest year in recorded state history, Governor Edmund G. Brown Jr. today proclaimed a State of Emergency and directed state officials to take all necessary actions to prepare for these drought conditions.

“We can’t make it rain, but we can be much better prepared for the terrible consequences that California’s drought now threatens, including dramatically less water for our farms and communities and increased fires in both urban and rural areas,” said Governor Brown. “I’ve declared this emergency and I’m calling all Californians to conserve water in every way possible.”

In the State of Emergency declaration, Governor Brown directed state officials to assist farmers and communities that are economically impacted by dry conditions and to ensure the state can respond if California experiences drinking water shortages. The Governor also directed state agencies to use less water and hire more firefighters and initiated a greatly expanded water conservation public awareness campaign (details at saveourh2o.org).

In addition, the proclamation gives state water officials more flexibility to manage supply throughout California under drought conditions.

State water officials say that California’s river and reservoirs are below their record lows, March’s and electronic readings record the snowpack’s statewide water content at about 20 percent of normal average for this time of year.

The Governor’s drought State of Emergency follows a series of actions the administration has taken to ensure that California is prepared for record dry conditions. In May 2015, Governor Brown issued an Executive Order to direct state water officials to expedite the review and processing of voluntary transfers of water and water rights. In December, the Governor formed a Drought Task Force to review expected water allocations, California’s preparedness for water scarcity and whether conditions merit a drought declaration. Earlier this week, the Governor toured the Central Valley and spoke with growers and others impacted by California’s recent dry conditions.

Photo captions and the full text of the emergency proclamation are below:

- 1.) Governor Brown announces Drought State of Emergency with Natural Resources Agency Secretary John Laird, Department of Water Resources Director Mark Cowin, Water Resources Control Board Chair Felicia Marcus and Governor’s Office of Emergency Services Director Mark Chirarducci (left to right) Photo Credit: Justin Short, Office of the Governor.
- 2.) Governor Brown signs proclamation declaring Drought State of Emergency. From left to right: CAL FIRE Director Chief Ken Pimlott, Department of Food and Agriculture Secretary Karen Ross, Secretary Laird, Director Cowin, Chair Marcus and Director Chirarducci. Photo Credit: Justin Short, Office of the Governor.

For high resolution copies of these photos, please contact Darusia Dabel, Office of the Governor at Darusia.Dabel@gov.ca.gov.

A PROCLAMATION OF A STATE OF EMERGENCY

WHEREAS the State of California is experiencing record dry conditions, with 2014 projected to become the driest year on record; and

WHEREAS the state’s water supplies have dipped to alarming levels, indicated by snowpack in California’s mountains is approximately 20 percent of the normal average for this date; California’s largest water reservoirs have very low water levels for this time of year; California’s major river systems including the Sacramento and San Joaquin rivers have significantly reduced surface water flows; and groundwater levels throughout the state have dropped significantly; and

WHEREAS dry conditions and lack of precipitation present urgent problems; drinking water supplies are at risk in many California communities; fewer crops can be cultivated and farmers’ long-term investments are put at risk; low-income communities heavily dependent on agricultural employment will suffer heightened unemployment and economic hardship; animals and plants that rely on California’s rivers, including many species in danger of extinction, will be threatened; and the risk of wildfires across the state is greatly increased; and

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<http://gov.ca.gov/news.php?id=18368> 1/3

Page D1-497

D1. Response to Comments

8/12/2015

Office of Governor Edmund G. Brown Jr. - Newsroom

WHEREAS extremely dry conditions have persisted since 2012 and may continue beyond this year and more regularly into the future, based on scientific projections regarding the impact of climate change on California's snowpack; and

WHEREAS the magnitude of the severe drought conditions presents threats beyond the control of the services, personnel, equipment and facilities of any single local government and requires the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8550(b) of the California Government Code, I find that conditions of extreme peril to the safety of persons and property exist in California due to water shortage and drought conditions with which local authority is unable to cope.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the state Constitution and statutes, including the California Emergency Services Act, and in particular, section 8625 of the California Government Code **HEREBY PROCLAIM A STATE OF EMERGENCY** to exist in the State of California due to current drought conditions.

IT IS HEREBY ORDERED THAT:

1. State agencies, led by the Department of Water Resources, will execute a statewide water conservation campaign to make all Californians aware of the drought and encourage personal actions to reduce water usage. This campaign will be built on the existing Save Our Water campaign (www.saveourw20.org) and will coordinate with local water agencies. This campaign will call on Californians to reduce their water usage by 20 percent.
2. Local urban water suppliers and municipalities are called upon to implement their local water shortage contingency plans immediately in order to avoid or forestall outright restrictions that could become necessary later in the drought season. Local water agencies should also update their legally required urban and agricultural water management plans, which help plan for extended drought conditions. The Department of Water Resources will make the status of these updates publicly available.
3. State agencies, led by the Department of General Services, will immediately implement water use reduction plans for all state facilities. These plans will include immediate water conservation actions, and a moratorium will be placed on new, non-essential landscaping projects at state facilities and on state highways and roads.
4. The Department of Water Resources and the State Water Resources Control Board (Water Board) will expedite the processing of water transfers, as called for in Executive Order B-21-13. Voluntary water transfers from one water right holder to another enables water to flow where it is needed most.
5. The Water Board will immediately consider petitions requesting consolidation of the places of use of the State Water Project and Federal Central Valley Project, which would streamline water transfers and exchanges between water users within the areas of these two major water projects.
6. The Department of Water Resources and the Water Board will accelerate funding for water supply enhancement projects that can break ground this year and will explore if any existing unspent funds can be repurposed to enable near-term water conservation projects.
7. The Water Board will put water right holders throughout the state on notice that they may be directed to cease or reduce water diversions based on water shortages.
8. The Water Board will consider modifying requirements for reservoir releases or diversion limitations, where existing requirements were established to implement a water quality control plan. These changes would enable water to be conserved upstream later in the year to protect cold water pools for salmon and steelhead, maintain water supply, and improve water quality.
9. The Department of Water Resources and the Water Board will take actions necessary to make water immediately available, and, for purposes of carrying out directives 5 and 8, Water Code section 13247 and Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are suspended on the basis that strict compliance with them will prevent, hinder, or delay the mitigation of the effects of the emergency. Department of Water Resources and the Water Board shall maintain on their websites a list of the activities or approvals for which these provisions are suspended.
10. The state's Drinking Water Program will work with local agencies to identify communities that may run out of drinking water, and will provide technical and financial assistance to help these communities address drinking water shortages. It will also identify emergency interconnections that exist among the state's public water systems that can help these threatened communities.
11. The Department of Water Resources will evaluate changing groundwater levels, land subsidence, and agricultural land following as the drought persists and will provide a public update by April 30 that identifies groundwater basins with water shortages and details gaps in groundwater monitoring.
12. The Department of Water Resources will work with counties to help ensure that well drillers submit required groundwater well logs for newly constructed and deepened wells in a timely manner and the Office of Emergency Services will work with local authorities to enable early notice of areas experiencing problems with residential groundwater sources.
13. The California Department of Food and Agriculture will launch a one-stop website (www.cdfa.ca.gov/drought) that provides timely updates on the drought and connects farmers to state and federal programs that they can access during the drought.
14. The Department of Fish and Wildlife will evaluate and manage the changing impacts of drought on threatened and endangered species and species of special concern, and develop contingency plans for state Wildlife Areas and Ecological Reserves to manage reduced water resources in the public interest.
15. The Department of Fish and Wildlife will work with the Fish and Game Commission, using the best available science, to determine whether restricting fishing in certain areas will become necessary and prudent as drought conditions persist.
16. The Department of Water Resources will take necessary actions to protect water quality and water

<http://gov.ca.gov/news.php?id=18366>

2/3

D1. Response to Comments

8/12/2015

Office of Governor Edmund G. Brown Jr. - Newsroom

supply in the Delta, including (installation) of temporary barriers or temporary water supply connections as needed, and will coordinate with the Department of Fish and Wildlife to minimize impacts to affected aquatic species.

17. The Department of Water Resources will refine its seasonal climate forecasting and drought prediction by advancing new methodologies piloted in 2013.

18. The California Department of Forestry and Fire Protection will hire additional seasonal firefighters to suppress wildfires and take other needed actions to protect public safety during this time of elevated fire risk.

19. The state's Drought Task Force will immediately develop a plan that can be executed as needed to provide emergency food supplies, financial assistance, and unemployment services in communities that suffer high levels of unemployment from the drought.

20. The Drought Task Force will monitor drought impacts on a daily basis and will advise me of subsequent actions that should be taken if drought conditions worsen.

I **FURTHER DIRECT** that as soon as hereafter possible, this Proclamation be filed in the Office of the Secretary of State and that widespread publicity and notice be given of this Proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 17th day of January, 2014.

EDMUND G. BROWN JR.,
Governor of California

ATTEST:

DEBRA BOWEN,
Secretary of State

###

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D1. Response to Comments

ATTACHMENT 12 | 3.12-1

D1. Response to Comments



[Go Back](#)

(#) (#) (#)
 (#) (#) 73 (#)
 (#)

Governor Brown Issues Executive Order to Redouble State Drought Actions

FOR IMMEDIATE RELEASE:
 Friday, April 25, 2014

Contact: Governor's Press Office
 (916) 445-4571

LOS ANGELES – With California's driest months ahead, Governor Edmund G. Brown Jr. today issued an executive order to strengthen the state's ability to manage water and habitat effectively in drought conditions and called on all Californians to redouble their efforts to conserve water.

"The driest months are still to come in California and extreme drought conditions will get worse," said Governor Brown. "This order cuts red tape to help get water to farmers more quickly, ensure communities have safe drinking water, protect vulnerable species and prepare for an extreme fire season. I call on every city, every community, every Californian to conserve water in every way possible."

In January, the Governor declared a drought state of emergency (<http://cert1.mail-west.com/rmsRyfE/nmc7/rjsRgtmyuzja/21sRo/2rw2m8/eskm8/R3l/2sqmv>). Since then, state water officials say that reservoirs, rainfall totals and the snowpack remain critically low. Current electronic readings show the snowpack's statewide water content at just 16 percent of average (<http://cert1.mail-west.com/rmcTypG/myuzjanmc7/1cToricTqt/eskm82rw2m82/3cT3lymw>).

In the order, Governor Brown directs the Department of Water Resources and the State Water Resources Control Board to expedite approvals of voluntary water transfers to assist farmers. He also directs the California Department of Fish and Wildlife to accelerate monitoring of drought impacts on winter-run Chinook salmon in the Sacramento River and its tributaries, and to execute habitat restoration projects that will help fish weather the on-going drought.

To respond to the increased threat of wildfire season, the order streamlines contracting rules for the Governor's Office of Emergency Services and CALFIRE for equipment purchases and enables landowners to quickly clear brush and dead, dying or diseased trees that increase fire danger.

The order also calls on Californians and California businesses to take specific actions to avoid wasting water, including limiting lawn watering and car washing; recommends that schools, parks and golf courses limit the use of potable water for irrigation; and asks that hotels and restaurants give customers options to conserve water by only serving water upon request and other measures. The order also prevents homeowner associations from fining residents that limit their lawn watering and take other conservation measures.

The order provides a limited waiver of the California Environmental Quality Act for several actions that will limit harm from the drought. This waiver will enable these urgently needed actions to take place quickly and will remain in place through the end of 2014.

Last December, the Governor formed a Drought Task Force (<http://cert1.mail-west.com/rmxTykG/mc7/qimyzjan/rjxT/km82rw2m821xTo/4xT3leshae>) to closely manage precious water supplies, to expand water conservation wherever possible and to quickly respond to emerging drought impacts.

D1. Response to Comments

throughout the state. In May 2013, Governor Brown issued an [Executive Order](http://cert1.mail-west.com/mmXyzK/myuzjanmc7r/2m821mXorjmXgt/skm82rw/5mX3lenvf) (<http://cert1.mail-west.com/mmXyzK/myuzjanmc7r/2m821mXorjmXgt/skm82rw/5mX3lenvf>) to direct state water officials to expedite the review and processing of voluntary transfers of water.

Governor Brown has called on all Californians to reduce their water use by 20 percent – visit SaveOurH2O.org (<http://cert1.mail-west.com/c7rmwGvIT/uzjanm/821wGorjwGqImy/82rw2m/6wG3leskmtn>) to find out how everyone can do their part, and visit Drought.CA.Gov (<http://cert1.mail-west.com/janmc7rmpNycA/yuz/pNorjpNqtm/821/pN3leskm82rw2m/7iyo>) to learn more about how California is dealing with the effects of the drought.

The text of the executive order is below:

A PROCLAMATION OF A CONTINUED STATE OF EMERGENCY

WHEREAS on January 17, 2014, I proclaimed a State of Emergency to exist in the State of California due to severe drought conditions; and

WHEREAS state government has taken expedited actions as directed in that Proclamation to minimize harm from the drought; and

WHEREAS California's water supplies continue to be severely depleted despite a limited amount of rain and snowfall since January, with very limited snowpack in the Sierra Nevada mountains, decreased water levels in California's reservoirs, and reduced flows in the state's rivers; and

WHEREAS drought conditions have persisted for the last three years and the duration of this drought is unknown; and

WHEREAS the severe drought conditions continue to present urgent challenges: water shortages in communities across the state, greatly increased wildfire activity, diminished water for agricultural production, degraded habitat for many fish and wildlife species, threat of saltwater contamination of large fresh water supplies conveyed through the Sacramento-San Joaquin Bay Delta, and additional water scarcity if drought conditions continue into 2015; and

WHEREAS additional expedited actions are needed to reduce the harmful impacts from the drought as the state heads into several months of typically dry conditions; and

WHEREAS the magnitude of the severe drought conditions continues to present threats beyond the control of the services, personnel, equipment, and facilities of any single local government and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8558(b) of the Government Code, I find that conditions of extreme peril to the safety of persons and property continue to exist in California due to water shortage and drought conditions with which local authority is unable to cope; and

WHEREAS under the provisions of section 8571 of the Government Code, I find that strict compliance with the various statutes and regulations specified in this proclamation would prevent, hinder, or delay the mitigation of the effects of the drought.

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, including the Emergency Services Act and in particular Government Code section 8567, do hereby issue this Executive Order, effective immediately, to mitigate the effects of the drought conditions upon the people and property within the State of California.

IT IS HEREBY ORDERED THAT:

D1. Response to Comments

1. The orders and provisions contained in Proclamation No. 1-17-2014, dated January 17, 2014, remain in full force and effect except as modified herein.

2. The Department of Water Resources and the State Water Resources Control Board (Water Board) will immediately and expeditiously process requests to move water to areas of need, including requests involving voluntary water transfers, forbearance agreements, water exchanges, or other means. If necessary, the Department will request that the Water Board consider changes to water right permits to enable such voluntary movements of water.

3. Recognizing the tremendous importance of conserving water during this drought, all California residents should refrain from wasting water:

- a. Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes.
- b. Turn off fountains and other decorative water features unless recycled or grey water is available.
- c. Limit vehicle washing at home by patronizing local carwashes that use recycled water.
- d. Limit outdoor watering of lawns and landscaping to no more than two times a week.

Recreational facilities, such as city parks and golf courses, and large institutional complexes, such as schools, business parks and campuses, should immediately implement water reduction plans to reduce the use of potable water for outdoor irrigation.

Commercial establishments such as hotel and restaurants should take steps to reduce water usage and increase public awareness of the drought through measures such as offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets.

Professional sports facilities, such as basketball arenas, football, soccer, and baseball stadiums, and hockey rinks should reduce water usage and increase public awareness of the drought by reducing the use of potable water for outdoor irrigation and encouraging conservation by spectators.

The Water Board shall direct urban water suppliers that are not already implementing drought response plans to limit outdoor irrigation and other wasteful water practices such as those identified in this Executive Order. The Water Board will request by June 15 an update from urban water agencies on their actions to reduce water usage and the effectiveness of these efforts. The Water Board is directed to adopt emergency regulations as it deems necessary, pursuant to Water Code section 1058.5, to implement this directive.

Californians can learn more about conserving water from the Save Our Water campaign (SaveOurH2O.org).

4. Homeowners Associations (commonly known as HOAs) have reportedly fined or threatened to fine homeowners who comply with water conservation measures adopted by a public agency or private water company. To prevent this practice, pursuant to Government Code section 8567, I order that any provision of the governing document, architectural or landscaping guidelines, or policies of a common interest development will be void and unenforceable to the extent it has the effect of prohibiting compliance with the water-saving measures contained in this directive, or any conservation measure adopted by a public agency or private water company, any provision of Division 4, Part 5 (commencing with section 4000) of the Civil Code notwithstanding.

5. All state agencies that distribute funding for projects that impact water resources, including groundwater resources, will require recipients of future financial assistance to have appropriate conservation and efficiency programs in place.

6. The Department of Fish and Wildlife will immediately implement monitoring of winter-run Chinook salmon in the Sacramento River and its tributaries, as well as several runs of salmon and species of smelt in the Delta as described in the April 8, 2014 Drought Operations Plan.

7. The Department of Fish and Wildlife will implement projects that respond to drought conditions through habitat restoration and through water infrastructure projects on property owned or managed by the Department of Fish and Wildlife or the Department of Water Resources for the benefit of fish and wildlife impacted by the drought.

D1. Response to Comments

8. The Department of Fish and Wildlife will work with other state and federal agencies and with landowners in priority watersheds to protect threatened and endangered species and species of special concern and maximize the beneficial uses of scarce water supplies, including employment of voluntary agreements to secure instream flows, relocation of members of those species, or through other measures.

9. The Department of Water Resources will expedite the consideration and, where appropriate, the implementation, of pump-back delivery of water through the State Water Project on behalf of water districts.

10. The Water Board will adopt statewide general waste discharge requirements to facilitate the use of treated wastewater that meets standards set by the Department of Public Health, in order to reduce demand on potable water supplies.

11. The Department of Water Resources will conduct intensive outreach and provide technical assistance to local agencies in order to increase groundwater monitoring in areas where the drought has significant impacts, and develop updated contour maps where new data becomes available in order to more accurately capture changing groundwater levels. The Department will provide a public update by November 30 that identifies groundwater basins with water shortages, details remaining gaps in groundwater monitoring, and updates its monitoring of land subsidence and agricultural land following.

12. The California Department of Public Health, the Office of Emergency Services, and the Office of Planning and Research will assist local agencies that the Department of Public Health has identified as vulnerable to acute drinking water shortages in implementing solutions to those water shortages.

13. The Department of Water Resources and the Water Board, in coordination with other state agencies, will provide appropriate assistance to public agencies or private water companies in establishing temporary water supply connections to mitigate effects of the drought.

14. For the protection of health, safety, and the environment, CAL FIRE, the Office of Emergency Services, the Department of Water Resources, and the Department of Public Health, where appropriate, may enter into contracts and arrangements for the procurement of materials, goods, and services necessary to quickly mitigate the effects of the drought.

15. Pursuant to the drought legislation I signed into law on March 1, 2014, by July 1, 2014, the California Department of Food and Agriculture, in consultation with the Department of Water Resources and Water Board, will establish and implement a program to provide financial incentives to agricultural operations to invest in water irrigation treatment and distribution systems that reduce water and energy use, augment supply, and increase water and energy efficiency in agricultural applications.

16. To assist landowners meet their responsibilities for removing dead, dying and diseased trees and to help landowners clear other trees and plants close to structures that increase fire danger, certain noticing requirements are suspended for these activities. Specifically, the requirement that any person who conducts timber operations pursuant to the exemptions in Title 14, California Code of Regulations sections 1038 (b) and (c) submit notices to CAL FIRE under the provisions of Title 14, California Code of Regulations, section 1038.2 is hereby suspended. Timber operations pursuant to sections 1038(b) and (c) may immediately commence operations upon submission of the required notice to CAL FIRE and without a copy of the Director's notice of acceptance at the operating site. All other provisions of these regulations will remain in effect.

17. The Water Board will adopt and implement emergency regulations pursuant to Water Code section 1058.5, as it deems necessary to prevent the waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water, to promote water recycling or water conservation, and to require curtailment of diversions when water is not available under the diverter's priority of right.

18. In order to ensure that equipment and services necessary for drought response can be procured quickly, the provisions of the Government Code and the Public Contract Code applicable to state contracts, including, but not limited to, advertising and competitive bidding requirements, are hereby suspended for directives 7 and 14. Approval by the Department of Finance is required prior to the execution of any contract entered into pursuant to these directives.

D1. Response to Comments

19. For several actions called for in this proclamation, environmental review required by the California Environmental Quality Act is suspended to allow these actions to take place as quickly as possible. Specifically, for actions taken by state agencies pursuant to directives 2, 3, 6–10, 13, 15, and 17, for all actions taken pursuant to directive 12 when the Office of Planning and Research concurs that local action is required, and for all necessary permits needed to implement these respective actions, Division 13 (commencing with section 21000) of the Public Resources Code and regulations adopted pursuant to that Division are hereby suspended. The entities implementing these directives will maintain on their websites a list of the activities or approvals for which these provisions are suspended. This suspension and that provided in paragraph 9 of the January 17, 2014 Proclamation will expire on December 31, 2014, except that actions started prior to that date shall not be subject to Division 13 for the time required to complete them.

20. For several actions called for in this proclamation, certain regulatory requirements of the Water Code are suspended to allow these actions to take place as quickly as possible. Specifically, for actions taken pursuant to directive 2, section 13247 of the Water Code is suspended. The 30-day comment period provided in section 1726(f) of the Water Code is also suspended for actions taken pursuant to directive 2, but the Water Board will provide for a 15-day comment period. For actions taken by state agencies pursuant to directives 6 and 7, Chapter 3 of Part 3 (commencing with section 85225) of the Water Code is suspended. The entities implementing these directives will maintain on their websites a list of the activities or approvals for which these provisions are suspended.

I FURTHER DIRECT that as soon as hereafter possible, this Proclamation shall be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this Proclamation.

IN WITNESS WHEREOF I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 25th day of April, 2014

EDMUND G. BROWN JR.
Governor of California

ATTEST:

DEBRA BOWEN
Secretary of State

###

Governor Edmund G. Brown Jr.
State Capitol Building
Sacramento, CA 95814

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D1. Response to Comments

ATTACHMENT 13 | 3.13-1

D1. Response to Comments

8/12/2015

Office of Governor Edmund G. Brown Jr. - Newsroom

The screenshot shows the newsroom website for Governor Edmund G. Brown Jr. The main content area features Executive Order B-28-14, dated 12-22-2014. The order's text is as follows:

EXECUTIVE ORDER B-28-14

12-22-2014

EXECUTIVE ORDER B-28-14

WHEREAS on January 17, 2014, I proclaimed a State of Emergency to exist throughout the State of California due to severe drought conditions; and

WHEREAS on April 25, 2014, I proclaimed a Continued State of Emergency to exist throughout the State of California due to the ongoing drought; and

WHEREAS the rainfall the State has recently experienced, while significant, is insufficient and the historic drought that continues to impact the State, and it is unknown how much rain will fall over the next few months; and

WHEREAS additional expedited actions are needed to reduce the harmful impacts from water shortages and other impacts of the drought; and

WHEREAS the magnitude of the severe drought conditions continues to present threats beyond the control of the services, personnel, equipment and facilities of any single local government and require the combined forces of a mutual aid region or regions to combat; and

WHEREAS under the provisions of section 8571 of the California Government Code, I find that strict compliance with various statutes and regulations specified in this order would prevent, hinder, or delay the mitigation of the effects of the drought;

NOW, THEREFORE, I, EDMUND G. BROWN JR., Governor of the State of California, in accordance with the authority vested in me by the Constitution and statutes of the State of California, in particular Government Code sections 8567 and 8571 of the California Government Code, do hereby issue this Executive Order, effective immediately.

IT IS HEREBY ORDERED THAT:

The waiver of the California Environmental Quality Act and Water Code section 13247 in paragraph 9 of the January 17, 2014 Proclamation and paragraph 19 of the April 25, 2014 Proclamation, is extended through May 31, 2015. This waiver shall also apply to the adoption of water reclamation requirements by the State Water Board for the purpose of paragraph 10 of the April 25, 2014 Proclamation. Drought relief actions taken pursuant to these paragraphs that are started prior to May 31, 2016, but not completed, shall not be subject to Division 13 (commencing with section 21000) of the Public Resources Code or Water Code section 13247 for the time required to complete them.

This Executive Order is not intended to, and does not, create any rights or benefits, substantive or procedural, enforceable at law or in equity, against the State of California, its agencies, departments, entities, officers, employees, or any other person.

I FURTHER DIRECT that as soon as hereafter possible, this Order be filed in the Office of the Secretary of State and that widespread publicity and notice be given to this Order.

IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the State of California to be affixed this 22nd day of December 2014.

EDMUND G. BROWN JR.
Governor of California

ATTEST:

DEBRA BOWEN
Secretary of State

The right sidebar, titled "Latest News", contains a list of recent news items with small thumbnail images:

- Governor Brown Signs Legislation 08-11-2015
- Governor Brown to Meet with Local Leaders on Drought Tomorrow in San Diego 08-10-2015
- Governor Brown Signs Legislation 08-10-2015
- Governor Brown Issues Statement on Death of U.S. Forest Service Firefighter 08-09-2015
- Governor Brown Announces Appointments 08-07-2015
- Governor Brown Issues Legislative Update 08-07-2015
- Photo Release: Governor Brown Meets With Rocky Fire First Responders in Colusa County 08-09-2015
- Governor Brown to Meet With Rocky Fire First Responders Tomorrow 08-05-2015
- Governor Brown to GDP Presidential Candidates on Climate Change: What is Your Plan? 08-05-2015
- Governor Brown Announces Appointments 08-04-2015

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http://www.gov.ca.gov/news.php?id=18815

1/2

D1. Response to Comments

ATTACHMENT 14 | 3.14-1

D1. Response to Comments

8/12/2015

Office of Governor Edmund G. Brown Jr. - Newsroom

The screenshot shows the California State Newsroom website. At the top, there is a navigation bar with the CA.GOV logo, the Governor's name, and a search bar. Below the navigation bar, the main content area is divided into two columns. The left column features a large article titled "GOVERNOR BROWN DIRECTS FIRST EVER STATEWIDE MANDATORY WATER REDUCTIONS" dated 4-1-2015. The article includes a photo of a snowy landscape and text explaining the Governor's executive order mandating water reductions across the state. The right column is titled "Latest News" and lists several recent news items, each with a small photo of Governor Brown and a date.

GOVERNOR BROWN DIRECTS FIRST EVER STATEWIDE MANDATORY WATER REDUCTIONS

4-1-2015

SACRAMENTO - Following the lowest snowpack ever recorded and with no end to the drought in sight, Governor Edmund G. Brown Jr. today announced actions that will save water, increase enforcement to prevent wasteful water use, streamline the state's drought response and invest in new technologies that will make California more drought resilient.

"Today we are standing on dry grass where there should be five feet of snow. This historic drought demands unprecedented action," said Governor Brown. "Therefore, I'm issuing an executive order mandating substantial water reductions across our state. As Californians, we must pull together and save water in every way possible."

High resolution photos of previous snow surveys are available here.

For more than two years, the state's experts have been managing water resources to ensure that the state survives this drought and is better prepared for the next one. Last year, the Governor proclaimed a drought state of emergency. The state has taken steps to make sure that water is available for human health and safety, growing food, fighting fires and protecting fish and wildlife. Millions have been spent helping thousands of California families most impacted by the drought pay their bills, put food on their tables and have water to drink.

The following is a summary of the executive order issued by the Governor today.

Save Water

For the first time in state history, the Governor has directed the State Water Resources Control Board to implement mandatory water reductions in cities and towns across California to reduce water usage by 25 percent. This savings amounts to approximately 1.5 million acre-feet of water over the next nine months, or nearly as much as is currently in Lake Oroville.

To save more water now, the order will also:

- Require 50 million square feet of lawns throughout the state with drought tolerant landscaping in partnership with local governments;
- Direct the creation of a temporary, statewide consumer rebate program to replace old appliances with more water and energy efficient models;
- Require campuses, golf courses, cemeteries and other large landscapes to make significant cuts in water use; and
- Prohibit new homes and developments from irrigating with potable water unless water-efficient drip irrigation systems are used, and banning watering of ornamental grass on public street medians.

Increase Enforcement

The Governor's order calls on local water agencies to adjust their rate structures to implement conservation pricing, recognized as an effective way to realize water reductions and discourage water waste.

Agricultural water users - which have borne much of the brunt of the drought to date, with hundreds of thousands of fallow acres, significantly reduced water allocations and thousands of farmworkers laid off - will be required to report more water use information to state regulators, increasing the state's ability to enforce against illegal diversions and waste and unenforceable use of water under today's order. Additionally, the Governor's action strengthens standards for Agricultural Water Management Plans submitted by large agriculture water districts and requires small agriculture water districts to develop similar plans. These plans will help ensure that agricultural communities are prepared in case the drought extends into 2016.

Additional actions required by the order include:

- Taking action against water agencies in depleted groundwater basins that have not shared data on their groundwater supplies with the state;
- Updating standards for toilets and faucets and outdoor landscaping in residential communities and taking action against communities that ignore these standards; and
- Making permanent monthly reporting of water usage, conservation and enforcement actions by local water suppliers.

Streamline Government Response

http://gov.ca.gov/news.php?id=18910

1/2

D1. Response to Comments

8/12/2015 Office of Governor Edmund G. Brown Jr. - Newsroom

The order:

- Prioritizes state review and decision-making of water infrastructure projects and requires state agencies to report to the Governor's Office on any application pending for more than 90 days.
- Streamlines permitting and review of emergency drought salinity barriers - necessary to keep freshwater supplies in upstream reservoirs for human use and habitat protection for endangered and threatened species.
- Simplifies the review and approval process for voluntary water transfers and emergency drinking water projects, and
- Directs state departments to provide temporary relocation assistance to families who need to move from homes where domestic wells have run dry to housing with running water.

Invest in New Technologies:

The order helps make California more drought resilient by:

- Incentivizing promising new technology that will make California more water efficient through a new program administered by the California Energy Commission.

The full text of the executive order can be found [here](#).

For more than two years, California has been dealing with the effects of drought. To learn about all the actions the state has taken to manage our water system and cope with the impacts of the drought, visit [Drought.CA.Gov](#).

Every Californian should take steps to conserve water. Find out how at [SaveOurWater.com](#).

Photo captions can be found below:

- 1.) Governor Brown delivers remarks. Photo Credit: California Department of Water Resources.
- 2.) Governor Brown and Frank Gehke. California Department of Water Resources. Photo Credit: California Department of Water Resources.
- 3.) Phillips Station. Photo Credit: California Department of Water Resources.

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<http://gov.ca.gov/news.php?id=18910> 2/2

D1. Response to Comments

3. Response to Comments from Jackson, DeMarco, Tidus, Peckenpaugh, Alene A. Taber, dated August 12, 2015.

We represent Baker Commodities, Inc. (“Baker”), a family-owned company founded in 1937 and operated by three generations of the Andreoli Family. Baker provides the following comments on South Coast Air Quality Management District’s (“SCAQMD”) Draft Environmental Assessment (“DEA”) for PR415. Also attached hereto are Baker’s previous letters (Attachments 1-6) addressing Baker’s California Environmental Quality Act (“CEQA”) concerns, which are hereby incorporated as part of this letter.

3.0-1

Response 3.0-1

Individual responses to the submitted comments are provided in Responses 3.0-2 through 3.14-1.

1. Clean Communities Plan for Boyle Heights.

There is no legal requirement for SCAQMD to adopt PR 415. According to SCAQMD Governing Board Resolution No. 10-30, “the 2010 Clean Communities Plan is not required by any federal or state regulation, or the AQMD’s Air Quality Management Plan (AQMP),” and “the 2010 Clean Communities Plan will not be submitted for inclusion in the State Implementation Plan (SIP).” Instead, SCAQMD asserts its PR 415 rulemaking is the “direct result of an issue that was identified by the working group for the Clean Communities Plan (“CCP”) in the pilot study area of Boyle Heights.” (DEA, page 1-1.) According to SCAQMD, the “2010 Clean Communities Plan is a planning document that outlines the overall control strategy for the South Coast Air Quality Management District’s (AQMD’s) air toxics control program. The Clean Communities Plan is an update to the Air Toxics Control Plan (ATCP) developed in 2000 and the subsequent Addendum in 2004.” Further, SCAQMD asserts that the “centerpiece of the Clean Communities Plan is the Community Exposure Reduction Measures which includes a pilot study for two communities to develop Community Exposure Reduction Plans and development of a template so other communities can develop a Community Exposure Reduction Plan.” (SCAQMD November 5, 2010 Board letter, agenda item No. 35.)

3.0-2

3.0-2
Cont'd

SCAQMD is obligated to base its rulemaking on scientific evidence. SCAQMD has not even bothered to create an emission inventory (as it does with other rulemakings) or addressed all of the permitted and unpermitted sources operating that could be contributing to odors in the Boyle Heights area. SCAQMD does not know the amount, if any, that the rendering facilities allegedly contribute to the odor issues in Boyle Heights. SCAQMD has failed to produce any evidence that emissions from Baker are causing a public nuisance in Boyle Heights or that the requirements of PR 415 will reduce odors in Boyle Heights, assuming there are any. In short, the Boyle Heights community will not experience a reduction in odors as a result of PR 415.

D1. Response to Comments

Response 3.0-2

As stated in Master Response 1, *Legal Authority to Adopt and Enforce*, SCAQMD is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) Section 40000. The term "air pollutant" includes odors [H&SC Section 39013]. Therefore, SCAQMD has the authority to pass regulations to control air pollution, including odors, from rendering facilities. SCAQMD has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on SCAQMD by law. [H&SC Section 40702]. As further detailed in Master Response 1, SCAQMD's legal authority to adopt and enforce PR 415 also derives from H&SC Section 41700 and H&SC Section 40001(b). PR 415 serves to prevent or at least reduce the likelihood of the occurrence of a nuisance through imposing reasonable odor control measures. Therefore, PR 415 is a reasonable and proper use of SCAQMD's regulatory authority.

Refer to Master Response 6, *Methodology*. SCAQMD staff considered a quantitative approach to assessing odors from rendering facilities early in the rule development for PR 415. However, based on the current research as described in Master Response 6, the current science and technology do not allow direct measurement of all the chemical compounds that make up odors. There are more than 100 chemical compounds that have been identified in rendering odors. Modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not currently have established methods for collection, speciation, and analysis. Many do not currently have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science and the present state of technology. Therefore, it is not currently possible to establish initial concentrations for modeling or develop an emissions inventory. However, as test methods develop and the science of odor measurement evolves, it may be possible to quantify and conduct modeling of odors in the future.

As described in Master Response 3, *Odor Control Measures* and Master Response 5, *Nuisance Odors*, rendering odors are distinctive and unmistakable as a whole, even if existing science does not allow chemical compounds that make up these odors to be fully identified and quantified. Staff has experienced these distinctive rendering odors both at the facilities and in the communities surrounding Vernon. These odors are very distinguishable from other sources such as diesel combustion. For this reason, among others, SCAQMD staff has elected to follow the approach in PR 415, which represents the best and most reliable way to control odors from rendering operations.

D1. Response to Comments

Furthermore, SCAQMD staff has conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction, and has observed through these inspections that the rendering facilities are a primary source of odors. SCAQMD staff has detected rendering odors during on-site inspections that have the potential to create odor nuisances in the surrounding community, especially when the odors from other nearby rendering facilities are combined.

No evidence or rationale was provided to substantiate the comment that the Boyle Heights community will not experience a reduction in odors as a result of PR 415. PR 415 is intended to reduce the potential for nuisance-level odors in the commercial and residential areas surrounding rendering facilities. PR 415 would require rendering facilities to implement Best Management Practices (BMP) and would require processes with the greatest potential for generation of off-site odors to be enclosed in a total permanent total enclosure, keep the enclosure under negative pressure to contain odors within the enclosure, and vent those odors to control equipment. PR 415 also allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening. The odor BMPs required by PR 415 are achieved in practice and reasonable measures that would result in odor reductions from rendering facilities. In cases where rendering odors from a facility constitute a public nuisance or trigger three confirmed odor events, PR 415 requires that the facility submit an Odor Mitigation Plan (OMP) with specific provisions for odor monitoring and mitigation to further reduce odors. Therefore, with all of these measures built into PR 415, implementation of PR 415 provides a proactive approach to preventing and controlling rendering odors, which is anticipated to result in a reduction of odors in the Boyle Heights community.

D1. Response to Comments

2. SCAQMD's Purported Legal Authority to Adopt PR 415.

SCAQMD cites Health and Safety Code sections 41700 ("Section 41700") and 40001, subdivision (b) ("Section 40001(b)") as its sole authority to adopt PR 415. Health and Safety Code section 41700 states:

Except as otherwise provided in Section 41705, a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

3.0-3

SCAQMD continues to ignore the exception in Section 41700. Health and Safety Code section 41705 does not apply to odors emanating from any agricultural operations necessary for the growing of crops or the raising of fowl or animals. Rendering is an agricultural activity. (Civ. Code, § 3482.6.) Civil Code section 3482.6(e)(1) states, under the public nuisance exceptions: " '[a]gricultural processing activity, operation, facility, or appurtenances thereof' includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food and Agricultural Code." Baker is an agricultural operation that is maintained and regulated under the Food and Agricultural Code. (Food & Agric. Code, §§ 19300 et. seq.; Cal. Code Regs., §§ 1180 et seq.)

3.0-3
Cont'd

Response 3.0-3

Refer to Master Response 1, *Legal Authority to Adopt and Enforce*. By its terms, Civil Code Section 3482.6 would not apply to SCAQMD's adoption or implementation of PR 415. First, PR 415 falls within an exemption to Section 3482.6 created by 3482.6(c). Subdivision (c) of Section 3482.6 states as follows:

(c) This section does not supersede any other provision of law, except provisions of this part, if the agricultural processing activity, operation, facility, or appurtenances thereof, constitute a nuisance, public or private, as specifically defined or described in the provision.

Pursuant to subdivision (c), Section 3482.6 does not preempt PR 415 because the rule: (1) is another provision of law; (2) that is not a provision of Division 4, Part 3, of the Civil Code; (3) that specifically describes rendering facilities and the measures that they must undertake to avoid constituting a nuisance.

D1. Response to Comments

Further, Section 3482.6(d) exempts PR 415 from the Section 3482.6 agricultural processing preemption. Subdivision (d) of section 3482.6 states:

(d) This section prevails over any contrary provision to any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, *except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993 (emphasis added).*

PR 415 is based on SCAQMD's authority to regulate nuisance under H&SC Section 41700, and falls within this provision of H&SC Section 3482.6.

Refer to Master Response 8, *Agricultural Preemption*. The goal of PR 415 is to reduce odors from rendering operations at a rendering facility or an integrated rendering facility. Equipment or vehicles used exclusively in agricultural operations are not subject to PR 415.

Even if Section 41700 did apply, SCAQMD has not produced any information on the quantities of air contaminants that are causing injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD adopted Rule 402 to implement Section 41700. Rule 402 does not impose a more stringent requirement than Section 41700 as SCAQMD proposes with PR 415. SCAQMD has not cited authority permitting it to adopt a rule more stringent than Section 41700. Unless and until SCAQMD does so, it has failed to establish it has the requisite legal authority as inaccurately asserted in the DEA.

3.0-4

Section 40001(b) states:

The district rules and regulations may, and at the request of the state board shall, provide for the prevention and abatement of air pollution episodes which, at intervals, cause discomfort or health risks to, or damage to the property of, a significant number of persons or class of persons.

This statute also does not confer authority upon SCAQMD to adopt PR 415. The State Air Resources Board has not requested that SCAQMD adopt PR 415. SCAQMD has no evidence that PR 415 will prevent and abate air pollution episodes that cause discomfort or health risks to, or damage to the property of, a significant number of persons or class of persons.

D1. Response to Comments

Response 3.0-4

Refer to Response 3.0-2 (above), Master Response 1, *Legal Authority to Adopt and Enforce*, and Master Response 5, *Nuisance Odors*. Even though rendering odors are not toxic, they are distinctive and affect the quality of life for residents in the surrounding communities. While Rule 402 can be used to issue a Notice of Violation if there are a considerable number of persons that are impacted by an odor (or other problems such as dust), that is a reactive measure. PR 415 is intended to reduce odors from rendering operations, which would help avoid a public nuisance. However, the two rules are not mutually exclusive. There are many SCAQMD rules that reduce odors (e.g. Rules 410, 1148.1, 1430). Facilities subject to these rules are also subject to Rule 402. Further, SCAQMD's authority granted by H&SC Section 41700 to protect the public's comfort and health and safety includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. Therefore, PR 415 does not impose more stringent requirements than H&SC Section 41700. PR 415 implements the objectives of H&SC Section 41700.

3. PR 415 Project Description.

The project description in the DEA is vague and incomplete. It is impossible to tell from the description which version of PR 415 is being analyzed in the DEA. Therefore, it is not possible for the DEA to completely evaluate the impacts of PR 415. Further, SCAQMD adopted policies and procedures for investigating and issuing notices of violation relating to odor issues. (Attachment 7.) SCAQMD's description of the PR 415 project is inconsistent with these existing policies and procedures.

3.0-5

Response 3.0-5

Refer to Response to 3.7-1 for a discussion of policies and procedures for investigating and issuing notices of violation relating to odor issues. The project description in the Draft Environmental Assessment (EA) clearly describes PR 415. The draft rule language, dated June 23, 2015, was included in the Draft EA as Appendix A that was circulated for a 30-day public review and comment period beginning July 14, 2015 and ending August 12, 2015. The comment does not include specific references what is incomplete about the project description.

With regards to SCAQMD's adopted policies and procedures for investigating and issue notices of violation related to odor issues, SCAQMD has authority to issue and enforce odors under Rule 402 (See Response 3.0-4 and Master Response 3, *Odor Control*

D1. Response to Comments

Measures). Under Rule 402, enforcement action can only be taken after the SCAQMD receives and verifies a sufficient number of complaints. However, Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they come to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred.

As described in Master Response 4, *Worst-Cast Scenario*, the Draft EA focused on potential environmental impacts of PR 415 as a whole. It was not a facility or site-specific CEQA document. The Draft EA used facility-provided information for the limited purpose of developing construction and operational scenarios. Therefore, the Draft EA for PR 415 complied with the CEQA requirements by including a conservative environmental analysis and disclosing a reasonable, worst-case impact scenario to the public and no further analysis is required under CEQA.

4. Basis for the DEA.

According to the DEA, the “environmental analysis was conducted based on one of the larger facilities in the current affect facility inventory to estimate maximum foreseeable impacts.” (DEA, page 2-4.) This analysis underestimates the true impact. The five facilities are very different. Two of the facilities operate only in conjunction with their meat packing activities. Of the three independent facilities, one facility accepts road kill, and the other two (Baker and Darling) are competitors in the market-place accepting materials from farms, ranches, restaurants, butchers and markets. By focusing on only one facility, the DEA does not address the differences between the facilities, the overlapping and cumulative impacts caused by the five facilities’ compliance with PR 415, and the environmental impacts that will be caused by Baker shutting down its rendering operation if PR 415 is adopted. Baker’s closure is not speculative as stated in the DEA. (See Attachments 1-6.) The DEA is incorrect in its assumption there is no overlap. PR 415 requires simultaneous submittals of enclosure plans. Unless SCAQMD will purposely stagger its approvals, all facilities are expected to obtain their approvals around the same time. The 3-year deadline will result in all facilities constructing and operating simultaneously.

3.0-6

D1. Response to Comments

Response 3.0-6

Refer to Master Response 4, *Worst-Case Scenario*, and the responses to the Attachments 1-6 in Responses to 3.1, 3.2, 3.3, 3.4, 3.5, and 3.6.

One of the policies of CEQA is that CEQA does not require technical perfection, but rather adequacy, completeness, and a good-faith effort at full disclosure (CEQA Guidelines Section 15003(i)). The Draft EA for PR 415 is an informational document. It focused on potential environmental impacts of PR 415 as a whole. The Draft EA was not a facility- or site-specific CEQA document. The Draft EA did not primarily focus on any specific rendering facility but used facility-provided information for the limited purpose of developing construction and operational scenarios. As explained in the Draft EA³⁰, the environmental analysis was conducted based on one of the larger facilities in the current affected facility inventory as that facility would be most impacted by PR 415 requirements. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. As identified in the EA, no significant environmental impacts would occur. The likelihood of overlapping construction activities was contemplated as part of the worst-case impact scenario and was disclosed in the Draft EA (Page 2-14). The construction emissions in the Draft EA were estimated based on a worst-case impact scenario assuming that construction would take up to two months to complete (Draft EA, Page 2-14). The potential energy impacts from fuel usage for construction activities were based on “two affected facilities at any given time (Draft, Page 2-25), and the transportation and traffic impact analysis in the Draft EA also assumed a worst-case impact scenario (Page 2-50). With regard to cumulative impacts, the discussions can be found in Section III and Section XVIII of Chapter 2 in the Draft EA. Therefore, all environmental impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

Refer to Master Response 2, *Facility Shutdown*. As stated in this master response, several comments have suggested that implementation of PR 415 would result in one or more facilities shutting down. Absence of rendering operations within SCAQMD’s jurisdiction is hypothetical as it supposes that every existing rendering facility will not be able to operate under the requirements of PR 415. SCAQMD staff does not believe such a scenario is supported by the requirements of PR 415 or the impacts on rendering facilities. For the detailed reasons outlined in Master Response 2, it is not expected that the requirements of PR 415 will cause rendering facilities to shut down, and the CEQA

³⁰ *Ibid.* Chapter 2, *Environmental Checklist*. Page 2-4.

D1. Response to Comments

analysis conducted for PR 415 does not consider the environmental impacts from the shutdown scenario.

