



South Coast Air Quality Management District

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SUBJECT: NOTICE OF COMPLETION OF A DRAFT ENVIRONMENTAL ASSESSMENT AND OPPORTUNITY FOR PUBLIC COMMENT

PROJECT TITLE: PROPOSED AMENDED RULE 1178 – FURTHER REDUCTIONS OF VOC EMISSIONS FROM STORAGE TANKS AT PETROLEUM FACILITIES

In accordance with the California Environmental Quality Act (CEQA), the South Coast Air Quality Management District (South Coast AQMD) is the Lead Agency and has prepared a Draft Environmental Assessment (EA) to analyze environmental impacts from the project identified above pursuant to its certified regulatory program (Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l), and South Coast AQMD Rule 110). The Draft EA includes a project description and analysis of potential adverse environmental impacts that could be generated from the proposed project. The purpose of this letter, the attached Notice of Completion (NOC), and the Draft EA, is to allow public agencies and the public the opportunity to review and comment on the environmental analysis in the Draft EA.

This letter and the NOC for the Draft EA are not South Coast AQMD applications or forms requiring a response from you. Their purpose is simply to provide information to you on the proposed project. **No action on your part is necessary if the proposed project has no bearing on you or your organization.** The proposed project's description, location, and potential adverse environmental impacts are summarized in the NOC. Information on how to obtain the Draft EA and other relevant documents is also provided in the attached NOC.

The NOC has been filed for posting with the county clerks of Los Angeles, Orange, Riverside, and San Bernardino Counties. The NOC and Draft EA have also been electronically filed with the State Clearinghouse of the Governor's Office of Planning and Research to be posted on their CEQAnet Web Portal which, upon posting, may be accessed via the following weblink: <https://ceqanet.opr.ca.gov/search/recent>. In addition, the NOC and Draft EA and other relevant documents have been electronically posted on the South Coast AQMD's webpage which can be accessed via the following weblink: <http://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects>.

Comments focusing on your area of expertise, your agency's area of jurisdiction, if applicable, or issues relative to the environmental analysis for the proposed project will be accepted during a 30-day public review and comment period beginning July 19, 2023 and ending at 5:00 p.m. on August 18, 2023. Please send any comments relative to the CEQA analysis in the Draft EA to Kevin Ni via email to kni@aqmd.gov, via facsimile to (909) 396-3982, or by mail (c/o PRDI/CEQA) to the address shown above. Please include the name, phone number and email address of the contact person, and the organization name, if applicable. Questions regarding the proposed amended rule language should be directed to Melissa Gamoning at (909) 396-3115 or by email to mgamoning@aqmd.gov.

The proposed project will be considered at the Governing Board Meeting (Public Hearing) on September 1, 2023 at 9:00 a.m. (subject to change). The Public Hearing agenda with details on how the public can participate will be posted at least 72 hours prior to the meeting on South Coast AQMD's website at: <http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>.

NOTICE OF COMPLETION (NOC) OF A DRAFT ENVIRONMENTAL ASSESSMENT (EA) AND OPPORTUNITY FOR PUBLIC COMMENT

To: County Clerks for the Counties of Los Angeles, Orange, Riverside and San Bernardino; and Governor's Office of Planning and Research – State Clearinghouse
From: South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

Project Title: Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Project Location: The proposed project is located in the South Coast Air Quality Management District (South Coast AQMD) jurisdiction, which includes the four-county South Coast Air Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portion of the Salton Sea Air Basin and the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin.

Description of Nature, Purpose, and Beneficiaries of Project: Proposed Amended Rule (PAR) 1178 establishes more stringent leak detection and repair and control requirements for storage tanks located at petroleum facilities that have emitted more than 20 tons of volatile organic compounds (VOC) in any reporting year since the rule's adoption in 2001. PAR 1178 establishes requirements for: 1) conducting inspections, including but not limited to weekly optical gas inspections; 2) installing domes and secondary seals; 3) increasing the efficiency of emission control systems; and 4) conducting monitoring, maintenance, recordkeeping, and reporting activities. PAR 1178 applies to storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. Of the proposed changes in PAR 1178, only the installation of domes on external floating roof tanks and additional roof seals on internal floating roof tanks is expected to require physical modifications that could create secondary adverse environmental impacts. However, the Draft EA did not identify any environmental topic areas that would be significantly adversely affected by PAR 1178. Facilities with storage tanks subject to PAR 1178 may be identified on lists compiled by the California Department of Toxic Substances Control per Government Code Section 65962.5; however, the implementation of PAR 1178 will not alter the status of the facilities on the lists.

Lead Agency: South Coast AQMD **Division:** Planning, Rule Development, and Implementation

The Draft EA is available from South Coast AQMD's website at: http://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects	or by calling: (909) 396-2039 or by emailing: PICrequests@aqmd.gov	PAR 1178 and all supporting documentation are available from South Coast AQMD's website at: http://www.aqmd.gov/home/rules-compliance/rules/scaqmd-rule-book/proposed-rules/rule-1178
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The NOC is provided to the public through the following:

- Los Angeles Times (July 19, 2023)
 - South Coast AQMD Mailing List & Interested Parties
 - South Coast AQMD Website
 - South Coast AQMD Public Information Center
 - State Clearinghouse of the Governor's Office of Planning and Research Website
-

Draft EA Review Period (30 days): July 19, 2023 to August 18, 2023

Scheduled Public Meeting Date(s) (subject to change): The proposed project will be considered at the Governing Board Meeting (Public Hearing) on September 1, 2023 at 9:00 a.m. (subject to change). The Public Hearing agenda with details on how the public can participate will be posted at least 72 hours prior to the meeting on South Coast AQMD's website at: <http://www.aqmd.gov/home/news-events/meeting-agendas-minutes>.

Send CEQA Comments to: Kevin Ni	Phone: (909) 396-2462	Email: kni@aqmd.gov	Fax: (909) 396-3982
Direct Questions on PAR 1178 to: Melissa Gamoning	Phone: (909) 396-3115	Email: mgamoning@aqmd.gov	Fax: (909) 396-3982

Date: July 18, 2023

Signature:



Kevin Ni
Acting Program Supervisor, CEQA
Planning, Rule Development, and Implementation

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Draft Environmental Assessment for Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

July 2023

South Coast AQMD Number: 07192023KN

State Clearinghouse Number: TBD

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CHAPTER 1

PROJECT DESCRIPTION

Introduction

California Environmental Quality Act

Project Location

Project Background

Technology Overview

Project Description

INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (South Coast AQMD) in 1977¹ as the agency responsible for developing and enforcing emission control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. By statute, the South Coast AQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the areas under the jurisdiction of the South Coast AQMD². Furthermore, the South Coast AQMD must adopt rules and regulations that carry out the AQMP³. The AQMP is a regional blueprint for how the South Coast AQMD will achieve air quality standards and healthful air; it contains multiple goals promoting reductions of criteria air pollutants including volatile organic compounds (VOC). The 2022 AQMP included Control Measure FUG-01 – Improved Leak Detection and Repair (LDAR), which explores the potential for newer leak detection technologies to improve current LDAR requirements thereby reducing VOC emissions from fugitive leaks from process and storage equipment at a variety of sources including, but not limited to, oil and gas production, petroleum refining, storage and transfer, etc.⁴ Previously, the 2016 AQMP included Control Measure FUG-01 to utilize advanced remote sensing technologies to allow for faster identification and repair of leaks, and the 2012 AQMP included Control Measure FUG-03 – Further Reductions of Fugitive VOC Emissions, which identified the implementation of advanced leak detection technologies, including optical gas imaging (OGI), as a method to reduce the emissions impact from leaks.

In accordance with Assembly Bill (AB) 617, which was signed into state law in 2017, and the California Air Resources Board's (CARB) Community Air Protection Program which implements AB 617, the South Coast AQMD is required to take specific actions to reduce air pollution and toxic air contaminants from commercial and industrial sources to address the disproportionate impacts of air pollution in environmental justice communities. The Wilmington, Carson, and West Long Beach (WCWLB) community, which is qualified as a high priority area, identified in its Community Emission Reduction Plan (CERP) adopted on September 6, 2019, emissions from refineries as an air quality concern. In particular, Chapter 5b, Action 4 in the WCWLB CERP recommended initiating rule development to amend Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities. Recommendations for proposed amendments to consider included improving current LDAR requirements by incorporating advanced leak detection technologies and requiring additional controls.

Since its adoption on December 21, 2001, Rule 1178 has been applicable to any aboveground storage tank that meets the following criteria: is located at a petroleum facility that has emitted more than 20 tons of VOC in any reporting year starting with emission inventory year 2000; and 1) has a capacity equal to or greater than 75,000 liters (19,815 gallons), or 2) is used to store organic liquids with a true vapor pressure (TVP) greater than 0.1 pound per square inch absolute (psia). Potential methods for reducing VOC emissions from aboveground storage tanks subject to Rule 1178 have included converting roofs, installing emission control systems, covering roof openings, and installing best available rim seal systems.

¹ The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch. 324 (codified at Health and Safety Code Section 40400-40540).

² Health and Safety Code Section 40460(a).

³ Health and Safety Code Section 40440(a).

⁴ South Coast AQMD, Final 2022 Air Quality Management Plan, December 2022. <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan>

As directed in the 2022 AQMP and WCWLB CERP, Proposed Amended Rule 1178 (PAR 1178) establishes more stringent leak detection and repair and control requirements, such as weekly optical gas inspections, and additional control requirements for installing domes (referred to as doming) and secondary seals. PAR 1178 applies to 1,059 tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. The proposed amendments will reduce VOC emissions from these sources by 0.82 ton per day and partially implement Control Measure FUG-01 of the 2022 AQMP.

Implementation of PAR 1178 is expected to result in less than significant increases of criteria air pollutants in the short-term due to construction impacts, and overall long-term decrease in VOC emissions through minimizing fugitive losses from storage tanks at petroleum facilities.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA) is comprised of Public Resources Code Section 21000 *et seq.* and CEQA Guidelines which are codified at Title 14 California Code of Regulations, Section 15000 *et seq.* CEQA requires all potential adverse environmental impacts of proposed projects be evaluated and methods to reduce or avoid identified significant adverse environmental impacts of these projects be implemented, if feasible. [Public Resources Code Section 21061.1 and CEQA Guidelines Section 15364]. The purpose of the CEQA process is to inform decision makers, public agencies, and interested parties of potential adverse environmental impacts that could result from implementing a proposed project and to identify feasible mitigation measures or alternatives, when an impact is significant.

Public Resources Code Section 21080.5 allows public agencies with regulatory programs certified by the Secretary of the Resources agency to prepare a plan or other written documents in lieu of a Negative Declaration or Environmental Impact Report (EIR). The South Coast AQMD's regulatory program was certified on March 1, 1989. [CEQA Guidelines Section 15251(l)]. In addition, the South Coast AQMD adopted Rule 110 – Rule Adoption Procedures to Assure Protection and Enhancement of the Environment, which implements the South Coast AQMD's certified regulatory program. Under the certified regulatory program, the South Coast AQMD typically prepares an Environmental Assessment (EA) to evaluate the environmental impacts for rule projects proposed for adoption or amendment.

The proposed amendments to Rule 1178 are a discretionary action subject to South Coast AQMD Governing Board consideration that has the potential for resulting in changes to the environment, and therefore, is considered a “project” as defined by CEQA. [CEQA Guidelines Section 15378]. The lead agency is the “public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment.” [Public Resources Code Section 21067]. Since the South Coast AQMD Governing Board has the primary responsibility for approving and carrying out the entire project as a whole, the South Coast AQMD is the most appropriate public agency to act as CEQA lead agency for the proposed project. [CEQA Guidelines Section 15051(b)].

The proposed project would further reduce VOC emissions from storage tanks through establishing weekly optical gas inspections and additional control requirements for doming, emission control systems, and secondary seals. However, South Coast AQMD's review of the proposed project also shows that the activities that facility operators may undertake to comply with PAR 1178 may also create secondary adverse environmental impacts that would not result in significant impacts for any environmental topic area. Thus, the analysis of PAR 1178 indicates

that the type of CEQA document appropriate for the proposed project is an EA with no significant impacts. The EA is a substitute CEQA document, which the South Coast AQMD, as lead agency for the proposed project, prepared in lieu of a Negative Declaration with no significant impacts [CEQA Guidelines Section 15252], pursuant to the South Coast AQMD's Certified Regulatory Program [Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l); South Coast AQMD Rule 110].

The EA includes a project description in Chapter 1 and an Environmental Checklist in Chapter 2. The Environmental Checklist provides a standard tool to identify and evaluate a proposed project's adverse environmental impacts and the analysis concluded that no significant adverse impacts would be expected to occur if the proposed project is implemented. Because the proposed project would have no statewide, regional, or areawide significance, no CEQA scoping meeting is required to be held pursuant to Public Resources Code Section 21083.9(a)(2). Further, pursuant to CEQA Guidelines Section 15252, since no significant adverse impacts were identified, no alternatives or mitigation measures are required.

The Draft EA is being released for a 30-day public review and comment period from July 19, 2023 to August 18, 2023. Any comments on the analysis presented in this Draft EA received during the public comment period will be responded to and included in an appendix of the Final EA.

Prior to making a decision on the adoption of the proposed project, the South Coast AQMD Governing Board must review and certify the Final EA, including responses to comments, as providing adequate information on the potential adverse environmental impacts that may occur as a result of amending Rule 1178.

PROJECT LOCATION

The proposed project applies to owners or operators of storage tanks used to store organic liquid located at any petroleum facility that emits more than 20 tons per year of VOC in any reporting year starting with emission inventory year 2000: 1) aboveground storage tanks with capacity equal to or greater than 75,000 liters (19,815 gallons) storing organic liquid with a true vapor pressure (TVP) greater than 0.1 psia under actual storage conditions; and 2) storage tanks with a potential for VOC emissions of six tons per year used in crude oil and natural gas production operations. PAR 1178 applies to 1,059 tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. The majority of affected facilities are located within Los Angeles County near the ports while a few are located in San Bernardino county.

South Coast AQMD's jurisdiction covers an area of approximately 10,743 square miles and includes the four-county Basin (all of Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portion of the Salton Sea Air Basin and the non-Palo Verde, Riverside County portion of the Mojave Desert Air Basin. The Basin is a subarea of South Coast AQMD's jurisdiction; it is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The Riverside County portion of the Salton Sea Air Basin, which is a federal nonattainment area known as the Coachella Valley Planning Area, is bounded by the San Jacinto Mountains to the west and spans the eastern boundary of the Coachella Valley up to the Palo Verde Valley (see Figure 1-1).

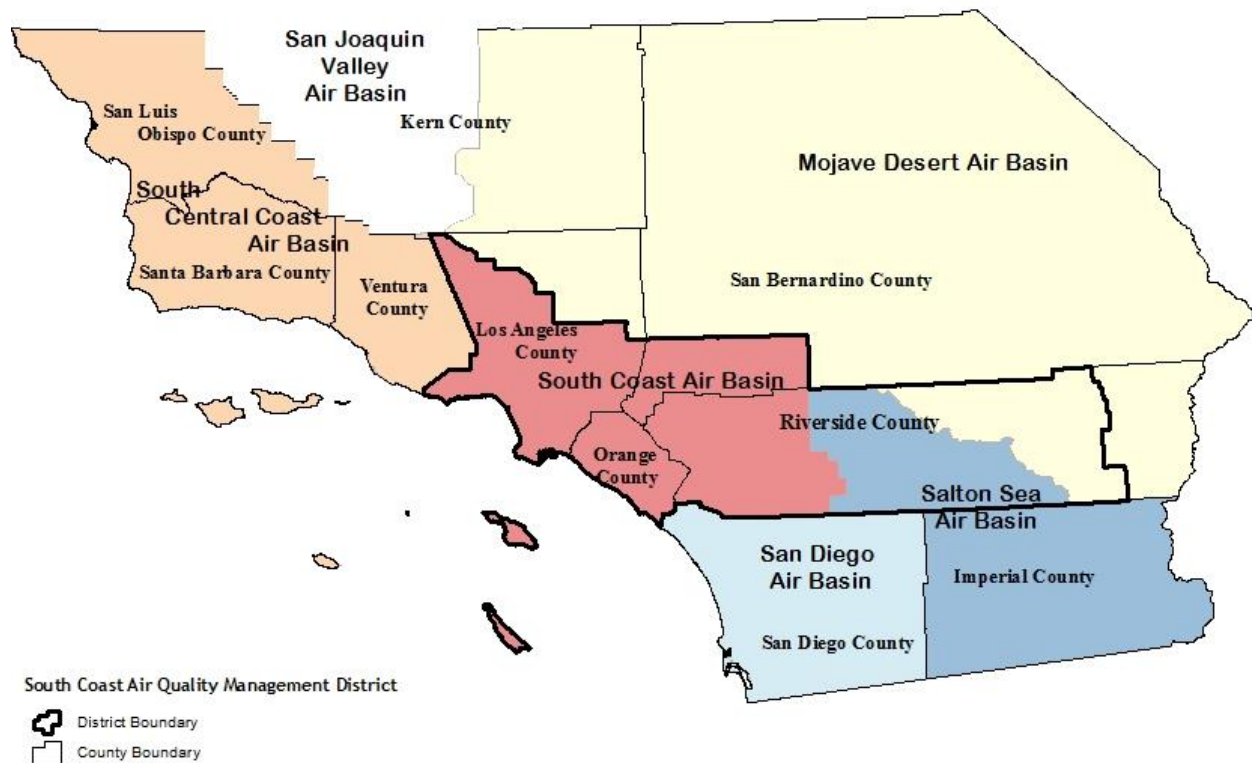


Figure 1-1
Southern California Air Basins and South Coast AQMD's Jurisdiction

PROJECT BACKGROUND

Since its adoption on December 1, 2001, Rule 1178 has applied to aboveground storage tanks that have a capacity equal or greater than 75,000 liters (19,815 gallons) used to store organic liquids with a TVP greater than 0.1 psia, located at petroleum facilities that have emitted more than 20 tons of VOC in any reporting year starting with emission inventory year 2000. Potential methods for reducing VOC emissions from aboveground storage tanks subject to Rule 1178 have included converting roofs, increasing the efficiency of emission control systems, covering roof openings, and installing best available rim seal systems.

Rule 1178 was amended several times over the years. Table 1-1 presents a summary of the previous key changes made to Rule 1178 by amendment year:

**Table 1-1
History of Amendments to Rule 1178**

Rule 1178 Amendment Date	Key Changes to Rule 1178
April 7, 2006	<ul style="list-style-type: none"> • Allowed an alternative for drain covers; • Included a modified seal requirement; • Updated the inspection form; and • Clarified the compliance schedule
April 6, 2018	<ul style="list-style-type: none"> • Specified requirements for flexible enclosure systems; • Required repairs or replacements to be conducted within 72 hours of an identified leak; and • Clarified report submissions
November 6, 2020	<ul style="list-style-type: none"> • Allowed certain operators to accept a permit condition limiting vapor pressure on the material stored in lieu of installing a domed roof
May 5, 2023	<ul style="list-style-type: none"> • Expanded rule applicability to include storage tanks subject to the United States Environmental Protection Agency’s (U.S. EPA’s) 2016 Control Techniques Guidelines (2016 CTG) for the Oil and Gas Industry

In accordance with AB 617, which was signed into state law in 2017, and the CARB Community Air Protection Program which implements AB 617, the South Coast AQMD is required to take specific actions to reduce air pollution and toxic air contaminants from commercial and industrial sources to address the disproportionate impacts of air pollution in environmental justice communities, such as Wilmington, Carson, and West Long Beach. The WCWLB CERP, adopted on September 6, 2019 by this community, identified emissions from refineries as an air quality concern, and Chapter 5b, Action 4 in the CERP specifically seeks to have South Coast AQMD initiate rule development to amend Rule 1178. Recommendations for potential amendments included improving current leak detection and repair requirements by incorporating advanced leak detection technologies and requiring additional controls. Also, both the 2016 AQMP and 2022 AQMP included Control Measure FUG-01 – Improved Leak Detection and Repair (LDAR) which was specifically designed to utilize advanced remote sensing technologies to allow for the faster identification and repair of leaks from equipment at oil and gas and other facilities that are currently required to maintain a LDAR program.

In response, staff initiated rule development to amend Rule 1178; however, it was first necessary to perform a limited amendment on November 6, 2020 in response to an affected facility’s request for relief from the requirement of installing a domed roof because doing so could result in a safety hazard. The amendment allowed certain operators to accept a permit condition limiting vapor pressure on the material stored in lieu of installing a domed roof.

In 2016, U.S. EPA released the 2016 CTG for the Oil and Gas Industry. Nonattainment areas classified as “Moderate” or worse, such as South Coast AQMD, are required to implement Reasonably Available Control Technology (RACT) for VOC sources covered by the CTG. Storage tanks covered by the 2016 CTG include those with the potential for VOC emissions of six tons per year or more, and are located at oil and natural gas facilities (excluding distribution); the RACT recommendation for such storage tanks is 95% emission control. While Rule 1178 contained requirements for 95% emission control or greater, the rule did not apply to storage tanks based on the quantity of their potential VOC emissions. Rather, Rule 1178 was applicable to storage tanks based on the capacity and the TVP of the material stored. Because the U.S. EPA stated that it was unclear whether all tanks subject to the 2016 CTG were covered by the applicability requirements, Rule 1178 was amended on May 5, 2023 to ensure the applicability would use direct terms to include storage tanks subject to the U.S. EPA’s 2016 CTG for the Oil and Gas Industry.

PAR 1178 is now being amended to implement the 2022 AQMP Control Measure FUG-01 and the goals of the WCWLB CERP.

TECHNOLOGY OVERVIEW

The following discussion provides a general overview of the control technologies and enhanced leak detection technologies associated with aboveground storage tank emissions.

Control Technologies

Domes

Domes are covers that can be installed onto external floating roof tanks, typically of a geodesic dome shape and made of lightweight material such as aluminum. Domes have the effect of preventing wind movement over the external floating roof as wind can cause vapors from inside the tanks to escape through the floating roof seals. By installing domes onto external floating roof tanks storing crude oil, standing losses may be reduced by 70% to 75%⁵. Staff identified 54 external floating roof tanks that are used for storing crude oil, ranging from 90 feet to 260 feet in diameter, which could be domed.

Alternative to Doming

Staff analyzed alternative options to doming and determined that by limiting the TVP of crude oil stored, equivalent VOC emission reductions may be achieved. Based on emissions calculations using TankESP PRO software, staff found that limiting Reid Vapor Pressure (RVP) of crude oil to approximately 3.7 psia results in equivalent VOC emission reductions to doming. RVP is the vapor pressure of the organic liquid at 100 degrees Fahrenheit as determined by ASTM Method D-323, whereas TVP is the vapor pressure of the organic liquid at actual storage temperature. The average TVP of crude oil in the storage tanks that results in equivalent emission reductions to doming is 2.2 psia (approximately RVP 3.7 psia). Staff is proposing to maintain the requirement for doming on external floating roof tanks used to store organic liquid with TVP of 3 psia or greater and remove the exemption for crude oil tanks. In lieu of installing a dome on these eligible tanks, some facilities may elect to take a permit condition limiting the storage of only crude oil with a TVP less than 3 psia.

⁵ Based on results from TankESP PRO for doming external floating roofs of different diameters storing crude oil with RVP 6-9 at 80 deg. F in Los Angeles, with deck fittings currently required by Rule 1178.

Emission Control Systems (Vapor Recovery)

Vapor recovery systems collect VOC vapors and either destroy the VOC by combustion or remove VOC from gas streams with adsorption. These systems are currently used for emissions control on sources at petroleum facilities such as fixed roof tanks and truck loading racks. The most common type of vapor recovery system used on fixed roof tanks are combustion systems that have associated NOx emissions. Adsorption with carbon canisters does not emit NOx emissions, but has higher capital costs and is less desirable for tanks.