PR 415, requires rendering facilities to submit a permit application for each permanent total enclosure within 12 months after adoption and meet the requirements no later than 12 months after a Permit to Construct is issued. In the event of any unforeseeable circumstances causing a delay in completing the construction of a permanent total enclosure and applicable ventilation and odor control system required under PR 415 (f), rendering facilities may request of a one-time extension for up to one year. Therefore, PR 415 includes a clear timeline for SCAQMD's permitting process and expectation while incorporating flexibility for time extension. For more information on permitting, please visit SCAQMD's website at: <http://www.aqmd.gov/home/permits..>

5. Local Environmental Surrounding.

CEQA requires that the description of the existing environment in the vicinity of the project be discussed from both a local and regional perspective. The DEA fails altogether to discuss the existing environment from a local perspective. It is critical to the analysis that the local setting around the facilities that are impacted be discussed. Without this information, the DEA does not inform the public that these facilities are located in the City of Vernon, which was incorporated for the very purpose of accommodating this type of business. Further, the environmental analysis does not consider odor impacts to the Boyle Heights community from other stationary (both permitted and not permitted) and mobile sources in the area.

3.0-7

Response 3.0-7

Refer to Master Response 4, *Worst-Case Scenario*. The Draft EA was not a facility- or site-specific CEQA document. The EA does not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios.

Refer to Master Response 5, *Nuisance Odors*. CEQA Guidelines Section 15125 defines the environmental setting as the physical environmental conditions at the time environmental analysis is commenced, from both a local and regional perspective, if no notice of preparation is published. Here, the baseline physical conditions at the time of preparation of the Draft EA were that the five rendering facilities were operating without PR 415 requirements and that rendering odors were detected by residents in nearby communities such as Boyle Heights. The information discussed from Page 1-6 to Page 1-11 of the Draft EA provided both local and regional perspectives of the rendering odors

D1. Response to Comments

and associated environmental and quality of life concerns, thereby triggering the need for PR 415.

With regard to odor impacts to the Boyle Heights community from other stationary and mobile sources in the area, odors from rendering facilities are distinctive. Based on personal experience from site visits to the affected area and facilities, SCAQMD staff did not find any evidence that odors created by rendering facilities are attributable to other sources. In particular, odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable and offensive to many in the communities surrounding the city of Vernon. The analysis of the Draft EA was specific to odors from rendering facilities, which as noted above are very distinctive. PR 415 regulates rendering odors other than odors from stationary and mobile sources, and the Draft EA analyzed potential environmental impacts from implementing the requirements and BMPs to control rendering odors. The Draft EA adequately analyzed the potential impacts related to odors from rendering facilities and it considered odors from all rendering facilities in the study area. Therefore, odor impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

6. Baseline.

There is no disclosure in the DEA of the baseline that was used in the analysis from which the impacts are measured. Without a baseline, impacts cannot be accurately assessed.

3.0-8

Response 3.0-8

Refer to Master Response 3, *Odor Control Measures*, and Master Response 6, *Methodology*. Rendering odors result in both environmental and quality of life issues. However, it is not necessary to identify baseline odor levels to establish the baseline for nuisance odors at rendering facilities. First, as noted in Master Response 5, *Nuisance Odors*, rendering odors are a complex mixture of many compounds. There are no currently available methods to measure ‘objectionable’ odors. Therefore, in its rule development effort, SCAQMD staff focused on identifying the current and accepted practices around the state of California and the nation for operating a rendering facility within an urban area. Second, establishing a baseline is not necessary because PR 415 does not require specific percent reductions. Instead, enclosure, ventilation, and odor control system standards or secondary odor containment system, in addition to BMPs reduce the potential for rendering odors. In cases where rendering odors from a facility constitute a public nuisance or trigger three confirmed odor events, an Odor Mitigation

D1. Response to Comments

Plan will be required. Refer to Response 3.0-7. The baseline physical conditions at the time of Draft EA were that the five rendering facilities were operating without PR 415 requirements and that rendering odors were detected by both area residents and residents in nearby communities such as Boyle Heights. Therefore, the Draft EA for PR 415 properly disclosed the baseline that was used to establish the need for PR 415 as well as in the CEQA analysis which measured and assessed potential impacts. The Draft EA has complied with CEQA requirements.

7. Aesthetics.

The DEA incorrectly states that “the proposed project would not involve the demolition of any existing buildings or facilities.” (DEA, pages 2-5.) Baker has told SCAQMD numerous times that its existing structures cannot be modified to become “enclosed structures” and meet all of the requirements for these structures. For example, the current structures cannot meet the pressure requirements. Most of Baker’s facility would need to be demolished and rebuilt as an “enclosed structure.”

3.0-9

Response 3.0-9

Refer to Master Response 4, *Worst-Case Scenario*. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. As identified in the EA, no significant environmental impacts would occur. As shown in Table P-1 of the Final EA, PR 415 has been modified to provide sufficient flexibility for facility operators. Also discussed in the Preface of the Final EA are the modifications to construction estimates with respect to demolition. Approximately 9,000 square feet of existing buildings or facilities would be expected to be demolished at Baker’s facility. Therefore, the impacts from demolition and construction have been adequately analyzed and disclosed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

8. Agriculture and Forestry Resource Impacts.

PR 415 in its current form will cause Baker to shut down its rendering operation because of the significant costs of rule compliance. Baker is one of only two independent renderers in the South Coast Air Basin that accept material from agricultural operations. The other existing independent renderer does not currently have the capacity to accept all of the material from agricultural operations in the area. There will be no substitute rendering location if the one remaining independent facility has a breakdown. The reduction in rendering capacity in the region caused by PR 415 may cause deceased farm animals (cattle, cows, chickens, and pigs) to remain longer and decay at farms and ranches. As dead animals decompose, bacteria that may normally be contained within the animal's body can be released, exposing people, soil and groundwater to potential disease-causing pathogens. None of these issues are analyzed in the DEA; if they had been analyzed, the impact would have been declared significant and mitigation measures would be required.

3.0-10

Response 3.0-10

Refer to Response 1.0-4 for a discussion of why PR 415 does not cease rendering operations, and Master Response 2, *Facility Shutdown*. PR 415 is intended to capture and control odors from rendering operations, not cease rendering operations. The CEQA analysis conducted for PR 415 considers the environmental impacts from implementing the requirements of PR 415 and does not consider the shutdown scenario. Existing rendering operations are not expected to cease and animal waste is not expected to be diverted because of the requirements included in PR 415. Compliance with the rule can be achieved by various alternatives, including an option to request a one-time time extension for up to one year for the enclosure construction requirement. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts. Therefore, all environmental impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

Furthermore, if a rendering facility is not able to meet the requirements of PR 415 through various compliance options, it is reasonable to expect that one or more of the other currently existing rendering facilities would have the ability or would generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal waste. In the event of equipment breakdown or emergency rendering services, PR 415 allows a rendering facility to accept materials from another rendering facility if the requirements under (k) are met.

D1. Response to Comments

The Final EA includes an analysis of potential impacts from the implementation of PR 415 on agriculture and forestry resources under Section II of Chapter 2 to support the finding that PR 415 would not cause any significant agriculture and forestry resources impacts. Therefore, the Final EA for PR 415 complies with CEQA requirements.

9. Air Quality and Greenhouse Gas Emissions Impacts.

PR 415 will conflict with and obstruct the implementation of all southern California AQMP and SIP rules that rely on biodiesel because if Rule 415 is adopted in its current form, Baker will shut down its rendering operation that produces feedstock for its biofuels facility in San Diego. This will reduce biofuel production at the San Diego facility and, in turn, reduce the supply necessary to implement AQMPs and SIPs in southern California.

3.0-11

Response 3.0-11

Refer to Response 3.0-10 (above) and Master Response 2, *Facility Shutdown*. Rendering operations are not expected to cease and feedstock for biofuels is not expected to decrease because of the requirements included in PR 415. As described in the Draft EA, implementation of PR 415 would not conflict with the Air Quality Management Plan (AQMP) and the State Implementation Plan (SIP). PR 415 includes requirements and BMPs to reduce rendering odors that have been impacting the quality of life for residents in the surrounding communities. Therefore, PR 415, once implemented, will further the SCAQMD's commitment to protecting public health and implementing AQMPs and SIPs.

There is a potential violation of the regional PM10, PM2.5, and NOx standards and a cumulatively considerable net increase of these criteria pollutants caused by the overlapping demolition, construction, paving and control equipment installation activities that will need to occur in order for the five facilities to comply with PR 415. There is no basis for SCAQMD to assume there will be no overlap between the construction activities occurring at the five locations. If overlap between the five facilities is considered, then the emissions from the construction activities would exceed the significance threshold for NOx for both construction activities and installation of control equipment. These impacts must be deemed significant and mitigation measures identified in the DEA. Further, SCAQMD's analysis of whether the localized significant thresholds for construction are exceeded proves Baker's point that odors from its facilities cannot reach residents in Boyle Heights.

3.0-12

3.0-12
Cont'd

D1. Response to Comments

Response 3.0-12

Refer to Master Response 4, *Worst-Case Scenario*. The Draft EA did not primarily focus on any specific rendering facility but used facility-provided information for the limited purpose of developing construction and operational scenarios. As such, the methodology used in the Draft EA represented SCAQMD staff's best efforts at reasonably estimating and disclosing the environmental impacts associated with PR 415. Modifications to PR 415 resulted in one of the five facilities being exempt from the PR 415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. As identified in the Final EA, no significant environmental impacts are anticipated. All environmental impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

As discussed in Master Response 5, *Nuisance Odors*, residents from the Boyle Heights community have identified that odors from rendering facilities are present and objectionable. The difficulty in tracing the odors to a specific facility does not mean a problem does not exist. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near one another. SCAQMD developed the Localized Significance Threshold (LST) methodology as a tool to assist lead agencies including SCAQMD to analyze localized impacts associated with project-specific level activities. LSTs represent the maximum emissions from carbon monoxide (CO), oxides of nitrogen (NO_x), particulate matter less than 2.5 microns in aerodynamic diameter (PM_{2.5}) or particulate matter less than 10 microns in aerodynamic diameter (PM₁₀) from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area. SCAQMD has not developed or established numerical CEQA thresholds for the measurement of odors. A less than significant impact conclusion for construction LSTs is not equivalent to a finding of less than significant for odors. Therefore, the air quality impact LSTs analysis should not be used to support that odors cannot reach residents in Boyle Heights (See also Master Responses 5, *Nuisance Odors*).

D1. Response to Comments

Assuming arguendo that SCAQMD is correct that odors from the five rendering operations affect the Boyle Heights community, it is then incorrect to conclude in the DEA that PR 415 will not increase exposure to odors. In order to comply with all of the water requirements in PR 415, it is likely that wastewater treatment facilities – that SCAQMD claims are odorous – will need to be expanded. According to SCAQMD’s logic, increasing the wastewater treatment facilities will increase odors.

3.0-13

Response 3.0-13

The purpose of PR 415 is to reduce odors from rendering facilities. Its purpose forms part of the basis for the analysis contained in the Draft EA, which concluded that adoption and implementation of PR 415 will result in the reduction and exposure of odors from rendering facilities. PR 415 will establish odor control standards as well as BMPs to prevent or minimize odors that can cause verified odor complaints and public nuisances in the communities surrounding Vernon. PR 415 is proactive in terms of preventing or minimizing odors.

Under PR 415, the wastewater treatment area is required to be enclosed within a permanent total enclosure and ventilated to odor control equipment. The approach in PR 415 does however consider differences in operation at each facility. For example, an exemption under PR 415 is provided for wastewater treatment to allow dilution of rendering wastewater with non-rendering wastewater (see paragraph (1)(2)). As shown in Table P-1 of the Final EA, since the release of the Draft EA, the requirements for wastewater treatment have been modified to allow smaller quantities of wastewater for dilution. Furthermore, Table P-3 of the Final EA shows that substantially less water would be required to meet the odor control requirement and BMPs during implementation. Therefore, it is expected that PR 415 will not cause the expansion of wastewater treatment facilities, and that the wastewater treatment will be totally enclosed and ventilated to odor control equipment to reduce odors, not increase odors as stated in the comment.

Furthermore, each of the affected rendering facilities are already currently subject to specific California Regional Water Quality Control Board and National Pollutant Discharge Elimination System wastewater discharge requirements. Compliance with PR 415 would not impact any facility’s obligation to adhere to these already existing requirements

D1. Response to Comments

SCAQMD is improperly deferring greenhouse gas (“GHG”) and criteria pollutant emissions analyses from increased electrical consumption due to the required PR 415 operation changes. For example, SCAQMD estimated the number and type of control equipment necessary to comply with PR 415 and could have, based on its experience, estimated increased electricity generation. Further, SCAQMD did not evaluate the loss of GHG reductions achieved by Baker if it is forced to close down its rendering operation because of PR 415. When materials are rendered, they do not enter landfills to decay and create GHGs. Other recycling methods, such as composting, may eliminate the recyclable materials and make amendments for soils, but the composting process also produces large amounts of carbon dioxide and methane that is not captured. Gases from composting add to the GHGs in the atmosphere, which may contribute to global warming or climate change. Products from the rendering processes do not. Rendering produces products like biodiesel that reduce GHG emissions. The carbon footprint of rendering was studied recently via a project conducted by the National Renderers Association at Clemson University’s Animal Co-Products Research & Education Center (“ACREC”). As these studies progressed, Dr. Charles H. Gooding, Ph.D., P.E., Professor of Chemical Engineering, developed the “Carbon Footprint Calculator for Rendering Operation,” a method of calculating the carbon footprint of a rendering facility. This calculator provided the rendering industry a method of measuring the good that is done by the rendering recycling process and industry. (See Attachment 8.) SCAQMD should use this recognized process for calculating GHG impacts. Please also see number 10 below regarding increased truck idling. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-14

Response 3.0-14

Refer to Master Response 4, *Worst-Case Scenario*. The Draft EA evaluated energy use from operation of the APCDs, under Section VI, *Energy*. The Draft EA did not primarily focus on any specific rendering facility but uses facility-provided information for the limited purpose of developing construction and operational scenarios. As such, the methodology used in the Draft EA represented SCAQMD staff’s best efforts to reasonably estimate and disclose the environmental impacts associated with PR 415. The Final EA includes modifications to the construction scenario analyzed in the Draft EA based on conservative estimates of demolition and construction of enclosures by the rendering facilities and overlap among affected facilities. Implementation of PR 415 would require additional electricity consumptions of approximately 450 to 517 megawatt-hours each year by the rendering facilities. This represents a substantial decrease from 2,015 megawatt-hours per year that was analyzed in the Draft EA (Page 2-25). Therefore, the environmental analysis disclosed in the Draft EA represented the worst-cast impact scenario for potential impacts on energy and air quality and greenhouse gas emissions

D1. Response to Comments

from the generation of electricity during implementation of PR 415, and no significant environmental impacts would occur.

Refer to Master Response 2, *Facility Shutdown*. It is not expected that the requirements of PR 415 will cause any of the rendering facilities to shut down, and the CEQA analysis conducted for PR 415 does not consider the environmental impacts from the shutdown scenario. Furthermore, Section 20890, Title 27, California Code of Regulations (CCR), provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. In 2006, the Southern San Joaquin Valley experienced a larger-than-normal number of dairy and other animal mortalities due to extreme temperatures. In response to the heat event and the intermittent operation of key rendering facilities in the valley, a series of recommendations were developed and approved by CalEPA and the California Department of Food and Agriculture (CDFA). Disposal at landfills is only recommended if rendering capacity is exceeded or suspended. Only the Kettleman Hills facility in Kern County accepts disposal of carcasses and self-haul is not permitted. However, rendering operations within the Basin are not expected to cease. In the event that the 2006 scenario occurs after PR 415 is adopted, PR 415 allows a rendering facility to accept materials from another rendering facility if the requirements under (k) are met (See Response 3.0-10). Therefore, it would be speculative to assume that animal waste would be diverted to landfills as a result of the proposed project; and the GHG emissions scenario described in the comment would not occur.

The GHG emissions analysis in the Draft EA disclosed the potential incremental increases of GHG emissions from implementing the requirements of PR 415, and the CalEEMod™ emissions computer model was used to calculate the GHG emissions. As discussed in Section III. g) and h) in the Draft EA, implementation of PR 415 requirements would likely cause an additional 3.2 metric tons per year CO₂eq, which is below SCAQMD's GHG CEQA threshold of significance of 10,000 metric tons per year (Refer to Master Response 4, *Worst Case Scenario*). Therefore, the Draft EA's GHG analysis has adequately disclosed the potential impacts on GHG emissions from PR. CEQA does not require a life-cycle assessment for calculating the carbon footprint of a rendering facility. Refer to Response 3.8-1 for a response to the Attachment 8. For these reasons, the Draft EA has properly analyzed and disclosed the potential air quality and GHG emissions impacts from PR 415, and those impacts were found to be less than significant requiring no mitigation measures.

Therefore, all air quality and GHG impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

10. Energy Impacts.

The DEA concludes that the control equipment will be powered by electricity. PR 415 would require the operation of new control equipment. The DEA fails to assess the full impact caused by PR 415 because the analysis is based on only one facility and not five. Had the total impacts of new equipment for five facilities been analyzed, the impact may have been declared significant and mitigation measures required. Despite the fact that four of the five facilities are located in the City of Vernon, SCAQMD did not analyze the impacts based on City of Vernon Gas & Electric. Instead, SCAQMD utilized the much larger Los Angeles Department of Water and Power that supplies power to one facility to dilute the impacts.

3.0-15

Response 3.0-15

Refer to Master Response 4, *Worst-Case Scenario*, Response 3.0-14, and Response 3.0-6. It will be clarified in the Final EA that facilities are supplied electricity from the City of Vernon Utility. The City of Vernon Utility has a lower carbon intensity of CO₂ than the Los Angeles Department of Water and Power. The worst-case impact scenario identifies that the increase in electricity demand would be from the facilities supplied by the City of Vernon Utility. For all the affected facilities, a maximum of 516,557 kWh per year or 517 MWh per year would be needed (Refer to Final EA, Table P-5). Based on the carbon intensity of the City of Vernon's electricity of 761 lbs/MWh, as reported in the CalEEMod 2016 User's Guide, PR 415 would result in 177 MTCO₂ annually.³¹ The Final EA includes modifications to the construction and operational scenario analyzed in the Draft EIR. As discussed in the Final EA, no significant environmental impacts would occur. Therefore, energy impacts were adequately analyzed in the EA and no further analysis is required under CEQA.

Further, the truck covering requirement will cause increased fuel usage. There is no state law requiring trucks transporting material for rendering facilities to be covered. In order to comply with PR 415, truckers may decide to cover the materials just prior to entering the rendering facilities. To do this, the trucks would have to idle while the covers are placed on the open area of the truck. This will increase truck emissions and truck fuel use. See also number 16. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-16

³¹ CH₄ and N₂O intensity factors are based on 2012 E-Grid for California reported in the CalEEMod 2016 User's Guide. CO₂-equivalency (CO₂e) is based on the global warming potentials identified in the Intergovernmental Panel on Climate Change's (IPCC) Fourth Assessment Report for CH₄ and N₂O.

D1. Response to Comments

Response 3.0-16

PR 415 requires transport vehicles delivering raw rendering materials to a rendering facility from off-site locations to be completely enclosed or covered prior to passing the first point of contact at the rendering facility (such as a guard shack or weigh station). Owners/operators of third-party trucks will have six months to become familiar with the requirements of paragraph (e)(1), Covering of Incoming Transport Vehicles, and subdivision (i), Signage and Tracking of Odor Complaints at Rendering Facilities of PR 415. It is not likely that after going through the trouble to make a truck compliant with the covering requirements, a third-party owner or operator would choose to wait until arriving at the rendering facility before covering an incoming load.

Non-essential idling of diesel trucks is limited to five minutes per CARB's Airborne Toxic Control Measures. Therefore, an increase in idling to place covers on the open area of the truck is not anticipated as this would be considered non-essential idling that is limited to the idling restrictions of CARB's rule. Refer to Response 3.0-26.

In summary, all environmental impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

11. Geology and Soils Impacts.

Please see number 8 above.

3.0-17

Response 3.0-17

Refer to Response 3.0-10. The analysis discussing the potential impacts of PR 415 on agricultural and forestry resources was included in Section II of the Draft EA, while the analysis on the potential impacts on geology and soils was included in Section VII of the Draft EA. Geology and soils impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

12. Hazards and Hazardous Materials Impacts.

The enclosures required by PR 415 may be considered “confined spaces” by the California Occupational Health and Safety Administration (“Cal OSHA”). The DEA does not address exposing employees and rescuers to the risks and requirements of confined spaces. (See Attachment 9, which discusses these risks in detail.) As a result of PR 415 creating new confined spaces, the renderers may be regulated by Cal OSHA requirements that may include permits, new worker training programs, development of a confined space program, and requiring employees to work in protective gear. (See Attachment 10, which discusses the requirements in detail.) Not only will PR 415 expose employees and rescuers to new hazardous risks, but adherence to Cal OSHA’s requirements for confined spaces will also delay the processing of the rendering materials that could increase odors. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-18

Response 3.0-18

Refer to Response 3.9-1 and 3.10-1 and Master Response 7, *Building Codes*. A “confined space”, as defined in Title 8, CCR, Section 5157, is a space that has all three of the following characteristics:

- Is large enough and configured such that an employee can bodily enter and perform work; and
- Has limited openings for entry and exit; and
- Is not designed for continuous employee occupancy.

Although enclosures required by PR 415 would meet the first characteristic, they do not meet the second or third characteristic. The enclosures required by PR 415 would be areas designed for continuous employee occupancy, and would not be designed to provide limited openings for entry and exit. As clarified in the Final EA, the affected facilities may elect to meet the alternative permanent total enclosure requirements for raw material receiving areas. The alternative requirements include more enhanced measures for enclosure openings where vehicles or equipment are accessed with the use of an automated roll-up door with an air curtain, vestibule, and air lock system to minimize fugitive odors escaping through enclosure openings. The alternative requirements would also be applicable to personnel access doors defined under subparagraph (f)(5)(D) of PR 415. Therefore, in addition to not meeting the definition of enclosed space under Section 5157, the enclosures required under PR 415 would not be subject to Cal OSHA’s requirements for confined spaces, and PR 415 would not expose employees and rescue

D1. Response to Comments

workers to new hazardous risks from enclosures. Therefore, hazards and hazardous materials impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

13. Hydrology and Water Quality Impacts.

The DEA does not address the current severe drought situation, which should lower SCAQMD's water demand significance standard of 262,820 gallons per day of portable water. On January 17, 2014, the Governor proclaimed a State of Emergency and called for all Californians to reduce water consumption by 20 percent, not increase water usage as will occur with PR 415. The January 17, 2014 emergency proclamation is in Attachment 11. On April 25, 2014, the Governor issued an executive order to speed up actions necessary to reduce harmful effects of the drought, and he called on all Californians to redouble their efforts to conserve water. The April 25, 2014 executive order is in Attachment 12.

3.0-19

The executive order included:

Recognizing the tremendous importance of conserving water during this drought, all California residents should refrain from wasting water:

- a. Avoid using water to clean sidewalks, driveways, parking lots and other hardscapes.
- b. Turn off fountains and other decorative water features unless recycled or grey water is available.
- c. Limit vehicle washing at home by patronizing local carwashes that use recycled water.
- d. Limit outdoor watering of lawns and landscaping to no more than two times a week.

Recreational facilities, such as city parks and golf courses, and large institutional complexes, such as schools, business parks and campuses, should immediately implement water reduction plans to reduce the use of potable water for outdoor irrigation.

Commercial establishments such as hotel and restaurants should take steps to reduce water usage and increase public awareness of the drought through measures such as offering drinking water only upon request and providing customers with options to avoid daily washing of towels or sheets.

Professional sports facilities, such as basketball arenas, football, soccer, and baseball stadiums, and hockey rinks should reduce water usage and increase public awareness of the drought by reducing the use of potable water for outdoor irrigation and encouraging conservation by spectators.

D1. Response to Comments

Response 3.0-19

Refer to Master Response 4, *Worst-Case Scenario*. Refer to Response 3.11-1 and Response 3.12-1 for responses to Attachment 11 and Attachment 12, respectively. The Final EA includes modifications to the construction and operational scenario analyzed in the Draft EA. Implementation of PR 415 would require several washing activities as part of odor control and BMPs. However, as shown in Table P-1 and Table P-3 of the Final EA, water usage by rendering facilities would result in a total water demand of 3,340 gallons per day, which is less than SCAQMD's CEQA significance threshold of 262,820 gallons per day of potable water. Therefore, no significant environmental impacts on hydrology and water quality would occur. Moreover, SCAQMD staff has worked in good faith with rendering facilities to revise PR 415 to reduce water usage. Table P-3 shows that implementation of PR 415 requirements as analyzed in the Final EA would result in a substantial decrease in daily water usage. While the draft rule requirements published in 2015 would not cause a significant adverse impact on water usage, the revised rule requirements analyzed in the Final EA would further reduce water usage. Therefore, PR 415 is consistent with the State water reduction and conservation policies and impacts remain less than significant. Hydrology and water quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

On December 22, 2014, Governor Brown issued Executive Order B-28-14. This new Executive Order cites to paragraph 9 of the January 17, 2014 Proclamation and paragraph 19 of the April 25, 2014 Proclamation and extends the operation of the provisions in these paragraphs through May 31, 2016. The December 22, 2014 executive order is in Attachment 13.

3.0-20

Response 3.0-20

Refer to Response 3.0-19 and Response 3.13-1 regarding water demand associated with the proposed rule.

On April 1, 2015, the Governor issued Executive Order B-29-15. Key provisions include ordering the State Water Resources Control Board to impose restrictions to achieve a 25 percent reduction in potable urban water usage through February 28, 2016. The April 1, 2015 executive order is in Attachment 14. SCAQMD's significance threshold and PR 415 are contrary to the Governor's executive order.

3.0-21

D1. Response to Comments

Response 3.0-21

Refer to Response 3.0-19 and Response 3.13-1 regarding water demand associated with the proposed rule.

SCAQMD's water demand analysis fails to include water usage required by SCAQMD's dust suppression rules. Adherence to these rules will be required during construction activities. The DEA provides no information on how the assumption of washing four hours per day to comply with BMPs was developed. Baker operates more than four hours a day. The DEA wrongly assumes that only one hose will be used at a facility. All of BMP activities occur in different areas of the facility and will occur simultaneously. Therefore, the DEA's assumption that the five facilities will use 13,200 gallons a day significantly underestimates the true impact. The wastewater impact is also significantly understated for the above reasons.

3.0-22

Response 3.0-22

Refer to Response 3.0-19 (above) for a discussion on water demands as a result of implementing PR 415 requirements and Master Response 4, *Worst-Case Scenario*. SCAQMD's dust suppression rule is Rule 403. If the project is larger than 50 acres or daily earth-moving operations would be 3,850 cubic yards or more on three days in any year, the project will be considered a large operation to trigger Rule 403 (e). As shown in Appendix C to the Draft EA (on Page 5), it was assumed that approximately one acre of area would be graded during the site preparation phase and that approximately 1.5 acres of area would be graded during the grading phase. The area of disturbance for construction activities is expected to be small, not triggering Rule 403 (e) requirements for large operations. Additionally, as shown in Table P-2 in the Final EA, the proposed enclosures would require ground disturbing activities for construction of the enclosures. As shown in Appendix C to the Draft EA (on Page 7), watering exposed areas during construction was included in the analysis as a mitigation measure for construction. Therefore, compliance with SCAQMD Rule 403 is included in the analysis. Given that grading and construction activities are expected to be minimal, they are not anticipated to trigger water usage that would exceed SCAQMD's CEQA significance threshold of 262,820 gallons per day of potable water.

The Final EA includes modifications to the construction and operational scenario analyzed in the Draft EIR. Table P-3 of the Final EA shows that BMP (e)(3), Washing of Outgoing Transport Vehicles, BMP(e)(4), Washing of Drums and Containers, and BMP(e)(11), Cleaning Floor Drains, would result in a total water demand of 3,340 gallons per day, which is less than SCAQMD's CEQA significance threshold of 262,820

D1. Response to Comments

gallons per day of potable water. Therefore, as found in the Final EA, no significant environmental impacts on hydrology and water quality would occur.

Without any factual basis the DEA concludes that the “amount of additional wastewater is not expected to be a significant increase in the amount that any affected facility is currently permitted to discharge.” (DEA, page 2-36.) The DEA does not identify a standard for determining significance of wastewater impacts, does not estimate the amount of additional wastewater created from all sources, and does not analyze whether this additional amount requires permit changes. SCAQMD is relying upon Los Angeles County Sanitation District requirements to limit discharge quantities and concentrations to avoid declaring a significant impact. Assuming Los Angeles County Sanitation District does this, what does SCAQMD expect to happen to the increased wastewater discharge that Los Angeles County Sanitation District does not permit? There is also no analysis of the quality of the additional wastewater and impacts to the existing wastewater treatment facilities. The increase in discharge will require more wastewater to be treated and could require expansion of these facilities. Further, as discussed above, according to SCAQMD, more wastewater treatment equates to more control devices (which increases water usage and wastewater) and odors. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-23

Response 3.0-23

Refer to Response 3.0-19 and Response 3.0-22 for a discussion on water demands as a result of implementing PR 415 requirements. As shown in Table P-3 in the Final EA, implementing PR 415 requirements would likely cause an increase in usage of 3,340 gallons per day of potable water. Based on data from Los Angeles County Sanitation Districts (LACSD)³², the wastewater treatment capacities from regional plants range from 0.2 million gallons per day (mgd) to 400 mgd. The additional wastewater discharge that would be generated from the increased water usage of 3,340 gallons per day is approximately 1.7 percent of the lowest treatment capacity. Therefore, the amount of additional wastewater generated by implementing PR 415 requirements is within the treatment capacity of the regional wastewater treatment plant. Moreover, Table P-1 of the Final EA shows that the requirements for wastewater treatment have been modified such that a smaller amount of wastewater would be generated from the implementation of PR 415. Therefore, it is reasonable to expect that PR 415 would not cause a significant increase in the amount of wastewater that any affected facility is currently permitted to discharge. As identified in the EA, no significant environmental impacts would occur.

Hydrology and water quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

³² Sanitation Districts of Los Angeles County. Accessed on October 16, 2017. Available at: <http://www.lacsd.org/wastewater/wwfacilities/#map>.

D1. Response to Comments

14. Public Services Impacts.

Please see number 12.

3.0-24

Response 3.0-24

Refer to Response 3.0-19. The analysis discussing the potential impacts of PR 415 on hazards and hazardous materials was included in Section VIII of the Draft EA, while the analysis on the potential impacts on public services was in Section XIV of the Draft EA. Therefore, public services impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

15. Transportation/Traffic Impacts.

The DEA fails to recognize that trucking operators may choose to cover their loads on the street next to the facilities before entering. This would still comply with PR 415. If trucks pull to the side of the roads, they could block traffic and cause an increase in traffic congestion and an increase in idling emissions. See also number 9 above. Had SCAQMD properly analyzed these issues in the DEA, the impact would have been declared significant and mitigation measures would be required.

3.0-25

Response 3.0-25

Refer to Response 3.0-16. It is not likely that after going through the trouble to make a truck compliant with the covering requirements, a third-party owner or operator would choose to wait until arriving at the rendering facility before covering an incoming load. Therefore, transportation/traffic impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

16. The DEA must be revised and recirculated.

As discussed above, and in the attached documents, PR 415 will have a significant adverse impact on the environment. CEQA requires in these instances that alternatives be proposed (such as the use of masking agents or limiting the enclosure requirement to wastewater treatment) to avoid or reduce significant effects and that mitigation measures be adopted. Since responding to these comments will necessitate that the DEA be significantly revised and impact status changed to significant, the revised document must be recirculated for a second public review period.

3.0-26

D1. Response to Comments

Response 3.0-26

SCAQMD staff has reviewed the comments and material provided and determined that none of this material constitutes significant new information that requires recirculation of the Draft EA for further public comment under CEQA Guidelines Sections 15073.5 and 15088.5. None of this new material indicates that PR 415 will result in a significant new environmental impact not previously disclosed in the Draft EA. Additionally, none of this material indicates that there would be a substantial increase in the severity of an environmental impact than previously analyzed in the Draft EA that would require mitigation or that there would be any of the other circumstances requiring recirculation described in Sections 15073.5 and 15088.5. Since no significant adverse impacts are identified, no alternatives or mitigation measures are required pursuant to CEQA Guidelines Section 15252 (a)(2)(B). The EA for PR 415 complies with the CEQA requirements. All environmental impacts have been adequately analyzed in the EA and no further analysis is required under CEQA. SCAQMD fulfills the responsibilities as a lead agency under CEQA for PR 415.

We represent Baker Commodities, Inc. (Baker), a family-owned company founded in 1937 and operated by three generations of the Andreoli Family. Baker has not had any violation notices for odors in the last 17 years. Baker's rendering operations serve a critical function in California by recycling millions of pounds of animal by-product, used cooking oil, and trap grease that cannot lawfully be disposed of in landfills. Baker is committed to environmental stewardship, and provides 202 green jobs. Baker's operations fully comply with industry standards and government regulations, including California Occupational Safety and Health Administration (OSHA), California Department of Transportation (Cal DOT) & (USDOT), California Department of Food and Agriculture (CDFA), United States Department of Food and Agriculture (USDA), Food and Drug Administration (FDA), Hazard Analysis Critical Control Points (HACCP), Rendering Code of Practice, Animal Protein Producers Industry (APPI), Association of American Feed Control Officials (AAFCO) and other miscellaneous City, County and State Regulations. It is essential that South Coast Air Quality Management District (SCAQMD) ensure that Proposed Rule 415 – Odors from Rendering Facilities (PR 415) does not conflict with these standards.

3.1-1

Response 3.1-1

Refer to Master Response 1, *Legal Authority to Adopt and Enforce*. As described in Chapter 1 of the Draft EA and the Final Staff Report for PR 415, SCAQMD has the legal authority to adopt and enforce PR 415. SCAQMD is given broad authority to regulate air

D1. Response to Comments

pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) Section 40000. The term "air pollutant" includes odors (H&SC Section 39013). Therefore, the SCAQMD may regulate to control air pollution, including odors, from PR 415 sources. In addition, SCAQMD has authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on SCAQMD by law (H&SC Section 40702).

Rendering facilities subject to the requirements of PR 415 will continue to operate as they currently do and will comply with existing applicable regulations (e.g. OSHA, Cal DOT, USDOT, CDFA, USDA, FDA, HACCP, APPI, AAFCO, along with other City, County, and State regulations).

The comment provides background information and does not raise any environmental issues necessitating a response under CEQA.

Baker recently attended SCAQMD's March 5, 2015, Public Workshop and CEQA Scoping Meeting for PR 415 and has been actively engaged in the public process for PR 415 since SCAQMD first proposed the rule. Baker estimates the initial capital costs to comply with PR 415 to be \$27 million and will increase annual operation costs by \$2.5 million. Baker simply cannot sustain a viable business in light of these significant costs. If the rule is passed in its current form, Baker will close down. Despite Baker's active participation in the process and SCAQMD's commitment that PR 415 would not cause rendering companies to go out of business, the February 18, 2015 version fails to meaningfully respond to Baker's concerns. In fact, the February 18 version of PR 415 has gone backwards from the original draft. It does not seem like SCAQMD is seriously considering Baker's comments.

3.1-2

3.1-2
Cont'd**Response 3.1-2**

Refer to Master Response 2, *Facility Shutdown*. PR 415 is intended to reduce the potential for nuisance-level rendering odors. While PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made during the rule development process to accommodate each existing facility's needs and provide sufficient flexibility. These accommodations are detailed in Master Response 2.

SCAQMD staff has prepared a Socioeconomic Impact Assessment of PR 415 which has been released for public review and comment in conjunction with the Staff report and PR 415 for a 30-day public review and comment period from July 14, 2015 to August 14, 2015 prior to the SCAQMD Governing Board hearing as currently scheduled for November 3, 2017. The analysis identifies affected facilities and presents the anticipated

D1. Response to Comments

costs of new enclosures and the capital and operating costs of ventilation systems and odor control equipment. In addition, the Socioeconomic Impact Assessment presents the potential costs of best management practices (BMPs), such as signage, covering of incoming trucks, and repair of rendering material receiving areas.

In its January 30, 2015 comment letter, Baker requested that the SCAQMD provide specific data so that Baker could meaningfully respond to PR 415. The requested data includes the evidence the SCAQMD is relying upon to claim that odors from Baker are causing public nuisance level odors in Boyle Heights. When the SCAQMD began to claim that odors cause health effects, Baker requested the SCAQMD provide it with the data confirming these allegations. To date, Baker has not received the requested documents. SCAQMD's lack of disclosure is seriously hampering Baker's ability to provide comments to SCAQMD.

3.1-3

Response 3.1-3

Public Records Act Request (Control Number 79841) was completed on May 13, 2015 and 115 records were provided to Baker. Public Records Act Request (Control Number 82875) was completed on January 7, 2016 and over 75 records were provided to Baker.

Refer to Master Response 5, *Nuisance Odors*, for a detailed assessment of the odor complaints over a 10-year period in Boyle Heights and surrounding communities. SCAQMD received an average of 35 odor complaints per year between January 2002 and October 2011. Locations of odor complaints are shown in Figure D1-1, while Appendix D2, *Odor Complaints*, provides an updated list of odor complaints that have occurred between January 2015 and September 2017 facilities in the Vernon, Boyle Heights, East Los Angeles, and Commerce area.

Complaints from Boyle Heights are documented in the Final Staff Report for PR 415, Appendix A: Public Comments and Responses. Development of PR 415 resulted from comments and complaints received by affected members of the public as well as an issue identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights.

In November 2010, the SCAQMD Governing Board approved the CCP pilot program. SCAQMD staff began implementing the CCP in the pilot study area of Boyle Heights, a community near the Vernon rendering facilities, by meeting with a stakeholder working group beginning in July 2011. The purpose of this working group was to identify air quality issues of importance to the community in Boyle Heights and surrounding communities. The prevalence of odors from rendering facilities in Vernon, directly south

D1. Response to Comments

of Boyle Heights, was of great concern to the working group affecting the quality of life in the area. SCAQMD staff beginning rule development to address odors from rendering operations in early 2014.

Furthermore, although SCAQMD is concerned that rendering odors are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. As a result of these efforts, PR 415 was developed to include requirements and BMPs that are capable of reducing the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering facilities.

A number of scientific studies have been published documenting the potential health effects of odors from animal operations. A summary of these findings are presented in the Final Staff Report, Chapter 1, *Odors and Potential Health Effects*, based on the following references:

- “What Constitutes an Adverse Health Effect of Air Pollution?”, American Thoracic Society, 1999, <http://www.thoracic.org/statements/resources/archive/airpollution1-9.pdf>
- “Odour Impact - Odour Release, Dispersion and Influence on Human Well-Being with Specific Focus on Animal Production”, Nimmermark, 2004
- “Science of Odor as a Potential Health Issue”, Schiffman, 2005, <http://www.fivesenses.com/Documents/Library/23%20%20Gray%20Line%20Nusance%20Health.pdf>
- “Potential Health Effects of Odor from Animal Operations, Wastewater Treatment, and Recycling of Byproducts,” Schiffman et. al, Journal of Agromedicine, Oct 2008

D1. Response to Comments

Despite the fact that critical information has not yet been disclosed and key issues remain unresolved, Baker understands that the SCAQMD staff intends to proceed with a Public Hearing before the SCAQMD Governing Board on May 1, 2015. Baker renews its request that SCAQMD staff postpone the Governing Board's consideration of PR 415 until all information has been disclosed to the public and the serious problems with PR 415 have been addressed and resolved. There is no need to fast track this rule.

3.1-4

Baker submits these comments on PR 415 and in response to the scoping meeting and requests that this letter be included in the administrative record for PR 415. Baker reserves the right to submit additional comments on PR 415 in the future.

Response 3.1-4

The comment period for the Draft EA for PR 415 – Odors from Rendering Facilities started on July 14, 2015 and ended on August 12, 2015. This comment letter from Baker has been included in the administrative record for PR 415 as part of Appendix D, Response to Comments. The Response to Comments are prepared in accordance with Public Resources Code Section 21080.5(d)(2)(D) and SCAQMD's Certified Regulatory Program (Codified under Rule 110), which requires that the final action on PR 415 includes written responses to issues raised during the public process. The public hearing before the SCAQMD Governing Board is scheduled on November 3, 2017.

1. Baker's Operation Provides an Essential Public Service.

Baker provides the following services to its customers:

- A Total Grease Management Program that includes the collection of used cooking oil from restaurants and food manufacturers, the pumping and cleaning of grease trap and interceptor systems, commercial Hydrojet drain cleaning, and high pressure power washing service.
- Collecting and recycling animal mortalities from the cattle and dairy industries.

3.1-5

D1. Response to Comments

- Collecting and recycling animal by-products from meat and poultry processing plants, supermarkets and butcher shops.

The products that Baker recycles are either collected by Baker's trucks or by outside trucking companies. Baker has no control over trucks it does not own. Baker processes the products by a continuous flow operation. This means that there must be sufficient product on-site before the process is started. Only batch operations can operate intermittently to process products as they arrive at the site. A continuous flow operation produces significantly less emission and odors than a batch process.

The rendering of these materials is vital because it protects the environment, prevents disease, and provides necessary products for other industries. Fifty percent of every animal raised for consumption is considered inedible and goes to renderers for recycling. Without rendering plants, cities would risk becoming filled with diseased and rotting carcasses causing a terrible stench and the spread of viruses and bacteria. If the carcasses are burned, it will create more air pollution and reduce recycling opportunities.

Through the rendering process, inedible wastes that are rich in carbon and nitrogen are recycled into useable materials. The recycled products include biofuels, livestock feed, pet food, fertilizer, cosmetics, paints, varnishes, soaps, and many other industrial products. The use of biodiesel can reduce greenhouse gas emissions by as much as 78%. Without recycling, it is likely the financial and environmental cost of these products will increase because other likely new resources would have to be used instead of the recycled product produced by rendering.

The wastes Baker recycles will not disappear if the rendering operations shut down. These wastes cannot be sent to landfills. Even if they could, without rendering the landfills in the United States would be full in four years. What does the SCAQMD propose happen to these wastes in the absence of rendering operations in the South Coast Air Basin?

3.1-5
Cont'd

Response 3.1-5

Refer to Master Response 2, *Facility Shutdown*. PR 415 is intended to reduce odors from rendering facilities, not to cause rendering facilities to shut down. SCAQMD staff has worked in good faith with the affected rendering facilities to minimize cost impacts, including making various changes to the scope and requirements of PR 415 from early versions of draft rule language (Refer to Table P-1 in the Final EA). The current requirements allow a rendering facility to use an alternative secondary odor containment system such as air curtain for the raw material area enclosure to prevent fugitive odors from escaping through enclosure openings under paragraph (f)(5). In addition, SCAQMD staff has included five additional exemptions resulting in a total of nine exemptions under subdivision (l) (Refer to Table P-1 in the Final EA).

D1. Response to Comments

The rendering operations perform a unique and necessary benefit; however they do not meet the definition of an essential public service under Rule 1302(m). An essential public service includes sewage treatment facilities which are publicly owned or operated, and consistent with an approved regional growth plan; prisons; police facilities; firefighting facilities; schools; hospitals; construction and operation of a landfill gas control or processing facility; water delivery operations; and public transit.³³

SCAQMD staff has learned that Baker has used similar controls in other facilities it operates in the United States. The statement regarding the absence of rendering operations within SCAQMD's jurisdiction is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. Such a scenario is not foreseeable based on the requirements of PR 415 or the impacts on rendering facilities. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

2. SCAQMD Lacks Authority to Impose a Rule that is More Stringent than the Public Nuisance Statute or Bypass the Public Nuisance Proof Requirement.

SCAQMD has regulated odors since 1976 under Rule 402. Rule 402 conforms to California Health and Safety Code section 41700 (Section 41700). PR 415 is unnecessary because the SCAQMD already has Rule 402.

3.1-6

Response 3.1-6

Refer to Master Response 1, *Legal Authority to Adopt and Enforce*, Master Response 3, *Odor Control Measures*, and Master Response 6, *Methodology*. PR 415 is needed to reduce nuisance-level odors surrounding rendering facilities because Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities and does not establish minimum standards to prevent or minimize odors. Furthermore, enforcement of Rule 402 is often ineffective in addressing odor complaints from existing rendering facilities because it requires verification of complaints, which is often not possible.

PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they rise to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred. Rendering odors are unique and distinctive. The difficulty in tracing the odors to a specific facility does not mean a

³³ Rule 1302. Amended November 4, 2016. Accessed at: <https://www.arb.ca.gov/drdb/sc/curhtml/r1302.pdf>.

D1. Response to Comments

problem does not exist. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near one another. In many cases, it is likely that more than one facility is contributing to the odor. This creates the need to require all facilities to take reasonable measures to reduce odors emanating from their operations.

SCAQMD derives its authority strictly from the Legislature. Under Health and Safety Code section 40001, subdivision (b) (Section 40001(b)), SCAQMD may adopt rules that

3.1-7

“provide for the prevention and abatement of air pollution episodes which, at intervals, cause discomfort or health risks to, or damage to the property of, a *significant number of persons or class of persons.*” (Emphasis added.) SCAQMD lacks statutory authority to adopt a rule more stringent than Section 41700. Further, SCAQMD lacks statutory authority to regulate bacteria.

3.1-7
Cont'd**Response 3.1-7**

SCAQMD has legal authority to adopt and enforce PR 415. Refer to Master Response 1, *Legal Authority to Adopt and Enforce*. SCAQMD is given broad authority to regulate air pollution from "all sources, other than emissions from motor vehicles." Health and Safety Code (H&SC) Section 40000. The term "air pollutant" includes odors [H&SC Section 39013]. Therefore, SCAQMD may regulate to control air pollution, including odors, from PR 415 sources. In addition, SCAQMD has the authority to adopt such rules as may be "necessary and proper" to execute the powers and duties imposed on SCAQMD by law. [H&SC Section 40702].

SCAQMD’s legal authority to adopt and enforce PR 415, establishing best management practices and requirements to reduce odors from rendering facilities also derives from H&SC Section 41700, which, in pertinent part, prohibits the discharge of air contaminants causing annoyance to the public. It further prohibits the discharge of air contaminants, such as odors, which “endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.” [H&SC Section 41700]. SCAQMD’s authority granted by H&SC Section 41700 to protect the public’s comfort and health and safety includes the regulation of facilities in order to prevent the discharge of odors before they cause nuisance or annoyance to the public. SCAQMD is authorized under H&SC Section 41508 to adopt rules imposing requirements that are stricter than those set forth in state law, including Section 41700.

D1. Response to Comments

In addition, H&SC Section 40001(b) authorizes the SCAQMD to adopt rules and regulations, such as PR 415, and provides, in relevant part, for the prevention and abatement of air pollution episodes which cause discomfort or health risks to a significant number of persons. This statute, which is phrased very similarly to Section 41700, allows rules to prevent air pollution episodes caused by any type of pollutant, not just criteria air pollutants. *Ultramar v. SCAQMD* (1993) 17 Cal. App. 4th 689,707. PR 415 serves to prevent or at least reduce the likelihood of the occurrence of a nuisance through imposing reasonable odor control measures. PR 415 is a reasonable and proper use of SCAQMD's regulatory authority.

PR 415 does not propose to regulate bacteria. However, PR 415 requires BMPs for standing water generated by washdown of rendering operations that contains organic matter that can allow the growth of odorous bacteria.

Not every odor constitutes a public nuisance. Generally, to qualify, the odor must be both substantial and unreasonable. Substantiality is significant harm, one that is definitely offensive, seriously annoying, or intolerable. The measure is an objective one: if normal persons in that locality would not be substantially annoyed or disturbed by the situation, then the odor is not a significant one. Unreasonableness of a given interference is determined by comparing the social utility of an activity against the gravit harm it inflicts, taking into account a handful of relevant factors. SCAQMD's failure to implement Rule 402 on a case-by-case basis prevents the lawful consideration of defenses such as laches (*City and County of San Francisco v. Pacello* (1978) 85 Cal.App.3d 637) or coming to a nuisance. (*Hellman v. La Cumbre Golf & Country Club* (1992) 6 Cal.App.4th 1224.) The current residents complaining about rendering and Baker's operations knew when they moved into the area that heavy manufacturing is located in Vernon and of Baker's presence since approximately 1950.

3.1-8

Response 3.1-8

Refer to Master Response 5, *Nuisance Odors*. SCAQMD staff has been present at complainants' locations and concluded that in many cases, normal persons would be annoyed or disturbed by the odors. PR 415 seeks to require reasonable controls to prevent or minimize public nuisance odors from rendering operations. The doctrines of laches and coming to the nuisance do not apply to the adoption of a rule designed to prevent the occurrence of a public nuisance. The case cited regarding "coming to the nuisance", *Hellman v. La Cumbre Golf & Country Club*, (1992) 6 Cal. App. 4th 1224, involved an action for private nuisance. The case cited for the application of laches involved a unique situation where the City Board of Permit Appeals had ruled that the defendants' home was a legal use, but many years later the City sought to declare their occupancy illegal,

D1. Response to Comments

and due to the passage of time the transcripts of the Board hearing had been lost. *City and County of San Francisco v. Pacello* (1978) 85 Cal. App. 3d 637. This is not precedent for arguing that a source of objectionable odors should not be required to minimize such odors merely because of the passage of time. One of SCAQMD's guiding principles is that all residents in the Basin are entitled to protection from air pollution and offensive odors which diminish their quality of life regardless of where they live.

SCAQMD staff informed the Governing Board in May 2014 that a public nuisance involves complaints from six or more separate households or businesses; that the odors must be confirmed by the inspector with the complainants, and traced back to the source; and that the complainant must sign a form and either complete a declaration or be willing to testify in court if necessary. SCAQMD staff contends that PR 415 is necessary because the odors occurring in Boyle Heights *cannot* be traced back to any specific company. If the source of the odors cannot be traced to Baker, there is no problem and SCAQMD lacks authority to require that Baker comply with the extraordinary and costly PR 415. SCAQMD cannot simply decide to bypass the rigorous application of Rule 402.

3.1-9

Response 3.1-9

As discussed above, SCAQMD has legal authority to adopt and enforce PR 415. Refer to Master Response 1, *Legal Authority to Adopt and Enforce*.

Refer to Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*. Rendering odors are very distinctive and based on staff's experiences from site visits, staff concluded that all of the affected facilities produce objectionable odors. The difficulty in tracing the odors to a specific facility does not mean that a problem does not exist. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near one another. In many cases, it is likely that more than one facility is contributing to the odor. This creates the need to require all facilities to take reasonable measures to reduce odors emanating from their operations. In similar fashion, SCAQMD requires many facilities to take all reasonable measures to reduce pollutants such as particulate matter (PM)_{2.5}, even though no one facility is solely responsible for creating a violation of the National Ambient Air Quality Standards (NAAQS).

PR 415 would not bypass Rule 402. Both would be tools and approaches that would be available to reduce odors. The rules would not be duplicative because Rule 402 does not require specific actions of the facility and is reactive when there is a problem. PR 415

D1. Response to Comments

would require specific requirements and ongoing implementation of BMPs that are designed to be proactive in nature, to reduce or prevent the potential for off-site odors.

Vernon is an industrial city incorporated in 1905; the intent was to locate heavy manufacturing facilities and industrial uses in this pocket of LA County. Vernon currently houses more than 1,800 businesses. Between Baker and Boyle Heights, there are freeways, rail yards, and a significant number of facilities that cause odors, including food processing plants, heavy manufacturing, mineral processing and warehousing, and trucking distribution centers. SCAQMD has yet to produce any evidence demonstrating that the odors in Boyle Heights are not caused by one of these other uses, or that the odors in Boyle Heights are not the cumulative effect of being located next to an industrial city. SCAQMD cannot in good conscience claim that the odor issues in Boyle Heights are all caused by a few rendering operations located several miles away. In sum, there is no proof that Baker is causing a public nuisance in Boyle Heights.

3.1-10

3.1-10
Cont'd

Response 3.1-10

While there may be other odorous industrial and commercial operations in Vernon in addition to rendering facilities, the odors generated from rendering operations are distinctive and unmistakable, and SCAQMD staff did not find that odors created by rendering facilities are attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable, and offensive to many in the communities surrounding the city of Vernon.

Refer to Master Response 5, *Nuisance Odors*, for additional information on the character of odors from rendering operations (Table D1-2) and odor complaints in the community surrounding rendering facilities.

PR 415 applies to all rendering plants regardless of whether the plant is creating a public nuisance. (PR 415(b).) The definition of a "confirmed odor event" requires only three complaints that are "verified" (whatever this means) by SCAQMD personnel. This standard is inconsistent with PR 402. The number of complaints has been reduced from 6 to 3. Why are the rendering facilities being held to a different standard than other industries, particularly the industries with the highest odor complaint rates? There is no requirement that the rendering facility cause quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public.

3.1-11

D1. Response to Comments

Response 3.1-11

SCAQMD staff has found it necessary to adopt certain rules which are designed to reduce odors in specific industries. Besides PR 415, these include Rule 410 - Odors from Transfer Stations and Material Recovery Facilities, and the currently-proposed amendments to Rule 1148.1 - Oil and Gas Production Wells. The comment accurately states that rendering facilities are subject to PR 415 irrespective of whether an affected facility has received a notice of violation (NOV) for public nuisance in the past. This is true of all rules adopted by SCAQMD, including Rule 410 – Odors from Transfer Stations and Material Recovery Facilities, and not just limited to rendering facilities. PR 415’s requirements are applicable to all rendering facilities, unless exempted, and further requires an Odor Mitigation Plan (OMP) if certain triggering events occur.

The purpose of defining a confirmed odor event in PR 415 as three verified odor complaints by different individuals from different addresses is that it is one of two “triggers” for submittal of an OMP. The number of verified complaints necessary for a confirmed odor event, while less than what SCAQMD normally requires for issuing a NOV for violating Rule 402, is considered to indicate a higher potential for causing an odor nuisance. Because PR 415 is designed to prevent such occurrences, the threshold is intentionally lower than the typical standard for actually causing a public nuisance. A confirmed odor event is simply a measure under PR 415 whereby a facility that receives three confirmed odor events within a 180-day period is required to take further action to control odors from their rendering facility. As such, there is no inconsistency between a confirmed odor event and Rule 402.

The most sensitive persons can create an odor event. (*See also* the definition of “odor” in PR 415(c)(13), making anything that can be smelled an odor.) An odor is not even required to be emitted; the operation or process is a source if an odor *may be* emitted. (PR 415(c)(14).) Regardless of whether a rendering facility creates a public nuisance, the facility must still implement Best Management Practices (BMP), operate in a closed system or permanent enclosure, and install odor control equipment. (PR 415(d)(1).) PR 415 essentially mandates an on-site zero odor threshold. This standard is not reasonable and cannot be met. On-site odors do not necessarily cause migrating public nuisance level odors. If the implementation of the BMP sufficiently reduced odors at the facility, why is it necessary for SCAQMD to require an existing facility have its equipment and processes operated in a closed system or located within the confines of a permanent enclosure?

3.1-12

D1. Response to Comments

Response 3.1-12

PR 415(c)(12) defines an odor as the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves. A single person cannot create a confirmed odor event, regardless of how sensitive that person is to rendering odors. A confirmed odor event is defined by three verified odor complaints from separate addresses. In order to be verified, the source of an alleged odor must be determined according to standard SCAQMD procedure. This involves a trained inspector tracing an odor back to a specific source. If a source cannot be determined, the odor complaint cannot be verified. The most a single person can do is call in an odor complaint to SCAQMD. A complainant cannot verify the source of that odor, no matter how sensitive they are to rendering odors. Verification requires an SCAQMD inspector. Even after a complaint is verified, a confirmed odor event requires two more verified complaints, from different addresses, following the same verification procedure as for the complaint from the highly-sensitive person.

PR 415 does not mandate an on-site zero odor threshold (Refer to Master Responses 3, *Odor Control Measures*). Staff recognizes that there may still be odors at the facility even after implementation of PR 415. The intent of the rule is to minimize the likelihood that odors will travel off-site and cause an odor nuisance to the public. If odors generate at least three complaints, properly verified by an SCAQMD inspector as previously described, and this occurs over the course of three separate and distinct events, these odors will trigger the requirement for a facility to submit an OMP detailing actions that a facility will take to reduce odors.

While BMPs should help to reduce odors, BMPs by themselves do not represent effective controls that can reasonably be achieved for reducing odors. Staff concludes that more effective controls for odors from rendering facilities are to enclose the operations that generate odors within a permanent total enclosure, keep the enclosure under negative pressure to contain odors within the enclosure, and vent those odors to control equipment, unless an unventilated permanent total enclosure for raw material receiving is allowed, provided a secondary odor containment method is used at each enclosure opening (paragraph (f)(5)). Included in PR 415 (paragraph (f)(3)), a closed system of cooking and processing equipment is an acceptable alternative to a permanent total enclosure, provided fugitive odors from that closed system do not continue to cause verified odor complaints. If these core requirements do not prevent the occurrence of an odor nuisance, or three or more confirmed odor events within 180 days, then the facility must prepare and implement an OMP.

D1. Response to Comments

SCAQMD also lacks authority to require and enforce the BMP requiring covered trucks. There has been no analysis disclosed to the public that demonstrates these measures will reduce odors in Boyle Heights. Even if a facility does all of the above, the Executive Officer is vested with unfettered authority to require a rendering operation to submit an Odor Mitigation Plan (OMP) and approval of the OMP. (PR 415(d)(2)-(3).) SCAQMD requires the facility to do its work by investigating the causes of a confirmed odor complaint. (PR 415(e)(22), (d)(3).)

3.1-13

Response 3.1-13

PR 415 requires transport vehicles delivering raw rendering materials to a rendering facility from off-site locations to be completely enclosed or covered prior to passing the first point of contact at the rendering facility (such as a guard shack or weigh station). Owners/operators of third-party trucks will have six months to become familiar with the requirements of paragraph (e)(1), Covering of Incoming Transport Vehicles, and subdivision (i), Signage and Tracking of Odor Complaints at Rendering Facilities. Haul vehicles and trucks are already required to use tarps or other suitable enclosures to cover and stabilize material while transporting to reduce fugitive dust emissions and manage odors under SCAQMD Rules 403 and 410. The BMP requiring covered trucks under paragraph (e)(1) is not a new requirement. For reasons discussed in Master Response 1, *Legal Authority to Adopt and Enforce* and Response 3.1-7 (above), SCAQMD has authority to require and enforce BMP (e)(1), Covering of Incoming Transportation Vehicles. The signage requirements in subdivision (i) requires the rendering facilities to install a sign to inform the public of how to report odor complaints to SCAQMD and another sign to be posted at each truck entrance to inform owners/operators of all incoming trucks to enclose or fully cover the trucks. The requirement to contact SCAQMD does not indicate that the facility is the source of the odor; only that the facility received a complaint. SCAQMD Compliance personnel trained in inspection techniques for odors will investigate the complaint and, if possible, determine the source of the odor. In cases where rendering odors from a facility constitute a public nuisance or trigger three confirmed odor events, an OMP will be required.

3. PR 415 Amounts to a Regulatory Taking of Private Property.

As discussed in this letter, PR 415 will make it impossible for Baker to operate in the City of Vernon. When a government regulation goes too far, it will be recognized as a taking, in which case the owner is afforded a remedy under the U.S. and California Constitutions. (*First*

3.1-14

D1. Response to Comments

Response 3.1-14

SCAQMD staff has made a good faith effort to revise PR 415 in an effort to provide flexibility while keeping the primary objective and benefits of PR 415 (Refer to Master Response 2, *Facility Shutdown* and Table P-1 in the Final EA).

A facility's business decision to cease its operations in Vernon would not turn PR 415 into a taking under the Constitutional provisions cited. A taking will generally be found if a regulation completely deprives an owner of "all economically beneficial uses" of the property. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1004 (1992). But if a regulation is otherwise a valid exercise of the government's regulatory power, the fact that it has the effect of prohibiting a particular beneficial use to which the property has previously been put does not make it a taking. *Goldblatt v. Hempstead*, 369 U.S. 590, 593 (1962). The courts will examine the individual facts of each case, considering three basic factors: (1) the character of the government action (taking is more likely to be found for physical invasion of property), (2) the economic impact of the regulation on the plaintiff, and (3) the property owner's distinct investment-backed expectations for the use of that property. *Penn Central Transp. Co. v. New York City*, 434 U.S. 104, 124 (1978). The comment does not present evidence on these issues, including information on how any expenses to comply with PR 415 would affect the facility. In addition, staff has learned that Baker's facility in the Rochester New York area already uses similar controls as would be required under PR 415.

English Evangelical Lutheran Church of Glendale v. Los Angeles County (1987) 482 U.S. 304.) The Fifth Amendment to the federal Constitution provides that "just compensation" must be made for a taking by the federal government. Article I, section 19 of the California Constitution contains a similar requirement.

3.1-15

Response 3.1-15

Refer to Response 3.1-14 for a discussion of why PR 415 does not constitute a taking.

D1. Response to Comments

4. PR 415 Lacks Appropriate Legal Standards and Clarity.

The “confirmed odor event” standard is impermissibly vague. There is no time frame within which the complaints must occur. The language in the original version of PR 415 requiring a SCAQMD inspector verify the odor by tracing it upwind to a facility was removed in the second February 18th version. Now, any untrained SCAQMD staff member or even the Executive Officer can verify an odor event. Verification is left up to the discretion of each SCAQMD employee.

3.1-16

Response 3.1-16

A confirmed odor event is not impermissibly vague and is defined in paragraph (c)(4) as the occurrence of a rendering-related odor resulting in three or more complaints by different individuals from different addresses, and the source of the odor is verified by SCAQMD personnel trained in odor inspection techniques.

A time frame is not specified for a confirmed odor event because a single event can last for an indeterminate length of time. If a time limit is specified in PR 415, SCAQMD compliance staff would be obligated to consider a new event at the conclusion of the time limit. For example, if a time limit of 24 hours is specified in PR 415 and three complaints are received and verified for this time-period; if the odor event continues for more than 24 hours, any complaints received and verified after this period would be counted towards another odor complaint event.

The rationale for the language change to “verified by SCAQMD personnel” under paragraph (c)(4) was to allow an SCAQMD compliance supervisor or manager to verify a complaint. Supervisory personnel receive the same training as inspectors with regard to verifying complaints. As shown in the draft rule language, dated June 23, 2015, attached in the Appendix A to the Draft EA, clarifying language was included to s (c)(4) to be: “...and the source of the odor is verified by SCAQMD personnel trained in inspection techniques.”

How can a violation of any term of an approved OMP be legally considered a violation of PR 415? How can an OMP be required when there is no violation of the rule? Even if Baker does everything SCAQMD requires, SCAQMD has reserved its right to come back after Baker and require it to do more. A public nuisance is not a pre-requisite for this requirement. There are no standards of what constitutes an approvable odor mitigation plan. It is entirely within the SCAQMD's discretion to decide what SCAQMD wants to require. Businesses cannot operate in this climate of uncertainty. What are the standards for approving or disapproving an OMP?

3.1-17

D1. Response to Comments

Response 3.1-17

A violation of an approved OMP is considered a violation of PR 415 because it is necessary to make the requirements of the OMP enforceable for each facility, and it is impractical to spell out the individual requirements of each facility's OMP in the rule language itself. This principle is already part of SCAQMD Rules. Pursuant to Rule 221, an "operation shall not be conducted contrary to any conditions specified in the approved plan" and "a violation of the plan is a violation of the rule."

The requirement to submit an OMP by a facility subject to PR 415 is based on a facility receiving either a NOV for public nuisance, or three confirmed odor events within a 180-day period, as specified in subparagraphs (d)(2)(A) and (d)(2)(B). Therefore, a public nuisance is one of the triggers for submittal of an OMP. However, submittal of an OMP is not based on violation of a requirement of PR 415. The Executive Officer will approve or disapprove an OMP within 90 days, as stated in subparagraph (h)(3)(A). In addition, the information that shall be included in an OMP is listed in paragraph (h)(1) and the standards for approval of an OMP are addressed in subparagraph (h)(3)(C). The odor mitigation activities must be sufficient to resolve the odor problem that triggered submittal of the OMP.

What standards will SCAQMD permitting staff use to evaluate whether an existing rendering operation complies with the closed system requirement, or in approving a permanent enclosure and the odor control equipment? These standards must be articulated in PR 415.

3.1-18

Response 3.1-18

PR 415 paragraph (f)(3) defines the minimum requirements for a closed system. Paragraph (f)(2) defines the requirements for a permanent total enclosure and the ventilation system capable of maintaining the required minimum face velocity through enclosure openings. Paragraph (f)(4) defines the requirements for an odor control system and associated testing requirements. Paragraph (f)(5) defines alternative standards for a permanent total enclosure for raw material receiving area.

D1. Response to Comments

Odors are subjective. How is the SCAQMD intending to maintain consistency between how odors from the different rendering operations are treated? How are the inspectors going to determine whether the complainant's odor is the same odor coming from the rendering facility? Why is the SCAQMD not considering a quantitative methodology? What methodology is the SCAQMD using to determine that a specific rendering facility is the cause of an odor complaint? How will SCAQMD determine whether odors are escaping from individual pieces of equipment?

3.1-19

Response 3.1-19

As described in Master Response 3, *Odor Control Measures*, there are no currently available objective methods to measure 'objectionable' odors. Therefore, in this rule development effort, staff focused on identifying the current and accepted practices around the state of California and the nation for operating a rendering facility within an urban area. In doing so, staff was unable to find a single example of a rendering facility in an urban area operating an open-air rendering process such as several of the rendering facilities currently operate within SCAQMD's jurisdiction. Instead, staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. This same standard of operation is used in other areas by at least two of the companies that operate rendering facilities within Vernon.

Under paragraph (f)(5), an owner or operator may elect to meet the alternative standards for a permanent total enclosure for the raw materials receiving area. PR 415 has been revised to allow an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening.

As identified in the Final Staff Report and Master Response 6, *Methodology*, the current science does not allow direct measurement of all the chemical compounds that make up odors.

As identified in Master Response 5, *Nuisance Odors*, SCAQMD compliance inspectors are trained to follow standard surveillance procedures to identify the source of an odor. Prior to conducting odor surveillance, inspectors attempt to gather information about the community impacted by the alleged emissions, along with any available information about potential odor sources in the general vicinity. These information-gathering activities often involve interviews of individuals who have reported air quality complaints to SCAQMD, during which inspectors typically inquire about the character, intensity, frequency, timing, and duration of odors reported by the complainants.

D1. Response to Comments

During odor surveillance, the inspector periodically measures wind speed and direction using a SCAQMD-issued wind meter, noting and documenting information about the character and intensity of any detectable emissions at each location where such measurements have been taken. Based on this information and/or on information from previous surveillance activities, the inspector follows a surveillance route that begins downwind of, and traces detectable emissions, if any, to their apparent source. The inspector continues along the surveillance route to a point upwind of the apparent source where the emissions are no longer detectable, then returns to a downwind location and performs repeated surveillance activities in this manner, from downwind to upwind locations, ruling out all other possible sources, until a probable emissions source can be identified. The inspector documents these findings, and may prepare a table or map that shows the surveillance route(s) taken, wind data collected, and the character and intensity of odor emissions detected at key locations along the route. Once a probable source has been determined, the inspector typically enters to verify whether the emissions detected at that source match those described by the complainant(s) and/or detected by the inspector at locations downwind of that location, and to identify the particular equipment and/or process from which the emissions emanate.

5. Closed System or Permanent Enclosure Requirement Comments.

Baker should be permitted to use alternative methods to address odors when there has been a substantiated violation of Rule 402. The construction of a permanent enclosure is cost-

3.1-20

prohibitive. Baker cannot retrofit the existing roofing structure to meet PR 415 requirements as the SCAQMD staff claim because of the control system requirements.

3.1-20
Cont'd

Response 3.1-20

As indicated in Response 3.1-9 and Master Response 5, *Nuisance Odors*, SCAQMD staff has detected objectionable odors emanating from all rendering facilities that staff visited. However, in many cases it is difficult to pinpoint a particular odor nuisance as coming from one specific facility. Indeed, odors from two or more facilities may contribute to a single nuisance event. Therefore, reasonable preventative measures are necessary for all affected facilities.

As explained in Master Response 2, *Facility Shutdown*, SCAQMD staff has worked in good faith with the affected facilities to modify the language and requirements of PR 415 in order to allow compliance flexibility. SCAQMD staff has prepared a Socioeconomic Impact Assessment for PR 415 to disclose costs associated with constructing enclosures.

D1. Response to Comments

As illustrated in Table P-2 of the Final EA, the size of enclosure the affected facilities will construct has been substantially reduced.

Moreover, SCAQMD staff has learned that Baker has at least one other facility in the Rochester, New York area that uses a similar control strategy as would be required under PR 415 in terms of enclosure of rendering operations, maintaining negative pressure on the enclosure and routing to odor control equipment. Further, paragraph (f)(5) allows the raw material receiving area enclosure to use an unventilated permanent total enclosure, provided a secondary odor containment method is used at each enclosure opening.

Baker has repeatedly asked whether its existing operation complies with the closed system requirement. To date, SCAQMD staff has not provided a clear unequivocal answer. SCAQMD rulemaking staff claim Baker's current operation fully complies with the closed system requirement. But, when Baker has asked for certainty, SCAQMD has hedged stating that the decision will be made by the engineers processing the enclosure permits. What are examples of closed systems? What standards will the SCAQMD utilize to determine if a system is closed? Is Baker's equipment, excepting the raw material pit, considered by the SCAQMD to be in closed systems that comply with PR 415? Is a screw that is covered considered a closed system? If the existing conveyor system does not comply, then what areas would Baker be required to permanently enclose under PR 415? What parts of the trap grease process also would need to be enclosed? For the permanent enclosure, what materials should be used to contain odors?

3.1-21

Response 3.1-21

Baker facility's existing operation in the main processing building is not considered a closed system. During a site visit in April 2015, SCAQMD staff noted several pieces of equipment that are not closed, including two inclined screw conveyors as well as a hopper feeding the grinder. These would need to be enclosed in order to consider the conveying, grinding, cooking and post-cooking processing equipment in the main building a closed system.

Paragraph (f)(3) defines the standards for a closed system. A screw conveyor that meets these minimum requirements would be acceptable as part of a closed system. Trap grease unloading operations are exempted if the requirements specified under paragraph (1)(8) are met. Subparagraph (f)(2)(D) defines acceptable materials from which a permanent total enclosure may be constructed. Notwithstanding the materials used in construction, the receiving area must be enclosed, including the receiving pit from which the screw conveyors move material toward processing equipment.

D1. Response to Comments

Baker cannot make business decisions when it does not know whether its current operation is in compliance with the proposed rule or not. PR 415 needs to be explicit and not leave Baker guessing. To do this, the rule must include language stating that Baker's current operation fully complies with the closed system requirement, and no more will be required. Why does a permit application for an enclosure need to be submitted if a facility opts to comply by a closed system?

3.1-22

Response 3.1-22

It is not SCAQMD's policy to include language stating that the existing operations at any affected facility subject to its rules fully comply with the rule requirements. As noted in Response 3.1-21, Baker's facility does not currently comply with the requirements for a closed system. Under subparagraph (d)(1)(B), a permit application for a permanent total enclosure is required to be submitted within 12 months after the date of rule adoption. A permit application is required for a closed system only if modifications are made to currently permitted equipment that is part of a closed system. Otherwise, a permit application is not required for a closed system. PR 415 has been clarified to provide that a permit application for an enclosure must be submitted only where an enclosure is required, and that a facility must give notice if it is instead intending on using a closed system and show construction progress (subparagraph (d)(1)(E)). PR 415 has been further clarified to provide that an owner or operator of a rendering facility may submit a request for one-time extension for up to one year if subparagraph (d)(1)(F) is met.

What types of negative air pressure systems are acceptable to the SCAQMD? Does a closed system have to have a negative pressure system? Is the negative air pressure standard reasonable considering some enclosures may be partially open or regularly opened?

3.1-23

Response 3.1-23

PR 415 does not specify the type of negative pressure system; only that the system is capable of meeting the inward face velocity requirements of paragraph (f)(2). A negative pressure system for a partially-open enclosure will need to be designed to maintain the required minimum inward face velocity through all openings. Likewise, a system for an enclosure with regularly opened doors will need to maintain minimum face velocity accounting for all doors open at once. Note that subparagraph (f)(2)(A) limits the combined area of all routine enclosure openings through which odors can escape from a

D1. Response to Comments

permanent total enclosure to 5 percent of the enclosure envelope. It should be noted that PR 415 has lowered the inward face velocity of not less than 100 feet per minute to allow truck access when doors are open and added an alternative ventilation system design standard in lieu of inward face velocity, provided the ventilation system is greater than 15 air changes per hour (Refer to Table P-1 in the Final EA).

6. BMP Requirement Comments.

It is not reasonable and possible to require all of the BMPs to be implemented within 90 days. For example, all of the washing required will generate a significant amount of wastewater that may require modifications to wastewater facilities and permits that will take significant time to be processed.

3.1-24

Response 3.1-24

Paragraph (e)(1) through (12) specify the required BMPs. The requirement for implementing all of the BMPs within 90 days is reasonable. The requirements of PR 415 will not result in additional water usage since washing is already required. BMP (e)(3) for outgoing transport vehicles or trucks are currently required to be washed under Section 1180.35, Title 3, California Code of Regulations (CCR). BMP (e)(4) for washing of drums and containers has been limited such that only drums and containers that previously contained raw rendering materials that are open upon exiting the facility are required to be washed before leaving a rendering facility. Rendering facilities are already washing the receiving area as would be required under BMP (e)(10). BMP (e)(11) for cleaning floor drains is limited to at least once per month to remove accumulation of rendering materials (Refer to Table P-3 in the Final EA). However, if modifications to any facility's wastewater permit are required to comply with the requirements of subdivision (g), the timing of requirements to submit permit applications and operate within a permanent total enclosure are contained in subparagraph (d)(1)(D). If a facility is unable to meet the construction deadlines in subparagraph (d)(1)(D) due to conditions beyond its reasonable control such as delay in obtaining a permit from a wastewater agency, the facility may apply for a one-time extension (subparagraph (d)(1)(F)) or petition for a variance before the SCAQMD's independent Hearing Board.

What if the material holding standards in the BMPs cannot be met due to circumstances beyond Baker's control? What happens if there is a breakdown or necessary variation from standard procedures? Will the emergency breakdown and variance provisions apply, or will the rendering companies be issued NOVs? What are the penalties for an NOV? Are they defined or

3.1-25

D1. Response to Comments

are they up to the SCAQMD's discretion? Under what conditions would a notice to comply be issued instead of an NOV?

3.1-25
Cont'd

Response 3.1-25

Subdivision (k) addresses equipment breakdown and emergency rendering services. Rule 430 – Breakdown Provisions provides for relief from most rule requirements during breakdowns, excluding Rule 402, provided the breakdown is reported by telephone in a timely manner and a complete Breakdown Emissions Report is submitted in a timely manner. Penalties for violations of SCAQMD rules are set forth in H&SC Section 42400 et seq., and the maximum penalties vary depending on whether the violation involved excess emissions and whether there is negligent conduct, strict liability, knowing violations, etc. In evaluating all cases, a court or SCAQMD must consider all relevant factors including those set forth in H&SC Section 42403, including the extent of harm caused by the violation; the length of time over which it occurs; the financial burden to the defendant; and any action taken by the defendant to mitigate the violation. If the facility and SCAQMD cannot agree on a settlement, then SCAQMD must prove its case in court. A notice to comply may be issued where a minor violation may be promptly corrected, depending on factors such as the facility's prior compliance history.

What is the basis for imposing a three-hour deadline for contacting the SCAQMD if Baker receives an odor complaint? What if the complaint is made after hours or on the weekend when Baker is not operating? What if the odor is not coming from Baker? Baker cannot be required to prove a negative after the fact.

3.1-26

Response 3.1-26

Paragraph (i)(2) requires a facility to notify SCAQMD “. . . no more than three hours after receiving an odor complaint, after facility personnel became aware of the complaint, or after facility personnel should reasonably have become aware of the complaint.” If a complaint is made directly to a facility after hours or on a weekend, and facility personnel do not become aware of the complaint until Monday morning, SCAQMD should be advised of the complaint within three hours after facility personnel become aware of the complaint on Monday. This requirement is necessary to enable SCAQMD staff to respond to the complaint in a timely manner in the event that a complainant contacts a

D1. Response to Comments

rendering facility directly but does not contact the SCAQMD. The contact number (1-800-CUT-SMOG) is accessible 24-hours a day, seven days a week in the event that the facility receives a complaint after hours or on the weekend. The requirement to contact SCAQMD does not indicate that the facility is the source of the odor; only that the facility received a complaint. SCAQMD will investigate the complaint and, if possible, determine the source of the odor.

Why does PR 415 establish deadlines for repairing any leaking components? These components do not contribute to migrating odors. Why is a written log of leaking valves, flanges, etc. required? Why is it necessary to have a who, what, where and why on every leak that is discovered when this is an odor rule?

3.1-27

Response 3.1-27

The BMP to repair leaking components within 72 hours (formerly paragraph (e)(18) in the rule draft) has been removed from PR 415.

7. Paving Requirement Comments.

The paving requirements are extremely costly and unrealistic. It will cost Baker about \$8.5 million to pave all of the areas required by PR 415. These paved areas are used for heavy duty truck movements, back loaders, and other equipment. Cracks will occur. To comply with the rule, Baker will be paving continuously to deal with the cracks. The \$8.5 million cost does not include repaving to fill cracks.

3.1-28

What are the standards for exactly what types of cracks and potholes in asphalt need to be repaired? What is the standard for maintaining the facility grounds once the asphalt is repaired? What areas are required to be repaved? Is it only the area around the pit or the entire property, which is 13 acres? How often does the rule require the area be repaved?

Response 3.1-28

The repair and repaving BMP under paragraph (e)(6) has been clarified to limit repairs and repaving to the outside raw material receiving area where material touches the ground, rather than the entire facility grounds. Potholes that hold standing water with a surface area greater than one square foot are required to be repaired under this BMP. The intent of this BMP is to prevent standing water that can allow odorous bacteria to multiply. Based on observations by SCAQMD staff during the April 2015 site visit to the Baker facility, no potholes were noted in the outside raw material receiving area that met the criteria in paragraph (e)(6). The concrete in the receiving area appeared to be durable

D1. Response to Comments

in spite of being decades-old. It is expected that the receiving area will be maintained in similar condition. Therefore, it is unlikely that the Baker facility will need to fill any potholes to comply with this BMP if the existing paving condition is maintained, and the compliance costs with this BMP will be minimal. Costs to comply with the BMPs are included as part of the Socioeconomic Impact Assessment in the Staff Report.

8. Watering And Cleaning Requirement Comments.

PR 415 requires constant washing of the trucks, drums, containers, and grounds. This washing will not reduce migrating odors. Instead, the washing requirement will significantly increase the amount of wastewater, which may cause more emissions and odors. The extensive washing requirements in the rule increase the amount of standing water and water that has to be treated. Further, California is in the middle of a serious drought and is requiring water use to be reduced, not increased as proposed by the rule. What is the basis for imposing all of these washing requirements?

3.1-29

Processing all of material within four hours is unreasonable. Baker does not receive enough material every four hours to process. It is not practical to wash the exterior of every truck every time as is proposed in the rule. How was this frequency determined?

3.1-29
Cont'd

The requirement that Baker has only 30 minutes for cleaning up any spilled material is unrealistic. What is the basis for imposing the 30 minute deadline?

What are the standards for preventing the accumulation of and cleaning up drippings in the plant?

Response 3.1-29

Refer to Response 3.1-24 for a discussion on the washing activities required under PR 415. PR 415 requirements will not increase either standing water or wastewater volume. Washing requirements have been substantially limited (Refer to Table P-3 in the Final EA). With regard to standing water, facility grounds at rendering facilities that staff visited, including receiving areas, appeared to be sloped to drain standing water to wastewater control equipment. Facility grounds were not required to be washed in earlier versions of the rule. Washing with high-pressure water will decrease water usage, relative to washing with water at line-pressure. However, this BMP has been removed due to concerns expressed by industry in light of the current drought.

The BMP to clean materials washed out of transport vehicles within 30 minutes [formerly paragraph (e)(8) in the 2/16/15 rule draft] has been removed. BMP (e)(11) requires

D1. Response to Comments

removal of accumulation of rendering materials from floor drains. Cleaning floor drains once per month will ensure that this BMP is satisfied.

9. Truck Requirement Comments.

Baker does not own or operate all of the trucks that enter its facility and, as such, truck drivers and companies may refuse to install tarps. Baker has no control over whether the truck drivers and companies use tarps on public streets. If the tarping requirement is limited to what Baker can control, which is only entry to the rendering facility, the purported benefits do not justify the cost and time because the tarp would only be on the truck for a few minutes until it is removed for unloading the material.

3.1-30

Baker cannot turn away uncovered trucks. Where will they go? The delay may increase odors and vehicle emissions if the trucks have to return to their original location to be covered.

Trucks also transfer the meal to the grinding department. Would these trucks have to be sealed? What is an odor tight container?

The requirement for the venting of release valves for the venting of trap grease delivery vehicles is unclear. What does this mean, and what exactly is required?

Response 3.1-30

Owners/operators of third-party trucks will have six months to become familiar with the requirements of paragraph (e)(1), Covering of Incoming Transport Vehicles. Transport vehicles delivering raw rendering materials to a rendering facility from off-site locations shall not be permitted past the first point of contact at a rendering facility for incoming trucks, such as a guard shack or weigh station, unless the cargo area of the vehicle is completely enclosed or fully tarped. It is not likely that after going to the trouble to make a truck compliant with the covering requirements, a third-party owner or operator would choose to wait until arriving at the rendering facility before covering an incoming load. Rendering facilities are responsible for notifying owners/operators of third-party trucks about this BMP and the requirements for compliance.

BMP (e)(9) requires cooked material with a batch cooker to be transported between permanent total enclosures only through a closed system of conveyance, or by covered containers. An intra-facility transport vehicle would qualify as a closed system of conveyance if it was covered, such that odors are not allowed to escape during transport. A covered container is one in which odors are substantially contained within the container and which allows minimal contact between the material and air outside the container.

D1. Response to Comments

The BMP for trap grease delivery vehicles has been removed from PR 415. Trap grease unloading operations are exempted if trap grease is unloaded only through a hose into a wastewater tank or separator within an access or viewing hatch that is not open except during unloading operations or for maintenance (paragraph (1)(8)).

10. SCAQMD Must Prepare an Environmental Impact Report (EIR) for PR 415.

As demonstrated below, the California Environmental Quality Act (CEQA) requires SCAQMD to evaluate the environmental impacts caused affected by PR 415 in an EIR. It is difficult to provide comprehensive comments without the Initial Study.

3.1-31

- Aesthetics

PR 415 requires the construction of massive buildings in the City of Vernon. There would be a change to the visual character of the existing setting.

Response 3.1-31

While CEQA does require the evaluation of potential environmental impacts caused by the proposed project, an EIR or EIR equivalent document is only required if the environmental analysis determines that significant environmental impacts could occur as a result of the proposed project. This type of document is then circulated for a 45-day public review and comment period. If no potential significant environmental impacts are expected to occur as result of the proposed project, a negative declaration or mitigated negative declaration or equivalent document is prepared and circulated for a 30-day public review and comment period. Through the environmental analysis conducted for PR 415, it was determined that implementation of PR 415 requirements is not expected to significantly adversely impact any environmental topic area. Therefore, a Draft Environmental Assessment (EA, equivalent to a negative declaration) demonstrating the analysis and conclusions was prepared and circulated for a 30-day public review and comment period from July 14, 2015 to August 12, 2015.

The Draft EA addressed potential impacts related to visual character on page 2-5. The affected rendering facilities are located in the cities of Vernon and Los Angeles, which is currently a highly industrialized commercial area that does not have any known scenic vistas or scenic resources. The types of enclosures required by PR 415 are not expected to be any larger or visually dissimilar to other structures on the existing facilities or neighboring properties. Since all the affected facilities are located in a highly

D1. Response to Comments

industrialized setting, the construction of new enclosures or buildings would not obstruct any scenic resources or degrade the existing visual character of any affected site. Further, PR 415 would not require the acquisition of any new land or the surrendering of existing land, or the modification of any existing land use designations or zoning ordinances. All new enclosures would be developed within the existing footprints of the affected facilities. Thus, PR 415 is not expected to degrade the visual character of any site or its surroundings from the existing visual character, affect any scenic vista, or damage scenic resources. Based upon these considerations, significant adverse aesthetics impacts are not anticipated. Therefore, aesthetics impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

- Greenhouse Gas Emissions

PR 415 is inconsistent with State greenhouse gas (GHG) reduction goals and plans. Rendering averts the release of carbon dioxide and other GHGs that would otherwise be released into the air through the normal decomposition process. The carbon in decaying organic material includes methane and nitrogen which have global warming potentials that are substantially greater than CO₂. This makes rendering even more important in removing GHGs from the environment.

3.1-32

Response 3.1-32

The intent of PR 415 is to capture and control odors from rendering operations, not cease rendering operations. Rendering operations within the South Coast Basin are not expected to cease because of the requirements in PR 415, and thus would not result in an increase of GHG emissions due to non-operation and subsequent transport of rendering material over longer distances (Refer to Master Response 2, *Facility Shutdown*). The EA addressed potential impacts related to GHG starting on page 2-17. SCAQMD applies a brightline approach of calculating GHG impacts from PR 415 to a 10,000-metric ton per year (MT/yr) threshold. GHG emissions associated with the construction of the required enclosures and control equipment, as well as the operation of the control equipment were evaluated in the EA (Refer to Master Response 4, *Worst-Case Scenario*). Rendering operations are known to have associated odors specific to the rendering process. Greater capture and control of these odor emissions through ongoing implementation of BMPs potentially reducing decomposition may reduce current rendering facility GHG emissions.

D1. Response to Comments

- Land Use/Planning

Rendering provides a sustainable method of handling unique wastes and repurposing them into valuable products, while protecting human and animal health.

3.1-33

Response 3.1-33

As discussed in the Draft EA starting on page 2-38, there are no provisions in PR 415 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements would be altered by PR 415 (Refer to Master Response 4, *Worst-Case Scenario*). Facilities would continue to handle unique wastes and repurpose them into products, and odor controls in PR 415 would not change that activity. Affected facilities would still have to comply with local ordinances and land use requirements. Additionally, since any physical changes caused by PR 415 would primarily occur within the established footprints of existing facilities, PR 415 will not require or result in physically dividing an established community and will not affect any habitat conservation or natural community conservation plans, or agricultural resources or operations, and would not create divisions in any existing communities. Based upon these considerations, significant adverse land use and planning impacts are not anticipated. Therefore, land use and planning impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

- Agriculture and Forestry Resources

How will the cattle and dairy industries dispose of animal mortalities without rendering operations?

3.1-34

Response 3.1-34

The intent of PR 415 is to capture and control odors from rendering operations, not to reduce or cease rendering operations. Existing rendering operations are not expected to cease because of the requirements included in PR 415 (Refer to Master Response 2, *Facility Shutdown*). If a rendering facility is not able to meet the requirements of PR 415, it is reasonably foreseeable to expect that one or more of the other currently existing local rendering facilities would have the ability or generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal waste. Subdivision (k) addresses emergency circumstances in the event there is equipment breakdown or emergency rendering services are needed.

D1. Response to Comments

With regard to agriculture and forestry resources, construction of new enclosures or installation of new control equipment as a result of the implementation of PR 415 are expected to take place within the current footprint of existing rendering facilities, which are located within highly urbanized areas that are typically designated as commercial/industrial (Refer to Master Response 8, *Agricultural Preemption*). Therefore, as discussed in the Draft EA starting on page 2-8, adoption of PR 415 would not result in any new construction of buildings or other structures that would convert farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. PR 415 would not require converting farmland to non-agricultural uses because the potentially affected facilities are expected to be already completely developed. For the same reasons, the proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. Based upon these considerations, significant adverse agricultural and forestry resource impacts are not anticipated. Therefore, agriculture and forestry resources impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

- Public Services

Rendering is important to assist cities in meeting their state mandated recycling requirements. These wastes cannot be sent to landfills. If the diseased and rotting carcasses are not disposed of properly, they will cause a terrible stench and the spread of viruses and bacteria. Additional government services may be needed for displaced employees.

3.1-35

Response 3.1-35

The intent of PR 415 is to capture and control odors from rendering operations, not cease rendering operations. Existing rendering operations are not expected to cease because of the requirements included in PR 415 (Refer to Master Response 2, *Facility Shutdown*). In the unlikely event that a rendering facility is not able to meet the requirements of PR 415 and makes a business decision to close, it is reasonably foreseeable to expect that one or more of the other currently existing rendering facilities would have the ability or generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal waste.

With respect to public services, the Draft EA addressed potential impacts related to fire protection, police protection, schools, parks, and other public facilities starting on page 2-43. Physical changes that are expected to occur because of PR 415 (e.g. installation of

D1. Response to Comments

enclosures and control equipment) will be located at already existing facilities. All newly installed enclosures and control equipment would be expected to comply with fire department standards, therefore, they would not increase the risk of fire. No other physical modifications or changes associated with PR 415 are expected and no flammable substances are necessary to operate rendering equipment. As such, PR 415 will not increase the chances for fires or explosions that could affect local fire departments. Finally, PR 415 is not expected to increase the need for security at affected facilities, which could adversely affect local police departments. Since PR 415 does not require or involve the use of new hazardous materials or generate new hazardous waste, it will not generate an emergency situation that would require additional fire or police protection, or impact acceptable service ratios or response times. Refer to Master Response 7, *Building Codes*.

Implementation of PR 415 would not induce population growth or dispersion because no additional operational workers are expected to be needed at the existing affected facilities and construction workers will be temporary, not permanent. Therefore, with no increase in local population anticipated as a result of adopting and implementing the proposed project, additional demand for new or expanded schools or parks is also not anticipated. As a result, no significant adverse impacts are expected to local schools or parks. Based upon these considerations, significant adverse public services impacts are not anticipated. Therefore, public services impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

• Solid Waste

Where will products be disposed of that cannot be rendered? Disposal at landfills does not comply with state and local statutes and regulations related to solid waste. Even if landfills allowed these products to be disposed of, the landfills do not have sufficient permitted capacity to accommodate the solid waste disposal needs.

3.1-36

Response 3.1-36

The intent of PR 415 is to capture and control odors from rendering operations, not cease rendering operations. Refer to Master Response 2, *Facility Shutdown*. Existing rendering operations are not expected to cease, and animal waste is not expected to be diverted because of the requirements included in PR 415. PR 415 will require existing rendering facilities to enclose certain rendering operations, install odor emission control equipment and carry out BMPs. If a rendering facility is not able to meet the requirements of PR 415, it is reasonably foreseeable to expect that one or more of the other currently existing

D1. Response to Comments

rendering facilities would have the ability or generate the ability to accept the displaced rendering material, thus not creating an excess build-up of rendering material or animal waste. Additionally, a new provision has been added under subdivision (k) for Equipment Breakdowns and Emergency Rendering Services, to allow facilities to accept materials in an emergency. Therefore, it is not expected that rendering material will be diverted to landfills as a result of PR 415.