Seals

Primary and secondary seals are used on floating roof tanks to block the annular space between the floating roof and the tank shell, thus preventing the emission of VOC vapors. Gaps between floating roof seals and tank shells are allowed by Rule 1178 and other tank agencies' tank rules; however, more stringent gap requirements are contained in San Joaquin Valley Air Pollution Control District and U.S. EPA rules. Rule 1178 also does not require both a primary seal and secondary seal on all tanks. An assessment was conducted to determine the feasibility to require more stringent gap requirements and secondary seals on all tanks, and staff concluded that eight internal floating roof tanks used to store organic liquid with a true vapor pressure of greater than 0.1 psia were not equipped with secondary seals and would benefit from their installation.

Leak Detection Technologies

Optical Gas Imaging (OGI)

An optical gas imaging camera uses infrared technology to visualize vapors and has different detectors capable of visualizing a variety of gas wavelengths. VOC wavelengths range between 3.2 and 3.4 micrometers. OGI cameras with the ability to detect or visualize in this range of wavelength contain a cryocooler that is integrated into the sensor which increases the sensitivity of the camera and the ability to detect smaller leaks. OGI cameras are widely used a screening tool for leak detection purposes.

OGI cameras are accepted as a viable leak detection technology. Handheld OGI cameras are used widely by leak detection service providers as well as facilities. Figures 1-2 and 1-3 show images captured with an OGI device by South Coast AQMD compliance and enforcement staff.

Staff proposes weekly OGI inspections for all tanks subject to Rule 1178 and additional semi-annual inspections for floating roof tanks. Semi-annual inspections will only be required for floating roof tanks since fixed roof tanks are already subject to quarterly U.S. EPA Method 21 inspections.

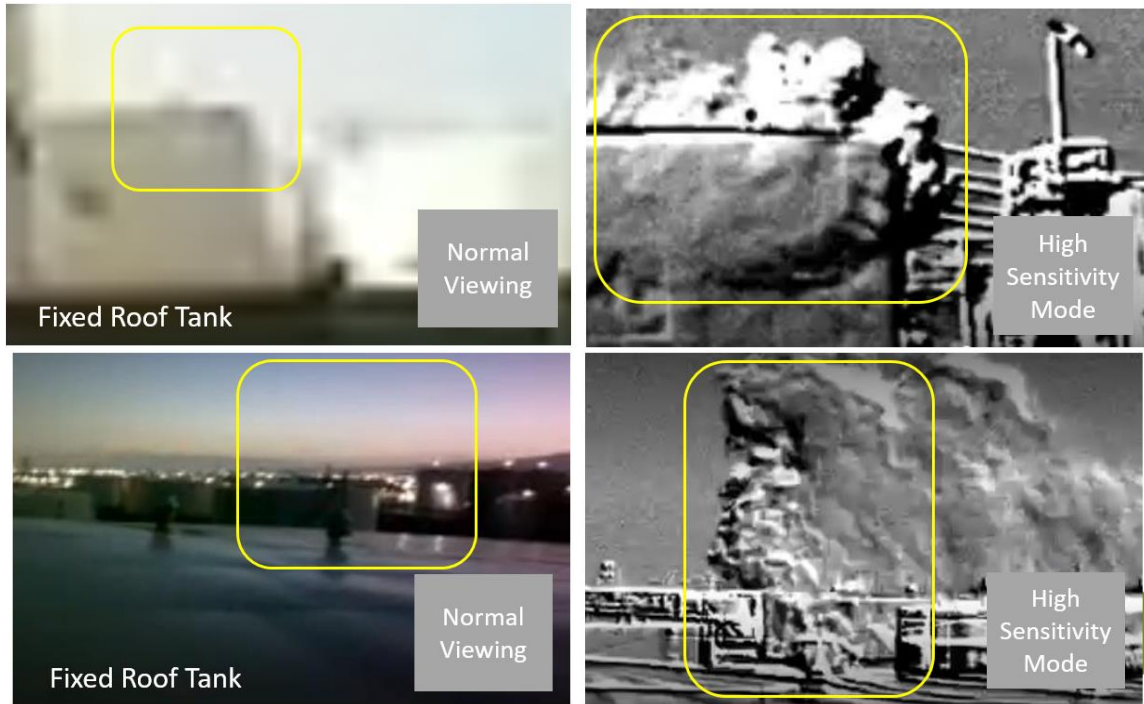


Figure 1-2
Fixed Roof Tank Viewing with an OGI Device

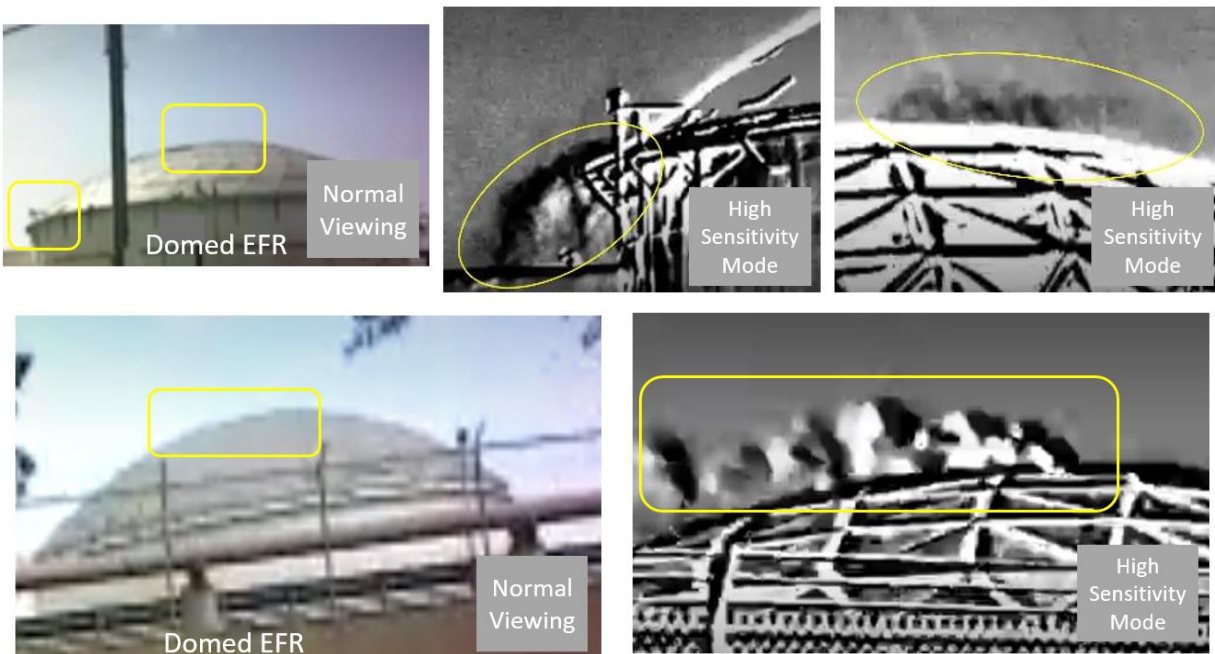


Figure 1-3
Domed External Floating Roof Tank Viewing with an OGI Device

PROJECT DESCRIPTION

Proposed Amended Rule (PAR) 1178 establishes more stringent leak detection and repair and control requirements for storage tanks located at petroleum facilities that have emitted more than 20 tons of VOC in any reporting year since the rule's adoption in 2001. PAR 1178 establishes requirements for: 1) conducting inspections, including but not limited to weekly optical gas inspections; 2) installing domes and secondary seals; 3) increasing the efficiency of emission control systems; and 4) conducting maintenance, recordkeeping, and reporting activities. PAR 1178 applies to storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day.

The following is a detailed summary of the key elements contained in PAR 1178. Appendix A of this EA contains draft rule language; actual text from PAR 1178 is italicized while the explanation and clarification of each provision is in a non-italicized font.

Proposed Amended Rule 1178

PAR 1178 will contain the following subdivisions:

- a) Purpose*
- b) Applicability*
- c) Definitions*
- d) Requirements*
- e) Identification Requirements*
- f) Inspection and Monitoring Requirements*
- g) Maintenance Requirements*
- h) Record Keeping and Reporting Requirements*
- i) Test Methods and Procedures*
- j) Exemptions*

Subdivision (a) – Purpose

The purpose of this rule is to reduce VOC emissions from storage tanks containing organic liquid located at large petroleum facilities.

Subdivision (b) – Applicability

Applicability will be revised to clarify that determination of the 20 tons per year of VOC emissions threshold is based on Annual Emission Reports.

Subdivision (c) – Definitions

Definitions were added for clarity for new requirements and are referenced and discussed below.

- *COMPONENT INSPECTION is monitoring for Visible Vapors with an Optical Gas Imaging Device of a Storage Tank roof and individual components, including but not limited to Roof Openings and Rim Seal Systems, viewable from the tank platform and ground.*
This is a new definition added to specify the requirements for this type of inspection.
- *EMISSION INVENTORY YEAR is the annual emission-reporting period specified by the Annual Emission Reporting Program requirements for a given year.*

This definition was modified to reflect the change in required reporting periods specified by the Annual Emission Reporting Program for different years.

- *OPTICAL GAS IMAGING DEVICE is an infrared camera with a detector capable of visualizing gases in the 3.2-3.4 micrometer waveband.*
This is a new definition to specify the capability of the OGI camera allowed to be used for required OGI inspections.
- *TANK FARM INSPECTION is monitoring for Visible Vapors with an Optical Gas Imaging Device of all applicable Storage Tanks at a Facility where the person conducting the inspection views the top of the tank shell, and fixed roof or dome, if applicable. Tank Farm Inspections may be conducted at an elevated position and/or at ground level.*
This is a new definition added to specify the requirements for this type of inspection.
- *VISIBLE VAPORS is any vapors detected with an Optical Gas Imaging Device during a Component or Tank Farm Inspection, when operated and maintained in accordance with manufacturer training, certification, user manuals, specifications, and recommendations.*
This is a new definition to clarify rule requirements for storage tanks that must be maintained in a condition that is free of Visible Vapors.

Subdivision (d) – Requirements

PAR 1178 includes revisions to existing and new requirements as described in this the following discussion. PAR 1178 establishes requirements for secondary seal gaps, emission control systems efficiencies, doming, testing, implementation, and monitoring. Requirements with implementation dates that that have already been met have been removed for clarity and simplicity.

Secondary Seal Gap Requirements – Clause (d)(1)(C)(iii)

Gap requirements for secondary seals have been revised to reflect the stringency of gap requirements at other air districts as well as the stringency of gap requirements contained in U.S. EPA's 40 CFR 60 Subpart Kb. The lengths of gaps greater than 0.5 inch wide cannot, when totaled together, exceed 10% of the length of the circumference. The length of gaps greater than 1/8 inch wide cannot, when totaled together, exceed 30% of the length of the circumference.

External Floating Roof Tank Condition – Subparagraph (d)(1)(D)

External floating roofs tanks must be kept in a condition free of Visible Vapors resulting from a defect or malfunction of equipment and is determined by an optical gas imaging inspection conducted pursuant to the requirements of paragraph (f)(4).

Doming External Floating Roof Tanks – Subparagraph (d)(1)(E)

Facilities are required to install a dome on any External Floating Roof Tank storing Organic Liquid with a true vapor pressure of 3 psia or greater unless permitted to contain 97% by volume crude oil. All external floating roof tanks permitted to contain 97% by volume crude oil are required to have a dome installed unless a permit application is submitted to limit the true vapor pressure of the crude oil to less than 3 psia within one year from date of adoption. An external floating roof tank permitted to contain 97% by volume crude oil for which a permit application has not been submitted to limit the true vapor pressure to less than 3 psia within one year from date of adoption is subject to the doming schedule of paragraph (d)(5).

True Vapor Pressure Measurements – Subparagraph (d)(1)(F)

Facilities are required to measure and record the true vapor pressure of the organic liquid inside all external floating roof tanks not equipped with a dome on a semi-annual (once every six months) basis to verify the true vapor pressure is less than 3 psia.

Internal/Domed External Floating/Fixed Roof Tank Condition Requirements – Subparagraphs (d)(2)(C), (d)(3)(F), and (d)(4)(C)

Internal floating roof, domed external floating roof, and fixed roof tanks are required to comply with the requirements of subparagraph (d)(1)(D) that specify the condition in which tanks must be maintained.

Emission Control Systems for Fixed Roof Tanks – Clause (d)(4)(A)(i)

Emission control systems required on fixed roof tanks must achieve 98% control efficiency by weight.

Compliance Schedules – Paragraph (d)(5)

This paragraph contains compliance schedules detailing when requirements of the rule apply for facilities currently subject to the rule, facilities that may later become subject to the rule, equipment that becomes subject to specific rule requirements on date of rule adoption, and equipment that may later become subject to specific requirements.

Tank Requirements – Subparagraph (d)(5)(A)

This subparagraph contains existing compliance timelines for tanks to meet the requirements of Rule 1178 if the facility they are located at becomes subject to Rule 1178 after date of rule adoption.

Doming Requirements – Subparagraph (d)(5)(B)

Any facility or facilities under common ownership with external floating roof tanks permitted to contain 97% crude oil by volume that become subject to doming upon date of adoption are required to dome one-third of their applicable tanks by December 31, 2031, half of their applicable tanks by December 31, 2033 and all of their applicable tanks by December 31, 2038.

Crude Oil External Floating Roof Tanks Later Subject to Doming – Subparagraph (d)(5)(C)

Any external floating roof tank that is permitted to contain more than 97% by volume crude oil with a True Vapor Pressure of less than 3 psia, which becomes subject to doming requirements after the date of rule adoption due to exceeding the true vapor pressure limitation of 3 psia or greater, must install a dome within 3 years of that exceedance and becoming subject to the doming requirement.

Internal Floating Roof Tank Requirements – Subparagraph (d)(5)(D)

Any internal floating roof tanks not equipped with a secondary seal are required to have a secondary seal installed the next time the tank is emptied and degassed starting two years after date of adoption. All internal floating roof tanks must have a secondary seal installed no later than 10 years after date of adoption.

Subdivision (f) – Inspection and Monitoring RequirementsOptical Gas Imaging (OGI) Inspections – Paragraph (f)(4)

Optical gas imaging inspections are required to determine compliance with the requirement for tanks to be maintained in a condition that is free of Visible Vapors resulting from a defect or malfunction of control equipment. This paragraph contains the requirements for OGI inspections.

Certification/Training of Person Conducting OGI Inspection – Subparagraph (f)(4)(A)

Persons conducting the OGI inspection must be manufacturer-certified or have undergone manufacturer's training for the camera used, including all subsequent certification or training recommended by the OGI manufacturer. The OGI camera must be operated and maintained in accordance with all manufacturer guidance including but not limited to that stated in any training or certification course, user manuals, specifications, and recommendations.

Tank Farm Inspection Requirements – Subparagraph (f)(4)(B)

This subparagraph contains requirements for Tank Farm Inspections.

Frequency (Tank Farm Inspection) – Clause (f)(4)(B)(i)

Inspections must be conducted at least once every calendar week.

Procedure (Tank Farm Inspection) – Clause (f)(4)(B)(ii)

An inspector is required to monitor for Visible Vapors with a Tank Farm Inspection. If Visible Vapors are detected during a Tank Farm Inspection, an inspector must conduct an additional inspection from the tank's platform to determine the source of emissions. From the platform, an inspector will use an OGI device to inspect components required to be maintained vapor tight or with no visible gaps viewable from the tank platform. If Visible Vapors are detected from any components that are required to be maintained in a Vapor Tight Condition or in a condition with no Visible Gaps, the facility must demonstrate compliance with rule requirements for any component in which Visible Vapors are emitted or make a repair, within 3 days of identifying the Visible Vapors. If Visible Vapors are detected from the roof or other components, the inspector must identify any defects in components or equipment from which Visible Vapors are detected with a visual inspection which may include the use of an OGI device. If no defects are identified, no further action is required for the inspection. If a defect is identified, a repair must be made within 3 days.

Alternative Option (Tank Farm Inspection) – Clause (f)(4)(B)(iii)

If an inspector performs an inspection required by Clause (f)(4)(B)(ii) on tank and determines that no demonstrations and repairs are required, the inspector has the option to record the Visible Vapors from that tank to use as a baseline to determine an increase in emissions in subsequent weekly Tank Farm Inspection for that tank. If Visible Vapors are detected from that tank during the following Tank Farm Inspections but do not indicate an increase in emissions compared to the baseline emissions, the inspector does not need to perform an inspection required by Clause (f)(4)(B)(ii); however, this applies only for the weekly inspections in the same calendar month that the baseline emissions were determined.

Component Inspections – Subparagraph (f)(4)(C)

This subparagraph contains requirements for Component Inspections. Component inspections include monitoring of individual components including, but not limited to rim seals, pressure-vacuum vents, hatches, guidepoles, roof legs, emission control system connections, and vents.

Frequency (Component Inspection) – Clause (f)(4)(C)(i)

Inspections must be conducted at least once every six months for floating roof tanks and may be conducted during other required semi-annual inspections.

Procedure (Component Inspection) – Clauses (f)(4)(C)(ii)-(iii)

Repairs or demonstration with applicable rule requirements must be conducted when Visible Vapors are detected from any component or equipment, except for rim seal systems. Repairs or demonstrations with rim seal requirements must be conducted when Visible Vapors are emitted from the rim seal and are also detectable at the top of the tank shell or from roof vents.

Subdivision (g) – Maintenance Requirements

This subdivision contains maintenance requirements for tanks that do not meet the requirements of the rule.

Repairs Schedules – Paragraph (g)(2)

Repairs or adjustments must be made within three days of identifying Visible Vapors requiring a repair determined pursuant to paragraph (f)(4).

Maintenance Schedule for Domed Tanks – Paragraph (g)(3)

Any tank subject to the doming schedule of paragraph (d)(5) must maintain the dome by performing a complete re-seal of the dome seams and hubcaps every 20 years beginning the date of dome installation.

Subdivision (h) – Reporting and Recordkeeping Requirements

This subdivision contains updated recordkeeping and reporting requirements for OGI inspections and additional reporting requirements of inspections required by paragraphs (f)(1) through (f)(3).

Reporting and Recordkeeping Requirements for OGI Inspections – Paragraph (h)(2)

This paragraph contains notification and recordkeeping requirements for OGI inspections.

Reporting for OGI Inspections – Subparagraph (h)(2)(A)

If Visible Vapors resulting from a defect are detected during a Tank Farm Inspection, facilities must report to 1-800-CUT-SMOG within 24 hours after the inspection is completed.

Records for Tank Farm Inspections – Subparagraph (h)(2)(B)

This subparagraph contains recordkeeping requirements for Tank Farm Inspections. Written and digital records must be kept of Visible Vapors resulting from a defect in equipment or from components required to be vapor tight or with no visible gap.

Records for Component Inspections – Subparagraph (h)(2)(C)

This subparagraph contains recordkeeping requirements for Component Inspections.

Records of True Vapor Pressure – Paragraph (h)(6)

This paragraph was revised to include a requirement to keep records of true vapor pressure test results.

Subdivision (j) – Exemptions

This subdivision contains criteria for exemption from all or some of the requirements of the rule.

Exemption from Doming – Paragraph (j)(3)

This exemption was modified to clarify that tanks with a permit condition limiting the true vapor pressure of the organic liquid stored to less than 3 psia are exempt from doming requirements only if the organic liquid stored in the tank has a true vapor pressure less than 3 psia as demonstrated by required testing.

Exemption for Tanks Storing Organic Liquid with Low True Vapor Pressure – Paragraph (j)(4)

Tanks storing organic liquid with TVP of 0.1 psia or less are exempt from all requirements of the rule provided that the owner or operator tests the TVP of the organic liquid at least every five years for refined organic liquid or products meeting specifications for sale and at least annually for all other organic liquids, and demonstrates a TVP of 0.1 psia or lower.

Exemption from Doming for Crude Oil Tanks – Paragraph (j)(5)

Crude oil tanks that become subject to doming requirements upon the date of rule adoption may be exempt from doming if a permit application is submitted to limit the crude oil TVP to lower than 3 psia within one year from the date of rule adoption. Any crude oil tanks for which a permit application is not submitted to limit the TVP to lower than 3 psia within one year from date of adoption is subject to the doming requirements, including crude oil with a TVP of less than 3 psia.

Exemption from OGI Inspections – Paragraph (j)(6)

Any tank that is empty or opened to the atmosphere, and complying with the requirements of Rule 1149 is exempt from OGI inspections.

Exemption Removals

Former paragraph (j)(2) – Proposed amendments remove the exemption for secondary seals for domed external floating roof tanks. All domed external floating roof tanks subject to the rule must have secondary seal installed.

Former paragraph (j)(7) – Proposed amendments remove the exemption from doming for tanks permitted to contain more than 97% by volume crude oil. Any tank with organic liquid with true vapor pressure of 3 psia or greater is required to install a dome unless otherwise stated in the rule.

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:	PAR 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
CEQA Contact Person:	Kevin Ni, (909) 396-2462, kni@aqmd.gov
PAR 1178 Contact Person:	Melissa Gamoning, (909) 396-3115, mgamoning@aqmd.gov
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:	PAR 1178 establishes more stringent leak detection and repair and control requirements for storage tanks located at petroleum facilities that have emitted more than 20 tons of VOC in any reporting year since the rule's adoption in 2001. PAR 1178 establishes requirements for: 1) conducting inspections, including but not limited to weekly optical gas inspections; 2) installing domes and secondary seals; 3) increasing the efficiency of emission control systems; and 4) conducting monitoring, maintenance, recordkeeping, and reporting activities. PAR 1178 applies to storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day.
Surrounding Land Uses and Setting:	Various
Other Public Agencies Whose Approval is Required:	Not applicable

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 "✓" involve at least one impact that is a "Potentially Significant Impact". An explanation relative to the determination of impacts can be found following the checklist for each area.

- Aesthetics
- Agriculture and Forestry Resources
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural and Tribal Cultural Resources
- Energy
- Mandatory Findings of Significance
- 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 and Hazardous Waste
- Transportation
- Wildfire

DETERMINATION

On the basis of this initial evaluation:

- I find the proposed project, in accordance with those findings made pursuant to CEQA Guidelines Section 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: 1) have been analyzed adequately in an earlier **ENVIRONMENTAL ASSESSMENT** pursuant to applicable standards; and, 2) 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 18, 2023

Signature: 

Kevin Ni
Acting Program Supervisor, CEQA
Planning, Rule Development and
Implementation

ENVIRONMENTAL CHECKLIST AND DISCUSSION

As explained in Chapter 1, PAR 1178 proposes to reduce VOC emissions from storage tanks used to store organic liquid located at any petroleum facility that emits more than 20 tons per year of VOC in any reporting year starting with emission inventory year 2000: 1) aboveground storage tanks with capacity equal to or greater than 75,000 liters (19,815 gallons) storing organic liquid with a true vapor pressure greater than 5 mmHg (0.1 psia) under actual storage conditions; and 2) storage tanks with a potential for VOC emissions of six tons per year used in crude oil and natural gas production operations. PAR 1178 proposes to establish more stringent leak detection and repair and control requirements, such as weekly optical gas inspections, and additional control requirements for domes, secondary seals, and emission control systems.

Of the proposed changes in PAR 1178, only the installation of domes on external floating roof tanks and additional roof seals on internal floating roof tanks are expected to require physical modifications involving construction and these activities could create secondary adverse environmental impacts. In particular, installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks under PAR 1178 might require the specific storage tank set to undergo modifications to be emptied and degassed first if repairs are needed. Construction from doming external floating roof tanks involves assembling the dome, lifting it, and installing the dome; while installing additional roof seals on internal floating roof tanks is a one-step process. These activities create the potential for secondary adverse environmental impacts from construction.

PAR 1178 provides long time frames for when domes are required to be installed on applicable storage tanks in accordance with subparagraph (d)(5)(B), as follows: one-third of applicable storage tanks by year's end 2031, half by year's end 2033, and all remaining tanks by year's end 2038. In addition, construction activities associated with installing domes are expected to occur concurrently in situations when requirements other than PAR 1178 necessitate emptying and degassing the tank. For example, PAR 1178 subparagraph (d)(5)(A)(iii) specifies that the timing of construction should be coordinated and coincide with when the storage tank is next emptied or degassed when installing additional roof seals on internal floating roof tanks. For these reasons, storage tank emptying and degassing activities are not considered unique to PAR 1178 and as such, the environmental impacts from these activities are excluded from the analysis of construction activities. In addition, no grading or site preparation activities are required for constructing domes. Thus, this construction analysis focuses on impacts from the combined efforts associated with: 1) doming external floating roof tanks which involves assembling the dome, lifting it, and installing the dome; and 2) installing additional roof seals on internal floating roof tanks as a one-step process.