The Draft EA addressed potential impacts related to solid waste starting on page 2-45. The permanent total enclosures and odor control equipment or containment devices are expected to be installed within the currently developed footprint at already existing facilities. The Draft EA disclosed that the potential impacts on solid waste from refurbishment and recycling of odor control equipment on page 2-46. Because the newly installed control equipment has a finite lifetime, it will ultimately have to be replaced at the end of its useful life. Affected equipment may be refurbished and used elsewhere or the scrap metal or other materials from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with the proposed project are expected to be minor. As a result, no substantial change in the amount or character of solid or hazardous waste streams is expected to occur.

Any portions of spent control equipment in the future that cannot be recycled are expected to be able to be disposed of in the existing landfills with available capacity. Additionally, any waste generated by construction activities associated with the installation of new enclosures or control equipment is expected to be minor. The proposed project is not expected to significantly increase the volume of solid or hazardous waste from affected facilities, require additional waste disposal capacity, or generate waste that does not meet applicable local, state, or federal regulations.

Based upon these considerations, PR 415 is not expected to increase the volume of solid or hazardous waste that cannot be handled by existing municipal or hazardous waste disposal facilities, or require additional waste disposal capacity. Further, implementing PR 415 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations.

Therefore, solid waste impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

- Transportation

The demand for on-site truck parking facilities will increase in order clean and process the trucks per PR 415.

3.1-37

Response 3.1-37

There are 12 BMPs including an alternative odor BMP currently proposed in PR 415 that will assist in reducing odors from various points or processes within a rendering facility. Only two of these BMPs involve delivery trucks:

BMP (e)(1) Covering of Incoming Transport Vehicles. Transport vehicles delivering raw rendering materials to a rendering facility from off-site locations are not permitted to enter the rendering facility beyond the first point of contact (ex: guard shack or weigh station) unless the cargo area of the vehicle is completely enclosed or fully covered with a tarp. There is no change to traffic/transportation due to covering the open beds of trucks. Because this requirement only affects the type of trucks that are allowed to enter rendering facilities and not the number of trips, this BMP is not expected to increase the demand for on-site truck parking facilities.

BMP (e)(3) Washing of Outgoing Transport Vehicles. Where raw rendering materials come directly into contact with a delivery truck, the cargo area of any vehicle exiting the rendering facility must be thoroughly washed prior to the truck leaving the facility. This requirement is expected to be a quick process that consists of hosing down the cargo area of the delivery trucks prior to exiting and is not expected to slow down the delivery/exiting process creating the need for extended on-site truck parking facilities. As discussed above, this requirement is not new to PR 415 because washing of outgoing vehicles is already required under Section 1180.35, Title 3, CCR.

BMPs related to trap grease delivery trucks or vehicles have been removed from PR 415. Additionally, as discussed in the Draft EA starting on page 2-48 implementation of PR 415 would not result in a net change in or cause additional transportation demands or services. Similarly, implementation of PR 415 is not expected to adversely affect circulation patterns on local roadways or the level of service at intersections near affected facilities.

D1. Response to Comments

Therefore, transportation/traffic impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

| | |
|---|--------|
| <ul style="list-style-type: none"> • Utilities/Service Systems <p>What is the increase in utilities to comply with PR 415?</p> | 3.1-38 |
|---|--------|

Response 3.1-38

The potential impacts to energy resources, as well as potential water demand impacts were evaluated starting on pages 2-23 and 2-34, respectively, of the Draft EA.

There may be an increase in electricity consumption associated with the new APCDs required for enclosures (Refer to Table P-5 in the Final EA). Diesel fuel would be consumed by construction equipment and gasoline fuel would be consumed by the construction workers vehicles. The Draft EA disclosed the worst-case impact scenario for energy (Refer to Master Response 4, *Worst-Case Scenario*).

Electricity: The worst-case impact scenario assumes 517 MWh per year usage based on the energy needed to power one scrubber and one fan or blower, electricity usage for the ventilation blower, and the electricity usage for the air curtains (Refer to Table P-5 in the Final EA).

Petroleum Fuels: During construction, diesel and gasoline fuel will be consumed by construction equipment (e.g., generators and compressors) used to weld, cut, and grind metal structures and by construction workers' vehicles traveling to and from construction sites. To estimate the worst-case energy impacts associated with construction required for PR 415 compliance, it was assumed that off-road construction equipment (including portable equipment used to weld, cut, and grind metal structures and heavy equipment used during the demolition, construction phases, and APCD installation) would be operated up to 2,025 hours in a year (see Appendix C). The details of the construction scenarios are included in Appendix C of the EA.

To estimate construction workers' fuel usage per commute round trip, it was assumed that workers' vehicles would get 21.7 miles to the gallon and would travel 30 miles round trip to and from the construction site in one day. Construction equipment diesel fuel use is based on OFFROAD. Table 2-9 of the Final EA lists the projected energy impacts associated with the construction and installation at the two affected facilities at any given

D1. Response to Comments

time. The proposed fuel usage is 0.0019 mmgal/yr of diesel and 0.0017 mmgal/yr of gasoline. Once construction is complete, there will not be a need for additional workers or truck trips during operation other than the laborers already working at the facilities, so there will be no increased fuel demand during operation. Based on the anticipated fuel usage and corresponding percentage increase above baseline of less than one percent for diesel and gasoline, PAR 415 is not expected to generate significant adverse energy resources impacts, and the Draft EA adequately disclosed the worst-case impact scenario for petroleum fuel usage.

Water Demand: Refer to Response 3.1-24. A minimal amount of water would be required, and BMPs would not interfere with any State water policies.

Refer to Master Response 4, *Worst-Case Scenario*. The Final EA includes modifications to the construction and operational scenarios analyzed in the Draft EA. Table P-3 in the Final EA shows that substantially less water would be required than was analyzed in the Draft EA. For example, PR 415 (1)(2) provides an exemption for enclosures of the wastewater treatment operations. This exemption has changed since circulation of the Draft EA to reduce the ratio of dilution for wastewater; and specifically identifies that process water and not clean water be used to dilute the rendering wastewater (PR 415 (1)(2)(B)(iii)). Therefore, the Final EA has adequately disclosed the substantial evidence used to support the finding that no significant environmental impacts on water demand would occur. As identified in the Draft EA, sufficient water supplies are expected to be available to serve the affected facilities from existing entitlements and resources without the need for new or expanded entitlements.

Therefore, utilities/service systems impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

- Air Quality

If the carcasses are burned, it will create more air pollution. Additional wastewater treatment can increase emissions and odors. What are the air quality impacts of all the construction and paving? What are the air quality impacts of trucks returning to their original locations to be tarped? SCAQMD does not consider odors to be significant under CEQA unless a Rule 402 violation exists.

3.1-39

D1. Response to Comments

Response 3.1-39

The main objective of PR 415 is to establish odor BMPs and requirements to reduce odors from facilities rendering animals and animal parts. The main requirements of PR 415 are to operate certain odorous processes within a permanent total enclosure or within a closed system, ventilate the enclosures to odor control equipment (PR 415 allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening), and implement BMPs for odor control. Facilities are currently not allowed to openly burn carcasses. None of the provisions in PR 415 are expected to result in the burning of carcasses at any of the affected facilities. Additionally, PR 415 will not result in a shutdown of the existing rendering facilities (Refer to Master Response 2, *Facility Shutdown*). Therefore, no adverse impact to air quality from the burning of carcasses is anticipated.

Air quality impacts from the construction activities required from the implementation of PR 415 were addressed in the Draft EA starting on page 2-8. The analysis addressed the potential impacts associated with the construction of the permanent total enclosures, installation of control equipment, and any associated paving or trenching activities required and operational impacts from new control equipment and BMPs. As analyzed in the Draft EA, no adverse impacts relating to air quality are anticipated. Refer to Master Response 4, *Worst-Case Scenario*.

All of the affected facilities are knowledgeable of where their animal wastes are delivered from and have standing contracts with many of the delivering entities. It is reasonably foreseeable that affected facilities would notify delivering parties of the tarping BMP requirement prior to the actual delivery of animal waste product, therefore, eliminating the need for a return trip to their original location to be tarped.

SCAQMD does not consider odors to be significant under CEQA unless a Rule 402 violation occurs or has occurred and PR 415 will be implemented in addition to continued enforcement of public nuisances under Rule 402.

Therefore, air quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

D1. Response to Comments

- Hydrology/Water Quality

The BMPs impose significant watering requirements during a drought which interferes with California water policies. PR 415 will generate a significant amount of wastewater and degrade the quality of water. The construction of massive buildings will change the existing drainage pattern of the site, and contributing more storm water to the drainage system.

3.1-40

Response 3.1-40

SCAQMD staff has worked with the affected facilities to make changes to PR 415 that have resulted in a reduction in water use compared to what was analyzed in the Draft EA. Refer to Response 3.1-24 and Tables P-1 and P-3 in the Final EA.

Outgoing trucks are currently required to be washed under Section 1180.35, Title 3, CCR. Washing of drums and containers has been limited such that only drums and containers that contained raw rendering materials that are open upon exiting the facility are required to be washed. Washing of receiving areas is already occurring at the rendering facilities. Washing of floor drains occurs once per month if floor drains are removed of accumulation of rendering materials. As shown in Table P-3 in the Final EA, the additional amount of water required for all of the washing BMPs is approximately 400 gallons per day for all rendering facilities combined, which is minimal and below the water demand CEQA threshold of significance of 262,820 gallons per day of potable water. PR 415 is not expected to degrade the quality of water.

Refer to Master Response 7, *Building Codes*. The permanent total enclosures are expected to be built within the existing footprint of the affected facilities, which are already completely developed with existing storm water collection systems. The addition of one or several enclosures at the already developed affected facilities would no increase the quantity or quality of stormwater runoff because the enclosure would not decrease the amount of non-permeable surface area on-site. If the footprint of the new enclosures are developed over existing stormdrains, it is expected that new stormdrains could be installed and tied into the existing stormwater collection system at the facility.

Further, PR 415 has no provision that would require the construction of additional water resource facilities, increase the need for new or expanded water entitlements, or alter existing drainage patterns in a substantial manner. PR 415 would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The proposed project would not create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional

D1. Response to Comments

sources of polluted runoff. Further, since the BMPs for washing activities involve equipment/containers/surfaces that currently come into contact with rendering materials, there would be no change in the composition of existing wastewater streams from the potentially affected facilities. In addition, PR 415 is not expected to require additional wastewater disposal capacity, violate any water quality standard or wastewater discharge requirements, or otherwise substantially degrade water quality. Based upon these considerations, significant hydrology and water quality impacts are not expected from the implementation of PR 415. Therefore, hydrology and water quality impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

The proposed rule is seriously flawed. If the current version of PR 415 is adopted by the SCAQMD Governing Board, Baker will shut down its facility and go out of business in Southern California. Baker requests that the rule be taken off the rulemaking calendar until these issues can be worked out. Baker appreciates the opportunity to provide these comments and would appreciate receiving a written response to each of the questions raised in the letter. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you.

3.1-41

Response 3.1-41

Refer to Responses 3.0-1 through 3.14-1 and Master Response 2, *Facility Shutdown*, for a discussion of the efforts of SCAQMD staff in working with the affected facilities to include revisions to PR 415 allowing compliance flexibility and why facility closure is not foreseeable based on PR 415 requirements.

D1. Response to Comments

We represent Baker Commodities, Inc. ("Baker"). Baker submitted a California Public Records Act ("PRA") request to the South Coast Air Quality Management District ("SCAQMD") on January 30, 2015. Under the PRA, SCAQMD was required to determine whether it possesses responsive documents within ten (10) days of the PRA request and promptly notify Baker of such determination, in this case, by February 9, 2015. (Gov. Code, § 6253.) SCAQMD failed to make this determination or notify Baker that it required additional time to search its records for responsive documents in violation of the PRA. (*Id.*) To date, the SCAQMD has not provided Baker with any response, much less documents responsive to the request. As such, this letter constitutes notice to the SCAQMD that it has violated the PRA, Government Code section 6250 et seq., and that Baker expressly reserves all legal rights, relief and remedies to which it is entitled.

3.2-1

The SCAQMD's violation of the PRA is irreparably prejudicial to Baker. SCAQMD has set a public hearing for Proposed Rule 415 – Odors From Rendering Facilities ("PR 415") on July 10, 2015 at the Governing Board meeting. SCAQMD's violation of the PRA has prevented Baker from submitting fully informed comments on PR 415. The current version of PR 415 would substantively alter the operations of rendering facilities located in the South Coast Air Basin, including Baker's. The requested California Environmental Quality Act ("CEQA") and socioeconomic scoping analyses contain the relevant assumptions that will be included in the final CEQA and socioeconomic analyses underlying a proposed rule. The purpose of the scoping documents is to correct any assumptions or analyses before the final analyses are completed. Despite Baker's good faith effort to actively participate in the rulemaking process, SCAQMD's failure to provide the requested documents has significantly hindered Baker's ability to submit informed comments on PR 415.

Baker hereby **demand**s that SCAQMD provide the following requested documents immediately to my attention, and in no event later than close of business on **Wednesday, May 13, 2015**:

3.2-1
Cont'd

Response 3.2-1

The SCAQMD is not aware of any litigation brought on behalf of Baker alleging a PRA request violation by the SCAQMD. Regarding the list of documents requested, Public Records Act Request (Control Number 79841) was completed on May 13, 2015 and 115 records were provided to Baker. Public Records Act Request (Control Number 82875) was completed on January 7, 2016 and over 75 records were provided to Baker. Please note that the schedule for PR 415 to be considered by the Governing Board was extended. PR 415 was originally scheduled to be heard in May 2015 and is now scheduled to be considered by SCAQMD's Governing Board at its November 3, 2017 meeting.

- All technical and other information the SCAQMD relied upon to draft PR 415.

3.2-2

D1. Response to Comments

Response 3.2-2

The Final Staff Report and the Final EA (including Appendix D, *Response to Comments*) include background on the information SCAQMD staff relied upon to draft PR 415.

- All NOV's issued to any rendering facility in the SCAQMD's jurisdiction in the last ten years. | 3.2-3

Response 3.2-3

Refer to Master Response 5, *Nuisance Odors*, for a discussion of the NOV's issued to rendering facilities. Also refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion of the NOV's.

- Location, time, and dates of all odor complaints made about rendering facilities in the SCAQMD's jurisdiction in the last ten years. | 3.2-4

Response 3.2-4

Refer to Master Response 5, *Nuisance Odors*, for a discussion of the complaints received which allege rendering facilities as the source. Also refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion of rendering odor complaints.

- All information the SCAQMD obtained or generated in regards to its review of out-of-state rendering facilities. | 3.2-5

Response 3.2-5

As identified in Master Response 3, *Odor Control Measures*, and detailed in the Final Staff Report, the approach taken for PR 415 is based on research of existing rendering operations to determine the current and accepted practices for operating a rendering facility within an urban area. The accepted practices include enclosure of odorous operations within a closed system or total enclosure (such as a building), maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. It should be noted that PR 415 allows an unventilated permanent total enclosure for raw

D1. Response to Comments

material receiving, provided a secondary odor containment method is used at each enclosure opening under subparagraph (f)(5).

Public Records Act Request (Control Number 79841) was completed on May 13, 2015 and 115 records were provided to Baker. Public Records Act Request (Control Number 82875) was completed on January 7, 2016 and over 75 records were provided to Baker. Therefore, the SCAQMD has provided all information requested by Baker.

- All odor studies or analysis SCAQMD developed or is in possession of for rendering facilities. | 3.2-6

Response 3.2-6

Refer to Master Response 5, *Nuisance Odors*, for a discussion of the odor studies. Also refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion of the odor studies.

- All comment letters received about PR 415. | 3.2-7

Response 3.2-7

The Final EA (including Appendix D, *Response to Comments*) and the Final Staff Report include copies of comment letters received during the PR 415 rulemaking process.

- All cost data the SCAQMD has in its possession for PR 415 requirements. | 3.2-8

Response 3.2-8

Staff has prepared a Socioeconomic Impact Assessment for PR 415 which has been released for public review and comment in conjunction with the Staff Report and PR 415 for a 30-day public review and comment period prior to the SCAQMD Governing Board hearing as currently scheduled for November 3, 2017. The Socioeconomic Impact Assessment identifies affected facilities and presents the costs associated with implementation of PR 415 requirements and BMPs. The Socioeconomic Impact

D1. Response to Comments

Assessment also evaluates the employment impacts of PR 415 on the regional economy, including the potential impacts on small businesses.

- All data estimating the air quality benefits of PR 415.

3.2-9

Response 3.2-9

Refer to the Final EA, Master Response 3, *Odor Control Measures*, Master Response 4, *Worst-Case Scenario*, Master Response 5, *Nuisance Odors*, and Master Response 6, *Methodology*, for a discussion of the air quality benefits and impacts of PR 415.

- SCAQMD's protocol for odor complaints.

3.2-10

Response 3.2-10

Refer to Master Response 5, *Nuisance Odors*, for a discussion of SCAQMD's protocol for odor complaints. Also refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion of rendering odor complaints.

- All documents or data SCAQMD is relying on to claim that odors from Baker are causing public nuisance level odors in Boyle Heights.

3.2-11

Response 3.2-11

Refer to Master Response 5, *Nuisance Odors*, and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26.

- All documents or data SCAQMD is relying on to support its allegations that odors cause health effects.

3.2-12

D1. Response to Comments

Response 3.2-12

Refer to Master Response 5, *Nuisance Odors*, Master Response 1, *Legal Authority to Adopt and Enforce*, and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion of documents and data on rendering odors in the communities in and around the City of Vernon.

We represent Baker Commodities, Inc. (“Baker”), a family-owned company founded in 1937 and operated by three generations of the Andreoli Family. Baker recently attended South Coast Air Quality Management District’s (“SCAQMD”) June 4, 2015 working group meeting to discuss the June 3rd version of Proposed Rule (“PR”) 415. The comments and questions in Baker’s previous letters still apply, and are incorporated by reference. SCAQMD has not responded to Baker’s numerous comments or answered Baker’s questions in its prior letters. When asked at the working group meeting about SCAQMD’s failure to at least respond to the numerous legal issues Baker raised, SCAQMD would only refer to a staff report, which has not been released to the public. This prevents Baker from responding to the SCAQMD’s legal analysis. Further, the June 3rd version of the proposed rule does little to alleviate the initial capital costs required to comply with PR 415 and increased annual operating costs. SCAQMD is intent on regulating business practices it knows nothing about, instead of focusing on the real need to address the odor issues in Boyle Heights. If the June 3rd version of the rule is passed in its current form, Baker will be forced to shut down its rendering business in Southern California despite SCAQMD’s commitment that PR 415 would not cause rendering companies to go out of business. In short, it does not seem like SCAQMD is seriously considering Baker’s comments.

3.3-1

Response 3.3-1

Responses to comments submitted during the public comment and review period for the PR 415 Draft EA are included as numbered Commenter Letters 3.0 through 3.14. Responses and clarifications to additional written correspondence received during the PR 415 rulemaking process can be found in the Final Staff Report and Socioeconomic Impact Assessment, which were released for public review and comment for a 30-day public review and comment period beginning on July 14, 2015 and ending on August 12, 2015 prior to the SCAQMD Governing Board hearing as currently scheduled for November 3, 2017. The Socioeconomic Impact Assessment identifies affected facilities and presents the costs of complying with PR 415. In addition, the Socioeconomic Impact Assessment presents the potential costs of best management practices, such as signage,

D1. Response to Comments

covering of incoming trucks, and repair of rendering material receiving areas. The Socioeconomic Impact Assessment also evaluates the employment impacts of PR 415 on the regional economy, including the potential impacts on small businesses.

As discussed in Master Response 2, *Facility Shutdown*, while PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made during the rule development process to provide flexibility for affected facilities to ensure compliance. With changes to the rule language as outlined in Table P-1 in the Final EA, rendering facilities subject to the requirements of PR 415 will be able to continue to operate as they currently do and a shutdown scenario is not foreseeable or supported by the requirements of PR 415 or the impacts on rendering facilities. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

Further, Baker's review of documents SCAQMD provided in response to Baker's Public Records Act request shows SCAQMD has **no evidence** to support its contentions made during the rulemaking process that Baker is the cause of public nuisance level odors in the Boyle Heights community. Rather, the record shows that the PR 415 rule-makers have presumed Baker is guilty, formed a predetermined prejudice against Baker, and as a result have targeted Baker specifically in this rulemaking. It appears SCAQMD has spent considerable time researching Baker's out-of-state activities, particularly for its New York and Washington operations, even though these activities are clearly not within SCAQMD's jurisdiction. The last odor-related Notice of Violation ("NOV") Baker from SCAQMD, was on September 3, 1998 – **almost 17 years ago**. By contrast, SCAQMD has received 69 odor complaints about Darling International, Inc. ("Darling") and issued seven (7) NOVs. Despite Darling's much higher NOV rate, SCAQMD has collected only two documents for Darling's operations elsewhere. Further, the record does not contain information about any of the other renderers, even though some of them have received an NOV in the past.

3.3-2

Response 3.3-2

Refer to Master Response 5, *Nuisance Odors*, and Master Response 6, *Methodology*, and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's pro-active approach to reducing rendering odors. SCAQMD staff conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction. Through its multiple inspections, SCAQMD staff observed that

D1. Response to Comments

the rendering facilities are a significant source of odors not only on-site within the facilities, but within the Boyle Heights community. For this reason, SCAQMD followed an approach in PR 415 which represents the best and most reliable way to control odors from rendering operations. The requirements of PR 415 would be applicable to all rendering facilities, both existing and new. Thereby reducing odors in the Boyle Heights community.

Refer to Master Response 3, *Odor Control Measures*. During the course of rulemaking, staff conducted research into the rendering operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area. In doing so, staff was unable to find a single example of a rendering facility in an urban area operating an open-air rendering process such as the one Baker operates within the City of Vernon. Instead, SCAQMD staff found that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. This same standard of operation is used in at least three of the other facilities owned by Baker outside of Vernon and around the nation.

It is important to note that Baker submitted two Public Records Act Requests for PR 415. Public Records Act Request (Control Number 79841) was completed on May 13, 2015 and 115 records were provided to Baker. Public Records Act Request (Control Number 82875) was completed on January 7, 2016 and over 75 records were provided to Baker.

Baker understands that SCAQMD staff intends to request the Governing Board on July 10, 2015 to set a public hearing for September 4, 2015. Baker renews its request that no Board consideration of PR 415 be scheduled until after SCAQMD has conducted the proper scientific analysis in conjunction with the rendering industry and there is legally sufficient proof that the odor issues in Boyle Heights will be resolved by taking the actions proposed in PR 415.

3.3-3

Baker submits these comments on the June 3rd version of PR 415 and pending California Environmental Quality Act ("CEQA") document, and requests that this letter be included in the administrative record for PR 415. Baker reserves the right to submit additional comments on PR 415, CEQA and socioeconomic impacts in the future.

D1. Response to Comments

Response 3.3-3

Refer to Response 3.3-1 regarding the re-scheduled Governing Board meeting, Master Response 1, *Authority to Adopt and Enforce*, Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*.

SCAQMD staff considered a quantitative approach to assessing odors from rendering facilities early in the rule development for PR 415. However, the current science and technology do not allow direct measurement of all the chemical compounds that make up odors. There are more than 100 chemical compounds that have been identified in rendering odors. Modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not currently have established methods for collection, speciation, and analysis. Many do not currently have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science and the present state of technology. Therefore, it is not currently possible to establish initial concentrations for modeling or development of an emissions inventory. However, as test methods develop and the science of odor measurement evolves, it may be possible to conduct measurements, quantification, and modeling of odors in the future.

Additionally, rendering odors are distinctive and unmistakable as a whole, even if existing science does not allow chemical compounds that make up these odors to be fully identified and quantified. As noted in the previous response to comment, SCAQMD staff has experienced these distinctive rendering odors both at the facilities and in the communities surrounding Vernon. SCAQMD staff has conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction and has observed through these inspections that the rendering facilities are a substantial source of odors.

For these reasons, among others, SCAQMD staff elected to follow the approach in PR 415, which represents the most effective way to control odors from rendering operations. Implementation of PR 415 would minimize odors from rendering facilities through a combination of odor capture by enclosing odor-generating processes, odor control by venting odorous air from within enclosures to odor control equipment (allowing an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening), and BMPs. Therefore, implementation of PR 415 will result in a reduction of rendering odors in Boyle Heights and communities surrounding the facilities.

D1. Response to Comments

1. Public Nuisance Laws Do Not Apply to Rendering Operations.

Rendering is a key component of the state's waste disposal systems and is essential for agriculture to exist. According to the State Senate Judiciary Committee, the expanding urban population's potential conflict with long operating agriculture businesses resulted in the passage of "Right to Farm" laws, including creating a general protection from nuisance findings for those farmers, ranchers, and processors in operation for three years without incident (Attachment 1). This general protection has been twice amended to include agricultural processing facilities and rendering operations licensed under the Food and Agricultural Code.

3.3-4

Civil Code section 3482.6 ("Section 3482.6") (addressed in Attachment 1) is a "Right to Farm" law that expressly forbids, under certain conditions that are present here, agricultural operations from being declared a nuisance. The Civil Code specifically states: "No agricultural processing activity, operation, facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in continuous operation for more than three years if it was not a nuisance at the time it began." (Civ. Code, § 3482.6(a); see also Civ. Code, § 3482.5(a).) This statute is intended to expand on the "coming to the nuisance" doctrine by making it clear that there is no legal recourse under nuisance laws when a person buys a home near an existing rendering operation.

3.3-4
Cont'd

Response 3.3-4

Refer to Master Response 8, *Agricultural Preemption*, and Response 3.3-34 (Attachment 1). SCAQMD staff has investigated the land uses surrounding the Vernon rendering facilities between 1989 and 1994 and determined that the facilities were surrounded by commercial and residential (i.e., non-agricultural) uses as of 1993 (See Appendix D4, Historic Aerial Photographs). Under Civil Code Section 3482.6, an air district may enforce regulations adopted pursuant to Health and Safety Code (H&SC) Section 41700, such as PR 415, in these circumstances.

Refer to Response 3.0-3 and Master Response 1, *Legal Authority to Adopt and Enforce*, for a discussion on SCAQMD's legal authority.

D1. Response to Comments

All of the facts necessary to be protected under Section 3482.6 are present. Rendering is an agricultural activity. Section 3482.6 was amended to specifically include rendering operations (Attachment 1). Section 3482.6(e)(1) now states under the public nuisance exceptions: “[a]gricultural processing activity, operation, facility, or appurtenances thereof” includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food and Agricultural Code.” Baker is a business conducted and maintained for commercial purposes (Attachment 2). Baker operates in a manner consistent with proper and accepted customs and standards as established and followed by similar agricultural operations in the same locality (Attachment 3). Baker is an agricultural operation that is maintained and regulated under the Food and Agricultural Code. (Food & Agric. Code, §§ 19300 et. seq.; Cal. Code Regs., §§ 1180 et seq.) The rendering operation at the Baker site was established before the Boyle Heights neighborhood existed (Attachment 4). The allegations of nuisance occurred after Baker had been in operation for more than three years (Attachment 5). The rendering operation at the Baker site was not a nuisance at the time it began (Attachment 6).

3.3-5

The statute specifically provides that “[t]his section prevails over any contrary provision of any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993.” (Civ. Code, § 3482.6(d).) As discussed in Baker’s prior letters, SCAQMD lacks authority to regulate public nuisances more stringently than Health and Safety Code section 41700. Further, Baker is not surrounded by housing or commercial development. Between Baker and the Boyle Heights neighborhood, there are freeways, rail yards, and a significant number of other facilities (most of

which are not permitted by SCAQMD) that cause odors, including food processing plants, heavy manufacturing, mineral processing and warehousing, and trucking distribution centers. SCAQMD has yet to produce any evidence demonstrating that the odors in Boyle Heights are not caused by one of these other uses, or that the odors in Boyle Heights are not the cumulative effect of being located next to several freeways and an industrial city. If SCAQMD really wanted to address odor problems in Boyle Heights, before embarking on rulemaking or singling out a specific industry as creating the odor issues it would have carefully inventoried the area to identify all potential odor sources, required permits for all of the non-permitted facilities in the area, and assessed the impacts of the freeways in the area. Until this work is completed, the regulation of a few rendering facilities is not going to resolve the odor issues in the Boyle Heights neighborhood.

3.3-5
Cont'd

D1. Response to Comments

Response 3.3-5

Refer to Master Response 1, *Authority to Adopt and Enforce*, Master Response 8, *Agricultural Preemption*, and Response 3.3-1 through 3.3-4. SCAQMD is given broad authority to regulate air pollution from all sources, including odors. SCAQMD staff has authority to take enforcement action against odors. Additionally, refer to Response 3.3-34 (Attachment 1), Response 3.3-35 (Attachment 2), Response 3.3-36 (Attachment 3), Response 3.3-37 (Attachment 4), Response 3.3-38 (Attachment 5), and Response 3.3-39 (Attachment 6) for more detailed responses to each attachment.

While the rendering facilities are surrounded by non-residential uses, the effects of the odor impacts from these facilities is an issue of concern for residents of Boyle Heights and surrounding communities (refer to Master Response 5, *Nuisance Odors*). Odors from rendering facilities are very distinctive and cannot be attributable to other sources. In particular, odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable and offensive to many in the communities surrounding the city of Vernon. The environmental analysis for PR 415 focuses on the potential impacts of rule requirements that address odors from rendering facilities. Therefore, odors from other non-rendering-facility sources in the area are not relevant to the environmental analysis and need not be considered in the Draft EA. The Draft EA adequately analyzed the potential impacts related to controlling odors from rendering facilities.

Furthermore, for the reasons outlined in Response 3.3-3 and the Final EA, implementation of PR 415 will result in a reduction of odors in the Boyle Heights community.

In addition to the above, the Civil Code also states that “[n]othing which is done or maintained under the express authority of a statute can be deemed a nuisance.” (Civ. Code, § 3482.) As discussed above, Baker’s operation is maintained under the express authority of the Food and Agricultural Code and, thus, cannot be deemed a nuisance.

3.3-6

D1. Response to Comments

Response 3.3-6

Refer to Master Response 8, *Agricultural Preemption*, and Response 3.3-5 for a discussion on SCAQMD's legal authority.

2. **SCAQMD Lacks Authority to Impose PR 415.**

PR 415 states that its purpose "is to reduce odors from facilities rendering animals and animal parts." SCAQMD derives its authority strictly from the Legislature. SCAQMD has no authority to regulate odors.

3.3-7

Response 3.3-7

Refer to Master Response 1, *Authority to Adopt and Enforce*, and Response 3.3-5 for a discussion on SCAQMD's legal authority.

3. **The SCAQMD's April 2012 Study of the Ambient Air Quality at Resurrection Catholic School Eliminates Baker as a Potential Source.**

According to the February 2015 staff report, PR 415 is being developed solely because of a working group recommendation made for the Clean Communities Plan in the pilot study area of Boyle Heights. In response to the working group's recommendations, SCAQMD conducted a year-long study to measure ambient air pollutants in the Boyle Heights neighborhood. The study was authored by Dr. Fine, who is in charge of the PR 415 rulemaking.

3.3-8

Emissions from the freeways in the area dominate the air quality in the Boyle Heights neighborhood. According to the SCAQMD 2012 study, "the extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights..." (Attachment 7.) "The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of

D1. Response to Comments

Long Beach and Los Angeles.” Although elemental carbon (which is an indicator of diesel particulate matter) levels measured at Resurrection School are similar to those observed in other dense urban areas of the Los Angeles Basin, “they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.”

Exide Technologies as source of emissions in Boyle Heights was ruled out. According to the study:

Increased lead concentrations in the Boyle Heights area may be due to re-suspension of historically deposited dust accumulated on or near the nearby freeways. While lead has been completely removed from gasoline for over 30 years, some studies have shown higher lead levels leftover in soils next to busy roadways. Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blew from the Exide plant toward the Resurrection School. In addition, the lead data collected at the Resurrection School site are not well correlated to those measured right next to the Exide plant during the same time period.

Exide is north east of Baker and closer to Resurrection School than Baker (Attachment 8). For the same reasons SCAQMD finds it unlikely that emissions from Exide travel toward Resurrection School, emissions from Baker are unlikely to affect Resurrection School.

Volatile organic compounds (“VOCs”), which include odorous compounds, were not traced from Baker and were found at concentration levels at Resurrection School “comparable to those observed at the other two monitoring stations in Central Los Angeles and Rubidoux”. The SCAQMD study concluded that “gaseous emissions from motor vehicles are likely to be the predominant source of these volatile species at all three monitored locations and throughout the entire South Coast Air Basin” and that “VOCs measurements at Resurrection school might be explained by the close proximity of this site to the I-5 and/or nearby surface streets.”

The June 3rd rule version targets sulfur compounds (PR 415(f)(5)(A)(ii)). However, according to the SCAQMD study, sulfur is typically generated from combustion of sulfur-containing fuel. How can SCAQMD distinguish between freeway/roadway-generated sulfur compounds and industry-generated compounds, let alone compounds traced from Baker? How can SCAQMD rule out freeway/roadway-generated sulfur compounds as a problem in the Boyle Heights neighborhood?

3.3-8
Cont'd

3.3-8
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D1. Response to Comments

Response 3.3-8

Refer to Response 3.3-40 (Attachment 7) and Response 3.3-41 (Attachment 8). Rendering odors are distinctive. Based on site visits to the rendering facilities, SCAQMD staff found that odors created by rendering facilities are not likely to be attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable, and offensive to many in the communities surrounding the city of Vernon. Given the distinctive odors from rendering operations, emissions from the freeway, ports, and Exide Technologies cited in the 2012 study regarding toxic air contaminants are unlikely to be mistaken for rendering odors.

As identified in Master Response 5, *Nuisance Odors*, SCAQMD staff has conducted multiple on-site inspections of the affected rendering facilities within SCAQMD's jurisdiction and has detected through these inspections that rendering operations, cooking, leaving unsealed and rendering materials out in the open, the wastewater treatment systems, and trucks transporting animal parts at the plants are a significant source of odors, especially when combined with odors from other rendering operations and from nearby rendering facilities. Additionally, there have been odor complaints in the surrounding community that specifically identify odors that are associated with rendering facilities.

D1. Response to Comments

4. The Public Health Literature Relied On by SCAQMD Does Not Support the Rule.

The Characterization of Odor Nuisance (2012) (“dissertation”) notes that SCAQMD receives fewer odor complaints for rendering facilities than for other industries, namely landfill, transfer station/recycling, foundry/metal processing, and refinery/fossil fuel (Attachment 9). To date, the SCAQMD has only adopted a specific regulation for one of these industries – Transfer Stations – for odor, Rule 410. Moreover, the dissertation also indicates that SCAQMD is targeting rendering facilities because of the SCAQMD’s current challenge in identifying and verifying the source of the odor complaint. SCAQMD’s inability to identify and verify the source demonstrates that SCAQMD lacks data to establish a causal connection between Baker and odors complaints received by SCAQMD. In the event that the odor source is a single nuisance operation in Vernon, PR 415 would be unlawfully over-inclusive.

SCAQMD has also relied on health studies and dissertations that discuss odor outside of the context of animal rendering. For example, SCAQMD’s document production includes a doctoral thesis about odor from animal production processes, which are distinct from rendering processes, *Odour Impact: Odour Release, Dispersion, and Influence on Human Well-Being with Specific Focus on Animal Production* (2004). Additionally, the record shows that SCAQMD has improperly utilized a health study rooted in industrial hygiene literature to assess odors in developing PR 415, *Odor Thresholds and Irritation Levels of Several Chemical Substances: A Review* by Jon H. Ruth (1986). Use of this literature is misplaced because it is aimed at exposure in the workplace, not on nuisance odors detected by a neighborhood.

3.3-9

Response 3.3-9

Refer to Master Response 3, *Odor Control Measures*, Master Response 5, *Nuisance Odors*, and Response 3.4-42 (Attachment 9).

PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they rise to the level of a public nuisance. The difficulty in tracing the odors to a specific facility does not mean a problem does not exist. The absence of this data does not mean there is no causal connection. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near one another. In many cases, it is likely that more than one facility is contributing to the odor. Rendering odors are distinctive. PR 415 uses the most effective way to control rendering odors and prevent the odors from becoming a public nuisance.

D1. Response to Comments

5. Definitions Remain Vague and Ambiguous.

- a. "Closed System" (c)(2) is defined as a system "in which odors are contained within the system." What does "contained" mean? Is "contained" defined by the closed system standards in (f)(4)? If so, there is a conflict between sections (f)(4) and "odor" defined in (c)(12). Odor is defined as "the perception experienced by a person when one or more chemical substances in the air come into contact with the human

3.3-10

olfactory nerves." Therefore, a system is only considered "closed" if a person cannot perceive a chemical substance in the air. It is left up to the complete discretion of SCAQMD staff, the majority of which are not qualified to determine if there is an odor. Renderers will not know whether their system is "closed" because SCAQMD staff with sensitive olfactory nerves may smell something the renderers or previous SCAQMD staff persons do not. What if one SCAQMD staff person does not perceive a chemical substance in the air, and a second SCAQMD staff person does? Is this a one-time test, or can SCAQMD at any point in the future declare a system not to be closed if at any time a SCAQMD staff person perceives a chemical substance in the air? SCAQMD has yet to inform Baker whether its operation is considered "closed." SCAQMD has visited Baker several times and there is no reason why SCAQMD cannot definitively inform Baker as to whether the operation complies as is with the proposed rule, or whether an enclosure is required.

3.3-10
Cont'd**Response 3.3-10**

The definition of "closed system" in paragraph (c)(2) has been changed in PR 415 to clarify that a system that meets the requirements of paragraph (f)(3) is a "closed system" within the meaning of the definition.

The requirements for a close system has been moved from paragraph (f)(4) to (f)(3). "Contained" as used in paragraph (c)(2) means air leakage from a closed system is insignificant and the escape of potential odors is reduced, as long as it meets the closed system standards in paragraph (f)(3). PR 415 does not contain a conflict between paragraphs (f)(4) (now, (f)(3)) and "odor" defined in paragraph (c)(12), in that paragraph (f)(4) (now, (f)(3)) describes the minimum requirements to prevent the escape of odors from a closed system and paragraph (c)(12) describes what constitutes an odor.

The intent of PR 415 is to minimize the likelihood that odors will travel off-site and cause an odor nuisance in the surrounding communities. In order for the SCAQMD to verify an

D1. Response to Comments

odor complaint, a trained inspector must trace the odor back to a specific source according to standard SCAQMD procedures. If a source cannot be determined, the odor complaint cannot be verified. Refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's pro-active approach to reducing rendering odors.

SCAQMD staff has conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction and has advised facilities whether staff considers their system "closed." Under subparagraph (d)(1)(D), within six months from the date of adoption of PR 415, rendering facilities within SCAQMD's jurisdiction will be required to submit a letter of intent to the Executive Officer to select whether they will construct permanent total enclosures or operate in a closed system. Additionally, SCAQMD staff have worked with rendering facilities to allow alternative standards for a permanent total enclosure for raw material receiving area (paragraph (f)(5)).

- b. "Collection Center" (c)(3) refers to a licensed rendering plant or pet food processor. What licensing is SCAQMD referring to? There is no definition of a "pet food processor." What businesses besides rendering plants is SCAQMD attempting to regulate under PR 415 by referencing "pet food processor"?

3.3-11

Response 3.3-11

The definition of "collection center" was taken from the California Vehicle Code Section 2460(j). Please note that certain collection centers are exempted pursuant to subparagraph (l)(1)(B). "Pet food processor" is a term used in that definition. Licensing of collection centers is pursuant to Section 19300.5 of the Food and Agricultural Code.

D1. Response to Comments

c. “Confirmed Odor Event” (c)(2) continues to be an unlawful discretionary standard and is inconsistent with the Civil Code, which states: “[a] public nuisance is one which affects *at the same time an entire community or neighborhood, or any considerable number of persons*, although the extent of the annoyance or damage inflicted upon individuals may be unequal.” (Civ. Code, § 3480 [emphasis added].) Any SCAQMD staff member can declare a confirmed odor event instead of only qualified inspectors. There is no time frame for the odors. Is this one odor during a specific hour or will SCAQMD add up complaints over the days, weeks, or years in order to declare a “confirmed odor event?” How will SCAQMD exclude other sources of odors? How will SCAQMD determine which rendering facility is allegedly emitting the odor when several are located near one another? SCAQMD staff informed the Governing Board in May 2014 that a public nuisance involves complaints from six or more separate households or businesses; that the odors must be confirmed by the inspector with the complainants, and traced back to the source; and that the complainant must sign a form and either complete a declaration or be willing to testify in court if necessary. (Attachment 10.) This is the standard that should be used consistently in all SCAQMD rules and not some lessor standard

3.3-12

applied to a select and small group of businesses. There are other industries that receive more odor complaints and NOV's than renderers, yet SCAQMD is not imposing a more stringent public nuisance standard or enclosure requirement on those industries as it is doing with PR 415 and the rendering companies.

3.3-12
Cont'd**Response 3.3-12**

Refer to Master Response 5, *Nuisance Odors*, and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's pro-active approach to reducing rendering odors. The comment does not identify in what regard the definition of “Confirmed Odor Event” is an unlawful discretionary standard. There are two possibilities, both of which will be considered. The first possibility is that the definition causes an illegal delegation of discretion from the SCAQMD Governing Board to SCAQMD staff. In this regard, H&SC Section 40482 provides:

Any power, duty, purpose, function, or jurisdiction which the south coast district board may lawfully delegate is conclusively presumed to have been delegated to the executive officer unless it is shown that the south coast district board, by affirmative vote recorded in its minutes, specifically has reserved the particular power, duty, purpose, function, or jurisdiction for its own purpose.

D1. Response to Comments

Therefore, PR 415 causes an illegal delegation only if it is one the Board cannot make because it is unconstitutional. An unconstitutional delegation of legislative power occurs when a legislative body confers upon an administrative agency unrestricted authority to make fundamental policy decisions. *Golightly v. Molina* (2014) 229 Cal.App.4th 1501, 1516 (citing *Samples v. Brown* (2007) 146 Cal.App.4th 787, 804). According to the court in *Golightly*:

The nondelegation doctrine serves, “to assure that ‘truly fundamental issues [will] be resolved by the Legislature’ and that a ‘grant of authority [is] ... accompanied by safeguards adequate to prevent its abuse.’ [Citations.] This doctrine rests upon the premise that the legislative body must itself effectively resolve the truly fundamental issues. It cannot escape responsibility by explicitly delegating that function to others or by failing to establish an effective mechanism to assure the proper implementation of its policy decisions.” (*Kugler v. Yocum* (1969) 69 Cal.2d 371, 376–377.) *Golightly v. Molina*, *supra* at 1516, review denied (Jan. 14, 2015.)

The definition of Confirmed Odor Event “means the occurrence of an odor resulting in three or more complaints by different individuals from different addresses, and the source of the odor is verified by SCAQMD personnel trained in odor inspection techniques.” The definition of Confirmed Odor Event does not authorize or require SCAQMD staff to make fundamental policy decisions. The definition requires the staff to respond to odor complaints and verify the source of the odors. Although there is some discretion involved in this task, it does not involve policy choices, much less fundamental policy choices. Therefore, these activities do not involve an unconstitutional delegation.

A second possibility raised by the comment that the definition of Confirmed Odor Event is an unlawful discretionary standard is that the definition is unconstitutionally vague. Since the comment does not identify a particular word or phrase that is alleged to be vague, it is assumed that the comment asserts that the definition is vague when taken in its entirety.

In a nuisance case, the California Supreme Court followed two guiding principles endorsed by the United States Supreme Court for applying the vagueness doctrine. *People ex rel. Gallo v. Acuna* (1997) 14 Cal.4th 1090, 1116-1119. The first principle is that the particular allegedly vague term must be considered in context. *Id.* at 1116. In *Acuna*, the California Supreme Court explained that:

D1. Response to Comments

The first principle is derived from the concrete necessity that abstract legal commands must be applied in a specific context. A contextual application of otherwise unqualified legal language may supply the clue to a law's meaning, giving facially standardless language a constitutionally sufficient concreteness. Indeed, in evaluating challenges based on claims of vagueness, the court has said “[t]he particular context is all important.” (American Communications Assn. v. Douds (1950) 339 U.S. 382, 412, 70 S.Ct. 674, 691, 94 L.Ed. 925.) *People ex rel. Gallo v. Acuna*, supra at 1116.

The second guiding principle is the notion of “reasonable” specificity or “reasonable certainty” *Id.* at 1117. (citing *Coates v. City of Cincinnati* (1971) 402 U.S. 611, 614; *People v. Victor* (1965) 62 Cal.2d 280, 300; see also *In re Marriage of Walton* (1972) 28 Cal.App.3d 108, 116 [statute will not be held void for vagueness “if any reasonable and practical construction can be given its language or if its terms may be made reasonably certain by reference to other definable sources”].)

In explaining the reasonable specificity or reasonable certainty standard, the California Supreme Court quoted the United States Supreme Court decision in *Boyce Motor Lines v. United States*:

“few words possess the precision of mathematical symbols, most statutes must deal with untold and unforeseen variations in factual situations, and the practical necessities of discharging the business of government inevitably limit the specificity with which legislators can spell out prohibitions. Consequently, no more than a reasonable degree of certainty can be demanded. Nor is it unfair to require that one who deliberately goes perilously close to an area of proscribed conduct shall take the risk that he may cross the line.” (*Boyce Motor Lines v. United States* (1952) 342 U.S. 337, 340.) *People ex rel. Gallo v. Acuna*, supra at 1117.