Once the domes and additional roof seals are installed, no changes in process operations involving these storage tanks are expected to occur. Therefore, other than VOC emission reductions, which are an environmental benefit to air quality, no adverse operational impacts are expected.

Other components of PAR 1178, such as requirements for conducting weekly optical gas imaging inspections and other types of inspections, establishing a maintenance repair schedule and conducting maintenance, and implementing recordkeeping and reporting provisions would not be expected to cause any physical changes that would create any secondary adverse environmental impacts either during construction or operation.

For these reasons, the analysis in this EA focuses on the key elements in the proposed project with the potential to create secondary adverse environmental impacts associated with doming 54 external floating roof tanks at eight facilities and installing additional secondary seals on eight internal floating roof tanks.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
I. <u>AESTHETICS.</u> Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point(s).) If the project is in an urbanized area, would the project conflict with applicable zoning or other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

Significance Criteria

The proposed project impacts on aesthetics will be considered significant if:

- The project will block public views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of public views 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

I. a), b), & c) Less Than Significant Impact. For the purpose of determining significance under CEQA, a scenic vista is generally considered a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public. Some scenic vistas are officially designated by public agencies, or informally designated by tourist guides. Vistas provide visual access or panoramic views to a large geographic area and are generally located at a point where surrounding

views are greater than one mile away. Panoramic views are usually associated with vantage points over a section of urban or natural areas that provide a geographic orientation not commonly available. Examples of panoramic views might include an urban skyline, valley, mountain range, a large open space area, the ocean, or other water bodies. A substantial adverse effect to a scenic vista is one that degrades the view from such a designated view spot.

A scenic highway is generally considered a stretch of public roadway that is designated as a scenic corridor by a federal, state, or local agency. Caltrans defines a scenic highway as any freeway, highway, road, or other public right of way, that traverses an area of exceptional scenic quality.

Physical modifications associated with the proposed project are limited to doming external floating roof tanks and installing additional roof seals on internal floating roof tanks at existing facilities. The construction equipment is expected to be at the height of or just above the existing storage tanks and not substantially visible to the surrounding area due to construction occurring within each existing facility's property line, existing fencing along property lines, and existing structures currently within each facility's boundaries that may buffer the views of the construction activities.

Since the affected facilities are located in existing industrial areas, the construction equipment is not expected to be substantially discernable from other off-road equipment that exists on-site for routine operations and maintenance activities. Further, the construction activities are not expected to adversely impact views and aesthetics resources since most of the construction equipment and activities are expected to occur within the confines of each existing facility and are expected to introduce only minor visual changes to areas outside each facility, if at all, depending on the location of the construction activities within each affected facility. In addition, the construction activities are expected to be temporary in nature. Once construction is completed, all construction equipment would be removed from each facility.

Since all of the affected facilities are located in urbanized areas, any changes to the buildings or structures would require approvals from the local city or county planning departments. It is important to note that the affected facilities are located throughout Los Angeles county, with some located in San Bernardino county. Both counties are mandated by the state of California to prepare a general plan containing an aesthetics element. None of the anticipated physical activities associated with implementing PAR 1178 are intended to interfere or be inconsistent with the local planning department aesthetics requirements in their general plans. Based on the locations of the affected facilities, the proposed project would neither take place in nor have a substantial adverse effect on a scenic vista indicated in the Los Angeles County General Plan 2035 or San Bernardino Countywide Plan.^{6,7} Further, none of the affected facilities are located within the views of a scenic vista or state scenic highway as designated by the California Department of Transportation (CalTrans).⁸ Also, Therefore, PAR 1178 would not be expected to conflict with applicable zoning or other regulations governing scenic quality.

In addition, staff received a comment claiming that installation of domed roofs on large storage tanks could change the visual character of the landscape, particularly for storage tanks located near

⁶ Los Angeles County, General Plan 2035 Chapter 9 Section VII, Updated July 14, 2022. https://planning.lacounty.gov/wp-content/uploads/2022/11/9.0_gp_final-general-plan-ch9.pdf.

⁷ San Bernardino County, Countywide Plan, Accessed January 2023. <https://countywideplan.com/policy-plan/natural-resources/>

⁸ Caltrans, Officially Designated County Scenic Highways. Accessed January 2023. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>

coastal sightlines. Of the eight facilities with the 54 existing storage tanks that may be domed, Figure 2-1 illustrates the locations of the eight facilities and their proximity to coastal areas and only three facilities are located at or near the coastline.

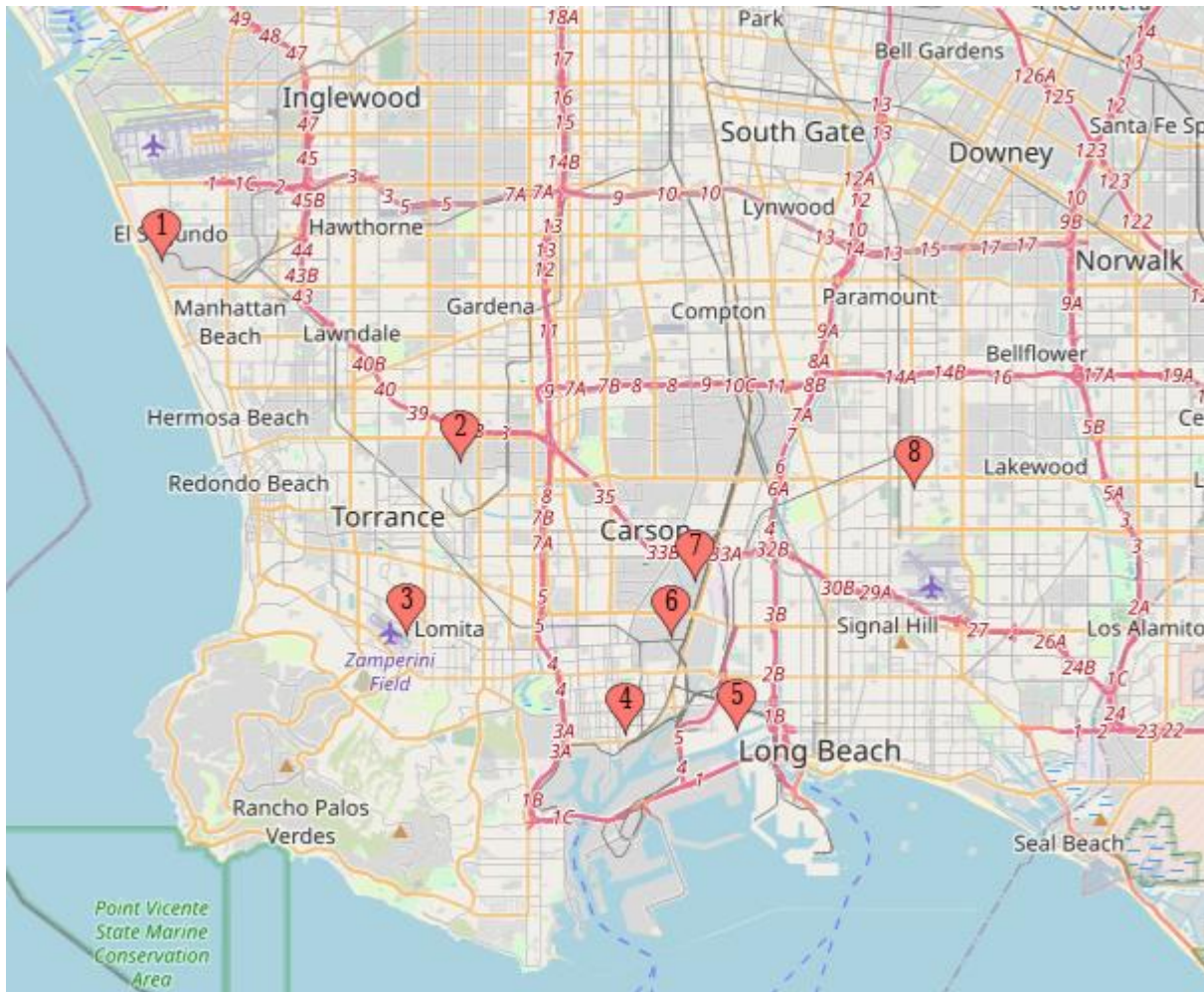


Figure 2-1
Proximity of Affected Facilities to Coastal Areas

Whether a facility is located near the coast or more inland, these existing properties are zoned for heavy industrial use. Existing storage tanks are clustered, and all eight facilities proposed to have domes installed on their external floating roof tanks already have other existing storage tanks which are domed. Of the facilities subject to PAR 1178, there are 260 existing domed storage tanks. Thus, installing more domes on other existing storage tanks will not be expected to significantly change the overall visual character of the facilities themselves or the surrounding landscape, whether located near the coast or more inland.

The existing storage tanks that will be domed range in height from 37 to 63 feet and diameter from 90 to 260 feet. For context, the size of these storage tanks can be compared to a building that is almost four to seven floors or stories in height.

Domes for these existing storage tanks are typically designed with a maximum radius equal to 1.2 times the tank diameter with a minimum of 0.7 times the tank diameter; the ratio of dome height

to tank diameter is about 1:6.⁹ For example, the largest of the affected storage tanks that would need a dome is 63-feet in height with a diameter of 260 feet and the new dome would be one-sixth of the diameter, or 43.3 feet which is equivalent to adding about four floors or stories in a building. After doming, the total height would be approximately 106 feet.

In conclusion, the visual character of the landscape at these eight facilities is already predominantly defined by the existing storage tanks themselves, and at a height that already obstructs the surrounding views, depending on the observer's location, regardless of whether the storage tanks are located at or near the coast or coastal sightlines or more inland. Further, the installation of domes are expected to blend in with the current industrial aesthetic profile of existing domed storage tanks at these eight facilities.

The requirements in PAR 1178 specific to conducting monitoring and inspections would involve low-profile activities, if at all, that would be expected to blend in with routine day-to-day operations occurring within the fence line of each affected facility. Therefore, monitoring and inspections would not be expected to cause any discernable aesthetic impacts visible to outside the property lines of each facility.

Based on the foregoing analysis, implementation of the proposed project would have less than significant impacts on scenic vistas and would not be expected to substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. In addition, PAR 1178 would not be expected to substantially degrade the existing visual character or quality of public views of the affects sites and their surroundings. Finally, PAR 1178 would not be expected to conflict with applicable zoning or other regulations governing scenic quality.

I. d) Less Than Significant Impact. PAR 1178 does not include any components that would require construction activities to occur at night. Further, cities often have their own limitations and prohibitions that restrict construction from occurring during evening hours and weekends. Therefore, no additional temporary construction lighting at the facility would be expected. However, if facility operators determine that the construction schedule requires nighttime activities, temporary lighting may be required. Nonetheless, since construction activities would be completely located within the boundaries of each affected facility, additional temporary lighting is not expected to be discernable from the existing permanent night lighting.

The existing buildings at the affected facilities are currently illuminated at night for safety and security purposes, and the lighting typically faces toward the interior of each facility's property so that they point downward or parallel to the ground, which has the effect of limiting the amount of lighting to what is needed to adequately illuminate the specific locations. While minimal, additional permanent light sources could potentially be installed at or near the installation of new domes, PAR 1178 does not specifically require new lighting to be installed. Thus, any new lighting, if installed, would likely be consistent in intensity and type with the existing lighting on equipment and other structures at the existing facilities and directed to minimize potential lighting impacts on areas outside the property lines. These practices are followed to avoid or minimize potential lighting impacts on areas outside each facility's property. Since the anticipated

⁹ Maxwell Continental Tank Serv Engineering, <https://maxwelltanks.com/domed-floating-roof-tank/alu-geodesic-dome-roofs/>, accessed on July 14, 2023.

modifications would occur within the boundaries of each facility's property, no new areas are expected to be illuminated off-site by permanent additional lighting, in the event any new lighting is installed.

Staff received a comment claiming that the potential solar reflectance and glare from domed roofs constructed of aluminum or other reflective alloys will cause glare impacts in a similar manner to cool roof technology. Dome manufacturers indicated that standard doming material is mill finish aluminum, which is not the same as cool roof technology. In addition, while any new aluminum dome could create an initial glare initially, the dome's aluminum panels will gradually oxidize such that the initial glare will dull naturally over the course of three to 12 months, or sooner at facilities located within industrial areas or by the ocean. In addition, to more quickly alleviate or eliminate the glare, dome panels can also be painted or sandblasted to dull the finish.

As described earlier in the discussion for questions 1a), b), and c), the existing storage tanks are at a very tall height (e.g., from 37 to 63 feet) and the installation of a dome would increase the total overall height by about 15 to 44 feet, depending on the tank diameter. As such, the installation of aluminum domes will mainly reflect up towards the sky except for certain angles and at certain times of the day as the sun moves across the sky. The degree of reflection will fade over time as the aluminum oxidizes. In any case, construction to install domes, whether painted, unpainted or sanded, on the affected storage tanks will be subject to local planning department aesthetics requirements to avoid any conflict with a city or county general plan's aesthetics element. PAR 1178 does not contain requirements or restrictions relative to the surface features of the dome. Further, all facility owners have other existing storage tanks that are domed and prior experience and understanding of what the local planning departments and any other agencies that may have oversight have required previously and if any glare reduction actions may be needed on any new domes that are installed at the individual site. As such, facility owners will need to work with contractors and coordinate with the local planning agency when designing each dome to determine the appropriate course of action for how to employ glare minimization features on the domes, if needed.

For these reasons, the proposed project would not create a new source of substantial light or glare at any of the affected facilities in a manner that would significantly adversely affect day or nighttime views in the surrounding areas.

Conclusion

Based upon these considerations, less than significant adverse aesthetics impacts are expected from implementing the proposed project. Since no significant 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. <u>AGRICULTURE AND FORESTRY RESOURCES.</u> 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 Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 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"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in the conversion of Farmland, to non-agricultural use 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 forest 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 Section 12220(g)), timberland (as defined in Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

II. a), b), c), d), & e) No Impact. Pursuant to the California Land Conservation Act of 1965, a Williamson Act Contract enables private landowners to voluntarily enter into contracts with local governments for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive lower property tax assessments based upon farming and open space uses as opposed to full market value.

The affected facilities and their immediately surrounding areas are not located on or near areas zoned for agricultural use, 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 Department of Conservation.¹⁰ Therefore, the proposed project would not result in any construction of new buildings or other structures that would require converting farmland to non-agricultural use or conflict with zoning for agriculture use or a Williamson Act contract. The construction and operation activities would be expected to occur within the confines of existing industrial facilities; thus, the proposed project is not expected to result in converting farmland to non-agricultural use; conflict with existing zoning for agricultural use, or a Williamson Act Control.

All of the facilities are located in industrial use areas in the urban portion of South Coast AQMD's jurisdiction and, as such, are not near forest land. Therefore, the proposed project is not expected to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g)) or result in the loss of forest land or conversion of forest land to non-forest use. Consequently, the proposed project would not create any significant adverse agriculture or forestry impacts.

Conclusion

Based upon these considerations, significant adverse agriculture and forestry resources impacts are not expected from implementing the proposed project. Since no significant agriculture and forestry resources impacts were identified, no mitigation measures are necessary or required.

¹⁰ California Department of Conservation, California Important Farmland Finder, Accessed January 2023.
<https://maps.conservation.ca.gov/DLRP/CIFF/>

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
III. <u>AIR QUALITY AND GREENHOUSE GAS EMISSIONS.</u>				
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) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) 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 checked="" type="checkbox"/>	<input type="checkbox"/>
f) Generate greenhouse gas 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"/>
g) 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 checked="" type="checkbox"/>	<input type="checkbox"/>

Significance Criteria

To determine whether or not air quality and greenhouse gas impacts from implementing the proposed project are significant, impacts will be evaluated and compared to the criteria in Table 2-1. The proposed project will be considered to have significant adverse impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

Table 2-1
South Coast AQMD Air Quality Significance Thresholds

Mass Daily Thresholds ^a		
Pollutant	Construction	Operation
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM₁₀	150 lbs/day	150 lbs/day
PM_{2.5}	55 lbs/day	55 lbs/day
SO_x	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 South Coast AQMD Rule 402	
GHG	10,000 MT/yr CO ₂ eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants ^b		
NO₂ 1-hour average annual arithmetic mean	South Coast AQMD 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) ^c & 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM_{2.5} 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^c & 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	South Coast AQMD 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	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal)	

^a Source: South Coast AQMD CEQA Handbook (South Coast AQMD, 1993)

^b Ambient air quality thresholds for criteria pollutants based on South Coast AQMD Rule 1303, Table A-2 unless otherwise stated.

^c Ambient air quality threshold based on South Coast AQMD 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

Revision: March 2023

Discussion

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

III. a) No Impact. The South Coast AQMD is required by law to prepare a comprehensive district-wide 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 the South Coast AQMD’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, the South Coast AQMD is also required to attain the state and federal ambient air quality standards for all criteria pollutants.

The most recent regional blueprints for how the South Coast AQMD will achieve air quality standards and healthful air are outlined in the 2022 AQMP¹¹ which contains multiple goals of promoting reductions of criteria air pollutants, greenhouse gases, and toxics. In particular, the 2022 AQMP contains Control Measure FUG-01– Improved Leak Detection and Repair (LDAR), which explores the potential for newer leak detection technologies to improve current LDAR requirements thereby reducing emissions of VOC from fugitive leaks from process and storage equipment from a variety of sources including, but not limited to, oil and gas production, petroleum refining, storage and transfer, etc.

The proposed project is not expected to obstruct or conflict with the implementation of the 2022 AQMP because minimizing VOC emissions from implementing the proposed project is in accordance with the emission reduction goals in the 2022 AQMP, and in particular, Control Measure FUG-01. Thus, implementing the proposed project would not conflict with or obstruct implementation of the applicable air quality plan.

III. b) and e) Less Than Significant Impact. While the proposed project is designed to reduce fugitive VOC emissions from aboveground storage tanks, secondary air quality impacts are expected due to PAR 1178 physical activities that would occur from its implementation, in particular: assembly and installation of domes on external floating roof tanks, and installation of additional roof seals on internal floating roof tanks. Incorporating OGI as an additional component to existing LDAR practices and implementing other components of the proposed project are not expected to have construction impacts. Because the proposed project will not affect operation, no secondary adverse impacts to air quality or greenhouse gases are expected from operation, and this EA is limited to the analysis of construction impacts.

¹¹ South Coast AQMD, Final 2022 Air Quality Management Plan, December 2022. <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan>

Construction Impacts

PAR 1178 provides long time frames for when domes are required to be installed on applicable storage tanks in accordance with subparagraph (d)(5)(B), as follows: one-third of applicable storage tanks by year's end 2031, half by year's end 2033, and all remaining tanks by year's end 2038. In addition, construction activities associated with installing domes are expected to occur concurrently in situations when requirements other than PAR 1178 necessitate emptying and degassing the tank. For example, PAR 1178 subparagraph (d)(5)(E) specifies that the timing of construction should be coordinated and coincide with when the storage tank is next emptied or degassed when installing additional roof seals on internal floating roof tanks. For these reasons, storage tank emptying and degassing activities are not considered unique to PAR 1178 and as such, the environmental impacts from these activities are excluded from the analysis of construction activities. In addition, no grading or site preparation activities are required for constructing domes. Thus, this construction analysis focuses on impacts from the combined efforts associated with: 1) doming external floating roof tanks which involves assembling the dome, lifting it, and installing the dome; and 2) installing additional roof seals on internal floating roof tanks as a one-step process.

Because of the long timeframes allowing for facilities to comply with PAR 1178, it is unlikely that a given facility will perform construction on more than one tank at a given time, or that multiple facilities will perform construction activities on the same day.

The following construction details include a collection of information based on recent conversations between South Coast AQMD rules staff with a supplier, and previous parameters regarding quantities and types of construction equipment considered in the modeling conducted in the December 2001 Final EA for Proposed Amended Rule 1178.¹² For worst case emissions estimates for the current proposal were based on the following criteria: 1) the modeled tank is assumed to be 260 feet in diameter (600,000 barrels of crude oil capacity, the largest in the PAR 1178 universe of equipment); 2) any type of construction equipment which was mentioned by the supplier or the previous CEQA document or both was used in this analysis,¹³ and 3) for any differences in operating duration of the construction equipment as cited by sources, the longer use duration was applied in this analysis. Since no grading or site preparation is needed for doming activities, this construction analysis excludes these activities.

The following bullets summarize the assumptions relied upon for the construction analysis:

Doming an External Floating Roof Tank

- On-road Motor Vehicles:
 - 1 Material Delivery Truck driving 50 miles per day
 - 10 Worker Vehicles driving 40 miles per day
- Off-road Construction Equipment:
 - 1 Crane, 3 Welders, and 1 Compressor each operating for 10 hours per day, 6 days per week, for 12 to 6 weeks

¹² South Coast AQMD, Final Environmental Assessment for Proposed Amended Rule 1178 - Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities. <http://www.aqmd.gov/home/research/documents-reports/lead-agency-scaqmd-projects/aqmd-projects---year-2001>

¹³ Welders were not incorporated in the December 2001 Final EA for Proposed Amended Rule 1178, and compressors were not mentioned by the supplier to South Coast AQMD rules staff in their communication but to be conservative, both welders and compressors are included in this construction analysis.

Installing Additional Roof Seals on an Internal Floating Roof Tank

- On-road Motor Vehicles:
 - 1 Material Delivery Truck driving 50 miles per day
 - 10 Worker Vehicles driving 40 miles per day
- Off-road Construction Equipment:
 - 1 Crane for 4 hours per day, 5 days per week, and 8 weeks
 - 1 Compressor for 8 hours per day, 5 days per week, and 8 weeks

Criteria pollutant emissions were calculated for off-road construction equipment used for retrofitting the storage tanks and on-road motor vehicles transporting workers and material deliveries during construction using the California Emissions Estimator Model® (CalEEMod), version 2022.1.1.3. The detailed output reports for the CalEEMod¹⁴ runs, and a summary excel sheet with the peak daily construction impacts by construction activity type and season are included in Appendix B.

With only 54 tanks at eight facilities undergoing construction to install new domes and eight tanks at seven facilities undergoing construction to install additional roof seals coupled with the long time frame for implementation means that as a practical matter, it is unlikely that one facility will perform construction on more than one tank at a given time, and that multiple facilities will perform construction activities on the same day. Nonetheless, to illustrate the magnitude of what the air quality impacts would be from overlapping construction activities, Table 2-2 summarizes the peak daily emissions associated with doming one external floating roof tank, installing additional roof seals for one tank, and concurrent installation.

**Table 2-2
Peak Daily Construction Emissions by Pollutant (lb/day)**

Construction Activity	VOC	NOx	CO	SOx	PM10	PM2.5
Doming 1 External Floating Roof Tank	0.91	8.41	11.50	0.02	0.67	0.40
Installing Additional Roof Seals for 1 Internal Floating Roof Tank	0.34	3.03	4.81	0.01	0.44	0.18
Doming 8 Tanks and Installing Additional Roof Seals for 7 Tanks	9.66	88.49	125.67	0.23	8.44	4.46
Significance Threshold for Construction	75	100	550	150	150	55
Significant?	NO	NO	NO	NO	NO	NO

The air quality analysis indicates that the peak daily construction emissions do not exceed the South Coast AQMD's air quality significance thresholds for any pollutant during construction. Thus, the air quality impacts during construction are concluded to be less than significant.

¹⁴ 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 GHG emissions associated with both construction and operations from a variety of land use projects.

Cumulatively Considerable Impacts

Based on the foregoing analysis, since criteria pollutant project-specific air quality impacts from implementing the proposed project would not be expected to exceed any of the air quality significance thresholds in Table 2-1, cumulative air quality impacts are also expected to be less than significant. South Coast AQMD cumulative air quality significance thresholds are the same as project-specific air quality significance thresholds. Therefore, potential adverse impacts from implementing the proposed project would not be “cumulatively considerable” as defined by CEQA Guidelines Section 15064(h)(1) for air quality impacts. Per CEQA Guidelines Section 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 cumulatively considerable.

The South Coast AQMD’s guidance on addressing cumulative impacts for air quality is as follows: “As Lead Agency, the South Coast AQMD 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 the South Coast AQMD 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 significant.”¹⁵

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 South Coast AQMD’s 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 Section 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 non-attainment 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 South Coast AQMD has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established South Coast AQMD significance thresholds. See also, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the South Coast AQMD’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 proposed project would not contribute to a significant unavoidable cumulative air quality impact. Since no cumulatively significant air quality impacts were identified, no mitigation measures are necessary or required.

¹⁵ South Coast AQMD 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>

III. c) Less Than Significant Impact.***Toxic Air Contaminants (TACs) During Construction***

Diesel powered vehicles and equipment would be utilized during construction activities. Diesel PM is considered a carcinogenic and chronic TAC. A construction activity would be completed within four months; thus, a Health Risk Assessment (HRA) was not conducted, which is consistent with the Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual (2015). The analysis in Section III b) and e) concluded that the quantity of pollutants that may be generated from implementing the proposed project would be less than significant during construction. Because the emissions from all activities that may occur as part of implementing the proposed project are at less than significant levels, neither would the emissions be substantial, regardless of whether sensitive receptors are located near the affected facilities. Therefore, PAR 1178 is not expected to generate significant adverse TAC impacts from construction or expose sensitive receptors to substantial pollutant concentrations. Since no significant air quality impacts were identified for TACs, no mitigation measures are necessary or required.

III. d) Less Than Significant Impact.***Odor Impacts***

Odor problems depend on individual circumstances. For example, individuals can differ quite markedly from the populated average in their sensitivity to odor due to any variety of innate, chronic or acute physiological conditions. This includes olfactory adaptation or smell fatigue (i.e., continuing exposure to an odor usually results in a gradual diminution or even disappearance of the small sensation).

During construction, diesel-fueled equipment and vehicles would be operated. Diesel fuel is required to have a low sulfur content (e.g., 15 ppm by weight or less) in accordance with South Coast AQMD Rule 431.2 – Sulfur Content of Liquid Fuels¹⁶; thus, the fuel is expected to have minimal odor. The operation of construction equipment would occur within the boundaries of existing affected facilities. It would be expected that sufficient dispersion of diesel emissions over distance generally occurs such that odors associated with diesel emissions may not be discernable to off-site receptors, depending on the location of the equipment and its distance relative to the nearest off-site receptor. The diesel trucks and equipment that would be operated on-site as a part of construction activities would not be allowed to idle longer than five minutes per any one location in accordance with the CARB idling regulation¹⁷, so lingering odors from idling vehicles would not be expected. In addition, construction activities would be temporary. Thus, PAR 1178 is not expected to create significant adverse objectionable odors during construction. Since no significant air quality impacts were identified for odors, no mitigation measures for odors are necessary or required.

¹⁶ South Coast AQMD, Rule 431.2 – Sulfur Content of Liquid Fuels, September 15, 2000. <http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-431-2.pdf>

¹⁷ CARB, Guide to Off-Road Vehicle & Equipment Regulations, https://ww2.arb.ca.gov/sites/default/files/offroadzone/pdfs/offroad_booklet.pdf.

III. f) and g) Less Than Significant Impacts.

Greenhouse Gas (GHG) Impacts

Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, 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. State law defines GHG to include the following: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆) (Health and Safety Code Section 38505(g)). The most common GHG that results from human activity is CO₂, followed by CH₄ and N₂O.

Traditionally, GHGs and other global warming pollutants are perceived as solely global in their impacts and that increasing emissions anywhere in the world contributes to climate change anywhere in the world. A study conducted on the health impacts of CO₂ “domes” that form over urban areas cause increases in local temperatures and local criteria pollutants, which have adverse health effects¹⁸.

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, the South Coast AQMD's current position is to evaluate the effects of GHGs over a longer timeframe than a single day (i.e., annual emissions). GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects.

Since GHG impacts are defined on an annual, instead of a peak daily basis, the GHG emissions for construction were quantified by summing all of the GHGs occurring during construction for 54 domes and eight additional seal installations which should be completed by December 31, 2038 and then amortizing the total construction GHGs over 30 years.

The South Coast AQMD convened a “Greenhouse Gas CEQA Significance Threshold Working Group” to consider a variety of benchmarks and potential significant thresholds to evaluate GHG impacts. On December 5, 2008, the South Coast AQMD adopted an interim CEQA GHG Significance Threshold for projects where the South Coast AQMD is the lead agency (South Coast AQMD 2008). This GHG interim threshold is set at 10,000 metric tons (MT) of CO₂ equivalent emissions (CO₂eq) per year. Projects with incremental increases below this threshold will not be

¹⁸ Jacobsen, Mark Z. Environmental Protection Agency Hearing on California Waiver: “Effects of Local CO₂ Domes and of Global CO₂ Changes on California's Air Pollution and Health,” March 5, 2009.
<https://web.stanford.edu/group/efmh/jacobson/PDFfiles/0903EPACalif.pdf>

cumulatively considerable. GHG impacts from the implementation of the proposed project were calculated at the project-specific level during construction activities.

PAR 1178 involves construction activities associated with installing domes and additional seals on existing storage tanks which rely on construction equipment that emit GHGs when in use. Once construction is completed, PAR 1178 does not have any requirements that would generate GHGs during operation of the storage tanks. Table 2-3 summarizes the GHG analysis which shows that the proposed project may result in the generation of 215 MT per year of CO₂eq from construction activities, which is less than the South Coast AQMD's air quality significance threshold for GHGs. Detailed calculations of project GHG emissions can be found in Appendix B.

**Table 2-3
Summary of GHG Emissions from Affected Facilities**

Construction Activity	CO₂eq Emissions (MT/yr)
Doming 1 External Floating Roof Tank	116
Installing Additional Roof Seals for 1 Tank	25
Doming 54 External Roof Tanks and Installing Additional Roof Seals for 8 Internal Floating Roof Tanks	216
Significance Threshold	10,000
Significant?	No

Note: 1 metric ton = 2,205 pounds. GHGs from short-term construction activities are amortized over 30 years.

As shown in Table 2-3, the South Coast AQMD air quality significance threshold for GHGs would not be exceeded. For this reason, implementing the proposed project would not be expected to generate significant adverse cumulative GHG air quality impacts. Further, as noted in Section III. a), implementation of the proposed project would not be expected to conflict with an applicable plan, policy or regulation adopted for the purpose of reducing criteria pollutants and the same is true for GHG emissions since the quantity of increased GHG emissions is at less than significant levels. Since significant air quality impacts were not identified for GHGs, no mitigation measures are necessary or required.

Conclusion

Based upon these considerations, significant air quality and GHG emissions impacts are not expected from implementing the proposed project. Since no significant air quality and GHG emissions 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. <u>BIOLOGICAL RESOURCES.</u>				
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 Section 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) Conflict 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

IV. a), b), c), & d) No Impact. Implementation of PAR 1178 would occur at existing affected facilities, which are located in industrial areas. Additionally, the physical improvements are expected to occur within the existing facility property boundaries which have been previously disturbed. Thus, PAR 1178 is not expected to adversely affect in any way habitats that support riparian habitat, federally protected wetlands, or migratory corridors. Similarly, special status plants, animals, or natural communities 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 are not expected to be found on or in close proximity to affected facilities. Therefore, PAR 1178 would have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely. PAR 1178 does not require the acquisition of additional land or further conversions of riparian habitats or sensitive natural communities where endangered or sensitive species may be found. In addition, any construction from the implementation of PAR 1178 would take place at the existing facilities and would not occur on or near a wetland or in the path of migratory species.

IV. e) & f) No Impact. The 27 facilities subject to PAR 1178 are located throughout Los Angeles and San Bernardino counties. According to the California Department of Fish and Wildlife, Natural Community Conservation Plans (NCCP) Plan Summaries,¹⁹ there are no permitted NCCPs for Los Angeles and San Bernardino Counties, and the NCCPs in preparation do not involve areas which will be affected by the proposed project. Projects resulting in an air quality benefit: decreasing air pollutant emissions while not changing the type of pollutants emitted, will not conflict with any U.S. Department of Fish and Wildlife Habitat Conservation Plans (HCP). Thus, PAR 1178 would not be expected to conflict with any adopted NCCP, HCP, or any other relevant habitat conservation plan, and would not create divisions in any existing communities. The proposed project is also not expected to conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans, because land use and other

¹⁹ California Department of Fish and Wildlife, NCCP Plan Summaries, Accessed May 2023.
<https://wildlife.ca.gov/conservation/planning/nccp/plans>.

planning considerations are determined by local governments and no land use or planning requirements would be altered by implementation of PAR 1178.

Conclusion

Based upon these considerations, significant biological resource impacts are not expected from implementing the proposed project. Since no significant biological 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
V. <u>CULTURAL AND TRIBAL CULTURAL RESOURCES.</u>				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 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 pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074, as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is either:				
• Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in Public Resources Code Section 5024.1(c)? (In applying the criteria set forth in Public Resources Code Section 5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.)	<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 or cultural significance, or tribal cultural significance to a community or ethnic or social group or a California Native American tribe.
- Unique 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

V. a) No Impact. There are existing laws in place that are designed to protect and mitigate potential impacts to cultural resources. For example, CEQA Guidelines state that generally, a resource shall be considered “historically significant” if the resource meets the criteria for listing in the California Register of Historical Resources, which include the following:

- Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possesses high artistic values;
- Has yielded or may likely to yield information important in prehistory or history (CEQA Guidelines Section 15064.5).

Buildings, structures, and other potential culturally significant resources that are less than 50 years old are generally excluded from listing in the National Register of Historic Places, unless they are shown to be exceptionally important. Buildings or structures that may be affected by PAR 1178 are used for industrial purposes and would generally not be considered to be historically significant, since they would not have any of the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. Therefore, PAR 1178 is not expected to cause any impacts to significant historic cultural resources.

V. b), c), & d) No Impact. Construction-related activities associated with installing domes and additional roof seals on existing storage tanks are expected to be confined within the affected existing industrial facility boundaries and will occur aboveground. In addition, as mentioned in section V. a) the existing storage tanks subject to PAR 1178 are considered heavy industrial equipment and as such, are not unique resources or identified as having any cultural or tribal importance. Thus, PAR 1178 is not expected to require physical changes to the environment which

may disturb paleontological or archaeological resources. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed. Therefore, PAR 1178 has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly to destroy a unique paleontological resource or site or unique geologic feature, or to disturb any human remains, including those interred outside formal cemeteries. Implementing PAR 1178 is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources.

PAR 1178 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, PAR 1178 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. Similarly, PAR 1178 is not expected to result in a physical change to a resource determined by the South Coast AQMD to be significant to any tribe. For these reasons, PAR 1178 is not expected to cause any substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074.

As part of releasing this CEQA document for public review and comment, the South Coast AQMD 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 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 proposed project.

In the event that a Tribe submits a written request for consultation during this 30-day period, the South Coast AQMD will initiate a consultation with the Tribe within 30 days of receiving the request in accordance with Public Resources Code Section 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 Section 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 Section 21080.3.2(b)(1)-(2) and Section 21080.3.1(b)(1)].

Conclusion

Based upon these considerations, significant adverse cultural and tribal cultural resources impacts are not expected from implementing the proposed project. Since no significant cultural and tribal 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 or obstruct adopted energy conservation plans, a state or local plan for renewable energy, or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Require or result in the relocation or construction of new or expanded electric power, natural gas or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts to energy 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 energy resources in a wasteful and/or inefficient manner.

Discussion

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

VI. a), e) f) & g) No Impact. The proposed project is not expected to conflict with any adopted energy conservation plans or violate any energy conservation standards because existing facilities would be expected to continue implementing any existing energy conservation plans that are currently in place regardless of whether the proposed project is implemented. The effects of implementing PAR 1178 would apply to existing facilities. Any energy resources that may be necessary to dome external floating roof tanks, install additional roof seals on internal floating roof tanks, and incorporate additional OGI technology would be used to achieve reductions in VOC; and therefore, would not be using non-renewable resources in a wasteful manner. For these reasons, the proposed project is not expected to conflict with energy conservation plans or existing energy standards, or use non-renewable resources in a wasteful manner. In addition, the construction and operation of domes is not expected to rely on electric power, natural gas or telecommunication facilities, as such PAR 1178 will not cause the relocation or construction of new or expanded electric power, natural gas or telecommunication facilities. Therefore, no impacts are expected.

VI. b), c), & d) Less Than Significant Impact.

Fuel Usage during Construction

Implementation of the proposed project would result in the installation of domes, roof seals, and OGI technology. To accomplish these activities, use of energy in terms of gasoline and diesel fuel would be needed for on-road passenger vehicles and heavy duty trucks associated with delivering supplies and construction materials, and off-road construction equipment, respectively. While construction under the proposed project is expected to be spaced out across multiple years until December 31, 2038, to estimate worst-case energy impacts associated with construction activities, South Coast AQMD staff estimated the total gasoline and diesel fuel consumption for doming 54 external floating roof tanks and installing additional roof seals for eight tanks at seven facilities all occurring in one year. Each project is estimated to require 10 worker trips and one material delivery trip per day, with doming requiring one crane, three welders, and one air compressor, each for 10 hours per day and 96 days for completion (six days per week for 16 weeks); and installation of additional seals requiring one crane four hours per day and one air compressor five hours per day and 40 days for completion (5 days per week for 8 weeks).

On-road passenger vehicles were modelled as gasoline passenger cars (LDA) and light-duty trucks (LDT1 and LDT2) traveling 40 miles per day, and heavy duty trucks associated with delivering supplies and construction materials were modelled as diesel Tier 7 CA International Registration Plan Trucks (T7 CAIRP) travelling 50 miles per day. Fuel use was estimated using EMFAC2021 version 1.0.2 for calendar year 2026. Fuel use for offroad equipment was estimated using equipment specifications from CalEEMod version 2022.1.1.3 and OFFROAD2021 version 1.0.3. Table 2-4 summarizes the projected fuel use impacts associated with construction activities and

compares it to the gasoline and diesel consumption rates in the South Coast AQMD jurisdiction, for 2017. Detailed fuel use calculations can be found in Appendix B.

**Table 2-4
Annual Total Projected Fuel Usage for Construction Activities**

	Diesel	Gasoline
Projected Construction Energy Use (gal/yr)	163,830	8,144
Year 2017 South Coast AQMD Jurisdiction Estimated Fuel Demand (gal/yr)	775,000,000	7,086,000,000
Total Increase Above Baseline	0.02114%	0.000115%
Significance Threshold	1%	1%
Significant?	No	No

Based on the foregoing analyses, the construction-related activities associated with the implementation of the proposed project would not use energy in a wasteful manner, would not result in substantial depletion of existing energy resource supplies, or create a significant demand of energy when compared to existing supplies. Thus, there are no significant adverse energy impacts associated with the implementation of PAR 1178.

Conclusion

Based upon these considerations, significant adverse energy impacts are not expected from implementing the proposed project. 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) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• 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"/>
• Landslides?	<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 direct or indirect 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"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<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.
- Unique paleontological resources or sites or unique geologic features are present that could be directly or indirectly destroyed by the proposed project.

Discussion

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

VII. a), b), c), d), e), f) No Impact. The proposed project involves constructing new domes and installing roof tank seals on existing storage tanks located in already developed industrial settings and these activities would occur aboveground and as such, would not require any grading or site preparation activities.. Therefore, the proposed project is not expected to adversely affect geophysical conditions in the South Coast AQMD.

Southern California is an area of known seismic activity. As part of the issuance of building permits, local jurisdictions are responsible for assuring that the Uniform Building Code is adhered to and can conduct inspections to ensure compliance. The Uniform Building code is considered to be a standard safeguard against major structural failures and loss of life. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation condition at the site. The Uniform Building Code requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction. The proposed project will not require the modification of existing structures at existing facilities in a manner that would not conform to the Uniform Building Code or any other state and local building codes. Structures must be designed to comply with the Uniform Building Code Zone 4 requirements if they are located in a seismically active area. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. Thus, the proposed project would not alter the exposure of people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structures to the risk of loss, injury, or death involving the rupture of an earthquake fault, seismic ground shaking, ground failure or landslides is not anticipated.

Physical modifications as a result of the proposed project are limited to retrofitting existing aboveground storage tanks and require no grading activities or soil disturbance that would create any issues with erosion. For this reason, no unstable earth conditions or changes in geologic substructures are expected to result from implementing the proposed project and therefore, no impacts to the loss of topsoil or soil erosion will occur. Further, since soil at existing facilities will not be disturbed, it will not be made further susceptible to expansion or liquefaction. Further, the proposed project will not create any new conditions that would cause subsidence landslides, or alter unique geologic features at any of the facilities. Thus, the proposed project would not be expected to increase or exacerbate any existing risks associated with soils at any facility. Implementation of the proposed project would not involve re-locating facilities on a geologic unit or soil that is unstable or that would become unstable as a result of the project; therefore, it would not be expected to potentially result in on-or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. No impacts are anticipated.

The proposed project would not require the installation of septic tanks or other alternative wastewater disposal systems. Therefore, no persons or property would be exposed to new impacts related to expansive soils or soils incapable of supporting water disposal. Thus, the implementation of the proposed project would not adversely affect soils associated with the installation of a new septic system or alternative wastewater disposal system or modification of an existing sewer.

The proposed project does not cause or require the construction of any new facilities. No previously undisturbed land that may contain a unique paleontological resource or site or unique geological feature would be affected. Therefore, the proposed project is not expected to directly or indirectly destroy a unique paleontological resource or site or unique geological feature.

Conclusion

Based upon these considerations, significant adverse geology and soils impacts are not expected from the implementation of the proposed project. Since no significant geology and soils impacts were identified, 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, or 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 and accident 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 Section 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 airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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) 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

VIII. a), b) & c) No Impact. While the proposed project will result in construction at affected facilities, doming external floating roof tanks, installing additional roof seals on internal floating roof tanks, and incorporating additional OGI technology will not require use or disposal of hazardous materials. Implementation of the proposed project is not expected to affect operations pertaining to hazardous materials, such as the processing of petroleum; thus, there will be no increase in nor creation of: a) significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; b) significant hazard to the public or the environment in the event of upset or accident conditions involving the release of hazardous materials from these storage tanks into the environment; or c) hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school if an existing facility happens to be located near an existing or proposed school.

VIII. d) No Impact. Government Code Section 65962.5 refers to hazardous waste handling practices at facilities subject to the Resources Conservation and Recovery Act (RCRA). Implementation of the proposed project is not expected to affect operations pertaining to hazardous materials, such as the processing of petroleum; thus, there will be no increase in or creation of a new significant hazard to the public or the environment if an existing facility happens to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

VIII. e) Less than Significant Impact. Federal Aviation Administration regulation, 14 CFR Part 77 – Safe, Efficient Use and Preservation of the Navigable Airspace, provide information regarding the types of projects that may affect navigable airspace. Projects may adversely affect navigable airspace if they involve construction or alteration of structures greater than 200 feet above ground level within a specified distance from the nearest runway or objects within 20,000 feet of an airport or seaplane base with at least one runway more than 3,200 feet in length and the object would exceed a slope of 100:1 horizontally (100 feet horizontally for each one foot vertically from the nearest point of the runway). There are four facilities located within two miles

of an airport that may involve construction activities associated with installing domes and roof tank seals on existing storage tanks, but none are taller than 200 feet aboveground. However, these facilities have other heavy industrial equipment that will not be affected by PAR 1178 but that are much taller than the existing storage tanks. Thus, for the facilities located near a runway or an airport, the facility operators will already have safety protocols and procedures in place for alerting the Federal Aviation Administration of any potential changes involving equipment greater than 200 feet above ground level. Thus, implementation of PAR 1178 is not expected to interfere with navigable airspace or affect existing operations pertaining to hazardous materials, such as the processing of petroleum. Finally, PAR 1178 does not contain any requirements that would interfere with any applicable design code or regulation the Federal Aviation Administration may have in effect for safety reasons. Thus, there will be no significant increase in existing safety hazards or the creation of new safety hazards to peoples working or residing in the vicinity of public/private airports. See Appendix C for list of affected facilities located within two miles of an airport.

VIII. f) No Impact. Health and Safety Code Section 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:

- Identification of individuals who are responsible for various actions, including reporting, assisting emergency response personnel and establishing an emergency response team;
- Procedures to notify the administering agency, the appropriate local emergency rescue personnel, and the California Office of Emergency Services;
- Procedures to mitigate a release or threatened release to minimize any potential harm or damage to persons, property or the environment;
- Procedures to notify the necessary persons who can respond to an emergency within the facility;
- Details of evacuation plans and procedures;
- Descriptions of the emergency equipment available in the facility;
- Identification of local emergency medical assistance; and,
- Training (initial and refresher) programs for employees in:
 1. The safe handling of hazardous materials used by the business;
 2. Methods of working with the local public emergency response agencies;
 3. The use of emergency response resources under control of the handler;
 4. 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.

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. The proposed project would not impair the implementation of, or physically interfere with any adopted emergency response plans or emergency evacuation plans that may be in place at existing facilities.

VIII. g) No Impact. The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations. Further, businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. Local fire departments ensure that adequate permit conditions are in place to protect against the potential risk of upset. The proposed project would not change the existing requirements and permit conditions for the proper handling of flammable materials.

Conclusion

Based upon these considerations, significant adverse hazards and hazardous materials impacts are not expected from implementing the proposed project. Since no significant hazards and hazardous materials impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IX. <u>HYDROLOGY AND WATER QUALITY.</u> Would the project:				
a) Violate any water quality standards, waste discharge requirements, or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<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 the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
• Result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• 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 type="checkbox"/>	<input checked="" type="checkbox"/>
• Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<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) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, facilities or new storm water drainage facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) 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 type="checkbox"/>	<input checked="" 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

IX. a), b), e), f), g) & h) No Impact. Implementation of PAR 1178 would require construction activities associated with installing domes on existing external floating roof tanks and installing additional roof seals on existing internal floating roof tanks. These activities might first require storage tanks to be emptied and degassed if other repairs are needed, but those steps already occur as part of regular tank inspections, and not because of PAR 1178.

PAR 1178 subparagraph (d)(5)(E) specifies that the timing of construction should be coordinated and coincide with when the storage tank is next emptied or degassed when installing additional roof seals on internal floating roof tanks. For these reasons, storage tank emptying and degassing activities are not considered unique to PAR 1178 and as such, the environmental impacts from these activities are excluded from the analysis of construction activities. It is important to note that dome suppliers and affected facilities say that a storage tank does not need to be emptied and degassed in order to install domes and roof seals, unless the tank shell is in need of reinforcement and repairs that involve welding. Further, if a storage tank is emptied and degassed, water is not required for this process so no increase in water demand is expected. In addition, PAR 1178 does not contain any requirements that would require the use of water during construction or operation. Further, since water is not needed to implement PAR 1178, no wastewater would be expected to be generated and. Since no wastewater is generated and no increase in water demand is created from the proposed project, the proposed project would not be expected to: 1) violate any water quality standards, waste discharge requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade surface or ground water quality; 2) require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, facilities or new storm water drainage facilities; 3) substantially decrease groundwater supplies or interfere substantially with groundwater recharge or impede sustainable groundwater management of the basin; 4) conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan; 5) impact the water supply available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years; and 6) give cause for the wastewater treatment provider to question or evaluate whether adequate wastewater capacity exists in addition to the provider's existing commitments.

Conclusion

Based upon these considerations, significant adverse hydrology and water quality impacts are not expected from implementing the proposed project. 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. <u>LAND USE AND PLANNING.</u>				
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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

X. a) & b) No Impact. The proposed project does not require the construction of new facilities, and the physical effects that would result from the proposed project would occur at existing facilities located in industrial areas and would occur within existing facility boundaries. For this reason, implementation of PAR 1178 is not expected to physically divide an established community. Therefore, no impacts are anticipated.