Under the two guiding principles adopted by both the California Supreme Court and the United States Supreme Court, the definition of Confirmed Odor Event is not vague.

First, the definition must be placed in the context of PR 415. Under PR 415 subparagraph (d)(2)(B), a rendering facility must submit an Odor Mitigation Plan (OMP) to SCAQMD if three Confirmed Odor Events are received regarding the facility within a 180-day period. Further, PR 415 (d)(3) requires a rendering facility to submit a Specific Cause Analysis within a day of notification by the Executive Officer of the receipt of a

D1. Response to Comments

confirmed odor event regarding the facility. In context, it is clear that a Confirmed Odor Event must involve rendering facilities and rendering odors. The context of the definition also makes it clear that the activities specified are a trigger for further regulatory action by SCAQMD to address rendering-plant odors. Second, taken in its entirety, the definition is reasonably specific and certain. According to the definition of Confirmed Odor Event, SCAQMD must receive complaints from three different individuals at three different addresses regarding an odor from a rendering facility. The definition further requires that SCAQMD staff must confirm that the odor is caused by a particular rendering facility. The definition finally requires that the SCAQMD staff confirming the source of the odors must be trained in odor inspection techniques. Taken as a whole, the definition of Confirmed Odor Event is highly specific and not unconstitutionally vague.

Regarding the inconsistency of the definition of Confirmed Odor Event with Civil Code Section 3480, the commenter provides the text of that section but does not explain the purported conflict with Section 3480. As noted, that section refers to a public nuisance being one which affects at the same time a considerable number of persons or the public. The commenter may be referring to the 180-day time period in which multiple Confirmed Odor Events will trigger an OMP, and contends that these events do not occur “at the same time.” The SCAQMD is not redefining a public nuisance through this rule, but instead is requiring an OMP when a series of Confirmed Odor Events (which each must have three separate verified complaints) establishes that the facility has an elevated likelihood of causing an odor nuisance. PR 415 requires reasonable preventative measures to ensure, to the extent feasible, that such nuisances do not occur.

Regarding the comment that any SCAQMD staff person can declare a confirmed odor event, the definition of confirmed odor event has been modified so that only SCAQMD personnel trained in odor detection techniques can identify a Confirmed Odor Event.

Regarding the time frame for a confirmed odor event, only single odor events fall within the definition of Confirmed Odor Event. Can SCAQMD add up complaints over days, weeks, or years? The definition states that a Confirmed Odor Event “means the occurrence of an odor...” Also, the use of the word “Event” in the definition of Confirmed Odor Event indicates that only single events fall within the definition. Thus, a Confirmed Odor Event occurs only when three people complain about the same event giving rise to odors. It would not be allowable under the definition to string together three separate odor events to meet the three-complaint requirement. On the other hand, it is not possible to give a specific time limit for an odor event. Odor events can have very different durations. They can be very short—for example, the momentary release of odors from

D1. Response to Comments

cooking operations. Or they can be very long—for example, open air storage of rendering materials over a weekend.

Regarding the question of how SCAQMD will exclude other sources of odors when determining Confirmed Odor Events, according to the definition of Confirmed Odor Event. Confirmation by SCAQMD personnel trained in odor inspection techniques is required. To constitute a confirmed odor, the odor must be traced back to its source. The training in odor inspection techniques includes the requirement that odors must be traced back to their particular source and the cause of the odors must be identified, if possible. If odors cannot be traced back to a particular source, then it is not possible for there to be a confirmed odor event for that facility.

Refer to Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*, regarding the difficulty in tracing rendering odors to a specific facility and the need for PR 415.

- d. “Odor Generating Source” (c)(13) means “an operation or process at a rendering facility from which odors *may be* emitted...” (Emphasis added.) This should be “are” emitted, otherwise it is vague, ambiguous, and unlawfully discretionary.

3.3-13

Response 3.3-13

Refer to Master Response 3, *Odor Control Measures*. Please note that “Odor Generating Source” is now defined in paragraph (c)(14). The intent of PR 415 is to require certain odor-generating sources to be enclosed within a permanent total enclosure or closed system at all times. This includes odor-generating sources that do not operate at a given time during the day but may be operated at another time (example: sources that generate odors during two shifts per day but do not generate odors during the third shift because the rendering facility is not operating). Therefore, the use of “may be” within this context is completely appropriate, and the definition of “odor generating source” is neither vague, ambiguous, nor unlawfully discretionary.

D1. Response to Comments

- e. “Permanent Enclosure” (c)(14) requires that the enclosure contain all odors from the odor-generating sources. Odor is defined as “the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves.” Therefore, a permanent enclosure is only considered as such if a person cannot perceive a chemical substance in the air. It is left up to the complete discretion of SCAQMD staff. Renderers will not know whether their enclosure is sufficient because SCAQMD staff with sensitive olfactory nerves may smell something the renderers or other SCAQMD staff do not. What if one SCAQMD staff person does not perceive a chemical substance in the air, and a second SCAQMD staff member does? Is this a one-time test, or can SCAQMD make a future determination that an enclosure does not meet the requirements if at any time any SCAQMD staff person perceives a chemical substance in the air? What happens if SCAQMD decides that an enclosure does not meet the requirements of PR 415 after it is built? This is also inconsistent with “Routine Enclosure Opening (c)(20), which properly recognizes that enclosures must have certain openings. How will SCAQMD staff determine that the allowed openings are the source of the odor and not the enclosure?

3.3-14

Response 3.3-14

Paragraph (c)(15) defines “Permanent Total Enclosure.” The language “verified by SCAQMD personnel” under paragraph (c)(4) is to allow a SCAQMD compliance supervisor or manager to verify a complaint. Supervisory personnel receive the same training as inspectors with regard to verifying complaints. Clarifying language has been added to paragraph (c)(4) to say: “...and the source of the odor is verified by SCAQMD personnel trained in inspection techniques”.

Regarding the questions on enclosures, PR 415 requires a minimum inward face velocity through routine enclosure openings. The purpose of this requirement is to ensure airflow into the building and prevent odors from escaping. Routine enclosure openings that comply with the minimum inward face velocity will not be a source of odors that remain after an enclosure is constructed. Refer to Table P-1 in the Final EA for the modifications to the requirement for minimum inward face velocity.

Regarding the comment about SCAQMD declaring a permanent total enclosure to be insufficient after it is built, the standards for permanent total enclosure are described in subdivision (f). During permitting of an enclosure, SCAQMD staff will evaluate the enclosure to determine whether it meets these standards. After the owner or operator

D1. Response to Comments

receives a Permit to Operate an enclosure, in combination with the ventilation and odor control systems or alternative permanent total enclosure requirements for any raw materials receiving area, SCAQMD does not retain the discretion to declare it insufficient after it is built.

6. **The Requirements are Draconian, Unnecessarily Costly, and will Not Reduce Odors in Boyle Heights.**

- a. The requirements are based on the presumptions that all renderers are causing odors in the Boyle Heights community, and that enclosure is the only method of addressing the issue. There is no evidence to support these assumptions. PR 415(d)(1)(A) requires that "all applicable Odor BMP[s] identified in subdivision (e) shall be implemented." There is no identification of who makes the determination of whether certain Odor BMPs are applicable or not. SCAQMD should not be interfering in business operations and activities that are already regulated by the Food and

3.3-15

Agricultural Code and following well-recognized best practices established by the industry. There is also no legal justification for requiring all businesses to implement Odor BMPs unless a public nuisance NOV has been issued and sustained after all appeals and judicial proceedings have concluded.

3.3-16

Response 3.3-15 and 3.3-16

As stated in Master Response 5, *Nuisance Odors*, SCAQMD staff has conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction. Through its multiple inspections, SCAQMD staff has observed that the rendering facilities are a substantial source of rendering odors not only on-site within the facilities, but within the Boyle Heights community. For this reason, among others, SCAQMD staff followed the approach in PR 415, which represents the most effective method to control odors from rendering operations. Implementation of PR 415 will result in a reduction of odors in the Boyle Heights community.

Regarding the comment that enclosures are the only method of addressing the odor issue, the intent of PR 415 is to capture and control odors from rendering operations. While BMPs would help to reduce odors, BMPs by themselves do not represent the best control that can reasonably be achieved for odors. Staff concludes that more effective controls for odors from rendering facilities are to enclose the operations that generate odors within a

D1. Response to Comments

closed system or total enclosure (such as a building), keep the enclosure under negative pressure to contain odors within the enclosure, and vent those odors to control equipment (or by using an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening). The approach taken for PR 415 is based on research of existing rendering operations to determine the current and accepted practices for operating a rendering facility within an urban area. The accepted practices include permanent total enclosures, maintaining that enclosure under negative pressure, and venting the enclosure. This same standard of operation is used in other areas by at least two of the companies that operate rendering facilities within Vernon.

Master Response 8, *Agricultural Preemption*, discusses the businesses and activities regulated by the Agricultural Code. The BMPs are defined in paragraphs (e)(1) to (12). They are meant to be ongoing and applicable to existing and new rendering facilities. BMPs are cost-effective methods to reduce rendering odors and prevent nuisance-level odors. SCAQMD staff is available to meet and discuss any questions the facilities may have regarding these requirements and their applicability.

Regarding the legal justification for requiring rendering facilities to implement odor BMPs in the absence of a public nuisance NOV and all related appeals and judicial proceedings, refer to Response 3.0-3 and Master Response 1, *Legal Authority to Adopt and Enforce*. For the reasons outlined in these responses, SCAQMD has the authority to regulate odors from rendering facilities and require BMPs to reduce rendering odors. There is no such authority granted by the Food and Agriculture Code.

D1. Response to Comments

b. PR 415(d)(1)(B)(ii) requires all rendering facilities to submit permit applications for a permanent enclosure even if the facility has a closed system or it has not been the subject of an public nuisance NOV. PR 415(e)(2) assumes all raw rendering receiving locations will be enclosed, although this requirement is not part of PR 415(d)(1)(B)(ii). In short, this rule presumes every existing facility will be required to construct permanent enclosures, and that the “closed system” provisions are not really an option. There is no approval process proposed for quickly obtaining SCAQMD’s determination as to whether existing facilities already have “closed systems.” In fact, there is no reason why SCAQMD cannot inform the existing rendering operations now as to whether their systems are considered “closed.” If a “closed system” is really an option for the few existing facilities, there is no reason for these facilities to endure the cost of engineering and permits when a permanent enclosure is not required under the rule.

3.3-17

Response 3.3-17

Facilities that meet the closed system standards under paragraph (f)(3) are not required to submit applications for a permanent total enclosure for the closed system. A rendering facility has the option of operating within a closed system or a permanent total enclosure. However, raw rendering material receiving must be conducted within a permanent total enclosure but may meet the alternative requirement under paragraph (f)(5), or be moved into a permanent total enclosure within 60 minutes after the end of material delivery. This requirement is set out in PR 415(e)(2) Delivery of Raw Rendering Materials. Additionally, under subparagraph (d)(1)(D), within six months from the date of adoption of PR 415, rendering facilities within SCAQMD’s jurisdiction are required to submit a letter of intent to the Executive Officer to select whether they will enclose or operate in a closed system.

Regarding whether existing facilities already have enclosed systems, refer to the detailed Enclosures discussion provided in the Final Staff Report. As noted in this section of the Staff Report, and based on SCAQMD staff’s site visits to the rendering facilities, only one facility has a completely enclosed raw material receiving operation. Two rendering facilities have partial enclosures around the receiving area. A fourth facility has an asphalt/concrete slab, where raw materials are directly deposited, with no covering. Four of the facilities had at least partially enclosed cooking and fat processing areas, consisting of a roof with one or more walls. One facility had an enclosure around the wastewater

D1. Response to Comments

treatment area. The other three rendering facilities have open wastewater treatment processes that would need to be enclosed.

Specific to the Baker facility, existing operation in the main processing building is not considered a closed system. During a site visit in April 2015, SCAQMD staff noted several pieces of equipment that are not closed, including two inclined screw conveyors as well as a hopper feeding the grinder. These would need to be enclosed in order to consider the conveying, grinding, cooking and post-cooking processing equipment in the main building a closed system. Paragraph (f)(3) defines the standards for a closed system. Subparagraph (f)(2)(D) defines acceptable exterior wall materials from which a permanent total enclosure may be constructed. Notwithstanding the materials used in construction, the receiving area must be enclosed, including the receiving pit from which the screw conveyors move material toward processing equipment.

c. The time frames in PR 415(d) are unreasonable for existing facilities. The rule fails to recognize the time necessary to evaluate all of the Odor BMPs, determine whether the BMPs are applicable, change business practices, deal with increased water usage, etc. The rule fails to recognize the extensive permitting that must occur in addition to SCAQMD's permitting process that is not within the control of the facilities, or time required to conduct demolition activities, obtain financing, and get inspection clearances from the different permitting agencies. What if construction is slowed down because of weather, delays in obtaining equipment, etc.? The rule does not provide sufficient time to develop an effective odor mitigation plan, and does not recognize any appeal time frames for challenging "confirmed odor events." One day to conduct a specific cause analysis for a confirmed odor event is unreasonable.

3.3-18

Response 3.3-18

The time frame for construction under subdivision (d) allows between two and four years for construction of the permanent total enclosures at existing facilities. This timing is sufficient to conduct all necessary steps to construct an enclosure and 90 days to develop an effective OMP after notification by the Executive Officer, as allowed under paragraph (d)(2) is sufficient. A facility has 30 days under paragraph (d)(3) to submit a specific cause analysis to SCAQMD. The intent of this requirement is that after a facility is notified of a confirmed odor event, facility personnel begin the analysis within a short period of time while details of the circumstances surrounding the confirmed odor event

D1. Response to Comments

are fresh. Refer to Master Response 7, *Building Codes*. Modifications have been made to PR 415 to provide for a one-time extension for up to one year to complete construction of a permanent total enclosure and applicable ventilation and odor control system under subparagraph (d)(1)(F). This subparagraph is added as a result of staff's good faith efforts to account for unforeseeable circumstances that delay the construction of permanent total enclosures which may be outside the facilities' control.

- d. PR 415(d)(1)(D)(ii) requires enclosures for wastewater treatment systems regardless of whether they are the source of a public nuisance odor. SCAQMD has no evidence proving the wastewater treatment systems from the five renderers are causing public nuisance level odors in Boyle Heights.

3.3-19

Response 3.3-19

Refer to Master Response 5, *Nuisance Odors*. SCAQMD staff has conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction and has observed through these inspections that the wastewater treatment systems at the facilities are a substantial source of odors. During on-site inspections, SCAQMD staff detected rendering odors coming from wastewater treatment systems that have the potential to create odor nuisances in the surrounding community, especially when combined with odors from other rendering operations and from nearby rendering facilities. Although the SCAQMD is concerned that rendering odors from wastewater treatment systems are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public workshops on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering facilities.

D1. Response to Comments

- e. What is the purpose of the odor complaint contact sign requirement in PR 415(d)(1)(E) and (i)? If there are any odors at the perimeter of the rendering operations, these would only affect persons in vehicles driving by, which does not qualify as a public nuisance and would not further any public purpose. Moreover, this requirement would impermissibly create undue and unjustified negative publicity for rendering companies, despite the fact that the companies are lawfully operating.

3.3-20

Response 3.3-20

The odor complaint contact sign requirement has been moved to subdivision (i). SCAQMD staff has conducted public workshops on PR 415 where residents and workers from the housing and commercial development areas surrounding the rendering facilities have stated that they were not aware of whom they should call if they smelled odors they believed were coming from the rendering facilities. Therefore, the odor complaint contact sign is an important element of PR 415, because it informs affected workers at the commercial businesses in Vernon and members from the communities surrounding Vernon of who to call for nuisance odors. This is especially important for people who do not understand that SCAQMD has jurisdiction over nuisance odors. Under the odor complaint contact sign content requirements of paragraph (i)(1), a facility is obligated only to specify 1-800-CUT-SMOG as the primary contact for odor complaints. The name of the facility is requirement, but a facility contact is not required, only optional.

- f. There is no legal or factual basis for requiring an odor mitigation plan in PR 415(d)(2) when there is no proven public nuisance under Rule 402. The 180-day provision for confirmed odor events conflicts with Civil Code section 3480 (see above). What are the criteria for SCAQMD approval of an Odor Mitigation Plan? The provision making a violation of any term of an approved Odor Mitigation Plan a violation of PR 415 confers unlawful discretion on SCAQMD staff. SCAQMD lacks authority to impose an Odor Mitigation Plan penalty in addition to a settlement of an NOV. It is unclear why the specific cause analysis report should identify correct measures when presumably the Odor Mitigation Plan will do this. What is the difference between the two?

3.3-21

D1. Response to Comments

Response 3.3-21

Refer to Master Response 3, *Odor Control Measures*, and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's proactive approach to reducing rendering odors. Enforcement action under PR 402 can only be taken after SCAQMD receives and verifies a sufficient number of complaints from the public. Moreover, because there are several rendering facilities located within a relatively small area, in some cases the odors cannot be attributed to one specific facility and indeed are likely contributed to by several of the facilities. Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. Rule 402 is reactive, where PR 415 is proactive in terms of preventing or minimizing odors.

Regarding the comment that the 180-day provision for confirmed odor events conflicts with Civil Code Section 3480, the comment does not explain the purported conflict with this Civil Code section. That section refers to a public nuisance being one which affects at the same time a considerable number of persons or the public. The commenter apparently refers to the 180-day time period in which multiple Confirmed Odor Events will trigger an OMP, and contends that these events do not occur "at the same time." SCAQMD is not redefining a public nuisance through this rule, but instead is requiring an OMP when a series of Confirmed Odor Events (which each must have three separate verified complaints) establishes that the facility has an elevated likelihood of causing an odor nuisance. Rule 415 requires reasonable preventative measures to ensure, to the extent feasible, that such nuisances do not occur.

Regarding the comment that SCAQMD lacks authority to impose an OMP, refer to Response 3.0-3 and Master Response 1, *Legal Authority to Adopt and Enforce*, for a discussion of SCAQMD's authority.

- g. The notification requirement in PR 415(d)(1)(F) and covering requirement in Odor Best Management Practices PR 415(e)(1) are unlawful. SCAQMD has no authority to regulate whether trucks are covered on public roadways or to force a rendering operation to regulate trucks for SCAQMD under the guise of "best management practices." Further, there is no factual evidence justifying this requirement. According to SCAQMD staff at the June 4 meeting, odors from trucks are fleeting, minor, and not a nuisance. Covering trucks will not reduce odors in Boyle Heights.

3.3-22

D1. Response to Comments

Response 3.3-22

Refer to Master Response 1, *Authority to Adopt and Enforce*. The installation of an odor complaint contact sign at rendering facilities and covering of incoming transport vehicles is not unlawful. H&SC Section 41508 grants SCAQMD authority to regulate odors, which includes the adoption of PR 415, which imposes requirements that are stricter than those set forth in H&SC Section 41700. SCAQMD staff has conducted multiple on-site inspections of rendering facilities within SCAQMD's jurisdiction and has observed through these inspections that the rendering materials at the plants are a substantial source of these odors (refer to Master Response 5, *Nuisance Odors*). H&SC Section 40000 provides SCAQMD with the primary responsibility for control of air pollution from rendering facilities and all other sources except emissions from motor vehicles located in their jurisdiction. Rendering materials at the plants are a substantial source of odors, and odors are an air pollutant under H&SC section 39013. PR 415's regulation of odors from raw rendering materials from trucks leaving their facilities within SCAQMD's jurisdiction is within SCAQMD's authority both because it is a regulation of the rendering facility's operations, and because odors emanating from rendering materials in trucks are not "emissions from motor vehicles" within the meaning of Section 40000, which was intended to give the California Air Resources Board exclusive authority to establish standards which motor vehicle engines in California must meet.

Additionally, all trucks are required to be tarped prior to entry to the rendering facility, whether they are owned by the facility or a third-party transporter. Odors from trucks can be more than "fleeting, minor and not a nuisance". The requirements of PR 415, including the permanent total enclosure or closed system standards and BMPs, taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes covering of trucks.

Furthermore, although SCAQMD staff is concerned that rendering odors from rendering facilities are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors (refer to Master Response 5, *Nuisance Odors*). In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering facilities.

D1. Response to Comments

- h. Despite the fact there is no evidence showing that the raw rendering material receiving areas are the source of odors in Boyle Heights, PR 415(e)(2) requires an enclosure for these receiving areas. The option of storing the materials in sealed, odor tight containers on a continuous basis after material delivery is not operationally possible and thus, not a real option.

3.3-23

Response 3.3-23

The requirements for a permanent total enclosure are listed in paragraph (f)(2). Paragraph (e)(9) requires that raw rendering materials be transferred between permanent total enclosures from a transport vehicle or a closed system of conveyance or by covered containers, such that material does not remain outside of a permanent total enclosure for more than 60 minutes after the end of material delivery (paragraph (e)(2)). The current version of PR 415 requires covered containers, not sealed, odor tight containers.

Regarding the comment of evidence showing that the raw rendering material receiving areas are the source of odors in Boyle Heights, the requirements of PR 415, including the permanent total enclosure or closed system standards and BMPs, taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP for raw material receiving. Although SCAQMD is concerned that rendering odors from rendering facilities are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors (refer to Master Response 5, *Nuisance Odors*). In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering facilities.

- i. The extensive washing requirements in PR 415(e)(3)-(4), (13)-(14) are inconsistent with State drought policies and Executive Orders. Further, these requirements will generate more wastewater to be treated (and more emissions and odors), and possible changes to wastewater permits which could take a considerable time to obtain. Who determines how much water is needed to wash outgoing trucks in PR 415(e)(3)?

3.3-24

D1. Response to Comments

How does the truck washing and drum washing requirements relate to reducing odors in Boyle Heights? What authority does SCAQMD have to prevent trackout of raw rendering materials on to public streets? What about tanker trucks that cannot be washed and do not contribute to trackout of raw rendering materials on public streets? There is no evidence that washing will reduce odors in Boyle Heights.

3.3-24
Cont'd

Response 3.3-24

Refer to Response 3.1-24 for the discussion of water consumption from the washing activities. The washing requirements are in paragraphs (e)(3), (e)(4), (e)(10), and (e)(11). Under Title 3, California Code of Regulations (CCR), Section 1180.35, the Department of Food and Agriculture already requires vehicles used to transport carcasses and packinghouse waste to be washed to prevent the spread of disease and creation of nuisances.

Regarding the comment on PR 415 (e)(13)-(14), under the current version of the rule language dated October 3, 2017, there are a total of 12 BMPs. BMP (e)(13)-(14) have been removed. It should be noted that SCAQMD staff has worked with the facilities to make changes to PR 415 that have resulted in a reduction in water use compared to what was analyzed in the Draft EA (refer to Table P-3 in the Final EA).

Regarding the comment of reducing odors in Boyle Heights, as stated above, the requirements of PR 415, including the permanent total enclosure or closed system standards and BMPs including the washing BMPs, taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. Refer to Master Response 5, *Nuisance Odors*.

Furthermore, SCAQMD staff has conducted multiple on-site inspections of the rendering facilities within SCAQMD's jurisdiction and has observed through these inspections that the rendering materials at these facilities are a substantial source of odors. H&SC Section 40000 provides SCAQMD with the primary responsibility for control of air pollution from all sources other than emissions from motor vehicles. The limitations on controlling air pollution from motor vehicles is a limitation on establishing motor vehicle emission standards—so-called tailpipe standards—under section 209 of the Clean Air Act. Rendering materials at the plants are a significant source of odors. Air pollutants include “odors” under H&SC Section 39013. PR 415's regulation of odors from raw rendering materials from trucks leaving their plants within SCAQMD's jurisdiction is within

D1. Response to Comments

SCAQMD's authority. Refer to Master Response 1, *Legal Authority to Adopt and Enforce*.

- j. The requirements in PR 415 (e)(5) relating to holding time of raw rendering materials cannot be implemented until a permanent enclosure is constructed as the storage in a sealed, odor tight container is not an option as discussed above. There is no evidence showing that limiting the holding time and requiring the raw materials be enclosed will reduce odors in Boyle Heights.

3.3-25

Response 3.3-25

Refer to Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*. The holding time of incoming raw rendering materials in paragraph (e)(5) is intended to reduce the time that raw rendering materials will enter a permanent total enclosure or a closed system, thereby reducing odors from accumulation of raw materials over an extended period of time.

Regarding the comment of reducing odors in Boyle Heights, the requirements of PR 415, including the enclosure or closed system standards and all of the BMPs, taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP for holding time of raw rendering materials prior to the enclosure standard becoming effective.

- k. According to SCAQMD staff at the June 4 meeting, the requirement to repair the raw material receiving area in PR 415(e)(6) is required to reduce bacteria, in addition to preventing standing water. Not only is there no evidence that bacteria causes odors in Boyle Heights, but SCAQMD lacks authority and jurisdiction to regulate bacteria or standing water. Further, there is no evidence showing that preventing standing water will reduce odors in Boyle Heights. The requirement is also vague as to time; is this a one-time requirement or continuous requirement?

3.3-26

D1. Response to Comments

Response 3.3-26

The requirement to repair the raw rendering material receiving area is one of a number of BMPs that will reduce the potential for fugitive odors generated from rendering facilities. Potholes that hold standing water with a surface area greater than one square foot are required to be repaired under this BMP. The intent of this BMP is to prevent standing water that can allow odorous bacteria to multiply. When SCAQMD staff visited the Baker facility in April 2015, no potholes were noted in the raw material receiving area that met the criteria in paragraph (e)(6). The concrete in the receiving area appeared to be durable. This BMP is to ensure that the receiving area will be maintained in similar condition. Refer to Response 3.1-28 for the discussion of water consumption from the washing activities.

SCAQMD has authority to require rendering operations to take reasonable steps to reduce odor emissions, including those that may emanate from bacterial activity in standing water, which is under SCAQMD's authority to regulate air pollution from all sources except emissions from motor vehicles. H&SC Section 40000. Refer to Master Response 1, *Legal Authority to Adopt and Enforce*.

Regarding the comment of reducing odors in Boyle Heights, refer to Response 3.3-25. The requirements of PR 415 and all of the BMPs, taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the BMP to repair potholes to prevent growth and accumulation of odorous bacteria. With regard to the ability of bacteria to cause odors, refer to Science Daily, "Bacteria Can Have a 'Sense of Smell.'" (August 17, 2010):

Bacteria are well-known to be the cause of some of the most repugnant smells on earth (Assessed at:
<http://www.sciencedaily.com/releases/2010/08/100816095719.htm>)

With regard to bacteria causing odors in rendering operations, refer to A.C. Stern, ed., *Sources of Air Pollution and Their Control*, Vol. III, Food and Feed Industries (1968):

Localized odor problems of an objectionable nature are related to transportation and storage of the raw material. Bacterial decomposition of animal tissue begins at the death of the animal and putrefaction progresses rapidly with time and elevated temperatures. Just dumping of a "ripe" load of offal can create a problem (Id. at 282).

D1. Response to Comments

Regarding lack of evidence that odors due to bacteria in standing water have reached Boyle Heights, BMPs are cost effective ways to prevent rendering odors from affecting residents and businesses in Boyle Heights. Just like the BMPs discussed in Response 3.3-22 and Response 3.3-25, this BMP to repair the outside raw material receiving areas will contribute towards rendering odors reduction from reaching a nuisance level. Refer to Master Response 5, *Nuisance Odors*.

With regard to SCAQMD's authority to regulate odors from bacteria and standing water, refer to Response 3.0-3 and Master Response 1, *Legal Authority to Adopt and Enforce*.

Regarding the timing of the obligation to repair conditions in the outside raw material receiving areas creating standing water where raw materials touch the ground, the obligation to make repairs is ongoing.

- l. The requirement in PR 415(e)(9) limits transfer of raw or cooked rendering materials between enclosures to a closed system of conveyance or odor-tight drum. There is no evidence showing that transporting material between enclosures causes odors in Boyle Heights.

3.3-27

Response 3.3-27

Refer to Master Response 5, *Nuisance Odors*, and Responses 3.3-22, 3.3-25, and 3.3-26 with respect to the intent for implementing all of the BMPs as a whole to reduce rendering odors. It should be noted that paragraph (e)(9) requires cooked rendering materials with a batch cooker and that the odor-tight requirement is modified to say covered container (refer to Table P-1 in the Final EA).

D1. Response to Comments

m. The accumulation of processed materials requirements in PR 415(e)(12) are unlawfully vague and ambiguous as to time, in part because of the use of the word “accumulate.” Water which is regulated by this requirement is not an accumulation of the processed materials, or within SCAQMD’s jurisdiction to regulate. There is no evidence showing that regulating accumulations of processed materials will reduce odors in Boyle Heights. The requirements related to floor drains in PR 415(e)(14) suffer from the same defects. PR 415(e)(12) is also unlawfully vague and ambiguous as to the terms “grease” and “oils” because it does not state whether they are derived from the rendering process. Rendering companies may utilize other processes that generate grease and oils that are entirely unrelated to the rendering process that would not be subject to PR 415.

3.3-28

Response 3.3-28

Washdown of the receiving area is a BMP under PR 415 (e)(10). Cleaning Floor Drains is a BMP under PR 415 (e)(11). BMP (e)(12) is an alternative BMP. Similarly, there is no BMP under (e)(14). Refer to Response 3.1-24 with respect to the washing activities under PR 415. With regard to how the washdown of a receiving area will reduce odors in Boyle Heights, refer to Responses 3.3-22, 3.3-25, 3.3-26, and 3.3-27. Additionally, SCAQMD staff has worked with the facilities to make changes to PR 415 including, an exemption for trap grease unloading operations (paragraph (l)(8)).

n. The permanent enclosure requirements in PR 415(f)(1)-(3) are not justified. There is no evidence demonstrating that constructing a permanent enclosure will reduce odors in Boyle Heights. The requirements are extremely costly. If SCAQMD is truly interested in reducing odors and had jurisdiction to impose this rule, it should focus on less costly alternatives such as masking agents. Why does PR 415 specify the materials that the enclosure can be constructed of? Since SCAQMD approves the enclosure materials, it should bare the risk if the enclosure does not perform as required by the rule.

3.3-29

Response 3.3-29

Refer to Master Response 3, *Odor Control Measures*, and Master Response 6, *Methodology*. The requirements for a permanent total enclosure is specified in

D1. Response to Comments

subdivision (f). After review of rendering operations in other states as well as other jurisdictions within California to determine the current and accepted practices for operating a rendering facility within an urban area, staff concluded that the accepted standard for operating a rendering facility in an urban area includes: enclosure of odorous operations, maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment. This same standard of operation is used at least at three of the other facilities owned by Baker outside of Vernon around the nation, while Baker continues to deny the same standard of operation to the communities and workers surrounding the Vernon rendering facility. In a review of other rendering operations, nationally, staff was unable to find a single example of a rendering facility in an urban area operating an open-air rendering process such as Baker currently operates in Vernon.

As discussed in Master Response 3 and Master Response 6, the requirements of PR 415, including the enclosure or closed system standards and BMPs, taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the permanent total enclosure standards in PR 415. Although SCAQMD is concerned that rendering odors from Baker and the nearby rendering facilities are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors (refer to Master Response 5, *Nuisance Odors*). In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in other commercial and residential areas surrounding the rendering facilities.

Regarding the comment that SCAQMD should “bare the risk if the enclosure does not perform as required”, under section 818.4 of the Government Code, commonly referred to as the California Tort Claims Act, a public entity is not liable for an injury caused by the issuance or denial of, or by the failure or refusal to issue or deny any permit, approval, or similar authorization where the public entity or an employee of the public entity is authorized by enactment to determine whether or not such authorization should be issued or denied. *Elson v. Public Utilities Commission* (1975) 51 Cal.App.3d 577, 587-588. Therefore, the decisions by SCAQMD in permitting an enclosure, including the selection of enclosure material, are immune from suit under California law.

D1. Response to Comments

- o. The closed system requirements in PR 415(f)(4) are inconsistent with the definition of closed system in PR 415(c)(2). The use of the phrase “to the maximum extent possible” makes the requirement vague and ambiguous, and grants unlawful discretion to SCAQMD staff. Who makes the determination of whether a system is considered “closed” and when does that determination occur? Why is there a need to close air gaps – these small gaps cannot conceivably cause odors in Boyle Heights. Where does a closed system end; which part of the process?

3.3-30

Response 3.3-30

With respect to the requirement for a closed system, refer to Response 3.3-10. A “closed system” ends at the point where odorous solids, liquids or vapors contained within the closed system first come into contact with the air. The phrase “to the maximum extent possible” is included in subparagraph (f)(3)(A). The use of this phrase does not make the requirement vague and ambiguous, and does not grant unlawful discretion to SCAQMD staff. The minimum standards to minimize air leakage and contain odors in a closed system are specified in subparagraph (f)(3)(A) through (H) and SCAQMD staff cannot determine what constitutes “to the maximum extent possible” without any standards.

H&SC Section 40482 provides, in relevant part, that any power, duty, purpose, function, or jurisdiction, which the SCAQMD Board may lawfully delegate is conclusively presumed to have been delegated to the executive officer unless it is shown that the SCAQMD Board, by affirmative vote recorded in its minutes, specifically has reserved the particular power, duty, purpose, function, or jurisdiction for its own purpose. PR 415 causes an illegal delegation only if it is one the Board cannot make because it is unconstitutional. An unconstitutional delegation of legislative power occurs when a legislative body confers upon an administrative agency unrestricted authority to make fundamental policy decisions. *Golightly v. Molina* (2014) 229 Cal.App.4th 1501, 1516 (citing *Samples v. Brown* (2007) 146 Cal.App.4th 787, 804) (See Response 3.3-12, above). According to the court in *Golightly*, the nondelegation doctrine serves “to assure that ‘truly fundamental issues [will] be resolved by the Legislature’ and that a ‘grant of authority [is] ... accompanied by safeguards adequate to prevent its abuse.’ [Citations.] This doctrine rests upon the premise that the legislative body must itself effectively resolve the truly fundamental issues. It cannot escape responsibility by explicitly delegating that function to others or by failing to establish an effective mechanism to assure the proper implementation of its policy decisions.” (*Kugler v. Yocum* (1969) 69 Cal.2d 371, 376–377.)

D1. Response to Comments

The determination whether a closed system contains odors within the system to the maximum extent possible does not authorize or require SCAQMD staff to make fundamental policy decisions. The definition requires the staff to evaluate whether the facility's closed system meets the minimum standards set out in paragraph (f)(3). There is discretion involved in this task; however, it does not involve policy choices. Therefore, these activities do not involve an unconstitutional delegation.

Regarding the comment of air gaps causing odors in Boyle Heights, the requirements of PR 415, including the enclosure or closed system standards and BMPs, when taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes the closed system standards, requiring small air gaps to be sealed (subparagraph (f)(3)(E)). PR 415 is intended to reduce the potential for nuisance-level odors not only in Boyle Heights, but also in other commercial and residential areas surrounding the rendering facilities. For a discussion of SCAQMD staff's intent for implementing all of the BMPs, refer to Responses 3.3-22, 3.3-25, 3.3-26, 3.3-27, and 3.3-28.

- p. The June 3rd version of PR 415 is the first attempt by SCAQMD to apply standards to any aspect of the rule. Unfortunately, these "standards" have no scientific basis. This was especially evident at the June 4 meeting during the exchange between SCAQMD staff and a Los Angeles city employee about increasing the control efficiencies with no discussion of a basis for doing so. There is no evidence of whether nitrogen and sulfur compounds are causing odors in Boyle Heights. There is no evidence that the control efficiencies selected are achievable, cost-effective, and will reduce odors in Boyle Heights. SCAQMD needs to also address these issues in the socioeconomic analysis. The provision allowing the Executive Officer to identify other marker compounds causes these requirements to be impermissibly vague and ambiguous and an unlawful delegation of discretion. 180 days is not sufficient time to have source testing protocols approved. The testing and analytical methods are not identified and are to be determined. Baker cannot comment on requirements that are not specified in the rule. This level of technical detail cannot be provided to Baker the day before the public consultation meeting as was the June 3rd version of the rule.

3.3-31

D1. Response to Comments

Response 3.3-31

SCAQMD staff began the rulemaking process for PR 415 in spring 2013 and has worked in good faith with all of the affected rendering facilities to clarify and revise the scope of the rule, including applying standards.

Refer to Master Response 5, *Nuisance Odors*. Regarding the comment of nitrogen and sulfur compounds causing odors in Boyle Heights, the requirements of PR 415, including the enclosure or closed system standards and BMPs, when taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities. Although SCAQMD is concerned that rendering odors from Baker and the nearby rendering facilities are affecting the residents of Boyle Heights, there are other surrounding commercial and residential areas in addition to Boyle Heights that have been impacted by rendering odors. In addition to the residents of Boyle Heights, SCAQMD has conducted public meetings on PR 415 where residents of Commerce, Maywood, and areas of East Los Angeles outside Boyle Heights have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not only in Boyle Heights, but also in other commercial and residential areas surrounding the rendering facilities.

180 days is a sufficient amount of time to have source testing protocols approved, as this is a standard length of time to allow under permitting for new equipment. The testing and analytical methods are specified in paragraph (f)(4).

Regarding the comment that the issues raised in this comment should be addressed by SCAQMD in the Socioeconomic Impact Assessment, the SCAQMD staff has prepared the Socioeconomic Impact Assessment, which was included as a part of the Final Staff Report. The Staff Report in its entirety has been released for a 30-day public review and comment period beginning on July 14, 2015 and ending on August 12, 2015 prior to the SCAQMD Governing Board hearing currently scheduled for November 3, 2017.

q. The Odor Mitigation Plan requirements in PR 415(h) presume that all existing facilities will be constructing a permanent enclosure. There are no standards governing the approval or disapproval of the Odor Mitigation Plan. This provides SCAQMD with unfettered discretion in deciding which Odor Mitigation Plan should be approved or disapproved.

3.3-32

D1. Response to Comments

Response 3.3-32

The OMP requirements in subdivision (h) do not presume an enclosure. In fact, the requirements of paragraphs (h)(1) and (h)(2) clearly bifurcate the submittal content of the OMP depending on whether an enclosure is present or not.

The proposed rule is seriously flawed. If the current version of PR 415 is adopted by the SCAQMD Governing Board, Baker will shut down its rendering operation and go out of the rendering business in Southern California. Baker respectfully requests that SCAQMD provide a written response to each of the questions raised in the letter and the previous letters. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you.

3.3-33

Response 3.3-33

Refer to Response 3.3-1 through 3.3-32 and Master Response 2, *Facility Shutdown*, for a discussion on why the facility shutdown scenario is not foreseeable.

ATTACHMENT 1

3.3-34

Response 3.3-34

Refer to Response 3.3-4 (above) for the discussion on the historic land uses surrounding the Vernon rendering facilities and Master Response 8, *Agricultural Preemption*. Attachment 1 is an excerpt from the California Civil Code regarding nuisances and no response is necessary.

ATTACHMENT 2

3.3-35

D1. Response to Comments

Response 3.3-35

Refer to Response 3.3-5 for the reference of Attachment 2. Attachment 2 is local and State business licenses for the facility and no response is necessary.

ATTACHMENT 3 | 3.3-36

Response 3.3-36

Refer to Response 3.3-5 for the reference of Attachment 3. Attachment 3 is the Department of Food and Agriculture license for the facility and no response is necessary.

ATTACHMENT 4 | 3.3-37

Response 3.3-37

Refer to Response 3.3-5 for the reference of Attachment 4. Attachment 4 include the City of Los Angeles Department of City Planning Parcel Profile Reports for the affected sites and no response is necessary.

ATTACHMENT 5 | 3.3-38

Response 3.3-38

Refer to Response 3.3-5 for the reference of Attachment 5 and Master Response 5, *Nuisance Odors*. Attachment 5 is the SCAQMD Facility Information Detail (FIND) database showing the last Notice of Violation (NOV) in 1997 and no response is necessary.

D1. Response to Comments

ATTACHMENT 6 | 3.3-39**Response 3.3-39**

Refer to Response 3.3-5 for the reference of Attachment 6 and Master Response 5, *Nuisance Odors*. Attachment 6 is a letter from the City of Vernon Health & Environmental Control Department stating that there have not been any nuisance complaints for the rendering facilities.

Refer to Master Response 1, *Authority to Adopt and Enforce*, and Master Response 8, *Agricultural Preemption*, regarding comments on SCAQMD's authority to adopt PR 415 and that PR 415 conflicts with California Civil Law, respectively.

ATTACHMENT 7 | 3.3-40**Response 3.3-40**

Refer to Response 3.3-8 for the reference of Attachment 7. Attachment 7 is an excerpt from the SCAQMD 2012 Ambient Measurements of Air Toxic Pollutants at Resurrection Catholic School in Boyle Heights. Rendering odors are not comparable to odors from toxic air contaminants. Given the distinctive odor from rendering operations, emissions from the freeway, ports, and Exide Technologies cited in the study regarding toxic air contaminants are not likely to be mistaken for rendering odors..

ATTACHMENT 8 | 3.3-41

D1. Response to Comments

Response 3.3-41

Refer to Response 3.3-8 for the reference of Attachment 8. Attachment 8 of is a map pinpointing the locations of Resurrection Church, Exide Technologies, and Baker Commodities. Given the distinctive nature of odors from rendering operations, emissions from the freeway, ports, and other facilities that generate toxic air are not likely to be mistaken for rendering odors.

ATTACHMENT 9 | 3.3-42

Response 3.3-42

Refer to Response 3.3-9 for the reference of Attachment 9. Attachment 9 is a university paper on the characterization of odor nuisance. As identified in Master Response 5, *Nuisance Odors*, odors from rendering facilities are distinct, substantial, and unreasonable.

ATTACHMENT 10 | 3.3-43

Response 3.3-43

Refer to Response 3.3-12 for the reference of Attachment 10. Attachment 10 is an excerpt of the workshop slides from the SCAQMD 2014 Governing Board Retreat on Select Case Studies Related to Odors/Public Nuisance. As discussed in Master Response 5, *Nuisance Odors*, odor events from rendering facilities in the city of Vernon have rarely resulted in violations under Rule 402 and H&SC Section 41700. PR 415 is a pro-active approach to addressing rendering odors with provisions designed to reduce odors before they rise to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred.

D1. Response to Comments

Baker Commodities, Inc. (Baker) is a family-owned company founded in 1937 and operated by three generations of the Andreoli family. Baker has 215 union and non-union employees at the Vernon rendering facility, 101 of which belong to three unions: Teamsters Local 63, UFCW Local 770, and Operating Engineers Local 501. Baker is already heavily regulated by nine other agencies. South Coast Air Quality Management District's (SCAQMD) Proposed Rule 415 (PR 415) unjustly penalizes Baker even though it has had no odor violations since September 3, 1998 – **almost seventeen years ago**.

3.4.-1

Response 3.4-1

Development of PR 415 resulted from comments and complaints received by affected members of the public, as well as an issue identified by the working group for the Clean Communities Plan (CCP) in the pilot study area of Boyle Heights. Odors from rendering facilities in Vernon (which include the Baker facility) was a key issue during discussions with residents in the Boyle Heights area during the CCP study work. The prevalence of odors from rendering facilities in Vernon, directly south of Boyle Heights, was of great concern to the working group affecting the quality of life in the area. SCAQMD staff has also personally experienced the unique and unmistakable rendering odors on many occasions when in the areas in and around Vernon and the surrounding communities. This concern led to SCAQMD's development of PR 415 for reducing odors from all rendering facilities in Vernon. Compliance with Rule 415 applies to all existing and proposed facilities within SCAQMD's jurisdiction as defined in subdivision (b) upfront in the rule language. Furthermore, rendering facilities are subject to PR 415 irrespective of whether an affected facility has received a notice of violation for public nuisance in the past.

On Friday, July 10, 2015, SCAQMD staff will ask the SCAQMD to vote in favor of setting a public hearing for PR 415 in September 2015. Baker urges the SCAQMD to vote no for the following reasons:

1. Baker will be forced to shut down its rendering operation in Vernon. Baker estimates that the initial capital costs to comply with PR 415 will be about \$27 million and will increase annual operating costs by \$2.5 million. 215 jobs, including 101 union jobs, in south central Los Angeles will be lost even though Baker has had no NOV's for the last 17 years, and SCAQMD has not traced by any scientific method the odors in Boyle Heights to Baker.

3.4.-2

D1. Response to Comments

Response 3.4-2

For the detailed reasons provided in Master Response 2, *Facility Shutdown*, it is not expected that the requirements of PR 415 will cause any of the rendering facilities to shut down. Additionally, the comment does not include evidence to show that PR415 would increase the facility's operation cost by \$2.5 million, or result in a capital cost of \$27 million to comply with PR 415. Costs to comply with PR 415 have been included in the Socioeconomic Impact Assessment prepared by SCAQMD staff, which is included as a part of the Final Staff Report. The Staff Report in its entirety has been released for a 30-day public review and comment period beginning on July 14, 2015 and ending on August 12, 2015 prior to the SCAQMD Governing Board hearing currently scheduled for November 3, 2017. For example, the Socioeconomic Impact Assessment identifies affected facilities and presents the costs of new enclosures and the capital and operating costs of ventilation systems and odor control equipment or odors containment system as allowed under paragraph (f)(5). In addition, the Socioeconomic Impact Assessment presents the potential costs of best management practices, such as signage, covering of incoming trucks, and repair of outside rendering material receiving areas. The Socioeconomic Impact Assessment also evaluates the employment impacts of PR 415 on the regional economy, including the potential impacts on small businesses.