Further, land use and other planning considerations are determined by local governments and the proposed project does not alter any land use or planning requirements. Compliance with the proposed project would apply to existing storage tanks operating within the boundary of existing facilities. Thus, the proposed project would not be expected to affect or 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.

Conclusion

Based upon these considerations, significant adverse land use and planning impacts are not expected from implementing the proposed project. 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. <u>MINERAL RESOURCES.</u> 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XI. a) & b) No Impact. 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 plant or other land use plant. Some examples of mineral resources are gravel, asphalt, bauxite, and gypsum, which are commonly used for construction activities or industrial processes. Implementation of the proposed project would result in the installation of domes and roof seals; all of which have no effect on the use of minerals, such as those described above. Therefore, no new demand on mineral resources is expected to occur and no significant adverse mineral resources impacts from implementing the proposed project are anticipated.

Conclusion

Based upon these considerations, significant adverse mineral resource impacts are not expected from implementing the proposed project. Since no significant mineral 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
XII. NOISE. Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XII. a) & b) Less than Significant Impact. The facilities subject to PAR 1178 are located in urbanized industrial areas. The existing noise environment at each of the facilities is typically dominated by noise from existing equipment on-site, vehicular traffic around the facilities, and trucks entering and existing facility premises. Large, potentially noise-intensive construction

equipment may be needed temporarily to dome external floating roof tanks and install additional roof seals on internal floating roof tanks. Operation of the construction equipment would be expected to comply with all existing noise control laws and ordinances. Since all of the facilities are located in heavy industrial areas, which have a higher background noise level when compared to other areas, the noise generated during construction would likely be indistinguishable from the background noise levels at the property line. Further, Occupational Safety and Health Administration (OSHA) and California-OSHA have established noise standards to protect worker health both indoors and outdoors. Furthermore, compliance with local noise ordinances typically limit the hours of construction to reduce the temporary noise impacts from construction to sensitive and offsite receptors. These potential noise increases would only be temporary until construction is completed and would be expected to be within the allowable noise levels established by the local noise ordinances for industrial areas; thus, impacts are expected to be less than significant.

XII. c) No Impact. As stated in Section VIII e), four facilities identified in Appendix C are located within two miles of an airport. The existing noise environment at this facility is dominated by noise from existing equipment on-site, vehicular traffic around the facilities, and trucks entering and exiting facility premises. Thus, any new noise impacts from temporary construction activities would be likely to generate noise that is indistinguishable from the background levels at the property line. Thus, PAR 1178 is not expected to expose persons residing or working within two miles of a public airport or private airstrip to excessive noise levels.

Conclusion

Based upon these considerations, significant adverse noise impacts are not expected from the implementing the proposed project. 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XIII. a) No Impact. The construction activities associated with the proposed project are not expected to involve the relocation of individuals, require new housing or commercial facilities, or change the distribution of the population. Approximately 10 construction workers per facility may be needed to perform construction activities to comply with PAR 1178, and these workers can be supplied from the existing labor pool in the local Southern California area. The proposed project is not expected to affect day-to-day operations. As such, PAR 1178 is not anticipated to cause change in population densities, population distribution, or induce significant growth in population.

XIII. b) No Impact. The proposed project would result in construction activities that are expected to occur within the confines of existing facilities, and would not be expected to substantially alter existing operations. Consequently, PAR 1178 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 persons or housing elsewhere within the South Coast AQMD’s jurisdiction.

Conclusion

Based upon these considerations, significant adverse population and housing impacts are not expected from implementing the proposed project. 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 project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XIV. a) & b) No Impact. Implementation of PAR 1178 would require construction activities associated with installing domes on existing external floating roof tanks and installing additional roof seals on existing internal floating roof tanks. If other repairs to the storage tanks need to be made, then these activities may require storage tanks to first be emptied and degassed, but those steps occur as part of regular tank inspection. As such, no special circumstances with handling sensitive materials during construction would be expected. For these reasons, new safety hazards are not expected to occur during construction, and implementation of PAR 1178 is not expected to substantially alter or increase the need or demand for additional public services (e.g., fire and

police departments and related emergency services, etc.) above current levels. No significant impact to these existing services is anticipated.

XIV. c), d), & e) No Impact. As explained in Section XIII. a), PAR 1178 is not anticipated to generate any significant effects, either direct or indirect, on the population or population distribution within South Coast AQMD's jurisdiction as no permanent additional workers are anticipated to be required for compliance. Because PAR 1178 is not expected to induce substantial population growth in any way, and because the local labor pool (e.g., workforce) would remain the same since PAR 1178 would not trigger changes to current usage practices, no additional schools would need to be constructed. The analysis assumes that 10 construction workers per facility may be needed but any construction activities would be temporary and be expected to be supplied from the existing labor pool in the local Southern California area. There would be no corresponding impacts to local schools or parks, and there would be no corresponding need for new or physically altered public facilities in order to maintain acceptable service ratios, response times, or other performance objectives. Therefore, no impacts would be expected to schools, parks or other public facilities.

Conclusion

Based upon these considerations, significant adverse public services impacts are not expected from implementing the proposed project. 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XV. a) & b) No Impact. As previously explained in Section XIII – Population and Housing, the proposed project is not expected to affect population growth or distribution within the South Coast AQMD’s jurisdiction because only about 10 construction workers per facility will be needed to dome external floating roof tanks, install additional roof seals on internal floating roof tanks, and incorporate additional OGI technology for compliance with the proposed project can be supplied by the existing labor pool in the local Southern California area. As such, the proposed project is not anticipated to generate any significant adverse effects, either indirectly or directly on population growth within the South Coast AQMD’s jurisdiction or population distribution, and thus no additional demand for recreational facilities would be necessary or expected. No requirements in the proposed project would be expected to affect recreation in any way. Therefore, the proposed project would not 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.

Conclusion

Based upon these considerations, significant adverse recreation impacts are not expected from implementing 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. <u>SOLID AND HAZARDOUS WASTE.</u> 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 and 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XVI. a) & b) No Impact. While the proposed project will involve doming of external floating roof tanks, installation of additional roof seals on internal floating roof tanks, and incorporation of additional OGI technology, construction will not require removal or replacement of existing equipment. Therefore, no solid construction waste would be generated that would need to be disposed of in a landfill, and the proposed project is not expected to impact existing permitted landfill capacity.

Current operations at facilities are assumed to comply with all applicable local, state, or federal waste disposal regulations, and PAR 1178 does not contain any provisions that would weaken, alter, or interfere with current practices. Thus, implementation of 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 in a manner that would cause a significant adverse solid and hazardous waste impact.

Conclusion

Based upon these considerations, significant adverse solid and hazardous waste impacts are not expected from implementing the proposed project. Since no significant solid and 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.				
Would the project:				
a) Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Substantially increase hazards due to a geometric 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"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

Impacts on transportation will be considered significant if any of the following criteria apply:

- 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 or contributes to changes in overall vehicle miles traveled.
- There is an increase in vehicle miles traveled that is substantial in relation to the existing travel activity.
- 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

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XVII. a) & b) Less than Significant Impact. As previously discussed in Section III – Air Quality and Greenhouse Gas Emissions, compliance with PAR 1178 would require construction activities

to dome external floating roof tanks, install additional roof seals on internal floating roof tanks, and incorporate additional OGI technology. To accomplish these various activities, on-road passenger vehicles and heavy duty trucks would be dispatched to the affected facilities in order to deliver supplies and construction materials.

Table 2-5 presents the number of vehicle round trips that may occur on a peak day which involves doming eight external floating roof tanks and installing additional roof seals for seven internal floating roof tanks.

**Table 2-5
Number of Round Trips in a Peak Day**

Activity	Vehicle Trips
Doming 8 External Floating Roof Tanks	8 Delivery Trucks 80 Passenger Autos
Installing Additional Roof Seals for 7 Internal Floating Roof Tanks	7 Delivery Trucks 70 Passenger Autos
Total in a Peak Day	165 Vehicle Trips

In accordance with the promulgation of SB 743 which requires analyses of transportation impacts in CEQA documents to consider a project's vehicle miles traveled (VMT) in lieu of applying a LOS metric when determining significance for transportation impacts, CEQA Guidelines Section 15064.3(b)(4) gives a lead agency to use discretion to choose the most appropriate methodology to evaluate a project's VMT, allowing the metric to be expressed as a change in absolute terms, per capita, per household, or in any other measure.

On a peak day, these construction activities are estimated to result in 15 heavy duty delivery truck round trips and 150 passenger auto round trips, the former which is less than the threshold of 350 truck round trips per day. The proposed project is not expected to result in the need of 350 new employees; assumptions, such as that installing additional roof seals for one internal floating roof tank requires 10 workers similar to doming an external roof tank is to overestimate impacts for a peak day. The proposed project is not expected to cause a significant adverse transportation impact. Therefore, the proposed project would not conflict with or be inconsistent with CEQA Guidelines Section 15064.3(b). Further, because implementation of the proposed project would not alter any transportation plans, the proposed project would not conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.

XVII. c) & d) No Impact. No existing roadways would need to be modified and no new roadways would need to be constructed as a result of the proposed project. Thus, there would be no change to current public roadway designs including a geometric design feature that could increase traffic hazards. Further, the proposed project is not expected to substantially increase traffic hazards or create incompatible uses at or adjacent to the facilities. Construction-related activities are expected to be temporary and occur over a short-term. Since construction activities and associated passenger vehicle trips and delivery truck trips would cease after construction is completed, the proposed project is not expected to alter the existing long-term circulation patterns within the areas of each affected facility during construction. Thus, no long-term impacts on the traffic circulation system are expected to occur. Further, impacts to existing emergency access at the affected facilities would also not be affected because PAR 1178 does not contain any requirements specific to emergency

access points and each facility would be expected to continue to maintain their existing emergency access. As a result, PAR 1178 is not expected to result in inadequate emergency access.

Conclusion

Based upon these considerations, significant adverse transportation impacts are not expected from implementing the proposed project. Since no significant transportation 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. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildfires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Significance Criteria

A project’s ability to contribute to a wildfire will be considered significant if the project is located in or near state responsibility areas or lands classified as very high fire hazard severity zones, and any of the following conditions are met:

- The project would substantially impair an adopted emergency response plan or emergency evacuation plan.
- The project may exacerbate wildfire risks by exposing the project’s occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, and other factors.
- The project may exacerbate wildfire risks or may result in temporary or ongoing impacts to the environment because the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) are required.
- The project would expose people or structures to significant risks such as downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

- The project would expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildfires.

Discussion

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XVIII. a), b), c), d) & e) No Impact. Implementation of the proposed project would neither require the construction of any new facilities nor result in the construction of any occupied buildings or structures beyond the current boundaries of each affected facility. Thus, PAR 1178 is not expected to substantially impair an adopted emergency response plan or emergency evacuation plan. Further, the existing facilities which are subject to PAR 1178 are located in industrial areas, and not near wildlands. In the event of a wildfire, no exacerbation of wildfire risks, and no consequential exposure of the project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire due to slope, prevailing winds, or other factors would be expected to occur. Similarly, the existing facilities which are subject to PAR 1178 are located in industrial areas and no new facilities are required to be constructed. Thus, PAR 1178 would neither expose people or structures to new significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes, nor would it expose people or structures, either directly or indirectly, to a new significant risk of loss, injury or death involving wildfires. Finally, because PAR 1178 does not require any construction beyond existing facility boundaries, the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment are not required.

Conclusion

Based upon these considerations, significant adverse wildfire risks are not expected from implementing the proposed project. Since no significant wildfire risks were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIX. <u>MANDATORY FINDINGS OF SIGNIFICANCE.</u>				
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 checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

PAR 1178 applies to 1,059 storage tanks located at 27 facilities including refineries, bulk storage, loading, and oil production facilities. However, only 54 tanks at eight facilities will need to be domed and eight tanks at seven facilities will need additional roof seals installed. PAR 1178 is estimated to reduce VOC emissions by 0.82 ton per day. The components of PAR 1178 that would be expected to have physical effects are installing domes on external floating roof tanks and additional roof seals on internal floating roof tanks. Incorporating advanced leak detection technologies, and updating maintenance, recordkeeping, and reporting requirements are not expected to create any secondary adverse environmental impacts.

XIX. a) No Impact. As explained in Section IV - Biological Resources, PAR 1178 is not expected to significantly adversely affect plant or animal species, or the habitat on which they rely because any construction and operational activities are expected to occur entirely within the boundaries of existing developed facilities in areas that have been greatly disturbed and that currently do not

support any species of concern or the habitat on which they rely. For these reasons, PAR 1178 is not expected to reduce or eliminate any plant or animal species or destroy prehistoric records of the past.

XIX. b) Less Than Significant Impact. Based on the foregoing analyses, PAR 1178 would not result in significant adverse project-specific environmental impacts. Potential adverse impacts from implementing PAR 1178 would not be “cumulatively considerable” as defined by CEQA Guidelines Section 15064(h)(1) for any environmental topic because there are no, or only minor incremental project-specific impacts that were concluded to be less than significant. Per CEQA Guidelines Section 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. South Coast AQMD cumulative significant thresholds are the same as project-specific significance thresholds.

Therefore, there is no potential for significant adverse cumulative or cumulatively considerable impacts to be generated by PAR 1178 for any environmental topic area.

XIX. c) Less Than Significant Impact. Based on the foregoing analyses, PAR 1178 is not expected to cause adverse effects on human beings for any environmental topic, either directly or indirectly because: 1) aesthetics impacts were determined to be less than significant as analyzed in Section I – Aesthetics; 2) the air quality and GHG impacts were determined to be less than the significance thresholds as analyzed in Section III – Air Quality and Greenhouse Gases; 3) energy impacts were determined to be less than significant as analyzed in Section VI – Energy; 4) the noise impacts were determined to be less than significant as analyzed in Section XII – Noise; and 5) transportation and traffic impacts were determined to be less than the significant as analyzed in Section XVII – Transportation. In addition, the analysis concluded that there would be no significant environmental impacts for the remaining environmental impact topic areas: agriculture and forestry resources, biological resources, cultural and tribal cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, population and housing, public services, recreation, solid and hazardous waste, transportation, and wildfire.

Conclusion

As previously discussed in environmental topics I through XIX, the proposed project has no potential to cause significant adverse environmental effects. Since no significance adverse environmental impacts were identified, no mitigation measures are necessary or required.

APPENDICES

Appendix A: Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

Appendix B: Modeling Files, Assumptions, and Calculations

Appendix C: List of Affected Facilities

APPENDIX A

Proposed Amended Rule 1178 – Further Reductions of VOC Emissions from Storage Tanks at Petroleum Facilities

FOR DISCUSSION PURPOSES ONLY

(Adopted December 21, 2001)(Amended April 7, 2006)(Amended April 6, 2018)
(Amended November 6, 2020)(Amended May 5, 2023)([PAR 1178 September 2023](#))

V. 061323

RULE 1178 FURTHER REDUCTIONS OF VOC EMISSIONS FROM STORAGE TANKS AT PETROLEUM FACILITIES

(a) Purpose

The purpose of this rule is to further reduce emissions of Volatile Organic Compounds (VOC) from Storage Tanks located at Petroleum Facilities.

(b) Applicability

The rule applies to the following Storage Tanks used to store Organic Liquid located at any Petroleum Facility that emits more than 40,000 pounds (20 tons) per year of VOC [as reported in the Annual Emissions Report pursuant to Rule 301 – Permit Fees](#) in any Emission Inventory Year starting with the Emission Inventory Year 2000.

- (1) Aboveground Storage Tanks with capacity equal to or greater than 75,000 liters (19,815 gallons) storing Organic Liquid with a TTrue Vvapor Ppressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions; and
- (2) Storage Tanks with a Potential For VOC Emissions of 6 tons per year used in Crude Oil And Natural Gas Production Operations.

(c) Definitions

- (1) ACCESS HATCH is an opening in the roof with a vertical well and a cover attached to it. Access Hatch provides passage for workers and materials through the roof for construction or maintenance.
- (2) AMBIENT TEMPERATURE is the temperature of an Organic Liquid within a Storage Tank that has been influenced by atmospheric conditions only and is not elevated by a non-atmospheric means of heating at the tank which includes but is not limited to steam, hot water, heaters, heat exchangers, tank insulation, or tank jacketing.
- (3) CERTIFIED PERSON is a person who has successfully completed the [South Coast AQMD District](#) tank self-inspection program and a [South Coast AQMD District](#) approved fugitive emissions compliance inspection program, and who holds a certificate issued by the Executive Officer evidencing that such person is in good standing in this program.

- (4) COMPONENT INSPECTION is monitoring for Visible Vapors with an Optical Gas Imaging Device of a Storage Tank roof and individual components, including but not limited to Roof Openings and Rim Seal Systems, for Visible Vapors viewable from the tank platform and ground.~~CONTINUOUS SEAL is a seal that forms a continuous closure that completely covers the annular space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal. A continuous seal may be constructed of fastened segments so as to form a continuous seal.~~
- (5) CRUDE OIL AND NATURAL GAS PRODUCTION OPERATIONS are any operations from a crude oil well to the point of custody transfer to a refinery and any operations from a natural gas well to the natural gas customer.
- (6) DOMED ROOF is a self-supporting fixed roof attached to the top of an Eexternal Floating Roof Tank to reduce evaporative losses.
- (7) EMISSION CONTROL SYSTEM is a combination of capture system(s) and control equipment used to recover, reduce, remove or control the release of VOC to the atmosphere. Such equipment includes, but is not limited to, absorbers, adsorbers, compressors, condensers, incinerators, flares, boilers, and process heaters.
- (8) EMISSION INVENTORY YEAR is the annual emission-reporting period specified by the Annual Emission Reporting (AER) Program requirements for a given year, beginning from July 1 of the previous year through June 30 of a given year. For example, emission inventory year 2000 covers the period from July 1, 1999 through June 30, 2000.
- (9) EXTERNAL FLOATING ROOF TANK is a Sstorage Tank with a roof consisting of a double deck or pontoon single deck which rests or floats on the liquid being contained.
- ~~(10) EXEMPT COMPOUNDS are as defined in Rule 102.~~
- (10+) FACILITY is any equipment or group of equipment or other VOC-emitting activities, which are located on one or more contiguous properties within the District, in actual physical contact or separated solely by a public roadway or other public right-of-way, and are owned or operated by the same person (or by persons under common control), or an outer continental shelf (OCS) source as determined in 40 CFR Section 55.2. Such above- described groups, if noncontiguous, but connected only by land carrying a pipeline, shall not be considered one Facility.

- (112) FIXED ROOF SUPPORT COLUMN AND WELL is a column made of round pipe or of structural shape with an irregular cross section that passes through the floating roof via a peripheral vertical well and is used to support the roof of an internal floating roof tank.
- (123) FIXED ROOF TANK is a [S](#)storage [T](#)ank with a permanently affixed roof
- (134) FLEXIBLE ENCLOSURE SYSTEM is a VOC emission reduction system made of a VOC impervious material which is resistant to ultraviolet radiation, completely enclosing a [S](#)lotted [G](#)uidepole and controls the vapor emission pathway from inside the storage vessel through the [G](#)uidepole slots to the outside air.
- (145) FUEL GAS SYSTEM is the piping and control system that gathers gaseous stream(s) generated by onsite operations and transports the gaseous stream for sale or for use as fuel gas in combustion devices, or in-process combustion equipment such as furnaces and gas turbines, either singly or in combination.
- (156) GAUGE FLOAT is a device that is used to indicate the level of liquid within the tank. The float rests on the liquid surface and is housed inside a well that is closed by a removable cover.
- (167) GAUGE HATCH/SAMPLE PORT is an opening in the roof that provides access for gauging or sampling. A gauge hatch/sample port is usually equipped with a closing cover or a funnel and slit-fabric seal to cover the opening.
- (178) GUIDEPOLE is an anti-rotation device that is fixed to the top and bottom of the tank, passing through a well that is equipped with a sliding cover. The [G](#)uidepole is used to prevent adverse movement of the roof and subsequent damage to the roof fittings and rim seals, or as access for level gauging or sampling of the liquid stock. The [G](#)uidepole can be solid or equipped with slots or holes for gauging purpose.
- (189) INTERNAL FLOATING ROOF TANK is a [S](#)storage [T](#)ank equipped with a fixed roof and a floating roof which rests on the liquid being contained.
- (192) LADDER AND WELL is a ladder that passes through a well, and is used to access the tank bottom of an [I](#)nternal [F](#)loating [R](#)oof [T](#)ank.
- (202) LIQUID MOUNTED PRIMARY SEAL is a primary seal that is mounted in full contact with the liquid in the annular space between the tank shell and the floating roof.
- (212) MECHANICAL SHOE PRIMARY SEAL is a metallic band attached to the floating roof sliding in contact with the tank shell. The shoes are supported and held against the tank shell by a mechanical device, and are joined together to

form a ring. The vapor space between the shoe and the roof is sealed from the atmosphere by a primary seal of coated or VOC impervious fabric.

- (22) [OPTICAL GAS IMAGING DEVICE](#) is an infrared camera with a detector capable of visualizing gases in the 3.2-3.4 micrometer waveband.
- (23) ORGANIC LIQUID is any liquid containing VOC.
- (24) PETROLEUM FACILITY is any facility primarily engaged in the production, refining, storage, transfer or distribution of crude petroleum or petroleum products as defined in the Standard Industrial Classification for crude petroleum and natural gas (SIC code 1311), petroleum refining (SIC code 2911), petroleum bulk stations and terminals (SIC code 5171), or other related industries (e.g., SIC codes 4226, 4612, 4613, 4923 and 5541).
- (25) POLE FLOAT is a device located inside a guidepole that floats on the surface of the stored liquid, and is used to indicate the liquid level inside the tank.
- (26) POLE SLEEVE is a device that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.
- (27) POLE WIPER is a seal that extends from either the cover or the rim of an opening in a floating roof deck to the outer surface of a pole that passes through the opening.
- (28) POTENTIAL FOR VOC EMISSIONS means emissions calculated using a generally accepted model or calculation methodology, based on permitted throughput limits or, when permitted throughput limits are not available, based on the maximum throughput in a calendar month, where at least 30 days of production occurred, in years 2019 to 2022.
- (29) PRESSURE-VACUUM VENT is a vent that is used to minimize tank emissions due to breathing effects.
- (30) PRIMARY SEAL is a seal mounted below a secondary seal of a rim seal system that consists of two seals. A primary seal, which is in contact with the floating roof tank shell, can be either mechanical shoe, resilient filled, or wiper type.
- (31) RESILIENT FILLED PRIMARY SEAL is an envelope filled with resilient foam (non-metallic polyurethane) mounted at the rim of the floating roof that makes contact with the shell. A resilient filled nonmetallic primary seal can be liquid-mounted or vapor-mounted.
- (32) RIM MOUNTED SECONDARY SEAL is a secondary seal mounted on the rim of the floating roof of a storage tank. Rim mounted secondary seals are effective at reducing losses from the primary seal fabric.

- (33) RIM SEAL SYSTEM is a closure device between the shell of the Sstorage Tank and the floating roof edge. A Rim Sseal Ssystem may consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal.
- (34) RIM VENT is a device consisting of a weighted pallet that rests on a valve seat. Rim Vents are used to release any excess pressure or vacuum present in the vapor pocket between the seal and the rim area of a floating roof tank.
- (35) ROOF DRAIN is a drain on the roof of a floating roof tank that is used to remove rainwater from the floating roof. There are two types of roof drains. A closed roof drain removes the rainwater from the surface of the roof through a flexible hose through the stored liquid prior to exiting the tank. With a closed roof drain, the rainwater does not come in contact with the liquid stored in the tank. An open roof drain is any drain other than the closed roof drain. An open roof drain is typically used only during an emergency.
- (36) ROOF LEG is a device that holds the floating roof at a predetermined distance from the tank bottom to allow for tank cleaning or repair. There are two types of roof legs, adjustable or fixed. Fixed legs are attached to the floating roof or hangers suspended from the roof, whereas adjustable legs pass through a well or sleeve, and penetrate the roof.
- (37) ROOF OPENING is any opening through a floating roof of a Sstorage Tank for any roof fitting including but not limited to Access Hatch, Fixed Roof Support Column And Well, Gauge Float, Gauge Hatch, Ssample Port, Guidepole, Ladder And Well, Rim Vent, Roof Drain, Roof Leg, and Vacuum Breaker, and excluding Rim Sseal System.
- (38) SECONDARY SEAL is a seal mounted above the primary seal of a Rim Sseal System that consists of two seals. Secondary seals can be shoe mounted or rim-mounted.
- (39) SHOE MOUNTED SECONDARY SEAL is a secondary seal mounted on the primary mechanical shoe. Shoe mounted secondary seals are effective at reducing vapor losses from the gaps between the shoe and the tank shell.
- (40) SLOTTED GUIDEPOLE is a Guidepole that has slots or holes through the wall of the Guidepole. The slots or holes allow the stored liquid to flow into the pole at liquid levels above the lowest operating level.
- (41) STORAGE TANK is a stationary container primarily constructed of non-earthen materials that meets the applicability criteria of this rule.
- (42) TANK FARM INSPECTION is monitoring for Visible Vapors with an Optical Gas Imaging Device of all applicable Storage Tanks at a Facility where the

person conducting the inspection views the top of the tank shell, and fixed roof or dome if applicable. Tank Farm Inspections may be conducted from an elevated position and/or from ground level.

(432) TRUE VAPOR PRESSURE is the vapor pressure of a liquid at actual storage conditions.)

(443) VACUUM BREAKER is a device used to equalize the pressure of the vapor space across the deck as the floating roof is either being landed on or floated off its legs. A vacuum breaker consists of a well with a cover. Attached to the underside of the cover is a guided leg long enough to contact the tank bottom as the floating roof is being landed. When in contact with the tank bottom, the guided leg mechanically lifts the cover off the well.

~~(44) VAPOR MOUNTED PRIMARY SEAL is a primary seal that does not come in contact with the liquid in the annular space between the tank shell and the floating roof.~~

(45) VAPOR TIGHT CONDITION is a condition that exists when the reading on a portable hydrocarbon analyzer is less than 500 parts per million (ppm), expressed as methane, above background, measured using EPA Reference Method 21.

(46) VISIBLE GAP is a gap of more than 1/8 inch between any gasket or seal and the opening that it is intended to seal. Visible gap for primary and secondary seals is a gap that does not meet the requirements specified in subdivision (d).

(47) VISIBLE VAPORS are any vapors detected with an Optical Gas Imaging Device during a Component or Tank Farm Inspection, when operated and maintained in accordance with manufacturer training, certification, user manuals, specifications, and recommendations.

(487) VOLATILE ORGANIC COMPOUNDS (VOC) as defined in Rule 102.)

(498) WASTE STREAM TANK is a Sstorage Tank containing at least 75% water by volume, and some liquid waste stream generated in a manner which contains petroleum liquid, emulsified oil, VOC or other hydrocarbons. For the purpose of this rule, waste stream tanks include waste water tanks and recovered oil (or slop oil) tanks.

(504) WIPER TYPE PRIMARY SEAL is a continuous annular blade of flexible material (e.g. rubber, urethane, or foam filled) fastened to a mounting bracket on the deck perimeter that spans the annular rim space and contacts the tank shell. A wiper seal system may consist of a single primary seal, or dual (multiple) seals where one seal is mounted above the other.

(d) Requirements

(1) External Floating Roof Tanks

(A) Floating Roof Requirements

~~The owner or No later than July 1, 2003, the~~ operator of an Eexternal Ffloating Rroof Ttank shall:

- (i) Equip each Aaccess Hhatch and Gauge Ffloat well with a cover that is gasketed and bolted. The cover shall be closed at all times, with no Vvisible Ggaps, except when the hatch or well must be opened for access.
- (ii) Equip each Gauge Hhatch/sample well with a cover that is gasketed. The cover shall be closed at all times, with no Vvisible Ggaps, except when the hatch or well must be opened for access.
- (iii) Gasket or cover each adjustable Rroof Lleg with a VOC impervious sock at all times when the roof is floating.
- (iv) Gasket each Rrim Vvent. Rim Vvents shall be closed at all times, with no Vvisible Ggaps, when the roof is floating; and shall be set to open only when the roof is being floated off the Rroof Lleg supports or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting.
- (v) Gasket each Vvacuum Bbreaker. Vacuum Bbreakers shall be closed at all times, with no Vvisible Ggaps, when the roof is floating; and shall be set to open only when the roof is being floated off or is being landed on the Rroof Lleg supports.
- (vi) Equip each open floating Rroof Drain with a slotted membrane fabric cover or other device with an equivalent control efficiency that covers at least 90 percent of the area of the opening.
- (vii) Equip each unslotted Gguidepole well with a gasketed sliding cover and a flexible fabric sleeve or wiper.
- (viii) Equip each unslotted Gguidepole with a gasketed cover at the end of the pole. The cover shall be closed at all times, with no Vvisible Ggaps, except when gauging or sampling.
- (ix) Equip each slotted Gguidepole with the following combination of components:
 - (A) A gasketed cover, a Ppole Wwiper, and a Ppole Ffloat with a wiper or seal; or
 - (B) A gasketed cover, a Ppole Wwiper, and a Ppole Ssleeve that shall be extended into the stored liquid; or

- (C) A gasketed cover, a Ppole Wwiper, a Ppole Ssleeve that shall be extended into the stored liquid, and a Flexible Enclosure System.
 - (x) Maintain the Ppole Float in a condition such that it floats within the Guidepole at all times, except when it must be removed for sampling or when the tank is empty. The wiper or seal of the Ppole Float shall be at or above the height of the Ppole Wwiper.
 - (xi) An owner or operator that equips the slotted Guidepole with a Flexible Enclosure System shall ensure that the Flexible Enclosure System:
 - (A) Completely encloses the slotted Guidepole;
 - (B) Is free of holes, tears, slots, or rips; and
 - (C) Is double-clamped tightly at the top of the Guidepole and secured to the tank roof with no Visible Gaps.
 - (xii) Cover each slotted Guidepole opening with a gasketed cover at all times, with no Visible Gaps, except when the cover must be opened for access.
 - (xiii) Except for Vacuum Breakers and Rim Vents, ensure that each opening in the external floating roof shall provide a projection below the liquid surface.
 - (xiv) Except for Vacuum Breakers, Rim Vents, Roof Drain, and leg sleeves, equip all other openings in the roof with a gasketed cover or seal which is closed at all times, with no Visible Gaps, except when the cover or seal must be opened for access.
- (B) In lieu of complying with the requirement of no Visible Gap in subparagraph (d)(1)(A), the owner or operator of a floating roof tank containing Organic Liquid shall maintain all Roof Openings in a Vapor Tight Condition at all times except during preventive maintenance or repair specified in subdivision (g) of this rule.
- (CB) Rim Seal System Requirements
The owner or~~No later than July 1, 2003,~~ the operator of an Eexternal Floating Roof Tank shall equip the tank with a Rim Seal System meeting the following requirements:
- (i) The Pprimary Seal shall be a Mechanical Shoe or Liquid Mounted.
 - (ii) The Secondary Seal shall be Rim Mounted and shall not be attached to the Pprimary Seal.

- (iii) Gaps between the tank shell and the Pprimary Sseal shall not exceed 1.3 centimeters (1/2 inch) for a cumulative length of 1030 percent of the circumference of the tank, and 0.32 centimeter (1/8 inch) for 3060 percent of the circumference of the tank. No gap between the tank shell and the Pprimary Sseal shall exceed 3.8 centimeters (1-1/2 inches). No continuous gap between the tank shell and the Pprimary Sseal greater than 0.32 centimeter (1/8 inch) shall exceed 10 percent of the circumference of the tank.
- (iv) Gaps between the tank shell and the Ssecondary Sseal shall not exceed 0.32 centimeter (1/8 inch) for a cumulative length of 95 percent of the circumference of the tank. No gap between the tank shell and the Ssecondary Sseal shall exceed 1.3 centimeters (1/2 inch).
- (v) Mechanical Sshoe ~~primary~~ seals shall be installed so that one end of the shoe extends into the stored Organic Liquid and the other end extends a minimum vertical distance of 61 centimeters (24 inches) above the stored Organic Liquid surface.
- (vi) The geometry of the shoe shall be such that the maximum gap between the shoe and the tank shell is no greater than double the gap allowed by the seal gap criteria specified in clause (d)(1)(~~CB~~)(iii) for a length of at least 46 centimeters (18 inches) in the vertical plane above the liquid surface.
- (vii) The Pprimary Sseal envelope shall be made available for unobstructed inspection by the Executive Officer along its circumference. In the case of riveted tanks with Resilient Filled Pprimary Sseals, at least eight such locations shall be made available; for all other types of seals, at least four such locations shall be made available. If the Executive Officer deems it necessary, further unobstructed inspection of the Pprimary Sseal may be required to determine the seal's condition along its entire circumference.
- (viii) The Ssecondary Sseal shall be installed in a way that permits the Executive Officer to insert probes up to 3.8 centimeters (1-1/2 inches) in width to measure gaps in the Pprimary Sseal.
- (ix) There shall be no holes, tears or openings in the Ssecondary Sseal or in the Pprimary Sseal envelope surrounding the annular vapor

space enclosed by the roof edge, seal fabric, and Ssecondary Seal.

- (x) Except during the preventive maintenance, repair, or inspection periods specified in subdivision (f) and (g) of this rule that do not exceed 72 hours with prior notification to the Executive Officer, both the Pprimary Sseal and the Ssecondary Sseal shall cover the annular space between the external floating roof and the wall of the Sstorage Tank in a continuous fashion, with no Vvisible Ggaps.
- (xi) The owner or operator shall use a Rrim Sseal Ssystem that is identified on the current list of seals approved by the Executive Officer. The owner or operator requesting the use of an alternative Rrim Sseal Ssystem shall submit a written application including emission test results and analysis demonstrating that the alternative Rrim Sseal Ssystem is better in performance and has a rim seal loss emission factor that is less than or equal to the current design.

~~(C) No later than July 1, 2003, in lieu of complying with the requirement of no visible gap in subparagraph (d)(1)(A), the operator of an external floating roof tank shall maintain all roof openings in a vapor tight condition at all times except during preventive maintenance, repair, or inspection periods specified in subdivision (f) and (g) of this rule.~~

(D) Tank Condition Requirements

The owner or operator shall maintain the tank in a condition free of Visible Vapors resulting from a defect in equipment as determined pursuant to the schedule and inspection in paragraph (f)(4).

(E) Doming Requirements

The owner or operator of an External Floating Roof Tank shall install a Domed Roof on any External Floating Roof Tank used to store Organic Liquid with a True Vapor Pressure of 3 psia or greater.

(F) Verification of True Vapor Pressure

An owner or operator of an External Floating Roof Tank shall demonstrate the True Vapor Pressure of the Organic Liquid stored is lower than 3 psia on a semi-annual basis pursuant to the requirements of subdivision (i). For facilities that have committed to a testing frequency in writing on or before January 1, 2003, the applicability and compliance verification of Waste Stream Tanks and recovered oil tanks shall be based

on a monthly average True Vapor Pressure greater than or equal to 3 psia. The monthly average True Vapor Pressure of waste stream shall be determined based on at least one representative sample or multiple samples collected from the top surface layer that is no deeper than 6 inches at the frequency committed to in writing by the affected Facility.

(G) In lieu of complying with the requirements in subparagraph (d)(1)(E), the owner or operator of a wastewater tank where the conversion to a Domed External Floating Roof Tank may create a hazard due to the accumulation of pyrophoric material, as confirmed by the Executive Officer, shall accept permit conditions to limit the True Vapor Pressure of the Organic Liquids stored in a tank to lower than 3 psia.

(2) Domed External Floating Roof Tanks

The owner or operator of a Domed External Floating Roof Tanks shall:

~~(A) Phase I: The operator at any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for emission inventory year 2000 shall install domed roofs on all external floating roof tanks that contain organic liquids having true vapor pressure greater than or equal to 3 psia as reported in the Annual Emissions Report pursuant to Rule 301—Permit Fees for the emission inventory year 2000 according to the following schedule:~~

- ~~(i) At least 1/3 of the tanks subject to this provision by January 1, 2004;~~
- ~~(ii) At least 2/3 of the tanks subject to this provision by January 1, 2006;~~
- ~~(iii) All tanks subject to this provision by January 1, 2008.~~
- ~~(iv) As an alternative to clauses (i) through (iii) above, an operator may submit a compliance plan demonstrating that 75% of the tanks subject to this provision have domes installed by December 31, 2006, and 100% of such tanks shall have domes installed by December 31, 2008. The Executive Officer shall approve any plan which convincingly demonstrates compliance and may impose conditions of approval necessary to assure compliance. The operator shall comply with all provisions and conditions of an approved plan.~~

~~(B) Phase II: For additional external floating roof tanks that are not identified under Phase I but contain organic liquids having true vapor pressure greater than or equal to 3 psia as reported in the Annual Emissions Report~~

~~pursuant to Rule 301—Permit Fees for any emission inventory year after 2000, the operator who is subject to Phase I shall comply with the requirements specified in subparagraph (d)(2)(A) no later than two years after becoming subject to the rule. In those cases where the two-year period falls within Phase I, the operator shall complete the installation of the domes on all Phase II tanks by no later than January 1, 2010, or December 31, 2010 if choosing to comply with the alternative in clause (d)(2)(A)(iv). The applicability and compliance verification of waste stream tanks and recovered oil tanks shall be based on a monthly average true vapor pressure greater than or equal to 3 psia. The monthly average true vapor pressure of waste stream shall be determined based on at least one representative sample or multiple samples collected from the top surface layer that is no deeper than 6 inches at a frequency committed to in writing by the affected facility no later than January 1, 2003. The facility shall monitor and keep records of sampling results and monthly average true vapor pressures on site and make them available to the Executive Officer upon request.~~

- (C) ~~In lieu of complying with the requirements in subparagraph (d)(2)(B):~~
- (i) ~~The operator who is subject to Phase I shall accept permit conditions to limit the true vapor pressure of the organic liquids stored in a tank to lower than 3 psia by the end of Phase I.~~
 - (ii) ~~The operator of a waste water tank where the installation of a domed roof may create a hazard due to the accumulation of pyrophoric material, as confirmed by the Executive Officer, who is subject to Phase II shall accept permit conditions to limit the true vapor pressure of the organic liquids stored in a tank to lower than 3 psia.~~
- (AD) ~~The operator of a domed external floating roof tank shall Equip and maintain all Rroof Oopenings in accordance with the specifications listed in subparagraphs (d)(1)(A) and (d)(1)(C), except for Slotted Guidepoles by the applicable compliance date in subparagraph (d)(2)(A) and (d)(2)(B). Each Sslotted Gguidepole shall be equipped with the following combination of components:~~
- (i) ~~A gasketed cover, a Ppole Wwiper, a Ppole Ffloat with a wiper or seal; or~~
 - (ii) ~~A gasketed cover, a Ppole Wwiper, and a pole sleeve that shall be extended into the stored liquid; or~~

(iii) A gasketed cover, a Ppole Wwiper, and a flexible enclosure system.

~~(E) The operator of a domed external floating roof tank shall equip the tank with a rim seal system consisting of a primary and a secondary seal meeting the specifications listed in subparagraph (d)(1)(B) by the applicable compliance date in subparagraphs (d)(2)(A) and (d)(2)(B).~~

~~(BF) The operator shall Ensure that the concentration of organic vapor in the vapor space above ~~the a domed external floating roof~~ doesshall not exceed 30 percent of its lower explosive limit (LEL) ~~by the applicable compliance date in subparagraph (d)(2)(A) and (d)(2)(B).~~~~

~~(C) Comply with the requirements of subparagraph (d)(1)(D).~~

~~(G) The operator shall submit to the Executive Officer an annual status report including at a minimum all of the following:~~

~~(i) A list of all external floating roof tanks subject to the requirement in subparagraphs (d)(2)(A) and (d)(2)(B);~~

~~(ii) A general description of each tank including information such as tank identification, District permit number or District device identification, tank type, tank capacity, type of liquid stored, and if applicable, number of representative samples, frequency of sampling, averaging method used to determine the monthly average true vapor pressure of waste stream or recovered oil tanks, and the results.~~

~~(iii) A compliance status for each tank; and~~

~~(iv) An estimated compliance date for each external floating roof tank that is not yet in compliance with the requirement in subparagraph (d)(2)(A) and (d)(2)(B).~~

(3) Internal Floating Roof Tanks

The owner or operator of an Internal Floating Roof Tank shall:

~~When an internal floating roof tank is scheduled for emptying and degassing, but no later than January 1, 2007, the operator of an internal floating roof tank shall:~~

(A) Equip each fixed roof support column and well with a sliding cover that is gasketed or with flexible fabric sleeves;

(B) Equip each ladder well with a gasketed cover. The cover shall be closed at all times, with no Visible Gaps, except when the well must be opened for access;

(C) Equip and maintain other Rroof Openings according to the specifications listed in subparagraph (d)(1)(A) or (d)(1)(C). Each slotted

Guidepole shall be equipped with the following combination of components:

- (i) A gasketed cover, a Ppole Wwiper, a Ppole Float with a wiper or seal; or
- (ii) A gasketed cover, a Ppole Wwiper, and a Ppole Ssleeve that shall be extended into the stored liquid; or
- (iii) A gasketed cover, a Ppole Wwiper, and a flexible enclosure system.

(D) Equip the tank with a Rim Sseal Ssystem consisting of ~~either a Pprimary Sseal, or a primary~~ and a Ssecondary Sseal meeting the specifications listed in subparagraph (d)(1)(CB), with the exception of a mechanical shoe primary seal which shall have one end extend a minimum vertical distance of 15 centimeters (6 inches) above the liquid surface and the other end extend into the liquid a minimum of 10 centimeters (4 inches); and

(E) Ensure that the concentration of organic vapor in the vapor space above the internal floating roof ~~does~~shall not exceed 50 percent of its lower explosive limit (LEL) for those installed prior to June 1, 1984 and 30 percent of its LEL for those installed after June 1, 1984.

(F) Comply with the requirements of subparagraph (d)(1)(D).

(4) Fixed Roof Tanks

(A) ~~No later than January 1, 2007, T~~he owner or operator of a Fixed Rroof Ttank shall equip each Fixed Rroof Ttank ~~with an Emission Control Ssystem~~ shall meeting the following requirements:

- (i) Vent tank emissions to a Fuel Gas System or an ~~The tank emissions are vented to an Emission Control Ssystem~~ with an overall control efficiency of at least 98~~5~~% by weight ~~or the tank emissions are vented to a fuel gas system.~~
- (ii) Any tank gauging or sampling device on a tank shall be equipped with a vapor tight cover which shall be closed at all times, with no Visible Gaps, except during gauging or sampling. The roof of such tank shall be properly maintained in a Vvapor Ttight Ccondition with no holes, tears or uncovered opening.
- (iii) All openings on the roof shall be properly installed and maintained in a Vvapor Ttight Ccondition at all times.
- (iv) ~~The operator shall E~~quip each Fixed Rroof Ttank with Ppressure-Vvacuum Vvents that shall be set to the lesser of 10%

below the maximum allowable working pressure of the roof or 0.5 psig.

(v) ~~The operator shall maintain pressure-vacuum vents in a vapor tight condition at all times except when the operating pressure of the fixed roof tank exceeds the manufacturer's recommended setting.~~

(B) In lieu of complying with the requirement in subparagraph (d)(4)(A), the owner or operator may choose to convert the ~~fixed roof tank~~ to an external floating roof tank, a domed external floating roof tank or an internal floating roof tank meeting the requirements specified in paragraphs (d)(1), (d)(2) or (d)(3).

(C) The owner or operator shall comply with the requirements of subparagraph (d)(1)(D).

(5) Compliance Schedules

The owner or operator of any petroleum facility with annual VOC emissions exceeding 40,000 lbs (20 tons) for any emission inventory year subsequent to 2000 reporting pursuant to Rule 301—Permit Fees Storage Tank that becomes subject to this rule or requirements of this rule on or after [Date of Adoption] shall meet the following compliance schedules:

(A) The owner or operator of a facility that becomes subject to this rule after [Date of Adoption] shall: Comply with the requirements for external floating roof tanks specified in paragraph (d)(1) no later than one year after becoming subject to this rule.

(i) Comply with the requirements of paragraph for External Floating Roof Tanks specified in paragraph (d)(1), except for subparagraph (d)(1)(E) no later than one year after becoming subject to this rule.

(ii) Comply with the requirements of subparagraph (d)(1)(E) no later than two years after becoming subject to the requirement.

(iii) Comply with the requirements for Internal Floating Roof Tanks specified in paragraph (d)(3) when the tanks are scheduled for emptying and degassing, but no later than five years after becoming subject to this rule.

(iv) Comply with the requirements for Fixed Roof Tanks specified in paragraph (d)(4) no later than five years after becoming subject to this rule.

(B) The owner or operator shall install a domed roof on any storage tanks under common ownership permitted to contain more than 97% by volume

~~crude oil that become subject to the doming requirements of subparagraph (d)(1)(E) upon [Date of Adoption], in accordance with the following schedule: Comply with the requirements for domed external floating roof tanks specified in paragraph (d)(2) no later than six years after becoming subject to this rule . Any external floating roof tank that later becomes subject to this requirement based on any subsequent emission inventory year, shall comply with the requirements in paragraph (d)(2) no later than two years after becoming subject to this rule.~~

~~(i) No later than December 31, 2031 for at least 1/3 of the applicable Storage Tanks; and~~

~~(ii) No later than December 31, 2033 for at least 1/2 of the applicable Storage Tanks; and~~

~~(iii) No later than December 31, 2038 for all of the applicable Storage Tanks.~~

~~(C) The owner or operator of an External Floating Roof Tank permitted to contain more than 97% by volume crude oil with a True Vapor Pressure of 3 psia or less that becomes subject to the doming requirements of subparagraph (d)(1)(E) after [Date of Adoption] after a test demonstrates that the True Vapor Pressure of the crude oil is 3 psia or greater shall comply with subparagraph (d)(1)(E) no later than 3 years after becoming subject the requirement. Comply with the requirements for internal floating roof tanks specified in paragraph (d)(3) when the tanks are scheduled for emptying and degassing, but no later than five years after becoming subject to this rule.~~

~~(D) The owner or operator of an Internal Floating Roof Tank not equipped with a Secondary Seal shall comply with the requirements of subparagraph (d)(3)(D) when the tank is next emptied or degassed, or prior to refilling for any tank that is out of service, beginning 2 years after [Date of adoption]. The owner or operator shall install a secondary seal no later than 10 years after [Date of Adoption]. Comply with the requirements for fixed roof tanks specified in paragraph (d)(4) no later than five years after becoming subject to this rule.~~

~~(6) The operator of all tanks for which a permit to construct and operate has been issued by the Executive Officer on and after January 1, 2002 for new construction shall comply with the requirements of subdivision (d).~~

(e) Identification Requirements

- (1) The owner or operator shall permanently identify all tanks subject to the requirements of this rule by a visible sign that includes the tank number, on the outside wall of the tank for inventory, inspection and record keeping purposes.
 - (2) The owner or operator shall notify the Executive Officer of any change(s) in tank identification.
- (f) Monitoring Requirements
- (1) External Floating Roof Tanks
To demonstrate compliance with paragraph (d)(1), the operator shall have a Ceertified Pperson conduct the following in accordance with the procedures and guidelines specified in Attachment A:
 - (A) Conduct an EPA Method 21 inspection or measure gaps of all Rroof Oopenings on a semiannual basis and each time the tank is emptied and degassed.
 - (B) Perform complete gap measurements of the Rrim Sseal Ssystem on a semiannual basis and each time the tank is emptied and degassed.
 - (2) Domed External Floating Roof Tanks and Internal Floating Roof Tanks
To demonstrate compliance with paragraph (d)(2) and (d)(3), the owner or operator shall have a Ceertified Pperson conduct the following in accordance with the procedures and guidelines specified in Attachment A:
 - (A) Visually inspect the Rrim Sseal Ssystem and Rroof Oopenings and use an explosimeter to measure the lower explosive limit (LEL) on a semiannual basis.
 - (B) Perform complete gap measurements of the Rrim Sseal Ssystem each time the tank is emptied and degassed but no less than once every ten years.
 - (C) Perform complete gap measurements of all Rroof Oopenings each time the tank is emptied and degassed but no less than once every ten years.
 - (3) Fixed Roof Tanks
 - (A) No later than 180 days after the effective date of the requirements, the owner or operator of a Ffacility who elects to install an Eemission Ceontrol Ssystem to comply with the requirements in clause (d)(4)(A)(i) shall conduct an initial performance testing to determine the overall efficiency of the emission control system and submit a complete test report to the Executive Officer. The performance testing of the Eemission Ceontrol Ssystem shall be repeated when the system is modified or an operating parameter is changed in a manner that affects the capture or control efficiency. In such case, the performance test shall be conducted

and the test report submitted to the Executive Officer within 180 days after the modification. Subsequent to the initial performance test, the operator shall conduct annual performance tests, and shall monitor and record applicable operating parameters on a weekly basis to ensure that the Emission Control System is achieving 95% overall control efficiency.