Regarding the comment about scientific method for tracing odors, SCAQMD staff considered a quantitative approach to assessing odors from rendering facilities early in the rule development for PR 415 (refer to Master Response 3, *Odor Control Measures* and Master Response 6, *Methodology*). However, the current science and technology do not allow direct measurement of all the chemical compounds that make up odors. There are more than 100 chemical compounds that have been identified in rendering odors. Modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not currently have established methods for collection, speciation, and analysis. Many do not currently have established odor detection thresholds. For these reasons, it is not currently possible to identify the exact chemical makeup of rendering odors using existing science and the present state of technology. Therefore, it is not currently possible to establish initial concentrations for modeling or development of an emissions inventory. However, as test methods develop and the science of odor measurement evolves, it may be possible to conduct measurements, quantification, and modeling of odors in the future.

D1. Response to Comments

2. The severe impacts of PR 415 are not limited to Baker and the other four rendering companies. Only Baker and one other renderer in Vernon accept material from third-party businesses (like restaurants, grocery store delis, and packing houses). In the event that Baker is forced to shut down, the other renderer does not have the capacity to accept all of the material that Baker currently handles. Furthermore, even if it could accept all of the material, historically, having two rendering facilities in the area has been crucial when one of the facilities inevitably suffers a breakdown and is incapable of processing material. Rendering material cannot be landfilled. Without Baker, an unhealthy situation will result as material piles up at dairy, cattle, poultry, and hog farms, restaurants, hotels, grocery stores, meat markets, schools, military bases, prisons, etc. These facilities may need to curtail their operations, resulting in higher costs to consumers, loss of jobs and productivity, and lost revenue to governmental entities.

3.4-3

Response 3.4-3

For the detailed reasons provided in Master Response 2, *Facility Shutdown*, it is not expected that the requirements of PR 415 will cause any of the rendering facilities to shut down. Additionally, changes to PR 415 have occurred since circulation of the Draft EA, which allows a rendering facility to accept additional materials from another rendering facility in the event that rendering equipment is broken down or for performing emergency rendering services. Refer to Table P-1 in the Final EA for the changes.

Furthermore, Section 20890, Title 27, California Code of Regulations (CCR), provides that dead animals may be landfilled if allowed by local regulations and shall be covered immediately or at a frequency approved by the Enforcement Agency. Section 20760, Title 27, CCR, further states that each disposal site shall be operated and maintained so as not to create a public nuisance. Currently, there is not a landfill in Los Angeles County that is permitted to landfill dead animal carcasses at their site unless it is due to an emergency. However, rendering operations within the South Coast Basin are not expected to cease; and therefore, it would be speculative to assume that animal carcasses and parts would be diverted to landfills.

Regarding the comment about increased costs for consumers, and loss of jobs, productivity and revenue, please refer to the Socioeconomic Impact Assessment. PR 415 will not cause a loss of jobs, productivity, and revenues. PR 415 is intended to reduce rendering odors, not to cease rendering operations. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts.

D1. Response to Comments

3. SCAQMD determined the cause of the odors in the Boyle Heights community is rendering despite the fact that its year-long study of the Boyle Heights neighborhood, conducted by Dr. Fine in 2012, proved that Baker could not be the cause. (See Attachment 1.) According to SCAQMD, sulfur compounds are one of the causes of the odors. The smell of sulfur is the same no matter the source. Because SCAQMD refused to inventory the area to identify other possible sources of the sulfur compounds, Baker conducted its own preliminary study of potential sources that emit hydrogen sulfide within the 710-Olympic-Bandini-Santa Fe area. The findings show that more than 130 such sources exist and over 100 are not regulated by SCAQMD. (See Attachment 2.) Baker's research also indicates that at least 48 unpermitted potential sources are located in a smaller corridor bounded by Bandini Boulevard-Downey Road-Olympic Avenue-Townsend Avenue running south to West Coast Rendering and Baker.

3.4.-4

Response 3.4-4

Regarding the comment about SCAQMD's determination that rendering facilities are the cause of odors in the Boyle Heights community, refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, 3.1-26, 3.4-1 and Master Response 5, *Nuisance Odors*.

Regarding the monitoring study authored by Dr. Fine, this study was conducted to evaluate toxic air contaminant concentrations at Resurrection Church. The study was not conducted to evaluate odors, including those from rendering facilities, and any extrapolation of the study findings to odors from rendering operations are out of context with that study and are not relevant.

With regard to inventorying the area to identify other possible sources of sulfur compounds, refer to Master Response 3, *Odor Control Measures*, Master Response 6, *Methodology*, and Response 3.4-2, above. Additionally, the current proposal of PR 415 does not target sulfur or any other compounds. Although reduced sulfur compounds are a component of odors generated during cooking and wastewater treatment at rendering facilities, PR 415 merely establishes hydrogen sulfide (H₂S) as one of two marker compounds that are used to evaluate the control efficiency of an odor control device.

D1. Response to Comments

Furthermore, SCAQMD staff has personally experienced odors emanating from the rendering facilities subject to this rule and found that they are distinct and different from the types of odors one experiences from non-rendering businesses and sources. Odors (and its related compounds) created by rendering facilities are not likely attributable to other sources (refer to Master Response 5, *Nuisance Odors*). The analysis of the Draft EA was very specific to odors from rendering facilities, which as noted above are very distinct. The Draft EA adequately analyzed the potential impacts related to odors from rendering facilities, and it considered odors from all rendering facilities in the study area.

4. Baker does not doubt that the Boyle Heights community is affected by various odors. It is surrounded by freeways, rail yards, and heavy industrial operations. However, the SCAQMD's approach of pre-selecting the "culprits" for regulation under PR 415 will not resolve the Boyle Heights community's concerns. If SCAQMD was serious about addressing the odor issues, it would conduct a complete inventory of all potential sources and determine whether these sources contribute to the odor issues. What happens when the odor situation in Boyle Heights is not resolved by PR 415; will SCAQMD target another industry, and another, and so on until all alleged sources causing odors in Boyle Heights are regulated?

3.4.-5

Response 3.4-5

Although there may be other odorous industrial and commercial operations in Vernon in addition to rendering facilities and various mobile sources such as freeways and rail yards, the smell of rendering is distinctive and unmistakable, and odors created by rendering facilities are not likely attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable and offensive to many in the communities surrounding the city of Vernon. SCAQMD staff has also personally experienced the unique and unmistakable rendering odors on many occasions when in the areas in and around Vernon and the surrounding communities.

Regarding the comment that SCAQMD pre-selected the culprits for regulation under PR 415, refer to Response 3.4-1, Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*.

Regarding the comment about inventorying all potential sources, refer to Response 3.4-4.

D1. Response to Comments

Regarding the comment that PR 415 will not result in a decrease in odor impacts on the Boyle Heights community, SCAQMD staff believes, in good faith, that this is not the case and that PR 415 will be effective in reducing odors from rendering facilities. Implementation of PR 415 would require rendering facilities to implement BMPs and would require processes with the greatest potential for generation of off-site odors to be enclosed or in a closed system. The odor BMPs in PR 415 are achieved in practice and reasonable measures that would result in odor reductions from rendering facilities. Implementation of PR 415 would minimize odors from rendering facilities through a combination of odor capture by enclosing odor-generating processes or in a closed system, odor control by venting odorous air from within enclosures to odor control equipment, and BMPs. To provide sufficient flexibility, PR 415 allows an unventilated permanent total enclosure for raw material receiving, provided a secondary odor containment method is used at each enclosure opening. Based on the totality of the requirements in the rule, implementation of PR 415 will result in a reduction of odors in the Boyle Heights community.

5. PR 415 is an attack on agriculture. Because SCAQMD has not been able to prove the renderers are the cause of the odors and issue NOVs to the renderers under Rule 402 (Public Nuisance), SCAQMD is proposing in PR 415 to impose a lesser nuisance standard for renderers that requires no scientific proof of wrongdoing. SCAQMD has no legal authority to take this action and, in fact, it is pre-empted by Civil Code section 3482.6, the “Right to Farm” law. (See Attachment 3.)

3.4.-6

Response 3.4-6

Refer to Master Response 8, *Agricultural Preemption*. PR 415 is not an attack (either direct or indirect) on the agricultural industry. SCAQMD staff understands the importance of rendering facilities. As noted in Response 3.4-1, the prevalence of odors from rendering facilities in Vernon, directly south of Boyle Heights, was of great concern to the working group affecting the quality of life in the area. SCAQMD staff has also experienced the unique and unmistakable rendering odors on many occasions when in the areas in and around Vernon and the surrounding communities. This concern led to SCAQMD development of PR 415 for reducing odors from all rendering facilities in Vernon. The purpose of PR 415 is to reduce odors from facilities rendering animals and animal parts, and not to attack the agricultural industry.

D1. Response to Comments

SCAQMD staff has conducted multiple on-site inspections of the rendering facilities within SCAQMD's jurisdiction, and has observed through these inspections that the rendering facilities are a substantial source of odors. SCAQMD staff has detected rendering odors during on-site inspections, and those odors have the potential to create odor nuisances in the surrounding community, especially when the odors from nearby rendering facilities are combined.

Regarding the comment about no scientific proof of wrongdoing, refer to Response 3.4-4 and Master Response 3, *Odor Control Measures* and Master Response 6, *Methodology*.

Regarding SCAQMD's legal authority of taking action under PR 415, refer to Master Response 1, *Legal Authority to Adopt and Enforce*. PR 415 is a reasonable and proper use of the SCAQMD's regulatory authority.

Regarding the comment that SCAQMD is pre-empted by Civil Code section 3428.6, see Master Response 1, *Legal Authority to Adopt and Enforce*, and Master Response 8, *Agricultural Preemption*. By its terms, Civil Code Section 3482.6 would not apply to SCAQMD's adoption or implementation of PR 415. First, PR 415 falls within an exemption to Section 3482.6 created by 3482.6(c). Subdivision (c) of Section 3482.6 states:

(c) This section does not supersede any other provision of law, except provisions of this part, if the agricultural processing activity, operation, facility, or appurtenances thereof, constitute a nuisance, public or private, as specifically defined or described in the provision.

Pursuant to subdivision (c), Section 3482.6 does not preempt PR 415 because the rule: (1) is another provision of law; (2) that is not a provision of Division 4, Part 3, of the Civil Code; (3) that specifically describes rendering facilities and the measures that they must undertake to avoid constituting a nuisance.

Further, 3482.6(d) exempts PR 415 from the Section 3482.6 agricultural processing preemption. Subdivision (d) of section 3482.6 states:

(d) This section prevails over any contrary provision to any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, *except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993 (emphasis added)*.

D1. Response to Comments

PR 415 falls within this provision and is based on SCAQMD's authority to regulate nuisance under Health and Safety Code Section 41700.

Regarding the comment on NOVs and Rule 402, refer to Master Response 5, *Nuisance Odors*, and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's pro-active approach to reducing rendering odors.

It is unprecedented that SCAQMD staff would propose a rule with no scientific basis that would close down legitimate businesses and eliminate union jobs. Staff has indicated several times to Baker that it is up to the Board to sort these issues out and decide whether PR 415 should be enacted. As such, Baker requests that the Board not set a public hearing for PR 415.

3.4-7

Response 3.4-7

Refer to Master Response 5, *Nuisance Odors* and Response 3.4-1. Additionally, responses and clarifications to many of the issues and concerns raised can be found in the Final Staff Report and Socioeconomic Impact Assessment (included as a part of the Staff Report) prepared by SCAQMD staff, which have been released for a 30-day public review and comment period beginning on July 14, 2015 and ending on August 12, 2015 prior to the SCAQMD Governing Board hearing currently scheduled for November 3, 2017. Furthermore, revisions were made to PR 415 in response to various comments, concerns and issues raised by the public (refer to Table P-1 in the Final EA).

AMBIENT MEASUREMENTS OF AIR TOXIC POLLUTANTS AT RESURRECTION CATHOLIC SCHOOL IN BOYLE HEIGHTS

3.4-8

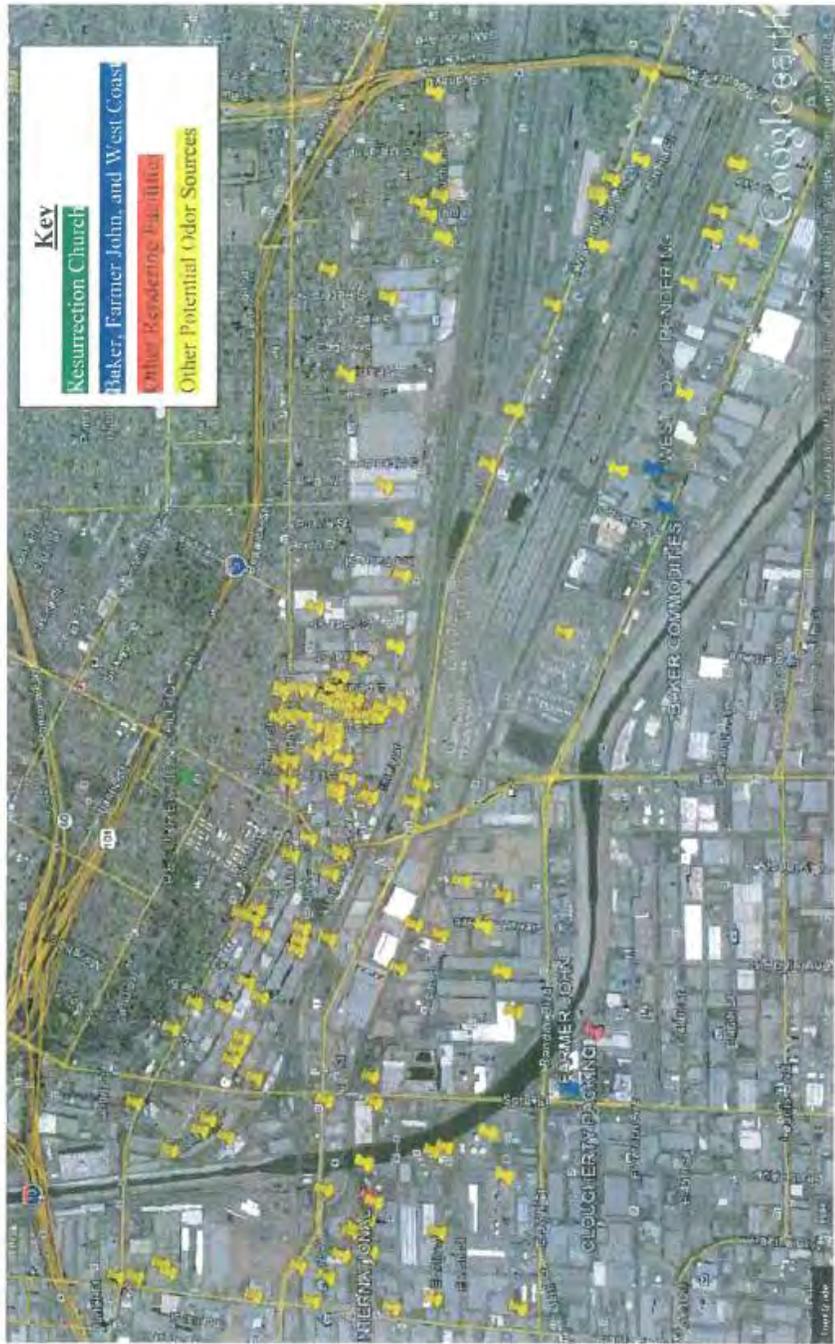
Response 3.4-8

The attachment is an excerpt from the SCAQMD 2012 Ambient Measurements of Air Toxic Pollutants at Resurrection Catholic School in Boyle Heights. The excerpt highlights passages regarding the predominant sources of toxic air contaminants. Refer to

D1. Response to Comments

Master Response 5, *Nuisance Odors*, and Response 3.4-4, which references this attachment.

Potential Odor Sources in the Boyle Heights Neighborhood



3.4-9

D1. Response to Comments

Response 3.4-9

The attachment is a map pinpointing potential odor sources in the Boyle Heights neighborhood. Refer to Master Response 5, *Nuisance Odors*, Response 3.3-8, Response 3.3-41, and Response 3.4-4, which references this attachment.

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CIVIL CODE - CIV

DIVISION 4. GENERAL PROVISIONS [3274 - 9566] (Heading of Division 4 amended by Stats 1988, Ch 160, Sec 16)

PART 3. NUISANCE [3479 - 3508.2] (Part 3 enacted 1872.)

TITLE 1. GENERAL PRINCIPLES [3479 - 3486.5] (Title 1 enacted 1872.)

3482.6. (a) No agricultural processing activity, operation, facility, or appurtenances thereof, conducted or maintained for commercial purposes, and in a manner consistent with proper and accepted customs and standards, shall be or become a nuisance, private or public, due to any changed condition in or about the locality, after it has been in continuous operation for more than three years if it was not a nuisance at the time it began.

(b) If an agricultural processing activity, operation, facility, or appurtenances thereof substantially increases its activities or operations after January 1, 1993, then a public or private nuisance action may be brought with respect to those increases in activities or operations that have a significant effect on the environment. For increases in activities or operations that have been in effect more than three years, there is a rebuttable presumption affecting the burden of producing evidence that the increase was not substantial.

(c) This section does not supersede any other provision of law, except other provisions of this part, if the agricultural processing activity, operation, facility, or appurtenances thereof, constitute a nuisance, public or private, as specifically defined or described in the provision.

(d) This section prevails over any contrary provision of any ordinance or regulation of any city, county, city and county, or other political subdivision of the state, except regulations adopted pursuant to Section 41700 of the Health and Safety Code as applied to agricultural processing activities, operations, facilities, or appurtenances thereof that are surrounded by housing or commercial development on January 1, 1993. However, nothing in this section precludes a city, county, city and county, or other political subdivision of this state, acting within its constitutional or statutory authority and not in conflict with other provisions of state law, from adopting an ordinance that allows notification to a prospective homeowner that the dwelling is in close proximity to an agricultural processing activity, operation, facility, or appurtenances thereof and is subject to provisions of this section consistent with Section 1102.6a.

(e) For the purposes of this section, the following definitions apply:

(1) "Agricultural processing activity, operation, facility, or appurtenances thereof" includes, but is not limited to rendering plants licensed pursuant to Section 19300 of the Food and Agricultural Code and collection centers licensed pursuant to Section 19300.5 of the Food and Agricultural Code, the canning or freezing of agricultural products, the processing of dairy products, the production and bottling of beer and wine, the processing of meat and egg products, the drying of fruits and grains, the packing and cooling of fruits and vegetables, and the storage or warehousing of any agricultural products, and includes processing for wholesale or retail markets of agricultural products.

(2) "Continuous operation" means at least 30 days of agricultural processing operations per year.

(3) "Proper and accepted customs and standards" means the compliance with all applicable state and federal statutes and regulations governing the operation of the agricultural processing activity, operation, facility, or appurtenances thereof with respect to the condition or effect alleged to be a nuisance.

(f) This section does not apply to any litigation pending or cause of action accruing prior to January 1, 1993.

(Amended by Stats, 1999, Ch. 329, Sec. 1. Effective January 1, 2000.)

3.4.-10

D1. Response to Comments

Response 3.4-10

The attachment is an excerpt from the California Civil Code regarding nuisance and agricultural operations. Refer to Response 3.3-34, Master Response 8, *Agricultural Preemption*, and Response 3.4-6, which references this attachment.

We represent Baker Commodities, Inc. ("Baker"), a family-owned company founded in 1937 and operated by three generations of the Andreoli Family. Baker recently attended South Coast Air Quality Management District's ("SCAQMD") June 30, 2015 public consultation meeting to discuss the June 23rd version of Proposed Rule ("PR") 415, and the Governing Board meeting on July 10, 2015. It is apparent from the comments at the public consultation meeting that the Boyle Heights community has issues that are not caused by rendering operations, and that many community members recognize that there are other sources of odors impacting the community that are not related to or caused by rendering operations. SCAQMD staff does not understand that rendering is an essential public service, reduces greenhouse gas emissions, and produces biofuels necessary to implement SCAQMD and California Air Resources Board ("CARB") requirements.

3.5-1

Baker's comments herein address only the recent changes to PR 415. To avoid duplication, the comments and questions in Baker's previous letters (including the July 8 and July 17 letters to the Governing Board and handouts given to the Board on July 10th) still apply, and are incorporated by reference. In summary, the June 23rd version of the proposed rule does not address Baker's concerns and does little to alleviate the initial capital costs required to comply with PR 415 as well as increased annual operating costs. If the June 23rd version of the rule is passed in its current form, Baker will be forced to shut down its rendering business in Southern California. There is no science to support the SCAQMD's allegations that the odor issues in Boyle Heights are the sole responsibility of five rendering operations. There is no science behind the proposed rule requirements. There is no basis for adopting an odor standard that is much less stringent than Rule 402, the public nuisance rule.

Baker submits these comments on the June 23rd version of PR 415, the revised staff report, and pending California Environmental Quality Act ("CEQA") document, and requests that this letter (and Baker's previous letters including, but not limited to, the July 8 and July 17 letters to the Governing Board and handouts given to the Board on July 10th) be included in the administrative record for PR 415. Baker reserves the right to submit additional comments on PR 415, the staff report, and CEQA and socioeconomic documents in the future.

3.5-1
Cont'd

D1. Response to Comments

Response 3.5-1

SCAQMD staff understands that rendering is an important and beneficial service. However, as identified in Master Response 1, *Legal Authority to Adopt and Enforce*, SCAQMD has an obligation under the Health and Safety Code to adopt such rules as may be necessary and proper to regulate air pollution from all sources, including odors.

Refer to Master Response 2, *Facility Shutdown*. SCAQMD staff has worked with the affected facilities to include various changes to the scope and requirements of PR 415 to allow the affected facilities flexibility in ensuring compliance with PR 415. SCAQMD staff does not anticipate closure of the affected rendering facilities from implementation of PR 415.

Refer to Master Response 3, *Odor Control Measures*, and Master Response 6, *Nuisance Odors*. Rendering odors are distinctive. Odors created by rendering facilities are unlikely attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable, and offensive to many in the communities surrounding the City of Vernon.

All comments received during the rulemaking process for PR 415 have been responded to in either the Staff Report or the Final EA.

1. The Definitions Remain Vague and Ambiguous.

The definition of a confirmed odor event incorporates a vague and ambiguous term that grants SCAQMD staff unfettered discretion. There is no explanation or document stating the scope of training for "District personnel" or why non-inspectors are granted the authority to issue violation notices and make important and costly determinations about the facilities. Is SCAQMD proposing to utilize support staff or the Executive Officer to verify odors? What are odor inspection techniques? Are these in place now or will they be developed after the Governing Board approves the rule? If they exist, the odor inspection techniques should be released to the public,

3.5-2

Response 3.5-2

Refer to Response 3.3-12. The definition of a Confirmed Odor Event "means the occurrence of an odor resulting in three or more complaints by different individuals from

D1. Response to Comments

different addresses, and the source of the odor is verified by SCAQMD personnel trained in odor inspection techniques.” The definition of Confirmed Odor Event does not authorize or require SCAQMD staff to make fundamental policy decisions. The definition requires staff to respond to odor complaints and verify the source of the odors. Although there is some discretion involved in this task, it does not involve policy choices.

A time frame is not specified for a confirmed odor event because a single event can last for an indeterminate length of time. If a time limit is specified in PR 415, SCAQMD compliance staff would be obligated to consider a new event at the conclusion of the time limit. For example, if a time limit of 24 hours is specified in PR 415 and 3 complaints are received and verified for this time period; if the odor event continues for more than 24 hours, any complaints received and verified after this period would be counted towards another odor complaint event.

Clarifying language is added to paragraph (c)(4) to say: “...and the source of the odor is verified by SCAQMD personnel *trained in odor inspection techniques*”. For an odor complaint to be verified by an SCAQMD compliance supervisor or manager, the inspector performs several sequential steps, which include: respond to the odor complaint; interview the complainant; detect the same odor as the complainant describes; and trace the odor back to a specific facility. Supervisory personnel receive the same training as inspectors with regard to verifying complaints. Therefore, SCAQMD’s odor inspection techniques are standard.

A new definition was added, “Odor Control System.” The definition is vague and ambiguous. For example, is it the odor control system or the permanent enclosure that is designed to reduce odors? What does “serving” mean?

3.5-3

Response 3.5-3

Paragraph (f)(4) specifies the requirements for an odor control system. A permanent total enclosure or a closed system is designed to reduce odors. Further, best management practices (BMP) as specified under subdivision (e) are also intended to reduce rendering odors. The word “serving” means “required for” or “installed for” a permanent total enclosure within the meaning of paragraph (f)(4). Therefore, the definition is not vague and ambiguous.

D1. Response to Comments

The definition of “Odor Generating Source” now treats each process as a source instead of the entire operation. SCAQMD has produced no science proving that the entire rendering operation is causing odors in Boyle Heights, let alone each process.

3.5-4

Response 3.5-4

Under PR 415, an Odor Generating Source is defined under paragraph (c)(14). It means a process at a rendering facility from which odors may be emitted, including raw material receiving, size reduction, cooking, separating and processing of cooked materials into fat commodities and protein commodities, and wastewater treatment. Refer to Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*, regarding odors from rendering facilities in the surrounding community. Odors from rendering facilities are distinct, substantial, and objectionable. SCAQMD staff has conducted multiple on-site inspections of the rendering facilities within SCAQMD’s jurisdiction and has observed through these inspections that the rendering facilities are a significant source of odors.

2. Odor Best Management Practices (“BMP”) are Unreasonable.

It is not possible to implement the entire odor BMPs within 90 days of rule adoption. Some of the BMPs propose different deadlines than 90 days, which makes the scheme confusing and unintelligible.

3.5-5

Response 3.5-5

BMPs are reasonable measures to reduce rendering odors. Some of the BMPs, such as the washdown of receiving area, are currently in practice, and the washing of outgoing transport vehicles is already required by existing regulations. The deadlines for all of the BMPs are the same, not different.

Baker cannot force transport vehicles it does not own to enclose or tarp the cargo area, or utilize trucks with pressure relief valves. Ninety (90) days is not sufficient to make the changes to vent delivery trucks to odor control equipment (SCAQMD cannot issue permits that fast, for one), or construct a permanent enclosure of a closed system. SCAQMD has produced no scientific basis demonstrating that these sources contribute to odor issues in Boyle Heights.

3.5-6

3.5-6
Cont'd

D1. Response to Comments

Response 3.5-6

Refer to Response 3.1-30. Owners/operators of third-party trucks will have six months to become familiar with the requirements of paragraph (e)(1), Covering of Incoming Transport Vehicles. It is not likely that after going through the trouble of making a truck compliant with the covering requirements, a third-party owner or operator would choose to wait until arriving at the facility before covering an incoming load.

The requirements of PR 415, including the enclosure or closed system standards and BMPs, when taken as a whole, will reduce the potential for public nuisance in Vernon and the surrounding communities. This includes covering of trucks (refer to Master Response 5, *Nuisance Odors*).

The washing requirements are excessive and could require changes to on-site wastewater treatment facilities and associated permits, which could not be accomplished within 90 days. The washing requirements will increase wastewater-associated emissions. SCAQMD has produced no scientific basis demonstrating that washing will reduce odors in Boyle Heights. SCAQMD imposes these requirements without any consideration of California's drought and limitations that may be imposed on this type of water use.

3.5-7

Response 3.5-7

Regarding the washing requirements and any consideration of California's drought and limitation, refer to Response 3.1-24. A minimal amount of water would be required and BMPs would not interfere with any California water policies. Additionally, refer to SCAQMD staff's intent for implementing all of the BMPs as discussed in Responses 3.3-22, 3.3-25, 3.3-26, 3.3-27, and 3.3-28

The holding times for delivery and processing of raw rendering materials are not realistic and display SCAQMD's lack of knowledge about how rendering facilities operate. SCAQMD has produced no scientific basis demonstrating that these limits on holding times will reduce odors in Boyle Heights.

3.5-8

Response 3.5-8

While PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made during the rule development process to accommodate each existing facility's needs and provide sufficient flexibility to ensure compliance. With respect to the holding time requirements for incoming raw rendering materials under

D1. Response to Comments

paragraph (e)(5), refer to Master Response 3, *Odor Control Measures*, Master Response 5, *Nuisance Odors*, Response 3.3-24 and Response 3.3-25. The holding time requirement after the enclosure standard becomes effective is limited to 60 minutes from the end of material delivery under paragraph (e)(2), provided material is moved into the permanent total enclosure on a continuous basis during this 60-minute period. If a facility receives material right before the end of a shift, that material must be processed or stored in covered containers within the time period allowed under paragraphs (e)(2) and (e)(5), as applicable.

The requirements of PR 415, including the enclosure or closed system standards and BMPs, when taken as a whole will reduce the potential for public nuisance in Vernon and the surrounding communities (refer to Master Response 5, *Nuisance Odors*). This includes the BMP for holding time of raw rendering materials prior to the enclosure standard becoming effective.

The requirements to repair the raw material receiving area are vague and ambiguous. Who determines when patching, repair and repaving are necessary? There is no feasible way to eliminate all standing water or puddles. Notably, SCAQMD itself has not found a way to do this in its own parking lot. SCAQMD has produced no scientific basis demonstrating that repaving will reduce odors in Boyle Heights.

3.5-9

Response 3.5-9

The Repair of Outside Raw Material Receiving Area BMP under paragraph (e)(6) has been clarified to limit repairs to the outside raw material receiving area where material touches the ground. Divots, cracks and potholes that hold standing water with a surface area greater than one square foot are required to be repaired under this BMP. Refer to Response 3.1-28. An estimate of costs to comply with the BMP is included as part of the Socioeconomic Impact Assessment within the Final 2017 Staff Report.

Refer to Master Response 5, *Nuisance Odors*. Washdown water in the raw material receiving area is a potential source of odors.

Ninety (90) days is not sufficient to construct a closed system of conveyance and using odor-tight containers to transport material is not feasible in a continuous operation. Ninety (90) days is not sufficient to make the changes required for tanker truck deliveries of trap grease. SCAQMD has produced no scientific basis demonstrating that these requirements will reduce odors in Boyle Heights.

3.5-10

D1. Response to Comments

Response 3.5-10

All BMPs are applicable to existing facilities within 90 days after rule adoption. Based on staff's review of operation at affected facilities, 90 days is sufficient to implement the BMPs. If a facility is unable to meet the construction deadlines in subparagraph (d)(1)(C) due to conditions beyond its reasonable control such as delay in obtaining a permit from a wastewater agency, it may apply for a one-time extension under subparagraph (d)(1)(F) or petition for a variance before SCAQMD's independent Hearing Board.

Refer to Master Response 5, *Nuisance Odors*. Transported material is a potential source of odors. Based on feedback from the facilities, PR 415 was revised to replace odor-tight containers with covered containers.

3. Permanent Enclosure, Ventilation, Closed Systems and Odor Control Standards are Unreasonable.

SCAQMD's requirements do not take into consideration the length of time Baker has been operating, or the fact that no violation notices have been issued to Baker in the last 17 years. There is no scientific proof that Baker's operation is contributing to odor issues in Boyle Heights. Despite these facts, SCAQMD intends to impose requirements upon Baker that will cause it to shut down. This is an unconstitutional exaction and taking of Baker's property.

3.5-11

Response 3.5-11

Refer to Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*. Under Rule 402, enforcement action can only be taken after SCAQMD receives and verifies a sufficient number of complaints. Moreover, because there are several rendering facilities located within a relatively small area³⁴, in some cases the odors cannot be ascribed to one specific facility and indeed are likely contributed to by several of the facilities. As a result, it is often not possible to pinpoint a single facility as the source of rendering odors. Additionally, there could be multiple sources of odor that originate from rendering facilities such as raw rendering material, cooking of meat, non-condensable vapors from cooker condensate, wastewater, and therefore multiple odor profiles from the various fugitive odors at each facility. Odors may also be different at the

³⁴ Draft EA. Project Location. Page 1-4.

D1. Response to Comments

same facility depending on the materials being processed at the time and other factors. Processed materials may also change over time based on market demands. For these reasons, it is often not possible to verify odor complaints, and odor events from rendering facilities in the Vernon area rarely can be attributed to a specific individual rendering facility. Refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for the comment related to violation notices.

Master Response 2, *Facility Shutdown*, discusses the reasons why shutdown of affected facilities is not a foreseeable result of PR 415.

If any facility were to make a business decision to cease its operations, that would not turn PR 415 into a taking under the Constitutional provisions cited. Refer to Response 3.1-14.

SCAQMD is imposing a permanent enclosure requirement upon all facilities, regardless of whether the facility qualifies as a closed system operation. There is no scientific proof that the raw rendering material receiving areas, or any of the other areas identified in the proposed rule, contribute to odors in Boyle Heights. There is no reason for SCAQMD to micro manage the enclosure and ventilation requirements. For example, the limitations on venting the enclosures may not be sufficient to exhaust vehicle fumes. SCAQMD would likely oppose any variance. Will Baker be permitted to operate without any penalty until SCAQMD revises the rule? Or, will SCAQMD simply force Baker to shut down? There is insufficient time to demolish existing structures, conduct engineering and develop building plans, obtain all necessary permits, and construct the building. It appears that the buildings must be large and tall enough for trucks to unload and maneuver in the structure. This could necessitate removing structures that are not part of the unloading operation and increase costs.

3.5-12

Response 3.5-12

distinct, substantial, and objectionable. SCAMQD staff has been present at complainants' locations and found that, in many cases, reasonable persons would be annoyed or disturbed by the odors. Additionally, staff has experienced substantial and unreasonable odors in the vicinity of the rendering facilities.

Refer to Master Response 3, *Odor Control Measures*. The approach taken for PR 415 is based on research of existing rendering operations to determine the current and accepted practices for operating a rendering facility within an urban area. The accepted practices include enclosure of odorous operations within a closed system or total enclosure (such

D1. Response to Comments

as a building), maintaining that enclosure under negative pressure, and venting that enclosure to odor control equipment.

While PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made during the rule development process to accommodate each existing facility's needs and provide sufficient flexibility to ensure compliance. Changes to PR 415 include modifications to paragraph (f)(5) so that for the raw receiving area enclosure, facilities may elect the alternative permanent total enclosure requirement such as air curtain. Under subparagraph (f)(2)(E), SCAQMD has defined an Alternative Ventilation System Standard that would allow installation of air curtains so long as the odorous air doesn't escape.

Refer to Master Response 2, *Facility Shutdown*. With the changes to the rule language providing compliance flexibility, rendering facilities subject to the requirements of PR 415 will continue to operate as they currently do. For example, modifications have been made to PR 415 to provide for a one-time time extension for up to one year to complete construction of a permanent total enclosure and applicable ventilation and odor control system. This was added as a result of SCAQMD staff's good faith efforts to account for unforeseeable circumstances that delay the construction of permanent total enclosures which may be outside the facilities' control.

Baker has repeatedly requested that SCAQMD determine whether its existing operation complies with the closed system standards. SCAQMD refuses to respond. Instead, SCAQMD has made the requirements more vague and ambiguous by allowing an undefined alternative if approved by the Executive Officer. However, there are no standards to guide the Executive Officer's approval, constituting an unlawful grant of authority to the Executive Officer and unfettered discretion on which alternatives to select.

3.5-13

Response 3.5-13

The Baker facility's existing operation in the main processing building is not considered a closed system. During a site visit in April 2015, SCAQMD staff noted several pieces of equipment that are not closed, including two inclined screw conveyors as well as a hopper feeding the grinder. These would need to be enclosed in order to consider the conveying, grinding, cooking and post-cooking processing equipment in the main building a closed system. Paragraph (f)(3) defines the standards for a closed system, including sealing requirements. A screw conveyor that meets these minimum

D1. Response to Comments

requirements would be acceptable as part of a closed system. Subparagraph (f)(2)(D) defines acceptable materials from which a permanent total enclosure may be constructed. Notwithstanding the materials used in construction, the receiving area must be enclosed, including the receiving pit from which the screw conveyors move material toward processing equipment. Therefore, the closed system standards are clear in PR 415 and do not amount to an unlawful grant of authority to the Executive Officer or unfettered discretion.

There is no scientific basis for establishing the requirements that an odor control system meet 70% efficiency for nitrogen and sulfur compounds. Is this standard achievable? How much odor will be reduced in Boyle Heights as a result of this standard and the proposed rule? Is there any scientific evidence that these compounds are causing odors in Boyle Heights? If so, are these the only compounds that cause odors in Boyle Heights? Will these standards and this rule alleviate the entire odor issue in Boyle Heights? The proposed SCAQMD testing methods are not designed for addressing odor issues, and to Baker's knowledge have not been utilized in rendering operations.

3.5-14

4. **The Odor Mitigation Plan ("OMP") Still Suffers from the Same Infirmities Identified in Baker's Previous Letters.**

The additions of subdivisions (h)(3)(C) and (D) do not alleviate Baker's concerns. In fact, the revisions make the proposed rule worse. SCAQMD has stated the purpose of the OMP is to address odor complaints in Boyle Heights. Yet, the OMP requirements do not set odor reduction in Boyle Heights as the standard for approving an OMP and leaves it to the complete discretion of the Executive Officer with no discernible standards. Further, the revised language adds more violation notice traps.

3.5-14
Cont'd3.5-14
Cont'd

Response 3.5-14

Based on a review of existing odor control systems, control efficiencies higher than 70% are achievable; however, the lower value of 70% in the literature was chosen to ensure an achievable control efficiency for organic compounds as well. It is likely that scrubber efficiencies for the two marker compounds addressed by PR 415 will be higher than 70%. EPA estimates that achievable emission reductions for inorganic gases from packed-bed scrubbers are over 95%. From EPA's "Air Pollution Control Technology Fact Sheet" [EPA-452/F-03-015, available at: <https://www3.epa.gov/ttnchie1/mkb/documents/fpack.pdf>]

Achievable Emission Limits/Reductions:

D1. Response to Comments

Inorganic Gases: Control device vendors estimate that removal efficiencies range from 95 to 99 percent.

VOC: Removal efficiencies for gas absorbers vary for each pollutant-solvent system and with the type of absorber used. Most absorbers have removal efficiencies in excess of 90 percent, and packed-tower absorbers may achieve efficiencies greater than 99 percent for some pollutant-solvent systems. The typical collection efficiency range is from 70 to greater than 99 percent.

The intent of using inorganic marker compounds (NH₃ and H₂S) is that they provide an indication of the control efficiency of nitrogen compounds and sulfur compounds respectively and methods for testing and analysis are readily available. Rendering odors also include VOC compounds, as shown in the Staff Report (refer to Master Response 5, *Nuisance Odors*). Although control efficiencies higher than 70% are achievable, the lower value of 70% in the literature was chosen to ensure an achievable control efficiency for organic compounds as well.

As identified in Master Response 5, *Nuisance Odors*, there are a large number of odorous compounds in rendering odors. 110 volatile compounds have been identified in rendering facility emissions, with about 25 contributing most noticeably to rendering facility odors.

Refer to Master Response 3, *Odor Control Measures*. PR 415 is consistent with existing technology- and BMP-based requirements in other states and countries that were implemented to protect the public health from odors. In addition, it is reflective of existing good industry practices and is a balanced approach given the nature of the existing local rendering facility operations. PR 415 will not only reduce odors in Boyle Heights but also in other impacted communities surrounding Vernon.

Under PR 415, an OMP will be required only if a facility receives an NOV for public nuisance, or has three confirmed odor events within a 180-day period. Both triggers for OMP submittal are subject to odor complaint verification, requiring SCAQMD inspectors to verify six or more complaints in the case of an NOV, or three or more complaints over the course of three separate events in the case of confirmed odor events. The standard for triggering an OMP is therefore relatively high. If an OMP is triggered under either of these scenarios, it indicates that a rendering facility either is causing a public nuisance or has a high potential for doing so, and should do more to control odors. If the facility believes its plan was improperly disapproved, or had improper conditions imposed upon it, it has the right to appeal the plan action to SCAQMD's independent Hearing Board under Rule 221(e).

D1. Response to Comments

5. There is No Scientific Basis for the Exemption Nos. 2 and 3.

There is no reason to exempt one facility from meeting the wastewater treatment enclosure requirements or rule requirements altogether. SCAQMD appears to be granting favoritism to one facility at the expense of another facility. SCAQMD staff is deciding whose businesses will survive or not survive by the granting of these exemptions.

3.5-15

Response 3.5-15

During the rule development process for PR 415, SCAQMD staff consulted with Sanitation Districts of Los Angeles County (LACSD) to craft the exemption for wastewater enclosure. Based on the recommendations from the LACSD, SCAQMD developed the wastewater exemption which is based on sufficient dilution of rendering wastewater with other process water such that after mixing, the chemical oxygen demand (COD) is reduced to a sufficiently low level to minimize odors. Exemptions provided under subdivision (I) are available to all facilities that qualify under the stated criteria and are not favoring one facility over another.

Refer to Master Response 2, *Facility Shutdown*. While PR 415 requirements will apply to all existing and new rendering facilities, good faith efforts were made during the rule development process to accommodate each existing facility's needs and provide sufficient flexibility. For example, paragraph (I)(2) provides an exemption for enclosures of the wastewater treatment operations. The ratio of dilution for wastewater has reduced since circulation of the Draft EA; and specifically identifies that process water and not clean water be used to dilute the rendering wastewater (PR 415 (I)(2)(B)(iii)). Refer to Table P-1 in the Final EA.

D1. Response to Comments

6. The Staff Report Does Not Address Baker's Concerns.

The staff report provides no scientific proof that Baker is causing odor in Boyle Heights. SCAQMD has conducted no analysis of its own and instead relies upon old studies conducted in other states. Further, staff improperly justifies its rulemaking based on unconfirmed odor complaints, hearsay, unconfirmed allegations, and staff feelings or beliefs. The staff report is lacking in its responses to Baker's concerns and its recognition of the facts that rendering is an essential public service, reduces greenhouse gas emissions, and produces biofuels necessary to implement SCAQMD and CARB requirements. There is no disclosure of what will happen if Baker shuts down, or if the rule does not produce the results SCAQMD is promising the Boyle Heights community? In fact, the staff report gives no credence to Baker's factual statements that it will shut down if the proposed rule is adopted.

3.5-16

Response 3.5-16

Refer to Master Response 5, *Nuisance Odors*. Odors from rendering facilities are distinct, substantial, and objectionable. The need for odor control measures is further documented in Master Response 3, *Odor Control Measures*. PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they rise to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred.

Absence of rendering operations within SCAQMD's jurisdiction is hypothetical and supposes every existing rendering facility will not be able to operate under the requirements of PR 415. Such a scenario is not supported by the requirements of PR 415 or the impacts on rendering facilities, as explained in Master Response 2, *Facility Shutdown*.

With the changes to PR 415, rendering facilities subject to the requirements of PR 415 will continue to operate as they currently do. Rendering operations within the South Coast Basin are not expected to cease and feedstock for biofuels is not expected to decrease because of the requirements included in PR 415.

D1. Response to Comments

SCAQMD staff's extraordinary interpretation of Health and Safety Code sections 40702 and 41700 would allow SCAQMD to regulate *anything* to protect the public's comfort. Staff's interpretation would not limit SCAQMD's authority to preventing criteria or toxic airborne emissions. This rulemaking is in excess of SCAQMD's statutory authority and sets a dangerous precedent. SCAQMD lacks authority to prevent the discharge of odors before they cause a nuisance or annoyance to the public. The location of the City of Vernon and any impacts it may cause to the Boyle Heights neighborhood is strictly a land use that SCAQMD has no statutory authority to regulate. SCAQMD's authority over odors is limited to Rule 402's provisions that address actual public nuisance situations, not anticipated situations. Further, the statutory protections afforded the agriculture industry from nuisance complaints under Civil Code section 3482.6 have been ignored by SCAQMD staff.

3.5-17

Response 3.5-17

As identified in Master Response 1, *Authority to Adopt and Enforce*, SCAQMD has an obligation under the Health and Safety Code to adopt such rules as may be necessary and proper to regulate air pollution from all sources, including odors. As identified in Master Response 3, *Odor Control Measures*, the goal of PR 415 is to establish standards for odor control.

Refer to Master Response 3, *Odor Control Measures*. Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. PR 415 is a proactive approach to addressing these odors with provisions designed to reduce odors before they rise to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred.

The staff report admits that “[o]dor events from rendering facilities in the Vernon area rarely rise to the level of public nuisance as defined under Rule 402 and H&SC § 4170. . . . In fact, a verified public nuisance is so rare that since 2000, only a single notice of violation (NOV) has been issued for public nuisance odors from a rendering facility in the South Coast Air Basin.” This statement proves renderers are not the problem in Boyle Heights.

3.5-18

3.5-18
Cont'd

Response 3.5-18

Refer to Master Response 5, *Nuisance Odors*. The difficulty in tracing the odors to a specific facility does not mean that odors generated from rendering operations do not pose a problem to nearby communities. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are located relatively near

D1. Response to Comments

one another. In many cases, it is likely that more than one facility is contributing to the odor. This creates the need to require all facilities to take reasonable measures to reduce odors emanating from their operations.

Under Rule 402, enforcement action can only be taken after SCAQMD receives and verifies a sufficient number of complaints. Moreover, because there are several rendering facilities located within a relatively small area³⁵, in some cases the odors cannot be ascribed to one specific facility and indeed are likely contributed to by several of the rendering facilities. As a result, it is often not possible to pinpoint a single facility as the source of rendering odors. Additionally, there could be multiple sources of odors that originate from rendering facilities such as raw rendering material, cooking of meat, non-condensable vapors from cooker condensate, wastewater, and therefore multiple odor profiles from the various fugitive odors at each facility. Odors may also be different at the same facility depending on the materials being processed at the time combined with other factors. Processed materials may also change over time based on market demands. For these reasons, it is often not possible to verify odor complaints and odor events to a specific individual rendering facility in the Vernon area.

The fact that other states may regulate rendering facilities is not a basis for SCAQMD to regulate rendering businesses this region. These other regulations are not proof that rendering operations in Vernon are causing an odor problem in Boyle Heights that warrants the PR 415 response. Further, the staff report does not disclose the basis for the rules, whether the facilities being regulated are new enough to accommodate the changes, etc.

3.5-19

Response 3.5-19

As identified in Master Response 1, *Legal Authority to Adopt and Enforce*, SCAQMD has an obligation under the Health and Safety Code to adopt such rules as may be necessary and proper to regulate air pollution from all sources, including odors. As identified in Master Response 3, *Odor Control Measures*, the goal of PR 415 is to establish standards for odor control. SCAQMD is concerned that rendering odors are affecting the residents of Boyle Heights and surrounding commercial and residential areas. SCAQMD has conducted public workshops on PR 415 where residents of Boyle Heights, Commerce, Maywood, and areas of East Los Angeles have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not

³⁵ Draft EA. Project Location. Page 1-4.

D1. Response to Comments

just in Boyle Heights but also in all commercial and residential areas surrounding the rendering facilities.

The odor complaint discussion is limited to the five rendering operations and excludes any evaluation of other permitted and unpermitted sources which Baker has shown to exist and be possible sources of the odors in Boyle Heights. Further, the conclusions in the staff report regarding the meteorological data conflict with the findings in Dr. Fine's Air Toxic Pollutants Study, dated April 2012. Finally, there is no health study linking odors from rendering operations to health effects in communities several miles away for the alleged sources.

3.5-20

Response 3.5-20

Refer to Master Response 5, *Nuisance Odors*. Rendering odors are very distinctive. Odors created by rendering facilities are not likely attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable, and offensive to many in the communities surrounding the City of Vernon. Given the distinctive odor from rendering operations, emissions from the freeway, ports, and Exide Technologies cited in the 2012 Study regarding toxic air contaminants are not possible to be mistaken for rendering odors.

SCAQMD staff has conducted multiple on-site inspections of the affected rendering facilities within SCAQMD's jurisdiction and has observed through these inspections that rendering operations, cooking, leaving unsealed and rendering materials out in the open, the wastewater treatment systems, and trucks transporting animal parts at the plants are a substantial source of odors, especially when combined with odors from other rendering operations and from nearby rendering facilities. Additionally, there have been odor complaints in the surrounding community that specifically identify odors that are associated with rendering facilities (see Master Response 5, *Nuisance Odors*).

D1. Response to Comments

7. Conclusion.

The proposed rule remains seriously flawed. There is a complete lack of scientific support for the rule or statutory authority. If the current version of PR 415 is adopted by the SCAQMD Governing Board, Baker will shut down its rendering operation and go out of the rendering business in Southern California. Baker respectfully requests that SCAQMD provide a written response to each of the questions raised in the letter and the previous letters. Baker also reserves its right to submit further comments in the future. If you have any questions, please call me at (949) 851-7492. Thank you.

3.5-21

Response 3.5-21

Refer to Responses 3.5-1 through Response 3.5-20, and Master Response 2, *Facility Shutdown*, for a discussion of why closure of the affected rendering facilities is not anticipated due to adoption of PR 415. All comment letters received have been responded to in either the Final Staff Report or the Final EA.

Baker Commodities, Inc. (Baker) would like to thank each of the South Coast Air Quality Management District's (SCAQMD) Governing Board Members for allowing Baker the time necessary to discuss its concerns about PR 415 at the July 10, 2015 meeting. As you may recall, Baker is a family-owned company founded in 1937 and employs 215 union and non-union people at the Vernon rendering facility, 101 of which belong to three unions: Teamsters Local 63, UFCW Local 770, and Operating Engineers Local 501. Baker has had no odor violations since September 3, 1998 – almost seventeen years ago.

3.6-1

The Governing Board raised several important issues at the July 10th meeting that Baker briefly responds to below.

Response 3.6-1

As identified in the Draft EA, because there are several rendering facilities located within a relatively small area, it is often not possible to pinpoint a single facility as the source of rendering odors. At a result, it is often not possible to verify odor complaints, and odor events from rendering facilities in the Vernon area can rarely be attributed to a specific individual rendering facility. The difficulty in tracing the odors to a specific facility does not mean a problem does not exist. Odor events from rendering facilities in the Vernon have rarely resulted in violations under Rule 402 and Health and Safety Code (H&SC) Section 41700. Refer to Master Response 5, *Nuisance Odors*.

D1. Response to Comments

1. Tracing Subjective Odors. PR 415 lacks a scientific basis. This is confirmed by Dr. Fine's statements at the July 10th meeting agreeing odors are subjective and technology to test odors is lacking. It is unprecedented for SCAQMD to impose tens of millions of dollars of control requirements upon five businesses without a scientific basis for doing so. The June 23, 2015 version of PR 415 identifies for the first time odorous markers, ammonia and hydrogen sulfide, which are compounds that can be measured. An odor rule should not be adopted until SCAQMD staff proves with well recognized scientific methods that there are odorous compounds in Boyle Heights above background concentrations levels and traces the compounds back to the originating sources responsible for the odors.

3.6-2

Response 3.6-2

The current science and technology does not allow direct measurement or air dispersion modeling of all the chemical compounds that make up rendering odors. As described in the Final Staff Report for PR 415, modeling requires input of an initial concentration for each chemical compound, which may not be possible to obtain. Many of these compounds do not have established methods for collection, speciation, and analysis. Many do not have established odor detection thresholds. For these reasons, it is not currently feasible to establish proper parameters for modeling or set minimum odor standards based on the existing science and technology. However, as identified in Master Response 6, *Methodology*, it is not necessary to identify baseline odor levels to establish the baseline for nuisance odors at rendering facilities. Rendering odors are a complex mixture of many compounds. There are no currently available objective methods to measure 'objectionable' odors. Therefore, in this rule development effort, staff focused on identifying the current and accepted practices around the state of California and the nation for operating a rendering facility within an urban area. Refer to Master Response 3, *Odor Control Measures*, and Master Response 5, *Nuisance Odors*.

2. Reducing Odor Complaint Requirements for Renderers. Because odors are subjective, SCAQMD requires when implementing Rule 402 (the public nuisance rule) six or more separate odor complaints about a single incident

3.6-3

D1. Response to Comments

and the same odor from this incident must be confirmed by the trained inspector with the complainants and traced back to the source. (Attachment 1.) When implementing Rule 402, SCAQMD requires complainants to legally attest that the odors are a genuine nuisance by signing a form and either completing a declaration or be willing to testify in court. PR 415 lacks the rigor of Rule 402. Under the June 23rd version of PR 415, a confirmed odor event is established if there are three separate odor complaints and the source is verified by trained District personnel. (PR 415(c)(4).) That's it! The complaints do not have to be about a single incident, they just have to occur within 180 days. (PR 415(d)(2)(B).) The odor does not have to be confirmed by the trained inspector with the complainants and traced back to the source. Complainants do not have to legally attest that the odors are a genuine nuisance. PR 415 makes it easy for people to target renderers, because only renderers will be required to post odor complaint signs. (PR 415(d)(1)(E).) Under PR 415, a violation notice may be issued for three complaints and an odor mitigation plan is required. (PR 415(d)(2)(B).)

3.6-3
Cont'd

SCAQMD staff insists that the lessor PR 415 standard is necessary because they cannot issue violation notices to renderers under the more stringent Rule 402 standard. This is not correct. SCAQMD has received 69 odor complaints about Darling International, Inc. and issued seven (7) violation notices under Rule 402.

Response 3.6-3

Refer to Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's pro-active approach to reducing rendering odors; Response 3.6-7 (Attachment 1), and Response 3.6-1 for a discussion of odor control methodology; Master Response 3, *Odor Control Measures*; and Master Response 5, *Nuisance Odors*. Odor events from rendering facilities in the Vernon area have rarely resulted in violations under Rule 402 and H&SC Section 41700. Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they rise to the level of a public nuisance, whereas existing statutes are solely reactive after the impact has occurred. The difficulty in tracing the odors to a specific facility does not mean that a problem does not exist. Instead, the difficulty in pinpointing one source in many cases results from the fact that the rendering facilities are

D1. Response to Comments

located relatively near one another. In many cases, it is likely that more than one facility is contributing to the odor. This creates the need to require all facilities to take reasonable measures to reduce odors emanating from their operations. Therefore, PR 415 applies to all new and existing rendering facilities (subdivision (b)).

3. Dr. Fine's Air Toxic Pollutants Study, April 2012. At the July 10th Governing Board meeting, Dr. Fine did not completely disclose to the Board Members the Study's findings. Dr. Fine's study concluded:

Lead emissions from Exide Technologies or transport of re-suspended particles containing lead from the Exide facility might have also contributed to increase the atmospheric concentration of lead at the Resurrection School. However, *this seems unlikely because the school is relatively far from the Exide plant (about 2.2 Km north-west) and the wind rarely blew from the Exide plant toward the Resurrection School.*

3.6-4

(Emphasis added; Attachment 2 (pg. 5 of Study).) Exide is across the street, northeast of Baker, and closer to Resurrection School than Baker. (Attachment 3.) Thus, for the same reasons SCAQMD finds it unlikely that emissions from Exide travel toward Resurrection School, emissions from

D1. Response to Comments

Baker are unlikely to affect Resurrection School.

The Fine Study also found the following:

The extensive East Los Angeles Interchange (the busiest freeway interchange in the world) passes through Boyle Heights.... The area in and around Boyle Heights is also a major goods movement hub, with goods moving through warehouses and rail-yards on their way to and from the busy ports of Long Beach and Los Angeles.

Elemental carbon is an indicator of diesel PM, considered by the State of California to be an air toxic. Although the EC levels at Resurrection School are similar to those observed in other dense urban areas of Los Angeles, they may reflect the close proximity of the Resurrection School site to mobile sources, such as the I-5, where heavy duty diesel trucks comprise about 6% of the total traffic volume.

(Attachment 2 (pgs. 1, 3, of Study).) Hydrogen Sulfide is typically smelled on busy highways from diesel trucks and whenever cars slow down or stop after a period of high speed cruising.

3.6-4
Cont'd

Response 3.6-4

Refer to Response to 3.6-8 (Attachment 2) and Master Response 5, *Nuisance Odors*. Rendering odors are very distinctive. Odors created by rendering facilities are not likely attributable to other sources. In particular, the odors from decaying organic raw materials, cooking of animal carcasses and parts, cooker condensate, as well as other sources of wastewater containing fats, oils and greases are distinctive, unmistakable, and offensive to many in the communities surrounding the City of Vernon. Given the distinctive odor from rendering operations, emissions from the freeway, ports, and Exide Technologies, cited in the study regarding toxic air contaminants, are not possible to be mistaken for rendering odors. As identified in Master Response 5, *Nuisance Odors*, SCAQMD has conducted multiple on-site inspections of the affected rendering facilities within SCAQMD's jurisdiction and has observed through these inspections that rendering operations, cooking, leaving unsealed and rendering materials out in the open, the wastewater treatment systems, and trucks transporting animal carcasses and parts at the rendering facilities are a substantial source of odors, especially when combined with odors from other rendering operations and from nearby rendering facilities. Additionally,

D1. Response to Comments

there have been odor complaints in the surrounding community that specifically identify odors that are associated with rendering facilities (refer to Master Response 5, *Nuisance Odors*).

With regards to Dr. Fine's study, refer to Response 3.4-4 for a discussion on the determination of the cause of odors in the Boyle Heights community and Master Response 5, *Nuisance Odors*.

4. Odorless Vernon. An odor free Vernon is not realistic. Vernon was incorporated to be an industrial city meant to create jobs. While the Dow Chemical facility no longer operates in Vernon, there are many other industrial facilities that may contribute to region's odor. Some of the industries in Vernon include:

- Cargill, Inc.
- Exide Technologies (battery manufacturer) – *operational during Boyle Heights Pilot Study Working Group*
- AMVAC Chemical Corp.
- Oak Manufacturing Company
- Atlas Galvanizing Co.
- Pacific Coast Chemicals
- CCI Chemical Corporation
- Bill Bailey Meat Packing Co.
- Jobber Meat Packing Co.
- Vivion Inc. (chemicals distributor)
- Rehrig Pacific Co. (plastic fabrication company)

3.6-5

D1. Response to Comments

- Cortez Furniture Manufacturing
- Paper Source Covering & Manufacturing
- Joe's Plastics (plastic manufacturing company)
- Mechanical Drives & Belting (rubber company)
- Air Products & Chemicals Inc. (industrial gas supplier)
- Nanka Seimen Co. (food processing and manufacturing)
- Dean Distributors Inc. (specialty food products manufacturer)
- Norman Fox & Co. (manufacturer)
- Holiday Rock (concrete, asphalt, aggregate supplier)
- Vernon Machine & Foundry (machine shop)
- Modern Patter & Foundry Co. (sand and investment casting)
- All American Manufacturing (tool & dye, stamping, plating)
- Gasser-Olds Company, Inc. (bronze foundry)
- Commercial Die Casting Co.
- Charman Manufacturing Inc. (PVC manufacturing)
- Lara Muffler & Welding (welder)

3.6-5
Cont'd**Response 3.6-5**

The intent of PR 415 is not to create an odor-free Vernon. As identified in Master Response 1, *Legal Authority to Adopt and Enforce*, SCAQMD has an obligation under the Health and Safety Code to adopt such rules as may be necessary and proper to regulate air pollution from all sources, including odors. As identified in Master Response 3, *Odor Control Measures*, the goal of PR 415 is to establish standards for odor control from rendering facilities. SCAQMD is concerned that rendering odors are affecting the residents of Boyle Heights and surrounding commercial and residential areas. SCAQMD staff has conducted public workshops on PR 415 where residents of Boyle Heights, Commerce, Maywood, and areas of East Los Angeles have complained about rendering odors. PR 415 is intended to reduce the potential for nuisance-level odors not just in Boyle Heights but also in all commercial and residential areas surrounding the rendering facilities.

D1. Response to Comments

5. Bio-Fuels. Consistent with AB 32 and California's policy to de-carbonize fuels, Baker produces a non-toxic biodegradable diesel fuel substitute from renewable resources including rendering materials. Biodiesel is the only EPA advanced clean-burning alternative fuel which, when used in place of, or in blends with, petroleum diesel can reduce greenhouse gas emissions by as much as 78%.

3.6-6

Response 3.6-6

Refer to Master Response 2, *Facility Shutdown*, and Response 3.0-11. Rendering operations within SCAQMD's jurisdiction are not expected to cease, and feedstock for biofuels is not expected to decrease because of the requirements included in PR 415.

ATTACHMENT 1 | 3.6-7

Response 3.6-7

Attachment 1 to Attachment 6 is an excerpt of the workshop slides from SCAQMD's 2014 Governing Board Retreat on Select Case Studies Related to Odors/Public Nuisance. Refer to Response 3.3-43 and 3.6-3.

ATTACHMENT 2 | 3.6-8

Response 3.6-8

Attachment 2 to Attachment 6 is an excerpt from the SCAQMD 2012 Ambient Measurements of Air Toxic Pollutants at Resurrection Catholic School in Boyle Heights report. Refer to Response 3.3-8, Response 3.3-40, and Response 3.6-4.

D1. Response to Comments

ATTACHMENT 3 | 3.6-9**Response 3.6-9**

Attachment 3 to Attachment 6 is a map pinpointing the locations of Resurrection Church, Exide Technologies, Baker Commodities, and other permitted facilities. Refer to Response 3.3-8, Response 3.3-41, Response 3.6-4, and Response 3.6-8.

ATTACHMENT 7 | 3.7-1**Response 3.7-1**

The attachment excerpts Appendix C of the 2010 Clean Communities Plan identifying SCAQMD's public nuisance investigations policies and procedures. Under Rule 402, enforcement action can only be taken after SCAQMD receives and verifies a sufficient number of complaints. Rule 402 does not contain any requirements to reduce odors from new and existing rendering facilities. In addition, Rule 402 does not establish minimum standards to prevent or minimize odors. PR 415 is a pro-active approach to addressing these odors with provisions designed to reduce odors before they rise to the level of a public nuisance, whereas the existing statutes are solely reactive after the impact has occurred. Refer to Response 3.0-5 and Responses 3.1-3, 3.1-6, 3.1-10, 3.1-11, 3.1-12, 3.1-16, and 3.1-26 for a discussion on odor complaints and PR 415's pro-active approach to reducing rendering odors.

ATTACHMENT 8 | 3.8-1**Response 3.8-1**

The attachment includes: an article documenting how rendering operations are a sustainable process; an article from the National Renderers Association (NRA) on rendering's role in capturing carbon emissions; and a carbon footprint calculator for rendering operations. SCAQMD staff recognizes the environmental benefits of rendering

D1. Response to Comments

and PR 415 is not intended to cause rendering operations to cease. The Final EA evaluated and disclosed the environmental impacts associated with implementation of PR 415. Refer to Response 3.0-14 for a discussion on the GHG emissions impact analysis in the Draft EA.

The GHG analysis in this attachment is based on a lifecycle analysis. In the Draft EA, GHG emissions estimates associated with implementation of PR 415 were based on the direct and indirect effects, and incremental additional GHG emissions associated with PR 415 requirements and BMPs. A lifecycle analysis of GHG emissions would require speculation on the potential upstream and downstream effects resulting from the hypothetical scenario that rendering operations would cease within SCAQMD's jurisdiction. The indirect effects associated with facility closure are considered speculative and not foreseeable because it would require an analysis of hypothetical conditions, and the EA is not obligated to evaluate these types of indirect impacts. Air quality and GHG emissions in the Final EA were estimated using the CalEEMod™ emissions computer model. The CalEEMod™ model incorporates up-to-date state and locally approved emission factors and methodologies for estimating pollutant emissions from typical land use development. The CalEEMod™ model is the only model maintained by the California Air Pollution Control Officers Association (CAPCOA) and is recommended by SCAQMD for use to estimate construction and operation air quality impacts under CEQA. Refer to Master Response 4, *Worst-Case Scenario*. Therefore, air quality and GHG impacts have been adequately analyzed in the EA and no further analysis is required under CEQA.

ATTACHMENT 9 | 3.9-1

Response 3.9-1

The attachment is the 2012 California State Department of Industrial Relations, CAL/OSHA Consultation Service Education and Training Unit, guidance document on *Confined Space Guide*. As analyzed in the Final EA, PR 415 would not expose employees and rescue workers to new hazardous risks from enclosures. Refer to Master Response 7, *Building Codes* and Response 3.0-18.

D1. Response to Comments

ATTACHMENT 10 | 3.10-1**Response 3.10-1**

The attachment is an excerpt from the California Code of Regulations regarding General Industrial Safety Orders for Confined Spaces. As analyzed in the Final EA, PR 415 would not expose employees and rescue workers to new hazardous risks from enclosures. Refer to Master Response 7, *Building Codes* and Response 3.0-18 for the discussion on “confined space.”

ATTACHMENT 11 | 3.11-1**Response 3.11-1**

The attachment is a webpage identifying Governor Jerry Brown’s Drought Proclamation. The Final EA includes modifications to the construction and operational scenario analyzed in the Draft EIR. The washing activities would result in a total water demand of 400 gallons per day which is below the SCAQMD’s CEQA water demand threshold of significance of 262,820 gallons per day of potable water. Therefore, no significant environmental impacts on hydrology and water quality would occur, and PR 415 is consistent with the State water conservation policies. Refer to Response 3.0-19, Response 3.1-24, and Response 3.1-40 for a discussion on the water activities required under PR 415, and Master Response 4, *Worst-Case Scenario*.

ATTACHMENT 12 | 3.12-1

D1. Response to Comments

Response 3.12-1

The attachment is a news release from the Governor's office regarding the Executive Order to conserve water during the drought. Refer to Master Response 4, *Worst-Case Scenario*, Response 3.0-19, and Response 3.11-1 for a discussion on the water activities required under PR 415.

ATTACHMENT 13 | 3.13-1

Response 3.13-1

The attachment is a webpage identifying Executive Order B-28-14 that accompanied the Governor's Drought Proclamation. Refer to Master Response 4, *Worst-Case Scenario* and Response 3.11-1 for a discussion on the water activities required under PR 415.

ATTACHMENT 14 | 3.14-1

Response 3.14-1

The attachment is a webpage identifying the mandatory water reductions that accompanied the Governor's Drought Proclamation. Refer to Master Response 4, *Worst-Case Scenario* and Response 3.11-1 for a discussion on the water activities required under PR 415.

Appendix D1. Darling Ingredients Modernization Permit

Appendix

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Attachment 1

Equipment Added in Section H

| Equipment | Application No. | Device No. | Process/System |
|---------------------------|-----------------|-----------------|----------------|
| Rendering Line 440U | 572695 | D158-D162, D204 | 1/8 |
| Rendered Products System | 572698 | D163-D175, D205 | 1/6 |
| Tallow line | 572696 | D176-D187 | 1/4 |
| Storage Tank No. 1 | 572702 | D188 | 1/9 |
| Storage Tank No. 2 | 572703 | D189 | 1/9 |
| Storage Tank No. 3 | 572704 | D190 | 1/9 |
| Storage Tank No. 4 | 572705 | D191 | 1/9 |
| Storage Tank No. 5 | 572706 | D193 | 1/9 |
| Unloading, Fat Load Out | 572708 | D193 | 1/9 |
| Odor Control System | 572730 | C194-C198 | 1/7 |
| Scrubber1 | 572732 | C199 | 1/7 |
| Boiler | 572735 | D200 | 3/0 |
| SCR with Ammonia Injector | 572736 | C201-C202 | 3/0 |

Appendix D2. Odor Complaints

Appendix

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| Complaint Number | Complaint Received Date | Inspection Date | Alleg Source Name | Alleg City | Complaint Description | Actual Name | Actual City |
|------------------|-------------------------|-------------------|--------------------------|------------------|---|------------------------------|------------------|
| 262057 | 2/8/16 5:57 PM | 2/9/16 12:00 AM | UNKNOWN | BOYLE HEIGHTS | Very strong burning meat odor | UNKNOWN | BOYLE HEIGHTS |
| 264123 | 4/15/16 3:46 PM | 4/15/16 12:00 AM | UNK | BOYLE HEIGHTS | REALLY BAD ODOR. PLS CONTACT. | UNKNOWN | BOYLE HEIGHTS |
| 249371 | 1/14/15 8:19 AM | 12/31/99 11:59 PM | UNK | COMMERCE | METAL OR CHEMICAL ODOR IN THE AIR - ZZZ 5825 RICKENBACKER RD COMMERCE | UNK | COMMERCE |
| 249431 | 1/15/15 7:52 PM | 1/15/15 12:00 AM | MEAT PROCESSING FACILITY | COMMERCE | VM: MEAT PROCESSING FACILITY, SMELLS BAD ZZZ 5600 E OLYMPIC BLVD. COMMERCE | UNKNOWN | |
| 249897 | 1/30/15 8:46 AM | 2/3/15 12:00 AM | UNK | COMMERCE | METALIC ODOR IN THE AIR - ZZZ CALLING FROM LA COUNTY SHERIFF'S DEPT. - ZZZ 4900 S. EASTERN AV COMMERCE | UNKNOWN | |
| 250335 | 2/17/15 12:03 PM | 2/17/15 12:00 AM | UNK | COMMERCE | CHEMICAL SMELL IN THE AIR - ZZZ 1542 BURRARD AV COMMERCE | UNION PACIFIC RAIL | COMMERCE |
| 253986 | 7/16/15 2:43 PM | 7/16/15 12:00 AM | UNKNOWN | COMMERCE | STORAGE OF EMPTY COMMERCIAL TRASH CONTAINERS, WHICH EMIT ODORS OF TRASH AND DECAY. | COMMERCIAL WASTE SERVICES, I | COMMERCE |
| 258533 | 11/19/15 6:01 PM | 11/19/15 12:00 AM | UNK | COMMERCE | REALLY BAD CHEESE AND MANURE SMELL. ZZZ 5600 E OLYMPIC BL, COMMERCE .90022 | UNK | COMMERCE |
| 258535 | 11/19/15 6:04 PM | 11/19/15 12:00 AM | UNK | COMMERCE | STRONG TRASH SMELL HAPPENING NOW. BRIDGE PUBLICATIONS ZZZ 5600 E OLYMPIC BL, COMMECE | UNK | COMMERCE |
| 259409 | 12/2/15 6:25 PM | 12/3/15 12:00 AM | UNKNOWN | COMMERCE | BAD CHEESE. DISGUSTING SMELL. SYCAMORE & TANAGER AVE. WASHINGTON & TELEGRAPH. THE ENTIRE AREA. FIRST STARTED SMELLING ON MONDAY. 11/30 | UNKNOWN | |
| 259801 | 12/7/15 6:37 PM | 12/8/15 12:00 AM | UNKNOWN | COMMERCE | VM - REALLY BAD ODOR. PLEASE CONTACT. ZZZ 4870 ASTER AVE, COMMERCE. | UNKNOWN | |
| 259937 | 12/9/15 4:44 PM | 12/9/15 12:00 AM | UNK | COMMERCE | EXHAUST TYPE ODOR. ZZZ 7101 E SLAUSON AVE. COMMERCE | UNKNOWN | |
| 261019 | 1/12/16 4:51 PM | 1/19/16 12:00 AM | UNKNOWN | COMMERCE | ODOR LIKE BETWEEN ROLLS OF FAT. THIS STARTS AT AROUND 4:30. SMELL OF BURNING METAL | UNKNOWN | COMMERCE |
| 261057 | 1/13/16 10:41 AM | 1/14/16 12:00 AM | UNKNOWN | COMMERCE | THE BELIEF IS ITS COMING FROM DAVID H FELL AND CO INC METALS BASE WHOLESALE | UNKNOWN | COMMERCE |
| 261255 | 1/19/16 9:09 AM | 1/19/16 12:00 AM | UNKNOWN | COMMERCE | AWFUL CHEMICAL SMELL | UNKNOWN | |
| 262117 | 2/9/16 8:54 PM | 2/10/16 12:00 AM | UNK | COMMERCE | VM: CALLING FROM BRIDGE PUBLICATIONS. BURNING MEAT TYPE ODOR. | UNKNOWN | COMMERCE |
| 262163 | 2/10/16 4:17 PM | 2/10/16 12:00 AM | SLAUGHTER HOUSE | COMMERCE | BURNING MEAT TYPE ODOR. PLS CONTACT. | UNKNOWN | COMMERCE |
| 262324 | 2/12/16 6:43 PM | 2/12/16 12:00 AM | UNK | COMMERCE | CALLING FROM BRIDGE PUBLICATIONS, AT LEAST TO EMPLOYEES COMPLAINING, REPORTING A RANCID FATTY MEAT | UNK | COMMERCE |
| 262326 | 2/12/16 6:50 PM | 2/12/16 12:00 AM | UNK | COMMERCE | CALLING FROM BRIDGE PUBLICATIONS, STRONG SMELL OF RANCID BURNING OIL. 100 EMPLOYEES COMPLAINING. | UNK | COMMERCE |
| 262398 | 2/15/16 5:42 PM | 2/15/16 12:00 AM | UNK | COMMERCE | VM BURNING ANIMAL SMELL | UNK | COMMERCE |
| 262399 | 2/15/16 5:48 PM | 2/15/16 12:00 AM | UNK | COMMERCE | VM PUTRID SMELL | UNK | COMMERCE |
| 262700 | 2/24/16 7:24 PM | 2/25/16 12:00 AM | UNK | COMMERCE | VM AWFUL SMELL IN THE AIR | UNKNOWN | |
| 262701 | 2/24/16 9:03 PM | 2/25/16 12:00 AM | UNK | COMMERCE | VM: SMELLS LIKE PIG/ TON OF GREASE | UNKNOWN | COMMERCE |
| 262702 | 2/24/16 9:05 PM | 2/25/16 12:00 AM | UNK | COMMERCE | VM: SMELL GOING ON FOR PAST 10MIN. REALLY SMELLS. | UNKNOWN | COMMERCE |
| 262952 | 3/3/16 4:52 PM | 3/4/16 12:00 AM | UNKNOWN | COMMERCE | VERY FOUL ODOR- PLEASE CALL | UNKNOWN | COMMERCE |
| 263392 | 3/18/16 8:56 PM | 3/22/16 12:00 AM | UNK | COMMERCE | VM STINKS OUTSIDE | UNK | COMMERCE |
| 263538 | 3/24/16 7:05 PM | 3/25/16 12:00 AM | UNKNOWN | COMMERCE | Voicemail-reporting a smell of plants burning in the southeast area of Commerce. | UNKNOWN | COMMERCE |
| 263810 | 4/4/16 7:14 PM | 4/6/16 12:00 AM | UNKNOWN | COMMERCE | Voicemail-reporting a horrible, hideous odor. | UNKNOWN | COMMERCE |
| 263822 | 4/4/16 7:58 PM | 4/5/16 12:00 AM | UNKNOWN | COMMERCE | Voicemail-strong odor of reccycled, burnt waste. | UNKNOWN | COMMERCE |
| 263829 | 4/4/16 9:57 PM | 4/5/13 12:00 AM | UNKNOWN | COMMERCE | Voicemail-horrible odor in the Rosewood park area. | UNKNOWN | COMMERCE |
| 265142 | 5/19/16 10:47 AM | 5/19/16 12:00 AM | MEAT PROCESSING PLANT | COMMERCE | PUNGENT ODOR. PLS CONTACT. | UNKNOWN | |
| 265623 | 6/9/16 3:20 PM | 6/10/16 12:00 AM | UNKNOWN | COMMERCE | very foul odor. | UNKNOWN | COMMERCE |
| 271299 | 11/28/16 5:38 PM | 11/29/16 12:00 AM | UNK | COMMERCE | VM: VERY PUTRID SMELL STARTED 10MIN AGO. | UNK | COMMERCE |
| 272098 | 12/29/16 5:08 PM | 12/31/99 11:59 PM | UNK | COMMERCE | strong smell of burning oil like from a car. | | |
| 272247 | 1/6/17 10:59 AM | 1/6/17 12:00 AM | UNKNOWN | COMMERCE | metallic odor. | UNKNOWN | COMMERCE |
| 272349 | 1/10/17 8:42 AM | 1/10/17 12:00 AM | UNKNOWN | COMMERCE | STRONG ODOR OF METAL_ FIRE DEPT STAFF CLD | UNKNOWN | COMMERCE |
| 273714 | 2/16/17 10:14 AM | 2/23/17 12:00 AM | UNK | COMMERCE | strong chemical smell. | UNKNOWN | COMMERCE |
| 274163 | 3/7/17 10:02 AM | 3/7/17 12:00 AM | UNK | COMMERCE | METALIC ODOR | UNKNOWN | COMMERCE |
| 274164 | 3/7/17 10:02 AM | 3/7/17 12:00 AM | UNKNOWN | COMMERCE | An administrative from Los Angeles County Fire Dept said there is a really bad chemical odor in the air. Unknown source. | UNKNOWN | COMMERCE |
| 278519 | 7/21/17 9:25 PM | 7/26/17 12:00 AM | UNKNOWN | COMMERCE | VM _ BURNING OF GARBAGE _ HAS BEEN GOING ON NOW FOR 4 NIGHTS. STARTS AT 6:00 & 7:00 AT NIGHT AND GOES ON ALL NIGHT. HAS BEEN HORRIBLE YOU CAN'T EVEN BREATHE. | | |
| 262210 | 2/10/16 8:32 PM | 2/11/16 12:00 AM | UNKNOWN | EAST LOS ANGELES | VM - TERRIBLE SMELL IN THE CITY OF EAST LOS ANGELES AND IT CONTINUES INTO VERNON. THERE IS A VERY STRONG, HORRIBLE ODOR AND THE SOURCE IS UNKNOWN. BASED ON THE WIND I WOULD SAY THE SMELL IS COMING FROM THE WEST SIDE, POSSIBLY NEAR VERNON. THE SMELL IS SO UNBEARABLE WE HAVE TO KEEP THE DOORS AND WINDOWS CLOSED. | RENDERING PLANTS | VERNON |
| 262798 | 2/26/16 8:53 PM | 3/1/16 12:00 AM | UNKNOWN | EAST LOS ANGELES | STRONG SEWAGE AND BURNING MEAT SMELL HAPPENING NOW. | UNK | EAST LOS ANGELES |
| 263095 | 3/10/16 6:48 PM | 3/11/16 12:00 AM | UNK | EAST LOS ANGELES | Voicemail-horrible odor. | UNKNOWN | |
| 264164 | 4/15/16 9:00 PM | 4/19/16 12:00 AM | UNKNOWN | EAST LOS ANGELES | VM SLAUGHTER HOUSE SMELL | UNKNOWN | |
| 266428 | 7/8/16 9:45 PM | 7/12/16 12:00 AM | SLAUGHTER HOUSE | EAST LOS ANGELES | NAUSEATING ODORS ARE COMING FROM THE BUILDING DAILY IN THE AFTERNOON. | UNKNOWN | EAST LOS ANGELES |
| 271576 | 12/7/16 2:56 PM | 12/20/16 12:00 AM | UNKNOWN | EAST LOS ANGELES | LAST YEAR I COMPLAINED ABOUT A SMELL OF BURNING PLASTIC. I GOT A CALL FROM THE AQMD AND SMELL WENT AWAY. NOW THE SMELL IS BACK NIGHTLY ABOUT 9:30. CAN YOU HELP. | UNKNOWN | |
| 279222 | 8/15/17 10:19 AM | 8/15/17 12:00 AM | UNKNOWN | EAST LOS ANGELES | VOICEMAIL- TERRIBLE ODOR UNACCEPTABLE WANTS A CALL BACK ZZZ SHEAN KIM 4550 MAYWOOD AVE, VERNON | UNKNOWN | VERNON |
| 249756 | 1/26/15 6:15 PM | 1/28/15 12:00 AM | UNKNOWN | VERNON | VM FOUL SMELL IN THE AIR - ZZZ 1231 S. EASTMAN AV LA | UNK | |
| 255288 | 9/8/15 9:30 PM | 9/9/15 12:00 AM | UNK | VERNON | Smells like fecal outside. Odors are all over the neighbor. He thinks its coming from the city of Vernon. ZZZ 6248 Bear | UNKNOWN SOURCE | VERNON |
| 258119 | 11/13/15 11:23 PM | 11/17/15 12:00 AM | UNKNOWN SOURCE | VERNON | VM: STRANGE SMELL. COUNSEL MEMBER ZZZ 6248 BEAR AVE. BELL 90201 | UNK | VERNON |
| 258546 | 11/19/15 10:38 PM | 11/20/15 12:00 AM | UNK | VERNON | STRONG SMELL OF COOKED WIENERS. ZZZ NONE GIVEN | UNK | VERNON |
| 258986 | 11/30/15 7:22 AM | 12/3/15 12:00 AM | UNK | VERNON | PUNGENT,RANCID, PUTRID | UNKNOWN | VERNON |
| 260659 | 12/31/15 10:19 AM | 12/31/15 12:00 AM | UNKNOWN | VERNON | Smells like a bad barbecue. | UNKNOWN | |
| 261274 | 1/19/16 5:00 PM | 1/20/16 12:00 AM | CREMATORIUM FOR PETS. | VERNON | SOUR ODOR IN THE AREA. | UNK | VERNON |
| 261316 | 1/20/16 4:56 PM | 1/20/16 12:00 AM | MEAT PROCESSING PLANT | VERNON | VM: BAD SMELL | UNKNOWN | COMMERCE |
| 263229 | 3/16/16 8:16 PM | 3/17/16 12:00 AM | MEAT PROCESSING PLANT | VERNON | VM -- ODORS - ZZZ 1231 S. EASTMAN AV LA | UNK | VERNON |
| 255435 | 9/11/15 11:42 PM | 9/15/15 12:00 AM | FOOD PROCESSING PLANT | VERNON | A STRONG NAUSEATING SMELL IS MAKING MYSELF, STAFF AND STUDENTS FEEL NAUSEOUS. BELIEVE ODOR IS EMITTING FROM MEAT PROCESSING PLANTS IN NEIGHBORING CITY OF VERNON | UNKNOWN | VERNON |
| 261424 | 1/22/16 10:36 AM | 1/26/16 12:00 AM | UNKNOWN | VERNON | Chemical odor happening now.. | | |
| 261581 | 1/26/16 3:27 PM | 12/31/99 11:59 PM | UNKNOWN | VERNON | Bug spray odor | UNKNOWN | VERNON |
| 261582 | 1/26/16 4:18 PM | 1/28/16 12:00 AM | UNKNOWN | VERNON | BAD ODOR SMELL ALMOST EVERY MORNING. SOME SAY ITS FROM THE SLUTTER HOUSES IN VERNON. IT'S REALLY BAD. REPORTING ON BEHALF OF JAMIE AT 6131 MALBURG WAY, VERNON, 213-741-7472. INTENSITY AND PERSISTENCE: | UNKNOWN | |
| 262202 | 2/11/16 7:47 AM | 2/11/16 12:00 AM | UNKNOWN | VERNON | STRONG, BUT WEARS OFF AFTER AN HOUR OR SO. FREQUENCY: INCONSISTENT, BUT MAINLY WEDNESDAYS AND THURSDAYS. TYPE: PESTICIDE, ORGANIC | UNKNOWN | |
| 262486 | 2/18/16 3:49 PM | 2/24/16 12:00 AM | UNKNOWN | VERNON | POISON TYPE ODOR - MAKING COMPLAINANT COUGH AND HAVE A RUNNY NOSE. | UNK | |
| 262645 | 2/23/16 3:01 PM | 2/24/16 12:00 AM | UNKNOWN | VERNON | FOUL SMELL IN THE AIR | UNK | VERNON |
| 263923 | 4/7/16 8:23 AM | 4/8/16 12:00 AM | UNK | VERNON | Voicemail-horrible odor.complainant would like a call back. | UNKNOWN | VERNON |
| 263988 | 4/11/16 7:26 PM | 4/12/16 12:00 AM | UNKNOWN | VERNON | very strong smell really bad. | UNK | |
| 265439 | 6/2/16 6:49 PM | 6/3/16 12:00 AM | UNK | VERNON | | | |

| Complaint Number | Complaint Received Date | Inspection Date | Alleg Source Name | Alleg City | Complaint Description | Actual Name | Actual City |
|------------------|-------------------------|-------------------|-------------------|------------------|---|------------------|---------------|
| 268794 | 9/27/16 8:50 AM | 9/27/16 12:00 AM | UNKNOWN | VERNON | BURNING METAL ODOR FOR THE LAST 3 CONSECUTIVE DAYS. NO PARTICULAR PATTERN HAS BEEN NOTICED. (I AM SUBMITTING THIS COMPLAINT ON BEHALF OF THE COMPLAINANT - I WORK FOR THE CITY OF VERNON, 323-826-1420. THANK YOU - DAVID LEDUFF.) | UNKNOWN | VERNON |
| 269233 | 10/7/16 7:24 AM | 10/7/16 12:00 AM | UNKNOWN | VERNON | VERY RANCID BURNING ODOR THAT YOU CAN TASTE WHEN YOU BREATHE IT IN. | CLEAN UP AMERICA | VERNON |
| 272279 | 1/7/17 6:59 AM | 1/10/17 12:00 AM | UNKNOWN | VERNON | VOICEMAIL_ AWFUL ODORS COMING FROM VERNON | UNKNOWN | VERNON |
| 275333 | 4/4/17 12:30 PM | 4/4/17 12:00 AM | UNKNOWN | VERNON | sewage odor. complainant would like a call back. | UNKNOWN | VERNON |
| 277220 | 6/8/17 8:02 PM | 6/8/17 12:00 AM | UNKNOWN | VERNON | TOXIC SMELL HAPPENS OFTEN . IT'S 8 PM ON 6/8/17. HARD TO BREATH STARTED AT 8 PM. | SOURCE UNKNOWN | VERNON |
| 277561 | 6/19/17 7:39 PM | 6/20/17 12:00 AM | UNKNOWN | VERNON | ODOR IN NEIGHBORHOOD. IT'S 7:30 PM AND THE WIND DIRECTION SEEMS TO GO IN A SOUTHEAST DIRECTION. IT SMELLS LIKE EXHAUST FUMES. IT IS MAKING MY EYES AND THROATS SCRATCHY. | UNKNOWN | VERNON |
| 277696 | 6/23/17 6:23 PM | 6/27/17 12:00 AM | UNKNOWN | VERNON | SURROUNDING ODOR SAME AS BEFORE. SMELLS LIKE DIESEL EXHAUST . DIRECTION OF AIR IS SOUTHWEST CONTINUAL EXHAUST SMELLING ODOR IN NEIGHBORHOOD. SOME DAYS STRONGER THAN OTHERS. SMELL STARTED AT 7 PM AND IS ONGOING. WIND SEEMS TO BE GOING IN A SOUTHEAST DIRECTION. | UNKNOWN | VERNON |
| 278501 | 7/21/17 7:39 PM | 8/3/17 12:00 AM | UNKNOWN | VERNON | SMELLS LIKE EXHAUST. SAME SMELL AS ALWAYS IT'S STRONGER TODAY | UNKNOWN | VERNON |
| 278707 | 7/28/17 5:38 PM | 8/3/17 12:00 AM | UNKNOWN | VERNON | strong odor of dead animals. | UNKNOWN | VERNON |
| 263932 | 4/7/16 12:14 PM | 4/8/16 12:00 AM | UNKNOWN | BOYLE HEIGHTS | strong odor of dead animals. | UNKNOWN | BOYLE HEIGHTS |
| 264457 | 4/22/16 7:12 PM | 12/31/99 11:59 PM | UNKNOWN | COMMERCE | Voicemail- burnt, dead animal odor. | UNKNOWN | COMMERCE |
| 263814 | 4/4/16 7:33 PM | 4/14/16 12:00 AM | UNKNOWN | VERNON | Voicemail-strong odor of dead animals. | UNKNOWN | COMMERCE |
| 264764 | 5/6/16 9:55 AM | 5/6/16 12:00 AM | UNKNOWN | BOYLE HEIGHTS | horrible odor of something dead. | UNKNOWN | COMMERCE |
| 263811 | 4/4/16 7:25 PM | 4/6/16 12:00 AM | UNKNOWN | COMMERCE | Voicemail-reporting a terrible smell of burnt, dead animals. | UNKNOWN | COMMERCE |
| 262323 | 2/12/16 4:58 PM | 2/12/16 12:00 AM | UNK | COMMERCE | ROTTEN MEAT ODOR | UNK | COMMERCE |
| 263853 | 4/5/16 6:45 PM | 4/6/16 12:00 AM | UNKNOWN | COMMERCE | ROTTEN FOOD, ROTTEN TRASH ODOR. | UNKNOWN | COMMERCE |
| 262325 | 2/12/16 6:46 PM | 2/12/16 12:00 AM | UNK | COMMERCE | STRONG ROTTING ANIMAL SMELL, CALLING FROM BRIDGE PUBLICATIONS. | UNK | COMMERCE |
| 258537 | 11/19/15 6:13 PM | 11/19/15 12:00 AM | UNK | COMMERCE | VERY STRONG ROTTEN SMELL MAKING IT HARD TO BREETH. CALLING FROM BRIDGE PUBLICATIONS. ZZZ 5600 E OLYMPIC BL COMMERCE | UNK | COMMERCE |
| 258594 | 11/20/15 4:18 PM | 11/20/15 12:00 AM | UNK | COMMERCE | SMELLS LIKE ROTTING MEAT. CALLING FROM BRIDGE PUBLICATIONS | UNKNOWN | LOS ANGELES |
| 253487 | 6/24/15 10:32 PM | 6/25/15 12:00 AM | UNK | COMMERCE | VM: TERRIBLE ROTTING FLESH SMELL. ZZZ 5600 E OLYMPIC BLVD. COMMERCE | UNKNOWN | COMMERCE |
| 268327 | 9/16/16 7:06 PM | 9/16/16 12:00 AM | UNK | VERNON | VM: HORRIBLE ROTTING FLESH SMELL HAPPENS EVERY WED & THURS AT 19:00-20:00HRS. | UNK | VERNON |
| 268365 | 9/16/16 12:54 PM | 9/16/16 12:00 AM | SLAUGHTER HOUSE | VERNON | STRONG ODOR OF ROTTING FLESH- PLEASE CALL | UNKNOWN | VERNON |
| 261889 | 2/3/16 8:35 AM | 2/3/16 12:00 AM | UNKNOWN | VERNON | STRONG ODOR OF ROTTEN FOOD please call | UNKNOWN | VERNON |
| 254601 | 8/14/15 10:04 AM | 8/14/15 12:00 AM | UNK | VERNON | STRONG SMELL OF ROTTING MEAT. PLEASE CONTACT COMPLAINANT. ZZZ 7115 SAN LUIS AVE, BELL 90201 | UNKNOWN | VERNON |
| 258532 | 11/19/15 5:58 PM | 11/19/15 12:00 AM | UNK | COMMERCE | SMELLS LIKE SOMETHING ROTTING CALL FROM BRIDGE PUBLICARTIONS. 4 EMPLPOYEES COMPLAINING . ZZZ 5600 E OLYMPIC BL COMMERCE 90022 | UNK | COMMERCE |
| 270953 | 11/16/16 2:52 PM | 11/17/16 12:00 AM | UNKNOWN | COMMERCE | THE SMELL OUTSIDE SMELLED LIKE ROTTING MEAT OR A DEAD ANIMAL. THE WEATHER FORECAST WAS SUNNY AT LOW CALLING FROM BRIDGE PUBLICATIONS REPORTING A STRONG ROTTEN MAC & CHEESE SMELL . ZZZ 5600 E OLYMPIC BL COMMERCE 90022 | UNKNOWN | COMMERCE |
| 258536 | 11/19/15 6:10 PM | 11/19/15 12:00 AM | UNK | COMMERCE | COMPLAINT REF BY THE CITY OF COMMERCE TO ADEO DERRICK ALATORRE. GOING ON EVERY NIGHT BETWEEN 20:30-22:00HRS. STRONG ROTTEN ONION, IRRITATING EYES AND NOSE. | UNK | COMMERCE |
| 265463 | 6/3/16 2:39 PM | 6/8/16 12:00 AM | UNKNOWN | COMMERCE | THIS SMELL HAS BEEN GOING ON FOR MORE THAN 2 MONTHS, MONDAY THROUGH THURSDAY FROM 2PM TO 6PM, THERE IS THIS EXTREMELY STRONG ODOR OF SOMETHING ROTTEN/FISHY. I AM NOT CERTAIN ABOUT THE SOURCE AND I AM AFRAID THAT THIS COULD BE HARMFUL TO HUMAN BODY. | SUNK | COMMERCE |
| 262728 | 2/25/16 4:01 PM | 2/25/16 12:00 AM | UNKNOWN | COMMERCE | WE LIVE IN NORTHEAST CITY TERRACE AND HAVE NOTICED A STRONG FOUL SMELL EVERY ONCE AND AGAIN. TODAY THE SMELL IS ONCE AGAIN SUBSTANTIALLY STRONG. IT IS A ROTTEN STENCH, EERILY SIMILAR TO LONGSTANDING STAGNANT | UNKNOWN | COMMERCE |
| 261590 | 1/26/16 6:21 PM | 1/27/16 12:00 AM | UNKNOWN | EAST LOS ANGELES | rotting meat odor. | UNKNOWN | LOS ANGELES |
| 267816 | 8/31/16 7:52 AM | 9/2/16 12:00 AM | UNKNOWN | COMMERCE | rotting meat smell @ 0925 like rotting dog food smell. | UNKNOWN | COMMERCE |
| 265359 | 5/31/16 9:31 AM | 5/31/16 12:00 AM | UNK | VERNON | AWFUL SMELL DAILY. SMELLS OF BURN FLESH. HEARD ITS FROM THE FARMER JOHN PLANT IN VERNON A NEIGHBORING | UNKNOWN | VERNON |
| 262207 | 2/11/16 8:05 AM | 2/11/16 12:00 AM | UNKNOWN | VERNON | Dead animal odor happening now. | UNKNOWN | VERNON |
| 262169 | 2/10/16 6:24 PM | 2/11/16 12:00 AM | SLAUGHTER HOUSE | VERNON | STRONG ODOR OF DEAD ANIMALS= UNKNOWN | UNKNOWN | COMMERCE |
| 259280 | 12/1/15 4:50 PM | 12/3/15 12:00 AM | UNKNOWN | COMMERCE | STRONG ODOR OF DEAD ANIMALS | UNKNOWN | COMMERCE |
| 263960 | 4/8/16 3:16 PM | 4/12/16 12:00 AM | UNKNOWN | COMMERCE | STRONG SMELL OF DEAD ANIMAL HAPPENING NOW. | UNK | COMMERCE |
| 262099 | 2/9/16 6:11 PM | 2/10/16 12:00 AM | UNK | VERNON | STRONG ODOR OF BURNT SKIN, DEAD BODY. | UNK | VERNON |
| 261472 | 1/25/16 8:29 AM | 1/26/16 12:00 AM | UNKNOWN | VERNON | VM BAD ODOR IN THE AIR - SMELLS LIKE DEAD ANIMAL - ZZZ 1231 S. EASTLAND AV LA | UNKNOWN | VERNON |
| 255287 | 9/8/15 9:29 PM | 9/9/15 12:00 AM | UNK | VERNON | | UNKNOWN | VERNON |