- (B) To demonstrate compliance with clauses (d)(4)(A)(ii), (d)(4)(A)(iii) and (d)(4)(A)(v), the owner or operator shall have a Certified Person conduct EPA Method 21 measurements on a quarterly basis.
- (C) To demonstrate compliance with clause (d)(4)(A)(iv), the operator shall keep engineering data sheet for Pressure-Vacuum Vents installed after January 1, 2002.

(4) Optical Gas Imaging Inspections

Effective July 1, 2024, the owner or operator shall demonstrate compliance with subparagraphs (d)(1)(D), (d)(2)(D), (d)(3)(F) and (d)(4)(C), by conducting OGI inspections in accordance with the following requirements:

(A) The person conducting an OGI inspection shall:

- (i) Complete a manufacturer's certification or training program for the OGI device used to conduct the inspection; and
- (ii) Operate and maintain the OGI device in accordance with the manufacturer's specifications and recommendations.

(B) Tank Farm Inspections

A person meeting the requirements of subparagraph (f)(4)(A) shall:

- (i) Conduct a Tank Farm Inspection at least once every calendar week.
- (ii) When Visible Vapors are detected from a tank, continue the inspection from the tank's platform to identify the source from which Visible Vapors are emitted.

(A) If the Visible Vapors are emitted from components required to be maintained in a Vapor Tight Condition or in a condition with no Visible Gaps, the owner or operator shall make necessary repairs or adjustments pursuant to subdivision (g), or demonstrate compliance with rule requirements within 3 days.

(B) If the Visible Vapors are emitted from equipment not specified in subclause (f)(4)(B)(ii)(A), a person meeting the requirements of subparagraph (f)(4)(A) shall conduct

a visual inspection for defects in the equipment, which may include the use of the OGI device. The owner or operator shall make necessary repairs or adjustments pursuant to subdivision (g) for any defects identified.

(iii) If, during an inspection of a tank conducted pursuant to clause (f)(4)(B)(i) Visible Vapors are detected and no repairs or demonstrations were required pursuant to clause (f)(4)(B)(ii), an owner or operator is not required to conduct inspections required by clause (f)(4)(B)(ii) for that tank for the following weeks within that calendar month provided the owner or operator:

(A) Records the Visible Vapors detected during the Tank Farm Inspection; and

(B) Makes a determination that there are no visually identifiable departures indicating an increase in Visible Vapors by comparing the Visible Vapors detected during subsequent Tank Farm Inspections in the same calendar month to the Visible Vapors recorded pursuant to subclause (f)(4)(B)(iii)(A). Departures may include, but are not limited to, increases in the size, density, flowrate, or number of Roof Openings from which Visible Vapors are emitted.

(C) Component Inspections

A person that meets the requirements of subparagraph (f)(4)(A) shall conduct a Component Inspection for floating roof tanks semi-annually.

(i) When Visible Vapors are detected, and are not emitted from the Rim Seal System, the owner or operator shall make any necessary repairs or adjustments pursuant to subdivision (g), or demonstrate compliance with rule requirements within 3 days.

(ii) When the Visible Vapors are detected from the Rim Seal System, the owner or operator shall identify any defects in the equipment and make any necessary repairs or adjustments pursuant to subdivision (g) for any defects identified. If no defects are identified, an inspection from ground level shall be conducted. If Visible Vapors are detected at the top of the tank shell or roof vents, the owner or operator shall demonstrate compliance with the Rim Seal requirements of this rule within 3 days.

(g) Maintenance Requirements

The owner or operator shall maintain tanks in accordance with the follow requirements:

- (1) Repair, or replace any piping, valves, vents, seals, gaskets, or covers of Roof Openings that are found to have defects or Visible Gaps, or are not in a Vapor Tight Condition and do not meet all the requirements of this rule before filling or refilling an emptied and degassed Storage Tank, or within 72 hours after an inspection, including one conducted by the operator as specified in paragraphs (f)(1) through (f)(3), determines that the equipment is not operating in compliance.
- (2) Make any necessary repairs or adjustment on tanks found in non-compliance during an inspection required by paragraph (f)(4) within 3 days after the inspection.
- (3) For tanks subject to the doming schedule specified in paragraph (d)(5), complete a re-seal of the seams and hubcaps on the Domed Roof no later than 20 years after the installation of the Domed Roof and every 20 years after the last complete re-seal.

~~The operator shall repair, or replace any piping, valves, vents, seals, gaskets, or covers of roof openings that are found to have defects or visible gaps, or are not vapor tight and do not meet all the requirements of this rule before filling or refilling an emptied and degassed storage tank, or within 72 hours after an inspection, including one conducted by the operator as specified in subdivision (f), determines that the equipment is not operating in compliance.~~

(h) Record Keeping and Reporting Requirements

- ~~(1) During the inspections specified subdivision (f), the operator~~For inspections required by subparagraphs (f)(1) through (f)(3), the owner or operator shall; keep records of all findings, including but not limited to the readings measured according to EPA Reference Test Method 21.
- ~~(2) The operator shall record all inspections of primary, secondary seals, a flexible enclosure system (if any), and roof openings on compliance inspection report forms approved by the Executive Officer as described in Attachment A.~~
- ~~(3) The operator shall submit all inspection reports and documents to the Executive Officer semiannually within five working days of completion of the inspections specified in paragraph (f)(1) and (f)(2); and on January 31 and July 31, respectively, upon the completion of two consecutive quarterly inspections conducted as specified in subparagraph (f)(3)(B).~~
 - (A) Keep records of all findings, including but not limited to the readings measured according to EPA Reference Test Method 21.

- (B) Record all inspections of Primary Seals, Secondary Seals, a Flexible Enclosure System (if any), and Roof Openings on compliance inspection report forms approved by the Executive Officer as described in Attachment A. An owner or operator may use an electronic compliance inspection report form provided that all required information specified in Appendix A is contained in the electronic report form.
- (C) Submit all inspection reports and documents to the Executive Officer semi-annually within five working days of completion of the inspections specified in paragraphs (f)(1) and (f)(2); and on January 31 and July 31, respectively, upon the completion of two consecutive quarterly inspections conducted as specified in subparagraph (f)(3)(B). Inspection reports may be submitted electronically to the email address designated by the Executive Officer.
- (2) For OGI inspections required by subparagraph (f)(4), the owner or operator shall:

 - (A) Report Visible Vapors detected during a Tank Farm Inspection resulting from a defect to the Executive Officer by phone (1-800-CUT-SMOG or 1-800-288-7664) within 24 hours after the inspection is completed.
 - (B) Keep written records and digital recordings of Visible Vapors detected during a Tank Farm Inspection resulting from a defect or emitted from a component required to be maintained in a Vapor Tight Condition or a condition with no Visible Gaps. Written records shall include tank identification, date of inspection, and findings. Findings shall include identification of tanks from which Visible Vapors were identified, any repairs or determinations made pursuant to subparagraphs (f)(4)(B). Digital recordings shall be accurately time-stamped and capture the Visible Vapors for a minimum of 5 seconds.
 - (C) Keep written records of Component Inspections that include tank identification, date of inspection and findings. Findings shall include identification of Storage Tanks from which Visible Vapors were identified, any repairs or determinations made pursuant to subparagraph (f)(4)(C).
- (34) If the owner or operator determines that a tank is in violation of the requirements of this rule during the inspections specified subdivision (f), the owner or operator shall submit a written report to the Executive Officer within 5 calendar days+20 hours of the determination of non-compliance, indicating corrective actions taken to achieve compliance.

(45) The owner or operator who elects to install or modify an Emission Control System to comply with the requirement in clause (d)(4)(A)(i) shall conduct an initial performance test as described in clause-subparagraph (f)(3)(A) and submit a complete test report to the Executive Officer no later than 180 days after the effective date of the requirement for new installation; or 180 days after the modification. Subsequent annual performance test and test report shall be submitted annually within 60 days after the end of each Emission Inventory Year.

(6) The owner or operator shall keep all monitoring, inspection, maintenance, ~~and~~ repair records, sampling results at the Facility for a period of five years and shall make the records available to the Executive Officer upon request.

(i) Test Methods and Procedures

The following test methods and procedures shall be used to determine compliance with this rule. Alternative test methods may be used if they are determined to be equivalent and approved in writing by the Executive Officer, the California Air Resources Board, and the U.S. Environmental Protection Agency.

- (1) Measurements of gaseous Volatile Organic Compound leaks shall be conducted according to EPA Reference Method 21 using an appropriate analyzer calibrated with methane.
- (2) Organic Liquids that are stored at Ambient Temperatures with a True Vapor Pressure of greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those with a flash point of less than 100 °F as determined by ASTM Method D-93.
- (3) Organic Liquids that are stored at above Ambient Temperatures with a True Vapor Pressure greater than 5 mm Hg (0.1 psi) absolute under actual storage conditions shall be determined as those whose volume percent evaporated is greater than ten percent at an adjusted temperature T_{Adj} as determined by ASTM Method D-86 of:

$$T_{Adj} = 300\text{ °F} + T_1 - T_a$$

Where:

T_1 = Liquid Storage Temperature (°F)

T_a = Ambient Temperature (°F) = 70 °F

- (4) ~~Organic liquids with a~~The True Vapor Pressure of Organic Liquid ~~greater than or equal to 3 psia~~ shall be determined by ASTM Method D-323 for Reid Vapor Pressure and converted to True Vapor Pressure using applicable nomographs in EPA AP-42 or South Coast

AQMD~~District~~ and EPA approved nomographs. The actual storage temperature used for determining Ttrue Vvapor Ppressure shall be 70 degrees Fahrenheit for Organic Liquids that are stored at Ambient Temperatures, and actual storage temperature for Organic Liquids that are stored at above Ambient Temperatures.

- (5) Control efficiency of an Emission Control System, on a mass emissions basis, and the VOC concentrations in the exhaust gases shall be determined by U.S. EPA Test Methods 25, 25A; South Coast AQMD~~District~~ Method 25.1 - Determination of Total Gaseous Non-Methane Organic Emissions as Carbon; or District Method 25.3 – Determination of Low Concentration Non-Methane Non- Ethane Organic Compound Emissions from Clean Fueled Combustion Sources, as applicable.
- (6) When more than one test method or set of test methods are specified for any testing, the application of these methods to a specific set of test conditions is subject to approval by the Executive Officer. In addition, a violation of any requirement of this rule established by any one of the specified test methods or set of test methods shall constitute a violation of the rule.
- (7) The sampling, analysis, and reporting shall be conducted by a laboratory that has been approved under the South Coast AQMD~~District~~ Laboratory Approval Program (LAP) for the cited South Coast AQMD~~District~~ reference test methods, where LAP approval is available. For South Coast AQMD~~District~~ reference test methods for which no LAP program is available, the LAP approval requirement shall become effective one year after the date that the LAP program becomes available for that South Coast AQMD~~District~~ reference test method.
- (8) Tests to determine emission factors for an alternative control device for rim seal or deck opening shall accurately simulate conditions under which the device will operate, such as wind, temperature, and barometric pressure. Test methods that can be used to perform the testing required in this paragraph include, but are not limited to, the following methods, which shall be performed by a laboratory certified by American Petroleum Institute (API):
 - (A) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part A, Wind Tunnel Test Method for the Measurement of Deck-Fitting Loss Factors for External Floating-Roof Tanks;

- (B) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part B, Air Concentration Test Method for the Measurement of Rim Seal Loss Factors for Floating-Roof Tanks.
- (C) API Manual of Petroleum Measurement Standards, Chapter 19, Section 3, Part E; Weight Loss Test Method for the Measurement of Deck-Fitting Loss Factors for Internal Floating-Roof Tanks.

(j) Exemptions

- (1) The provisions of this rule shall not apply to pressurized Sstorage Tanks designed to operate in excess of 15 pounds per square inch gauge (psig) without any emissions to the atmosphere except under emergency conditions.
- ~~(2) Domed external floating roof tanks installed prior to January 1, 2002 shall be exempt from the requirements of subparagraphs (d)(2)(D) and (d)(2)(E) for secondary seals.~~
- ~~(3) Any facility with a facility emission cap equal to or less than 40,000 pounds (20 tons) per year of VOC shall be exempt from the requirements of this rule.~~
- (24) Portable Baker tanks containing Organic Liquids having Tru~~e~~ Vapor Pressures from 0.1 psia to 0.5 psia equipped with carbon canisters to reduce the emissions from the Sstorage Tanks to less than 500 ppm outlet concentration shall be exempt from the performance testing requirements specified in clause (d)(4)(A)(i) and subparagraph (f)(3)(A) provided that the operator conducts EPA Reference Method 21 measurement weekly to ensure that the system achieves the emission standard of 500 ppm.
- ~~(35) External Floating Roof tanks having permit conditions that limit the Tru~~e~~ Vapor Pressure of the Organic Liquids stored in the tanks to lower than 3 psia shall be exempt from the requirements of paragraph (d)(2) provided that the True Vapor Pressure of the Organic Liquid stored does not exceed 3 psia.~~
- ~~(46) Sorage Tanks that do not have a Potential For VOC Emissions of 6 tons per year or greater used in Crude Oil And Natural Gas Production Operations and are storing Organic Liquid with a True Vapor Pressure equal to or less than 5 mm Hg (0.1 psi) absolute under actual storage conditions are exempt from the requirements of this rule, provided the owner or operator demonstrates that the Organic Liquid stored has a True Vapor Pressure of 5 mm Hg (0.1 psi) absolute or less under actual storage conditions with the appropriate test method specified in subdivision (i). The owner or operator shall:External floating roof tanks subject to clause (d)(1)(A)(i) shall be exempt from this requirement until the next time the tank is emptied and degassed, provided that the operator has demonstrated to the satisfaction of the Executive Officer that in order to properly~~

~~bolt, the covers for access hatches and gauge float wells must be welded. The operator shall use equivalent means, such as clamping, to secure the covers during the interim period.~~

(A) Test every 5 years for tanks storing refined material meeting specifications for sale; and

(B) Test annually for tanks storing an Organic Liquid that does not meet the criteria requirements of subparagraph (j)(5)(A).

(57) External floating roof tanks permitted to contain more than 97% by volume crude oil shall be exempt from the doming requirements of ~~subparagraph~~ paragraph (d)(12)(EA) and (d)(2)(B) provided that a permit application is submitted to the Executive Officer no later than 1 year from [Date of Adoption] to limit the True Vapor Pressure of the crude oil stored to less than 3 psia but shall comply with other remaining applicable requirements of this rule and the True Vapor Pressure does not exceed 3 psia as demonstrated pursuant to subparagraph (d)(1)(F) or by a True Vapor Pressure test requested by the Executive Officer.

(6) Any tank that is out of service, where the tank has been emptied or has been opened to the atmosphere pursuant to the requirements of Rule 1149, shall be exempt from the requirements of paragraph (f)(4).

ATTACHMENT A

INSPECTION PROCEDURES AND COMPLIANCE REPORT FORMS

Equipment Needed:

Organic Vapor Analyzer (OVA) calibrated with methane in accordance with EPA Test Method 21, explosimeter calibrated with methane (for internal floating roof tanks), liquid resistant measuring tape or device, tank probe (to measure gaps in tank seals - 1/8 inch, 1/2 inch, 1-1/2 inch), flashlight.

Inspection Procedures:

1. The findings of all tank self-inspections, whether completed or not, shall be recorded on the Rule 1178 Compliance Report forms prescribed by the Executive Officer and submitted to the District's Refinery Section in accordance with the rule's requirements. If an inspection is stopped before completion, indicate the reason for this action in the Comments section of the compliance report form.
2. During the compliance inspection, the person(s) conducting the inspection must have a copy of the Permit to Operate or Permit to Construct pertinent to the tank being inspected. Any discrepancies between the permit equipment description and the existing tank or the permit conditions and the actual operating conditions of the tank as verified during inspection must be recorded in the Comments section of the compliance report form.
3. Inspect the ground level periphery of each tank for possible leaks in the tank shell. Complete the tank information section (D) on the report.
4. For external floating roof tanks:
 - o From the platform, conduct an overall visual inspection of the roof and check for obvious permit or rule violations. Record the information as shown under section F of the compliance report form.
 - o During visual inspection of the roof, check for unsealed roof legs, open hatches, open emergency roof drains or vacuum breakers and record the findings on the report accordingly. Indicate presence of any tears in the fabric of both seals.
 - o Conduct an inspection of the roof fittings for vapor tight condition and record any leaks above 500 ppm in the fugitive emissions tank report OR conduct an inspection of the roof fittings using the 1/8" probes.

- o Conduct an inspection of the entire secondary seal using the 1/8" and 1/2" probes. Record the gap data in section F(4) of the report.
 - o Conduct an inspection of the entire primary seal using the 1/8", 1/2", and 1-1/2" probes. Inspect the primary seal by holding back the secondary seal. Record the gap data in section F(5) of the report.
 - o Record all cumulative gaps between 1/8 inch and 1/2 inch; between 1/2 inch and 1-1/2 inch; and in excess of 1-1/2 inches, for both primary and secondary seals in section G of the report. Secondary seal gaps greater than 1/2 inch should be measured for length and width, and recorded in Comments under section (J) of the report.
 - o For slotted guidepoles with a flexible enclosure system, conduct a visual inspection of the flexible enclosure system. Record any holes, tears, slots, or rips in the flexible enclosure system and any tightening or replacement of clamps at the top and the bottom of the flexible enclosure system pursuant to clause (d)(1)(A)(xi).
5. For internal floating roof and domed tanks:
- o Using an explosimeter, measure the concentration of the vapor space above the floating roof in terms of lower explosive limit (LEL), and record the reading in section (E) of the report.
 - o Conduct a visual inspection of the roof openings and the secondary seal, if applicable, and record findings on the report.
 - o Conduct gap measurements of the rim seal system and roof openings each time the tank is emptied and degassed but no less than once every ten years.
 - o Conduct a visual inspection of the slotted guidepole flexible enclosure system.
6. For fixed roof tanks:
- o Conduct an inspection of the pressure relief valves, piping, valves and fittings located on the roof for vapor tight condition and record any readings in excess of 500 ppm in the fugitive emissions tank report.
7. Complete all necessary calculations and record all required data accordingly on the report.



SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT RULE 1178 COMPLIANCE REPORT

****PLEASE COMPLETE FORM LEGIBLY IN BLACK INK****

SCAQMD ID No.: _____

Tank No. _____ SCAQMD Permit No. _____ Inspection Date _____ Time _____

Is This a Follow-up Inspection? No Yes If yes, Date of Previous Inspection _____

A. COMPANY INFORMATION:

Company Name _____

Location Address _____ City _____ Zip _____

Mailing Address _____ City _____ Zip _____

Contact Person _____ Title _____

Phone _____ E-mail _____

B. INSPECTION CONDUCTED BY:

Name _____ Title _____

Company Name _____ Phone _____

Mailing Address _____ City _____ Zip _____

C. TANK INFORMATION:

Capacity _____ (bbls) Installation Date _____ Tank Diameter _____ (ft) Tank Height _____ (ft)

Product Type _____ Product RVP _____

Type of Tank: Riveted Welded Other (describe) _____

Color of Shell _____ Color of Roof _____

Roof Type: Pontoon Double Deck Other(describe) _____

External floating roof Internal floating roof or domed tank Flexible enclosure system

D. GROUND LEVEL INSPECTION:

1) Product Temperature _____ ° F 2) Product level _____ (ft)

3) List type and location of leaks found in tank shell.

4) List any discrepancies between the existing equipment and the equipment description on the Permit.

5) Is tank in compliance with Permit conditions? No Yes If no, explain _____

E. INTERNAL FLOATING ROOF OR DOMED TANK:

- 1) Check vapor space between floating roof and fixed roof with explosimeter. _____ % LEL
- 2) Conduct visual inspection of roofs, secondary seals, and slotted guidepole flexible enclosure system, if applicable.
- 3) Are all roof openings covered? No Yes If no, explain in Comments section (J) and proceed to part (H)(6).

F. EXTERNAL FLOATING ROOF TANK (or DOMED TANK AND INTERNAL FLOATING ROOF TANK when needed)

- 1) On the diagram (below) indicate the location of the ladder, roof drain(s), anti-rotation device(s), platform, gauge well, and vents or other appurtenances. Note information in relation to North (to the top of the worksheet).
- 2) Describe any uncovered openings found on the roof in the Comments section (J). (Refer to Rule 463(a)(1)(F)):
- 3) Identify any tears in the seal fabric. Describe and indicate on diagram (below):

4) Secondary Seal Inspection

- a) Type of Secondary Seal: _____
- b) Does 1/2" probe drop past seal? No Yes if yes, measure length(s) and show on diagram
- c) Does 1/8" probe drop past seal? No Yes if yes, measure length(s) and show on diagram.
- d) Record dimensions of gap for gaps > 1/8" _____ > 1/2" _____

NOTE: Record the actual width and cumulative length of gaps in feet and inches. (Do not include gaps > 1/2" in 1/8" measurements)

5) Primary Seal Inspection

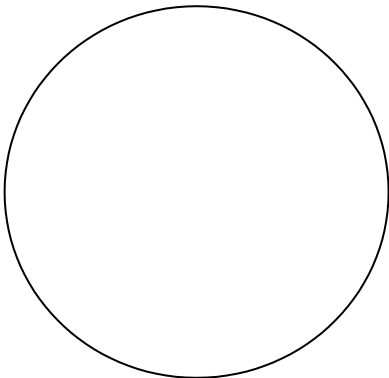
- a) Type of Primary Seal: Shoe; Tube; Other _____
- b) (shoe seal) does 1-1/2" probe drop past seal? No Yes ; if yes, measure length(s) and show on diagram.
- c) (shoe seal) does 1/2" probe drop past seal? No ; Yes ; if yes, measure length(s) and show on diagram.
- d) (tube seal) does 1/2" probe drop past seal? No Yes if yes, measure length(s) and show on diagram.
- e) (all seal types) does 1/8" probe drop past seal? No Yes if yes, measure (length(s) and show on diagram.
- f) Record dimensions of gaps for gaps > 1/8" _____ > 1/2" _____

>1-1/2" _____ NOTE: Record the actual width and cumulative length of gaps in feet and inches. (Do not include gaps > 1/2" in 1/8" measurements, or gaps > 1-1/2" in 1/2" measurements)

6) Deck Fitting Inspection

- (circle one) does 1/8" probe drop past gasket seal or pass Method 21? No Yes if yes, identify

NOTE: Show defects using symbols. Show seal gaps and lengths.



LEGEND:

Equipment:

- Antirrotational device
- Gauge well
- ⊥ Leg stand
- ⊥ Roof drain
- * Emergency roof drain
- ∞ Vacuum breaker
- σ Vent
- Platform & ladder

Defects:

- Leg top
- ‡ Leg pin
- Open hatch
- ∨ Torn seal
- |-P-| Primary seal gap
- |-S-| Secondary seal gap

Tank No. _____ SCAQMD Permit No. _____

7) Flexible Enclosure System Inspection

Does flexible enclosure system have any holes, tears, slots, or rips? If yes, identify location and approximate size: No Yes

Does the flexible enclosure system have double-clamps at the top that are fitted tightly to prevent fugitive emissions from being released to the outside? No Yes

Is the flexible enclosure system properly secured to the roof of the tank, with no visible gaps to prevent fugitive emissions from being released to the outside? No Yes

IF INTERNAL FLOATING ROOF OR DOMED TANK, PROCEED TO PART H(6) WHEN APPROPRIATE:

G. CALCULATIONS - complete all applicable portions of the following:

Record dimensions of indicated gaps [from F(4)(d), F(5)(b), and F(5)(f)]. Record in feet and inches.