Appendix D3. 2015 Boyle Heights-Vernon Odor Surveillance Survey

Appendix

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**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|----------------------------------|-----------------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|--------------|
| 1 | 2785 S. Bonnie Beach Pl., Vernon | NE Corner of Bonnie Beach/Bandini | 8/13 | 11:45 | SW | 2-4 | D, R | 1 | 1 m: 30s |
| 1 | 2785 S. Bonnie Beach Pl., Vernon | NE Corner of Bonnie Beach/Bandini | 07/31 | 13:34 | NW | 2-3 | T | 1 | 5m: 1m |
| 1 | 2785 S. Bonnie Beach Pl., Vernon | NE Corner of Bonnie Beach/Bandini | 8/14 | 14:09 | S | 1-2 | T | 2 | C |
| 1 | 2785 S. Bonnie Beach Pl., Vernon | NE Corner of Bonnie Beach/Bandini | 08/07 | 15:03 | W | 1-2 | F | 1 | C |
| 1 | 2785 S. Bonnie Beach Pl., Vernon | NE Corner of Bonnie Beach/Bandini | 8/12 | 15:05 | SW | 6 | D | 1 | 20s: 5s |
| 1 | 2785 S. Bonnie Beach Pl., Vernon | NE Corner of Bonnie Beach/Bandini | 07/28 | 18:58 | SW | 2.8 | C, S | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/31 | 08:06 | --- | 0 | T | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/04 | 08:08 | --- | 0-1 | P | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/13 | 08:37 | S | 0-1 | D, P | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/06 | 08:53 | E | 0-1 | P, D | 1 | 2m: 1m |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/12 | 09:05 | W | 1 | P | 2-4 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/14 | 09:15 | --- | --- | R | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/05 | 09:35 | SE | 2 | P | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/07 | 09:54 | E | 1-2 | P | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/29 | 10:05 | NNE | 0-2 | P | 0-1 | Single event |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/31 | 11:02 | --- | 0 | P | 1 | 5m: 30s |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/14 | 11:30 | SW | 1-2 | P | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/06 | 11:35 | SE | 0-2 | P, R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/13 | 11:52 | SW | 0-2 | P, R, F | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/04 | 12:25 | S | 0-1 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/12 | 12:35 | W | 7 | D, P | 3, 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/07 | 12:41 | SW | 1-2 | R | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/05 | 13:15 | S | 4 | D | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/31 | 13:40 | SW | 1-2 | R | 3 | C |

| | | | |
|---|--|---|--|
| <p>CHARACTER</p> <p>C - Cooking of meat and/or fat D - Decayed/dead matter L - Livestock/manure P - Processed meal/dry dog food R - Rendering-type odor other than above B - Bread/bakery/baking odor E - Earth/dirt/soil odor</p> | <p>F - Fruity/maskant odor S - Smoke/burning odor T - Trash/dumpster odor VOC - Paint/solvent odor W - Wood/paper product X - Engine exhaust Y - Soapy/detergent odor O - Other</p> | <p>INTENSITY</p> <p>0 (no odor detected) 1 (very light) 2 (light, distinguishable) 3 (moderate, very distinguishable) 4 (strong, irritating) 5 (very strong, overpowering, intolerable)</p> | <p>FREQUENCY/DURATION</p> <p>C = Constant X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)</p> |
|---|--|---|--|

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|------------------------------|-------------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|----------|
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/06 | 13:45 | SE | 0-1 | P, R | 0-1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/14 | 14:13 | SW | 1-2 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/04 | 14:50 | SW | 2-4 | R | 2-3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/11 | 14:55 | SW | 4-6 | P | 1 | 1m: 15s |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/13 | 14:58 | SW | 2-4 | D, P | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/07 | 15:08 | S | 1-2 | R, F | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/12 | 15:10 | SW | 8 | D | 3-4 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/05 | 15:35 | SW | 1 | D | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/29 | 16:35 | SW | 3-6 | P | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/28 | 17:04 | SSW | 4-6 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/18 | 17:28 | SW | 3-5 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/7 | 17:35 | WSW | 3-5 | P | 2 | 2m: 1m |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/26 | 17:45 | W | 7 | P, R | 1-3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/25 | 17:48 | SW | 1-2 | R, F | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/06 | 17:49 | SW | 1-2 | R, F | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/19 | 17:50 | WSW | 8 | D, R | 1, 3-4 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/20 | 17:50 | SW | 1-2 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/04 | 18:00 | WSW | 2-4 | P | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/12 | 18:00 | SW | 7 | D, P | 3, 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 08/05 | 18:05 | SW | 10 | P, D | 4, 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/13 | 18:05 | SW | 0-2 | D, P | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/21 | 18:05 | SW | 1-2 | D, R | 1-2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/11 | 18:06 | WSW | 2-4 | P | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/14 | 18:10 | SW | 2-3 | R | 3 | C |

| | | | |
|--|--|---|--|
| <p>CHARACTER</p> <p>C - Cooking of meat and/or fat D - Decayed/dead matter L - Livestock/manure P - Processed meal/dry dog food R - Rendering-type odor other than above B - Bread/bakery/baking odor E - Earth/dirt/soil odor</p> | <p>F - Fruity/maskant odor S - Smoke/burning odor T - Trash/dumpster odor VOC - Paint/solvent odor W - Wood/paper product X - Engine exhaust Y - Soapy/detergent odor O - Other</p> | <p>INTENSITY</p> <p>0 (no odor detected) 1 (very light) 2 (light, distinguishable) 3 (moderate, very distinguishable) 4 (strong, irritating) 5 (very strong, overpowering, intolerable)</p> | <p>FREQUENCY/DURATION</p> <p>C = Constant X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)</p> |
|--|--|---|--|

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|------------------------------|---------------------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|----------|
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/27 | 18:10 | SW | 0-2 | D, R | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/31 | 18:17 | WSW | 0-4 | D, P | 2 | 3m: 2m |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/28 | 19:07 | SW | 2.3 | P | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/28 | 19:15 | WSW | 2-4 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/30 | 19:24 | SW | 0.6 | D | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 07/29 | 19:33 | SW | 3.2 | P | 3 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/25 | 19:39 | --- | --- | R, F | 1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/20 | 19:40 | W | 1-2 | R, B | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/21 | 20:03 | SW | 2-4 | P, R | 1-2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/27 | 20:03 | SW | 0-1 | R | 0-1 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/19 | 20:05 | W | 6 | R | 2 | C |
| 2 | 4016 Bandini Blvd., Vernon | Baker Commodities Parking Lot | 8/26 | 20:05 | W | 4 | D | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/04 | 08:12 | S | 0-2 | P | 1 | 2m: 1m |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/06 | 09:01 | S | 0-1 | P, R | 1 | 1m: 15s |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/12 | 09:15 | --- | 0 | D | 1 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/07 | 09:58 | E | 2-3 | T | 1 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/14 | 11:34 | SW | 1-2 | P | 1 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/06 | 11:39 | S | 0-2 | P, D | 1-2 | 2m: 1m |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/13 | 11:59 | SW | 2-4 | D, P | 3 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/12 | 12:40 | W | 7 | D, P | 1, 1 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/07 | 12:44 | SE | 2-3 | R | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/05 | 13:25 | S | 3 | D | 2-3 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 07/31 | 13:46 | SW | 1-2 | R,F | 3 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/06 | 13:49 | S | 0-2 | P, R | 2 | C |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|--------------------------------------|--|-------------|-------|-----------------------|------------------|-------------------|------------------------|-----------|
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/14 | 14:16 | SW | 1-2 | P | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/11 | 15:00 | SSW | 4-6 | P | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/13 | 15:05 | SW | 2-5 | D, P | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/05 | 15:45 | SW | 5 | D | 1-3 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/28 | 17:07 | SSW | 4-6 | R | 1 | 1 m: 30 s |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/18 | 17:31 | SW | 3-5 | R | 1 | 1 m: 15 s |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/7 | 17:39 | SW | 3-5 | P | 1 | 2m: 1m |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/25 | 17:51 | SW | 1-2 | R | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/20 | 17:53 | SW | 2-3 | O, F | 3 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/04 | 18:04 | S | 2-4 | F | 1 | 1m: 30s |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/12 | 18:05 | SW | 7 | P | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 07/31 | 18:07 | S | 0-2 | D, P | 2 | 2m: 1m |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/13 | 18:09 | SW | 2-3 | D, P | 3-4 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/21 | 18:09 | SW | 0-2 | R, F | 1 | 1 m: 30 s |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/11 | 18:10 | S | 3-5 | P | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/27 | 18:14 | SW | 0-2 | R | 0-1 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 08/05 | 18:15 | SW | 10 | P | 3-4 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 07/28 | 19:13 | SW | 2.2 | T | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/28 | 19:18 | WSW | 2-4 | R | 1 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 07/30 | 19:26 | S | 1.5 | D | 2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/21 | 20:04 | SSW | 3-5 | R, F | 1-2 | C |
| 3 | 2719 S. Indiana St., Vernon | Exide Technologies – Rail Road Tracks | 8/27 | 20:07 | SW | 0-1 | R | 0-1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/13 | 15:10 | SW | 2-4 | D, P | 2 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 07/31 | 11:10 | SW | 1-2 | P | 2 | 5m: 1m |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|--------------------------------------|--|-------------|-------|-----------------------|------------------|-------------------|------------------------|------------|
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/14 | 11:37 | SW | 1-2 | P | 2 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/13 | 12:08 | S | 2-4 | D, P | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/11 | 12:12 | SE | 2-4 | T | 1 | 1m: 30s |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 08/07 | 12:47 | SE | 2-3 | T | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 08/05 | 13:30 | S | 2 | D | 3-4 | --- |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 07/31 | 13:52 | SW | 1-2 | P | 2 | 5m: 1m |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/14 | 14:19 | S | 1-2 | P | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/11 | 15:04 | SW | 4-6 | P | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 08/07 | 15:14 | S | 2-3 | T, P | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/12 | 15:20 | SW | 7 | P | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 08/05 | 15:55 | SW | 5 | D | 3-4 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 07/29 | 16:41 | SW | 3-6 | P | 2 | 1m: 15s |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/28 | 17:10 | SW | 5-7 | P | 1 | 1 m: 30 s |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/7 | 17:44 | WSW | 4-6 | P | 2 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/25 | 17:54 | SW | 1-2 | R | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/20 | 17:58 | SW | 2-3 | R, F | 2 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/19 | 18:00 | WSW | 8 | R | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/26 | 18:00 | W | 7 | R | 1 | 30 s: 10 s |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 08/04 | 18:08 | WSW | 4-7 | P | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/12 | 18:10 | SW | 7 | D, P | 1, 3 | --- |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 07/31 | 18:12 | SSW | 2-4 | D, P | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/13 | 18:12 | SW | 0-2 | D, P | 2-3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/11 | 18:13 | WSW | 5-7 | P | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/21 | 18:13 | SSW | 0-3 | D, P, R | 2-3 | C |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|---|--|-------------|-------|-----------------------|------------------|-------------------|------------------------|-----------|
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/14 | 18:14 | SW | 1-2 | T | 1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 08/05 | 18:20 | W | 10 | P | 4 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/28 | 19:21 | WSW | 2-4 | P | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 07/29 | 19:37 | S | 1.6 | C, D | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/25 | 19:45 | SW | 1-2 | P | 3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/18 | 20:00 | WNW | 2-4 | P | 1 | 1 m: 30 s |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/27 | 20:10 | SW | 0-2 | P, R | 2-3 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/21 | 20:12 | SW | 1-2 | R, F | 0-1 | C |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/19 | 20:15 | W | 6 | R | 1-2 | 2 m: 30 s |
| 4 | 4103 E. 26 th St., Vernon | Truck lot North of D&D Rendering Tanks | 8/26 | 20:20 | WSW | 4 | P, R | 1-2 | C |
| 5 | 4383 Exchange Ave., Vernon | Simply Fresh | 08/07 | 10:09 | NE | 1-2 | B | 1 | C |
| 5 | 4383 Exchange Ave., Vernon | Simply Fresh | 8/14 | 11:46 | NW | 1-2 | B (toasted) | 1 | C |
| 5 | 4383 Exchange Ave., Vernon | Simply Fresh | 8/11 | 18:19 | WSW | 5-7 | B | 2 | 1m: 30s |
| 5 | 4383 Exchange Ave., Vernon | Simply Fresh | 07/28 | 19:26 | SW | 3.8 | S | 3 | C |
| 6 | 3269 E. 44 th St., Huntington Park | US Growers | 08/07 | 15:27 | W | 2-3 | B, F | 2 | C |
| 6 | 3269 E. 44 th St., Huntington Park | US Growers | 07/28 | 19:32 | SW | 6.2 | Y | 1 | C |
| 6 | 3269 E. 44 th St., Huntington Park | US Growers | 07/29 | 19:57 | SW | 4.6 | Y | 2 | C |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 07/31 | 08:40 | NW | 1-2 | X | 1 | 5m: 3s |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 08/07 | 10:20 | SE | 1-2 | W | 2 | C |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 08/07 | 13:04 | SE | 1-2 | W | 2 | C |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 8/20 | 18:19 | SW | 1-2 | T | 1 | C |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 07/28 | 19:46 | SW | 2.2 | T | 2 | C |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 07/30 | 19:50 | --- | 0.0 | C | 1 | C |
| 7 | 4560 Pacific Blvd., Vernon | Wells Fargo | 07/29 | 20:02 | SW | 1.7 | Y | 1 | C |

| | | | |
|---|--|---|--|
| <p>CHARACTER</p> <p>C - Cooking of meat and/or fat D - Decayed/dead matter L - Livestock/manure P - Processed meal/dry dog food R - Rendering-type odor other than above B - Bread/bakery/baking odor E - Earth/dirt/soil odor</p> | <p>F - Fruity/maskant odor S - Smoke/burning odor T - Trash/dumpster odor VOC - Paint/solvent odor W - Wood/paper product X - Engine exhaust Y - Soapy/detergent odor O - Other</p> | <p>INTENSITY</p> <p>0 (no odor detected) 1 (very light) 2 (light, distinguishable) 3 (moderate, very distinguishable) 4 (strong, irritating) 5 (very strong, overpowering, intolerable)</p> | <p>FREQUENCY/DURATION</p> <p>C = Constant X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)</p> |
|---|--|---|--|

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DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|------------------------------|------------------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|--------------|
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/04 | 08:42 | SW | 0-2 | C | 1 | 2m: 15s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/31 | 08:48 | --- | 0 | R | 3 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/13 | 09:17 | SW | 0-2 | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/06 | 09:43 | E | 0-1 | C, L | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/14 | 09:43 | --- | --- | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/12 | 09:45 | --- | 0 | P | 2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/05 | 10:15 | SW | 2 | C, L | 2, 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/31 | 11:38 | SW | 1-2 | C | 2 | Single event |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/06 | 12:07 | S | 0-2 | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/13 | 12:37 | SW | 0-2 | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/11 | 12:43 | W | 1-3 | C | 1 | 1m: 10s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/04 | 12:58 | WSW | 3-5 | C | 2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/07 | 13:09 | SW | 1-2 | C, Y | 1 | 5m: 30s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/31 | 14:21 | SW | 1-2 | C, Y | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/04 | 15:30 | W | 3-5 | C | 1 | 1m: 30s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/11 | 15:30 | W | 4-6 | C | 1 | 1m: 10s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/07 | 15:36 | SW | 1-2 | C | 2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/05 | 16:20 | SW | 10 | C | 1-2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/29 | 17:11 | W | 3-6 | C | 1 | 1m: 15s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/18 | 18:04 | W | 3-5 | C | 1 | 1 m: 30 s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/04 | 18:31 | WSW | 4-7 | C | 2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/14 | 18:34 | SW | 1-2 | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/12 | 18:35 | SW | 6 | C | 3 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/13 | 18:35 | SW | 1-3 | C | 2-3 | C |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|------------------------------|------------------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|-----------|
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/19 | 18:40 | SW | 7 | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 08/05 | 18:45 | W | 7 | C | 2-3 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/31 | 18:51 | W | 0-2 | C | 1 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/28 | 19:52 | NW | 2.7 | C, Y | 2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/25 | 20:07 | SW | 1-2 | C | 2 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 07/29 | 20:08 | SW | 3.0 | C | 3 | C |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/18 | 20:20 | W | 2-4 | C | 1 | 1 m: 30 s |
| 8 | 3809 Soto St., Vernon | Greenwich Village Café Parking Lot | 8/27 | 20:27 | SW | 0-1 | C | 0-1 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 08/04 | 13:03 | WSW | 3-5 | L | 1 | 1m: 10s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 07/31 | 14:26 | SE | 1-2 | P | 1 | 5m: 30s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/14 | 14:46 | S | 1-2 | Y | 1 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/11 | 15:34 | W | 3-5 | L | 1 | 1m: 10s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 08/04 | 15:35 | W | 3-5 | L | 1 | 1m: 20s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/12 | 15:50 | W | 7 | L, P | 2, 1 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 07/29 | 17:27 | W | 3-6 | C | 1 | 1m: 15s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/18 | 18:10 | W | 2-4 | L | 1 | 1 m: 15 s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 08/04 | 18:35 | WSW | 3-6 | L | 1 | 1m: 10s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/14 | 18:37 | SW | 1-2 | C | 1 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/21 | 18:40 | SW | 0-2 | C | 0-1 | 1 m: 20 s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 08/05 | 18:55 | W | 7 | L, P | 2, 2 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 07/31 | 18:58 | W | 1-3 | C, I | 1 | 2m: 1m |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/28 | 19:47 | WSW | 2-4 | L | 1 | 1 m: 15 s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 07/28 | 19:59 | W | 2.9 | D | 3 | 5m: 1m |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 07/30 | 19:59 | N | 2.9 | Y | 2 | C |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|------------------------------|----------------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|--------------|
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/25 | 20:12 | SW | 2-3 | L | 2 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 07/29 | 20:14 | NW | 2.3 | Y | 1 | C |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/18 | 20:25 | SW | 2-4 | L | 1-2 | 1 m: 30 s |
| 9 | 3155 Bandini Blvd., Vernon | NE Corner of Sierra Pine/Bandini | 8/26 | 20:50 | W | 5 | L | 1 | 1 m: 40 s |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 07/31 | 08:57 | SW | 2-3 | P | 1 | Single event |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 08/04 | 09:20 | SE | 0-2 | L, P | 1 | 2m: 1m |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/13 | 09:32 | S | 0-1 | C | 1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/14 | 09:52 | SW | 1-2 | C | 1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/12 | 10:00 | --- | --- | P | 1-2 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 07/29 | 11:07 | WNW | 0-2 | L | 2 | Single event |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 08/06 | 12:14 | S | 0-2 | C | 1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/13 | 12:52 | SW | 0-2 | C | 1 | 1 m: 30s |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 08/07 | 13:20 | SW | 1-2 | C | 1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 08/05 | 14:10 | W | 5 | C | 1-2 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 08/06 | 14:27 | S | 0-1 | C | 0-1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 07/31 | 14:32 | SW | 1-2 | C | 2 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 08/04 | 15:45 | W | 3-5 | C | 1 | 1m: 10s |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/7 | 18:25 | W | 2-4 | X | 1 | 2m: 1m |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/13 | 18:44 | SW | 0-2 | C | 1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 8/12 | 18:45 | SW | 8 | C | 1 | C |
| 10 | 3666 S. Soto St., Vernon | RAE. G Café Parking Lot | 07/29 | 20:17 | NW | 1.2 | C | 1 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/14 | 09:55 | W | 1-2 | C | 1 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/12 | 10:10 | W | 1 | P | 1-2 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/14 | 12:17 | SW | 2-3 | T | 1 | C |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|------------------------------|---|-------------|-------|-----------------------|------------------|-------------------|------------------------|--------------|
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 08/06 | 12:19 | S | 0-1 | C | 1 | 1m: 20s |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 08/07 | 15:50 | W | 1-2 | T | 1 | Single event |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/12 | 16:00 | W | 7 | P | 2 | 1 m: 20 s |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 08/05 | 16:35 | W | 8 | P | 2 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/25 | 18:22 | W | 2-3 | P | 2 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 08/06 | 18:33 | NW | 2-3 | O ¹ | 1 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 07/30 | 20:05 | SW | 2.2 | C, T | 3 | 1m: 30s |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 07/28 | 20:10 | W | 2.1 | P | 2 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 07/29 | 20:22 | W | 1.9 | D, C | 3 | C |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/21 | 20:38 | WSW | 2-3 | P | 1 | 2 m: 30 s |
| 11 | 2775 E. 26th St., Vernon | Stericycle Parking Lot | 8/26 | 20:58 | W | 5 | P | 1 | 40 s: 20 s |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 07/31 | 09:07 | E | 1-2 | P | 2 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 08/05 | 10:40 | S | 3 | R | 1 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 08/07 | 10:50 | SE | 1-2 | D | 1 | 5m: 30s |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 08/05 | 14:20 | W | 2 | P | 1 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 8/13 | 16:07 | W | 0-2 | D | 1 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 08/05 | 16:40 | SW | 7 | P | 1 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 8/14 | 18:45 | SW | 1-2 | P | 3 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 8/26 | 18:45 | WSW | 6 | T | 1 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 8/19 | 19:00 | SW | 3 | T | 1 | C |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 07/31 | 19:16 | NW | 2-4 | R | 1 | 1m: 20s |
| 12 | 2590 Harriet St., Vernon | SE Corner Harriet/E. 25 th St. S&H Packing | 07/28 | 20:12 | W | 7.1 | T | 2 | C |

¹ O = Very faint chemical odor

| | | | |
|--|--|---|--|
| <p>CHARACTER</p> <p>C - Cooking of meat and/or fat D - Decayed/dead matter L - Livestock/manure P - Processed meal/dry dog food R - Rendering-type odor other than above B - Bread/bakery/baking odor E - Earth/dirt/soil odor</p> | <p>F - Fruity/maskant odor S - Smoke/burning odor T - Trash/dumpster odor VOC - Paint/solvent odor W - Wood/paper product X - Engine exhaust Y - Soapy/detergent odor O - Other</p> | <p>INTENSITY</p> <p>0 (no odor detected) 1 (very light) 2 (light, distinguishable) 3 (moderate, very distinguishable) 4 (strong, irritating) 5 (very strong, overpowering, intolerable)</p> | <p>FREQUENCY/DURATION</p> <p>C = Constant X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)</p> |
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**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|------------------------------|---------------------------|-------------|-------|-----------------------|------------------|-------------------|------------------------|----------|
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/13 | 09:55 | --- | --- | P | 1-2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/12 | 10:20 | W | 1 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/14 | 12:25 | SW | 1-2 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/06 | 12:28 | S | 0-1 | P | 0-1 | 1 m: 5s |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/11 | 13:15 | SW | 1-3 | P | 1 | 1m: 15s |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/13 | 13:16 | SW | 0-2 | P | 1 | 1 m: 40s |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/04 | 13:27 | W | 2-4 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/12 | 13:40 | W | 6 | P | 2, 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/05 | 14:25 | SW | 6 | P | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/06 | 14:38 | SW | 0-2 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 07/31 | 14:49 | SW | 1-2 | P | 3 | c |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/14 | 15:02 | SW | 1-2 | P, E | 1 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/11 | 15:51 | W | 3-5 | P | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/07 | 15:58 | W | 1-2 | P, E | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/12 | 16:10 | W | 8 | P | 3, 4 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/13 | 16:12 | SW | 0-2 | D, P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/05 | 16:45 | SW | 8 | P | 3-4 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 07/29 | 17:57 | W | 4-7 | P | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/7 | 18:38 | W | 2-4 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/20 | 18:39 | SW | 1-2 | P | 1 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/06 | 18:42 | W | 1-2 | P | 1 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/14 | 18:48 | SW | 1-2 | P | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/11 | 18:55 | W | 3-5 | P | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/27 | 18:55 | SW | 1-2 | P | 1-2 | C |

| | | | |
|---|--|---|--|
| <p>CHARACTER</p> <p>C - Cooking of meat and/or fat D - Decayed/dead matter L - Livestock/manure P - Processed meal/dry dog food R - Rendering-type odor other than above B - Bread/bakery/baking odor E - Earth/dirt/soil odor</p> | <p>F - Fruity/maskant odor S - Smoke/burning odor T - Trash/dumpster odor VOC - Paint/solvent odor W - Wood/paper product X - Engine exhaust Y - Soapy/detergent odor O - Other</p> | <p>INTENSITY</p> <p>0 (no odor detected) 1 (very light) 2 (light, distinguishable) 3 (moderate, very distinguishable) 4 (strong, irritating) 5 (very strong, overpowering, intolerable)</p> | <p>FREQUENCY/DURATION</p> <p>C = Constant X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)</p> |
|---|--|---|--|

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|------------------------------|--|-------------|-------|-----------------------|------------------|-------------------|------------------------|--------------|
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/04 | 18:57 | WSW | 3-6 | P | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/21 | 18:57 | SW | 0-2 | P | 1-2 | 2 m: 1 m |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/12 | 19:00 | SW | 3 | P | 1 | 1 m: 10s |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/13 | 19:00 | SW | 0-2 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/19 | 19:05 | W | 6 | R | 1 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 08/05 | 19:15 | W | 6 | P | 4 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 07/31 | 19:23 | W | 0-2 | P | 1 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/28 | 20:02 | W | 2-3 | R | 2 | 1 m: 30 s |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 07/30 | 20:11 | W | 2.4 | D | 3 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 07/28 | 20:16 | W | 3.1 | C | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/25 | 20:23 | SW | 1-2 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 07/29 | 20:29 | W | 3.0 | D, C | 4 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/20 | 20:29 | SW | 1-2 | P | 2 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/18 | 20:41 | W | 2-4 | R | 1-2 | 1 m: 30 s |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/26 | 21:08 | W | 5 | P, R | 1 | C |
| 13 | 1751 Soto St., LA | Carl's Junior Parking Lot | 8/19 | 21:10 | SW | 5 | R | 1-2 | C |
| 14 | 2650 E. Olympic Blvd., LA | SW Corner Soto/Olympic – Sears Parking Lot | 07/29 | 20:35 | SW | 2.9 | Y | 1 | C |
| 14 A | 1314 Dacotah St, Los Angeles | Christopher Dena Elementary School | 8/12 | 10:30 | SW | 1 | P | 1 | C |
| 14 A | 1314 Dacotah St, Los Angeles | Christopher Dena Elementary School | 08/07 | 13:44 | S | 1-2 | C, T | 1 | C |
| 14 A | 1314 Dacotah St, Los Angeles | Christopher Dena Elementary School | 08/07 | 16:10 | S | 2-3 | C | 1 | C |
| 14 A | 1314 Dacotah St, Los Angeles | Christopher Dena Elementary School | 8/13 | 16:26 | SW | 1-3 | P | 1 | C |
| 14 A | 1314 Dacotah St, Los Angeles | Christopher Dena Elementary School | 8/7 | 18:55 | WSW | 1-3 | T | 1 | 1m: 15s |
| 14 B | 3202 Garnet St, Los Angeles | Residential neighborhood | 8/14 | 10:17 | --- | --- | T | 1 | Single event |
| 14 B | 3202 Garnet St, Los Angeles | Residential neighborhood | 8/13 | 16:31 | SW | 0-1 | P | 1 | 1 m: 15 s |

CHARACTER

C - Cooking of meat and/or fat
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L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
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O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/ Dur |
|-------|-------------------------------|---|-------------|-------|-----------------------|------------------|-------------------|------------------------|--------------|
| 14 B | 3202 Garnet St, Los Angeles | Residential neighborhood | 8/13 | 19:18 | SW | 0-2 | P | 1-2 | C |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 08/07 | 11:13 | S | 1-2 | C | 1 | Single event |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 08/06 | 12:50 | SE | 0-2 | R | 0-1 | 1m: 5s |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 08/07 | 13:51 | E | 1-2 | T | 1 | Single event |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 08/05 | 14:45 | SW | 6 | P | 1 | 1m: 20s |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 08/07 | 16:17 | W | 2-3 | P | 1 | C |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 8/11 | 19:10 | W | 1-3 | P | 1 | 1m: 15s |
| 15 | 3324 Opal St., LA | SW Corner Opal/Lorena St. – Resurrection Church | 8/28 | 20:16 | W | 1-2 | T | 1-2 | 1 m: 15 s |
| 15 B | 1161 Mirasol Ave, Los Angeles | Residential Neighborhood | 8/12 | 10:50 | W | 2 | P | 1 | C |
| 15 B | 1161 Mirasol Ave, Los Angeles | Residential Neighborhood | 08/07 | 16:26 | SW | 2-3 | Y | 1 | C |
| 15 B | 1161 Mirasol Ave, Los Angeles | Residential Neighborhood | 8/20 | 19:00 | SW | 1-2 | Y | 1 | C |
| 15 B | 1161 Mirasol Ave, Los Angeles | Residential Neighborhood | 8/14 | 19:09 | SW | 1-2 | C | 1 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/25 | 20:46 | SW | 1-2 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/14 | 10:30 | SW | 1-2 | Y | 1 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/12 | 10:55 | W | 2 | P | 1 | 30s: 5s |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 07/31 | 12:18 | --- | 0 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 08/06 | 12:50 | SE | 0-2 | R | 0-1 | 1m: 5s |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/14 | 12:52 | S | 1-2 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/14 | 15:43 | SW | 2-3 | Y | 1 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 08/07 | 16:30 | SW | 1-2 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/25 | 18:57 | SW | 1-2 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 08/06 | 19:01 | SW | 2-3 | Y | 1 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/20 | 19:03 | SW | 1-2 | Y | 2 | C |

CHARACTER

C - Cooking of meat and/or fat
D - Decayed/dead matter
L - Livestock/manure
P - Processed meal/dry dog food
R - Rendering-type odor other than above
B - Bread/bakery/baking odor
E - Earth/dirt/soil odor

F - Fruity/maskant odor
S - Smoke/burning odor
T - Trash/dumpster odor
VOC - Paint/solvent odor
W - Wood/paper product
X - Engine exhaust
Y - Soapy/detergent odor
O - Other

INTENSITY

0 (no odor detected)
1 (very light)
2 (light, distinguishable)
3 (moderate, very distinguishable)
4 (strong, irritating)
5 (very strong, overpowering, intolerable)

FREQUENCY/DURATION

C = Constant
X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)

**LOCATIONS WHERE ODORS WERE DETECTED BY SCAQMD INSPECTORS
DURING 2015 VERNON/BOYLE HEIGHTS ODOR SURVEILLANCE – JULY 28 through AUGUST 28**

| Loc # | Approximate Location Address | Location Description | Date (2015) | Time | Wind Direction (From) | Wind Speed (mph) | Odor Description* | Odor Intensity (0-5)** | Freq/Dur |
|-------|------------------------------|---|-------------|-------|-----------------------|------------------|----------------------|------------------------|----------|
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/14 | 19:11 | SW | 1-2 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/26 | 19:18 | WSW | 5 | Y | 1-2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/12 | 19:35 | SW | 3 | Y | 3 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 07/30 | 20:27 | SW | 3.1 | Y | 3 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 07/28 | 20:37 | W | 5.0 | Y | 2 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 07/29 | 20:47 | SW | 2.8 | Y | 3 | C |
| 16 | 3640 E. Olympic Blvd., LA | CVS Parking Lot | 8/20 | 20:54 | SW | 1-2 | Y | 2 | C |
| 17 | 3915 E. Olympic Blvd, LA | SE Corner Indiana/Olympic – 76 Gas Station | 07/31 | 09:35 | NE | 2-3 | Y | 1 | C |
| 17 | 3915 E. Olympic Blvd, LA | SE Corner Indiana/Olympic – 76 Gas Station | 08/06 | 10:36 | SW | 0-1 | P | 1 | 2m: 30s |
| 17 | 3915 E. Olympic Blvd, LA | SE Corner Indiana/Olympic – 76 Gas Station | 08/07 | 16:36 | SW | 1-2 | C | 1 | C |
| 17 | 3915 E. Olympic Blvd, LA | SE Corner Indiana/Olympic – 76 Gas Station | 8/25 | 19:01 | W | 1-2 | P | 2 | C |
| 17 | 3915 E. Olympic Blvd, LA | SE Corner Indiana/Olympic – 76 Gas Station | 8/14 | 19:15 | SW | 1-2 | C | 2 | C |
| 18 | 4112 E. Olympic Blvd., LA | SE Corner Eastman/Olympic Eastman Avenue School | 8/14 | 13:00 | SW | 1-2 | V, C, O ² | 1 | 5m: 30s |
| 19 | 4290 E. Olympic Blvd., LA | Jack in the Box | 08/06 | 10:47 | SW | 0-1 | T | 1 | C |
| 19 | 4290 E. Olympic Blvd., LA | Jack in the Box | 08/07 | 14:15 | E | 1-2 | C | 1 | C |
| 19 | 4290 E. Olympic Blvd., LA | Jack in the Box | 08/07 | 16:43 | W | 1-2 | Y | 2 | C |
| 19 | 4290 E. Olympic Blvd., LA | Jack in the Box | 8/25 | 19:10 | W | 1-2 | P | 1 | C |
| 19 | 4290 E. Olympic Blvd., LA | Jack in the Box | 8/20 | 19:14 | W | 1-2 | C | 1 | C |
| 19 | 4290 E. Olympic Blvd., LA | Jack in the Box | 07/30 | 20:37 | --- | 0.0 | Y | 2 | C |
| 20 | 4824 Civic Center Way, LA | Library | 07/30 | 20:45 | NW | 3.2 | Y | 2 | C |

² Odor from iron work performed on gates at neighboring house

| | | | |
|--|--|---|--|
| <p>CHARACTER</p> <p>C - Cooking of meat and/or fat D - Decayed/dead matter L - Livestock/manure P - Processed meal/dry dog food R - Rendering-type odor other than above B - Bread/bakery/baking odor E - Earth/dirt/soil odor</p> | <p>F - Fruity/maskant odor S - Smoke/burning odor T - Trash/dumpster odor VOC - Paint/solvent odor W - Wood/paper product X - Engine exhaust Y - Soapy/detergent odor O - Other</p> | <p>INTENSITY</p> <p>0 (no odor detected) 1 (very light) 2 (light, distinguishable) 3 (moderate, very distinguishable) 4 (strong, irritating) 5 (very strong, overpowering, intolerable)</p> | <p>FREQUENCY/DURATION</p> <p>C = Constant X:Y = Intermittent, starting every X period (min, sec) and lasting Y period (min, sec) (e.g., 10m:1m = Starting every 10 minutes and lasting for about a minute each time; 5m:30sec = Starting every 5 minutes and lasting for about 30 seconds each time)</p> |
|--|--|---|--|

Appendix D4. Historic Aerial Photographs

Appendix

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Appendix

Figure D5-1 Map from August 22, 1989

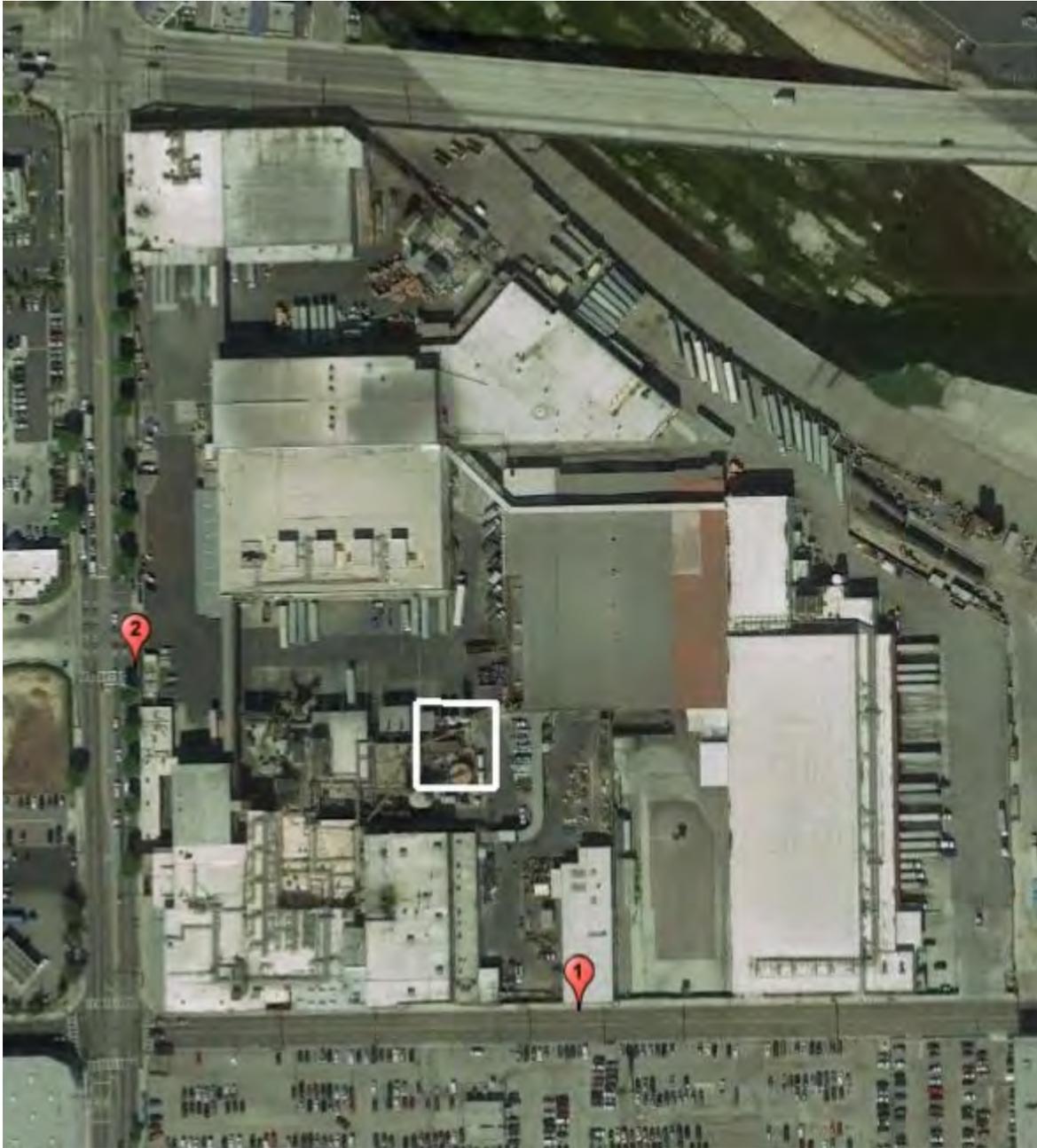


Appendix D5. Landmark Wall Viewshed Photographs

Appendix

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Appendix



Appendix

Photo 1 – Entryway signage on Vernon Avenue



Appendix

Photo 2 – Entryway Signage on Soto Street



Appendix

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**PROPOSED RULE 415
ODORS FROM RENDERING
FACILITIES**



**November 3, 2017
Governing Board Meeting**

Background

- ▣ Rulemaking initiated in Spring 2014
- ▣ PR 415 was originally scheduled for a May 2015 public hearing, but was delayed to respond to comments
- ▣ In September 2015, when rulemaking was suspended staff had:
 - Completed circulation of CEQA document
 - Conducted 4 Working Group Meetings
 - Released 3 versions of PR415
- ▣ At the September 1, 2017 Governing Board Meeting staff was directed to work towards a November Public Hearing for PR 415

Rendering

- ▣ Rendering industry provides a beneficial service
 - Animal materials cannot be landfilled, except for emergencies
 - Provides beneficial products, including grease, tallow, animal feed, pet food, biofuels, cosmetics, lubricants, soap, fertilizer, etc.
 - Rendering facilities may also process odorous kitchen trap grease
- ▣ Rendering odors are very distinctive
- ▣ Five rendering facilities are subject to PR 415
 - 4 facilities in the City of Vernon, and 1 facility in the City of Los Angeles



Need for Proposed Rule 415

- ▣ Priority under the Clean Communities Plan pilot study in Boyle Heights
 - A quality of life issue for people living near or downwind of the rendering facilities
- ▣ Currently no odor reduction measures for rendering facilities
- ▣ Rendering odors are regulated in states such as Utah, South Carolina, Mississippi, Texas, and New York
 - Odor reduction measures in PR 415 are similar to odor control requirements in those jurisdictions
- ▣ Baker Commodities has facilities in California and New York that have similar odor controls as PR415
- ▣ Darling Ingredients is finalizing upgrades to their Vernon facility that will comply with PR415

Vernon Area Rendering Facilities

(Darling Ingredients is located in the City of Los Angeles)



**Six Environmental Justice Communities Impacted by
Odors from Rendering Facilities**

Boyle Heights, Huntington Park, Commerce, Vernon, Maywood and Bell



Key Elements of PR 415



Best Management Practices

- Cover trucks
- Limit holding time for raw materials
- Wash down requirements
- Fix pavement cracks and holes



Permanent Total Enclosure or Closed System for Odorous Operations

- Applies to raw material receiving area, processing equipment, and wastewater
- 2½ to 3½ years to design, permit and construct*
- Alternative enclosure for raw materials receiving area

To Report Odors Call the South Coast Air Quality Management District at
1-800-CUT SMOG
or Facility Contact at
1-555-555-5555

Signage

- Contact 1-800-CUT-SMOG and facility representative
- Odor sign will engage community members



Contingency Odor Mitigation Plan

- Triggered if ongoing odor issues
- Specific Cause Analysis required by facility operator for odor events

PR 415 Provides Flexibility to Facility Operators

- ▣ Allows for alternative Best Management Practices provided meets objective of measure it is replacing
- ▣ Option for closed system or permanent total enclosure
- ▣ Lengthened raw material holding times for refrigerated materials
- ▣ Allows additional holding time for raw materials outside of a building enclosure if additional materials are needed to be processed because another facility is inoperable
- ▣ Alternative ventilation and wastewater treatment enclosure system standards

Key Remaining Issue

- ▣ Two facilities have commented on the cost to implement odor controls
- ▣ SCAQMD staff estimates that the annualized cost for these two facilities combined is \$394,000 to \$513,000 per year
- ▣ Staff has worked with the facilities to allow options to minimize both capital cost and annual operating costs such as:
 - Allowing option for a closed system or enclosure for certain operations;
 - Allowing repair of holes and cracks instead of repaving; and
 - Allowing alternative enclosure provisions for raw material receiving

Staff Recommendation

- ▣ Certify the final Environmental Assessment
- ▣ Adopt Proposed Rule 415