Gaps in primary seal between 1/8 and 1/2 inch: _____

Gaps in primary seal between 1/2 and 1-1/2 inch: _____

Gaps in primary seal greater than 1-1/2 inches: _____

Gaps in secondary seal between 1/8 and 1/2 inch: _____

Gaps in secondary seal greater than 1/2 inch: _____

Multiply diameter (ft) of tank to determine appropriate gap limits:

5% circumference = diameter X 0.157 = _____ 60% circ. = diam. X 1.88 = _____

10% circumference = diameter X 0.314 = _____ 90% circ. = diam. X 2.83 = _____

30% circumference = diameter X 0.942 = _____ 95% circ. = diam. X 2.98 = _____

H. DETERMINE COMPLIANCE STATUS OF TANK:

1) Were any openings found on the roof? No Yes

2) Were any tears in the seals found: No Yes

3) Is the product level lower than the level at which the roof would be floating? No Yes

4) Secondary Seal:

Did 1/2" probe drop between shell and seal? No Yes

Did cumulative 1/8" - 1/2" gap exceed 95% circumference length? No Yes

5) Primary Seal

Shoe Did 1-1/2" probe drop between shell and seal? No Yes

Did cumulative 1/2" - 1-1/2" gap exceed 30% circumference length, and

Did cumulative 1/8 - 1/2" gap exceed 60% circumference length? No Yes

Did any single continuous 1/8" - 1-1/2" gap exceed 10% circ. length? No Yes

Tube Did 1/2" probe drop between shell and seal? No Yes

Did cumulative 1/8" - 1/2" gap exceed 95% circumference length? No Yes

6) Internal floating roof (installed before 6/1/84) did LEL exceed 50% No Yes

(installed after 6/1/84) or domed tank did LEL exceed 30%? No Yes

7) Does tank have permit conditions? No Yes

Does tank comply with these conditions? No Yes

I. IF INSPECTION WAS TERMINATED PRIOR TO COMPLETION FOR ANY REASON, PLEASE EXPLAIN:

J. COMMENTS:

Use this section to complete answers to above listed items and to describe repairs made to the tank; include date and time repairs were made.

K. I(We) certify the foregoing information to be correct and complete to the best of my(our) knowledge.

Inspection completed by: _____ Date: _____
(Signature) (Certification ID #)

Compliance status by: _____ Date: _____
(Signature) (Certification ID #)

Company Representative: _____ Date: _____
(Signature) (Certification ID #)

SEND COMPLETED REPORT TO: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive
Diamond Bar, CA. 91765 FAX: (909)396 -3341
Attn: Rule 1178 Supervising Inspector

OR

rule463rule1178compliancereports@aqmd.gov

FOR SCAQMD USE ONLY:		Date received _____
Reviewed by: _____		Date reviewed _____
(Signature)	(Certification ID #)	
Tank Status: [] in compliance [] in violation, Rule(s) _____		
Comments: _____		

APPENDIX B

Modeling Files, Assumptions, and Calculations

Peak Daily Construction Impacts by Construction Activity and Season (lb/day for Criteria Pollutants, MT/yr for GHG)

Doming 1 External Floating Roof Tank

	ROG	NOx	CO	SO ₂	PM10T	PM2.5T	CO ₂ e
Winter	0.90	8.41	11.20	0.02	0.67	0.40	
Summer	0.91	8.40	11.50	0.02	0.67	0.40	
Max	0.91	8.41	11.50	0.02	0.67	0.40	116

Installing Additional Roof Seals for 1 Internal Floating Roof Tank

	ROG	NOx	CO	SO ₂	PM10T	PM2.5T	CO ₂ e
Winter	0.33	3.03	4.55	0.01	0.44	0.18	24
Summer	0.34	3.01	4.81	0.01	0.44	0.18	25
Max	0.34	3.03	4.81	0.01	0.44	0.18	25

Doming 8 External Floating Roof Tanks and Installing Additional Roof Seals for 7 Internal Floating Roof Tanks

	ROG	NOx	CO	SO ₂	PM10T	PM2.5T
Max	9.66	88.49	125.67	0.23	8.44	4.46

Doming 54 External Floating Roof Tanks and Installing Additional Roof Seals for 8 Internal Floating Roof Tanks

CO₂e
216

PAR 1178 - Dome Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PAR 1178 - Dome
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	Air District
Windspeed (m/s)	3.50
Precipitation (days)	16.0
Location	33.78242008132466, -118.2666105636882
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4641
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	32.0	1000sqft	0.73	32,000	0.00	—	—	—
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1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.09	0.91	8.40	11.5	0.02	0.34	0.33	0.67	0.32	0.08	0.40	—	2,630	2,630	0.11	0.05	1.38	2,650
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.09	0.90	8.41	11.2	0.02	0.34	0.33	0.67	0.32	0.08	0.40	—	2,612	2,612	0.10	0.05	0.04	2,631
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.29	0.24	2.24	3.00	0.01	0.09	0.09	0.18	0.08	0.02	0.10	—	695	695	0.03	0.01	0.16	700
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.04	0.41	0.55	< 0.005	0.02	0.02	0.03	0.02	< 0.005	0.02	—	115	115	< 0.005	< 0.005	0.03	116

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2026	1.09	0.91	8.40	11.5	0.02	0.34	0.33	0.67	0.32	0.08	0.40	—	2,630	2,630	0.11	0.05	1.38	2,650
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.09	0.90	8.41	11.2	0.02	0.34	0.33	0.67	0.32	0.08	0.40	—	2,612	2,612	0.10	0.05	0.04	2,631
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.29	0.24	2.24	3.00	0.01	0.09	0.09	0.18	0.08	0.02	0.10	—	695	695	0.03	0.01	0.16	700
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.05	0.04	0.41	0.55	< 0.005	0.02	0.02	0.03	0.02	< 0.005	0.02	—	115	115	< 0.005	< 0.005	0.03	116

3. Construction Emissions Details

3.1. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.86	8.14	10.1	0.02	0.34	—	0.34	0.31	—	0.31	—	2,172	2,172	0.09	0.02	—	2,180
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.02	0.86	8.14	10.1	0.02	0.34	—	0.34	0.31	—	0.31	—	2,172	2,172	0.09	0.02	—	2,180
Onsite truck	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	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.23	2.16	2.69	0.01	0.09	—	0.09	0.08	—	0.08	—	577	577	0.02	< 0.005	—	579
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.39	0.49	< 0.005	0.02	—	0.02	0.02	—	0.02	—	95.6	95.6	< 0.005	< 0.005	—	95.9
Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.08	1.31	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	290	290	0.01	0.01	0.99	294
Vendor	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	0.00
Hauling	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	167	167	0.01	0.03	0.38	176
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.09	1.05	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	273	273	< 0.005	0.01	0.03	276
Vendor	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	0.00
Hauling	0.01	< 0.005	0.19	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	167	167	0.01	0.03	0.01	175
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.29	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	73.7	73.7	< 0.005	< 0.005	0.11	74.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	44.4	44.4	< 0.005	0.01	0.04	46.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.2	12.2	< 0.005	< 0.005	0.02	12.3

Vendor	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	0.00	0.00
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.35	7.35	< 0.005	< 0.005	0.01	7.72

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Building Construction	Building Construction	1/1/2026	4/23/2026	6.00	97.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	10.0	367	0.29
Building Construction	Welders	Diesel	Average	3.00	10.0	82.0	0.20
Building Construction	Air Compressors	Diesel	Average	1.00	10.0	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	10.0	40.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	1.00	50.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	--	--	--	--	-----------------------------

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
------------	------------------------	------------------------	----------------------	-------------------------------	---------------------

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	690	0.05	0.01

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.07	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	17.6

AQ-PM	67.2
AQ-DPM	99.3
Drinking Water	42.4
Lead Risk Housing	91.8
Pesticides	0.00
Toxic Releases	97.1
Traffic	23.6
Effect Indicators	—
CleanUp Sites	71.7
Groundwater	76.2
Haz Waste Facilities/Generators	62.6
Impaired Water Bodies	0.00
Solid Waste	52.9
Sensitive Population	—
Asthma	83.0
Cardio-vascular	92.8
Low Birth Weights	72.9
Socioeconomic Factor Indicators	—
Education	99.6
Housing	58.2
Linguistic	97.3
Poverty	97.4
Unemployment	91.3

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
-----------	---------------------------------

Economic	—
Above Poverty	3.734120364
Employed	20.67239831
Median HI	8.109842166
Education	—
Bachelor's or higher	1.706659823
High school enrollment	20.74939048
Preschool enrollment	24.62466316
Transportation	—
Auto Access	9.085076351
Active commuting	86.1157449
Social	—
2-parent households	52.29051713
Voting	11.8311305
Neighborhood	—
Alcohol availability	4.516874118
Park access	81.35506224
Retail density	53.26575132
Supermarket access	94.25125112
Tree canopy	9.559861414
Housing	—
Homeownership	5.427948159
Housing habitability	2.361093289
Low-inc homeowner severe housing cost burden	14.65417683
Low-inc renter severe housing cost burden	73.7071731
Uncrowded housing	0.192480431
Health Outcomes	—

Insured adults	3.002694726
Arthritis	74.6
Asthma ER Admissions	21.3
High Blood Pressure	64.8
Cancer (excluding skin)	96.9
Asthma	13.4
Coronary Heart Disease	40.3
Chronic Obstructive Pulmonary Disease	22.0
Diagnosed Diabetes	11.9
Life Expectancy at Birth	10.9
Cognitively Disabled	46.5
Physically Disabled	63.7
Heart Attack ER Admissions	21.1
Mental Health Not Good	2.6
Chronic Kidney Disease	20.1
Obesity	3.6
Pedestrian Injuries	98.5
Physical Health Not Good	2.9
Stroke	29.9
Health Risk Behaviors	—
Binge Drinking	69.8
Current Smoker	4.4
No Leisure Time for Physical Activity	4.2
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	3.5

Elderly	97.8
English Speaking	3.7
Foreign-born	92.7
Outdoor Workers	6.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	3.2
Traffic Density	49.8
Traffic Access	87.4
Other Indices	—
Hardship	99.2
Other Decision Support	—
2016 Voting	0.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	95.0
Healthy Places Index Score for Project Location (b)	6.00
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Source: Conversation Between PAR 1178 Rules Staff with Supplier
Construction: Off-Road Equipment	Source: (1 Crane, 3 Welders) Conversation Between PAR 1178 Rules Staff with Supplier, and (1 Crane, 1 Compressor) Dec 2001 Final EA for PAR 1178
Construction: Trips and VMT	Source: (6-10 Workers) Conversation Between PAR 1178 Rules Staff with Supplier, and (2 Crew/Tool Trucks Driving 40 Miles, 1 Material Delivery Truck Driving 50 Miles) Dec 2001 Final EA for PAR 1178
Characteristics: Project Details	Rule 1178 in the South Coast AQMD Jurisdiction

PAR 1178 - Seals Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PAR 1178 - Seals
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	Air District
Windspeed (m/s)	3.50
Precipitation (days)	16.0
Location	33.782633950840065, -118.26814130827408
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4640
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	32.0	1000sqft	0.73	32,000	0.00	—	—	—
PAR 1178				B-24				July 2023

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.41	0.34	3.01	4.81	0.01	0.11	0.33	0.44	0.10	0.08	0.18	—	1,243	1,243	0.05	0.04	1.38	1,258
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.04	0.37	0.57	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	152	152	0.01	0.01	0.07	153
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.07	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.1	25.1	< 0.005	< 0.005	0.01	25.4

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.41	0.34	3.01	4.81	0.01	0.11	0.33	0.44	0.10	0.08	0.18	—	1,243	1,243	0.05	0.04	1.38	1,258
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.05	0.04	0.37	0.57	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	152	152	0.01	0.01	0.07	153
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.07	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	25.1	25.1	< 0.005	< 0.005	0.01	25.4

3. Construction Emissions Details

3.1. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.76	3.44	0.01	0.11	—	0.11	0.10	—	0.10	—	785	785	0.03	0.01	—	788
Onsite truck	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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.42	< 0.005	0.01	—	0.01	0.01	—	0.01	—	96.8	96.8	< 0.005	< 0.005	—	97.2
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.0	16.0	< 0.005	< 0.005	—	16.1

Onsite truck	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	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.08	1.31	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	290	290	0.01	0.01	0.99	294
Vendor	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	0.00
Hauling	0.01	< 0.005	0.18	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	167	167	0.01	0.03	0.38	176
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.05	34.6
Vendor	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	0.00
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	20.6	20.6	< 0.005	< 0.005	0.02	21.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.66	5.66	< 0.005	< 0.005	0.01	5.73
Vendor	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	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.41	3.41	< 0.005	< 0.005	< 0.005	3.58

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
---------	-----	-----	-----	----	-----	-------	-------	-------	--------	--------	--------	------	-------	------	-----	-----	---	------

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Building Construction	Building Construction	6/1/2026	8/1/2026	5.00	45.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Air Compressors	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	10.0	40.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	1.00	50.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	--	--	--	--	-----------------------------

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
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5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	690	0.05	0.01

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.07	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	PAR 1178	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	20.8
AQ-PM	67.2
AQ-DPM	59.7
Drinking Water	42.4
Lead Risk Housing	94.8
Pesticides	44.1
Toxic Releases	98.0
Traffic	32.5
Effect Indicators	—
CleanUp Sites	28.7
Groundwater	79.1

Haz Waste Facilities/Generators	43.7
Impaired Water Bodies	0.00
Solid Waste	37.6
Sensitive Population	—
Asthma	83.0
Cardio-vascular	92.8
Low Birth Weights	35.6
Socioeconomic Factor Indicators	—
Education	88.7
Housing	64.5
Linguistic	80.2
Poverty	71.7
Unemployment	74.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	28.7052483
Employed	80.73912486
Median HI	28.56409598
Education	—
Bachelor's or higher	11.58732196
High school enrollment	100
Preschool enrollment	70.15270114
Transportation	—
Auto Access	15.9373797

Active commuting	71.46156807
Social	—
2-parent households	29.78313871
Voting	18.19581676
Neighborhood	—
Alcohol availability	4.516874118
Park access	81.35506224
Retail density	92.85255999
Supermarket access	94.25125112
Tree canopy	32.76016938
Housing	—
Homeownership	26.45964327
Housing habitability	13.98691133
Low-inc homeowner severe housing cost burden	62.17117926
Low-inc renter severe housing cost burden	30.28358784
Uncrowded housing	5.889901193
Health Outcomes	—
Insured adults	9.008084178
Arthritis	88.1
Asthma ER Admissions	21.3
High Blood Pressure	81.4
Cancer (excluding skin)	93.3
Asthma	55.1
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	29.7
Life Expectancy at Birth	13.0

Cognitively Disabled	70.6
Physically Disabled	57.4
Heart Attack ER Admissions	21.1
Mental Health Not Good	27.8
Chronic Kidney Disease	35.4
Obesity	19.4
Pedestrian Injuries	94.5
Physical Health Not Good	27.0
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	32.5
Current Smoker	39.2
No Leisure Time for Physical Activity	26.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	15.5
Elderly	91.2
English Speaking	12.1
Foreign-born	75.5
Outdoor Workers	37.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.6
Traffic Density	71.5
Traffic Access	87.4
Other Indices	—
Hardship	81.2

Other Decision Support	—
2016 Voting	11.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	85.0
Healthy Places Index Score for Project Location (b)	34.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	Rule 1178 in the South Coast AQMD Jurisdiction
Construction: Construction Phases	Source: Dec 2001 Final EA for PAR 1178
Construction: Off-Road Equipment	Source: (No Welders) Conversation Between PAR 1178 Rules Staff with Supplier, and (1 Crane, 1 Compressor) Dec 2001 Final EA for PAR 1178

Construction: Trips and VMT

Source: (2 Crew/Tool Trucks Driving 40 Miles, 1 Material Delivery Truck Driving 50 Miles) Dec 2001
Final EA for PAR 1178

PAR 1178 - Seals Detailed Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PAR 1178 - Seals
Construction Start Date	1/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	Air District
Windspeed (m/s)	3.50
Precipitation (days)	16.0
Location	33.782633950840065, -118.26814130827408
County	Los Angeles-South Coast
City	Los Angeles
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4640
EDFZ	16
Electric Utility	Los Angeles Department of Water & Power
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
General Heavy Industry	32.0	1000sqft	0.73	32,000	0.00	—	—	—
PAR 1178				B-43				July 2023

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.41	0.33	3.03	4.55	0.01	0.11	0.33	0.44	0.10	0.08	0.18	—	1,225	1,225	0.04	0.04	0.04	1,239
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	0.04	0.35	0.53	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	142	142	< 0.005	< 0.005	0.07	143
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.06	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.01	23.7

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.41	0.33	3.03	4.55	0.01	0.11	0.33	0.44	0.10	0.08	0.18	—	1,225	1,225	0.04	0.04	0.04	1,239

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.05	0.04	0.35	0.53	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	142	142	< 0.005	< 0.005	0.07	143
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.01	0.06	0.10	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.4	23.4	< 0.005	< 0.005	0.01	23.7

3. Construction Emissions Details

3.1. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.76	3.44	0.01	0.11	—	0.11	0.10	—	0.10	—	785	785	0.03	0.01	—	788
Onsite truck	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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.32	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01	—	90.4	90.4	< 0.005	< 0.005	—	90.7
Onsite truck	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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.0	15.0	< 0.005	< 0.005	—	15.0

Onsite truck	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	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.09	1.05	0.00	0.00	0.28	0.28	0.00	0.07	0.07	—	273	273	< 0.005	0.01	0.03	276	
Vendor	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	0.00	
Hauling	0.01	< 0.005	0.19	0.06	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.01	—	167	167	0.01	0.03	0.01	175	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.9	31.9	< 0.005	< 0.005	0.05	32.3	
Vendor	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	0.00	
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.28	5.28	< 0.005	< 0.005	0.01	5.35	
Vendor	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	0.00	
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.18	3.18	< 0.005	< 0.005	< 0.005	3.34	

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Building Construction	Building Construction	1/1/2026	3/1/2026	5.00	42.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Building Construction	Cranes	Diesel	Average	1.00	4.00	367	0.29
Building Construction	Air Compressors	Diesel	Average	1.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Building Construction	—	—	—	—
Building Construction	Worker	10.0	40.0	LDA,LDT1,LDT2
Building Construction	Vendor	0.00	10.2	HHDT,MHDT
Building Construction	Hauling	1.00	50.0	HHDT
Building Construction	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
------------	--	--	--	--	-----------------------------

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
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5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Heavy Industry	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	690	0.05	0.01

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.07	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	0.00	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider different increments of sea level rise coupled with extreme storm events. Users may select from four model simulations to view the range in potential inundation depth for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 50 meters (m) by 50 m, or about 164 feet (ft) by 164 ft.

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	PAR 1178	1	1	2

Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	20.8
AQ-PM	67.2
AQ-DPM	59.7
Drinking Water	42.4
Lead Risk Housing	94.8
Pesticides	44.1
Toxic Releases	98.0
Traffic	32.5
Effect Indicators	—
CleanUp Sites	28.7
Groundwater	79.1

Haz Waste Facilities/Generators	43.7
Impaired Water Bodies	0.00
Solid Waste	37.6
Sensitive Population	—
Asthma	83.0
Cardio-vascular	92.8
Low Birth Weights	35.6
Socioeconomic Factor Indicators	—
Education	88.7
Housing	64.5
Linguistic	80.2
Poverty	71.7
Unemployment	74.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	28.7052483
Employed	80.73912486
Median HI	28.56409598
Education	—
Bachelor's or higher	11.58732196
High school enrollment	100
Preschool enrollment	70.15270114
Transportation	—
Auto Access	15.9373797

Active commuting	71.46156807
Social	—
2-parent households	29.78313871
Voting	18.19581676
Neighborhood	—
Alcohol availability	4.516874118
Park access	81.35506224
Retail density	92.85255999
Supermarket access	94.25125112
Tree canopy	32.76016938
Housing	—
Homeownership	26.45964327
Housing habitability	13.98691133
Low-inc homeowner severe housing cost burden	62.17117926
Low-inc renter severe housing cost burden	30.28358784
Uncrowded housing	5.889901193
Health Outcomes	—
Insured adults	9.008084178
Arthritis	88.1
Asthma ER Admissions	21.3
High Blood Pressure	81.4
Cancer (excluding skin)	93.3
Asthma	55.1
Coronary Heart Disease	69.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	29.7
Life Expectancy at Birth	13.0

Cognitively Disabled	70.6
Physically Disabled	57.4
Heart Attack ER Admissions	21.1
Mental Health Not Good	27.8
Chronic Kidney Disease	35.4
Obesity	19.4
Pedestrian Injuries	94.5
Physical Health Not Good	27.0
Stroke	70.4
Health Risk Behaviors	—
Binge Drinking	32.5
Current Smoker	39.2
No Leisure Time for Physical Activity	26.6
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	15.5
Elderly	91.2
English Speaking	12.1
Foreign-born	75.5
Outdoor Workers	37.1
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.6
Traffic Density	71.5
Traffic Access	87.4
Other Indices	—
Hardship	81.2

Other Decision Support	—
2016 Voting	11.4

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	85.0
Healthy Places Index Score for Project Location (b)	34.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	Rule 1178 in the South Coast AQMD Jurisdiction
Construction: Construction Phases	Source: Dec 2001 Final EA for PAR 1178
Construction: Off-Road Equipment	Source: (No Welders) Conversation Between PAR 1178 Rules Staff with Supplier, and (1 Crane, 1 Compressor) Dec 2001 Final EA for PAR 1178

Construction: Trips and VMT	Source: (2 Crew/Tool Trucks Driving 40 Miles, 1 Material Delivery Truck Driving 50 Miles) Dec 2001 Final EA for PAR 1178
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On-Road Vehicles, VMT + Fuel Usage (As Published in the Draft EA)

Activity	Description	Trip Distance (miles)	Number Trips/yr	VMT	Fuel Type	MPG	Fuel Use (Gal/yr)
Doming 54 External Floating Roof Tanks	Equipment Delivery - Heavy-Heavy Duty Vendor Trucks	50	5184	259200	Diesel	6.4	40,686
	Equipment Installation - Passenger Auto	40	5184	207360	Gas	27.0	7,671
Installing Additional Seals for 8 Internal Floating Roof Tanks	Equipment Delivery - Heavy-Heavy Duty Vendor Trucks	50	320	16000	Diesel	6.4	2,511
	Equipment Installation - Passenger Auto	40	320	12800	Gas	27.0	474

Fuel Usage = VMT / MPG

Offroad Equipment Fuel Usage

Activity	Equipment	Number of Equipment	Usage Hours/day	Horse power	Load Factor	Fuel Rate (Gal/hr)	Fuel Use (Gal/day)
Doming 54 External Floating Roof Tanks	Cranes	54	10	367	0.29	3.4	539.2
	Welders	162	10	82	0.2	1.5	471.6
	Air Compressors	54	10	84	0.37	1.1	221.5
Installing Additional Seals for 8 Internal Floating Roof Tanks	Cranes	8	4	367	0.29	3.4	32.0
	Air Compressors	8	8	84	0.37	1.1	26.3
Total Diesel Fuel Usage from Offroad Equipment (Gal/yr)							120632.9

Fuel Usage = Hours/day * Days * Load Factor * Fuel Rate

Notes: Horsepower and Load Factor from CalEEMod version 2022.1.1.3

Fuel Type	Construction
Diesel Fuel Usage (Gallons)	163,830
Gas Fuel Usage (Gallons)	8,144

Annual Total Projected Fuel Usage for Construction Activities		
	Diesel	Gasoline
Projected Operational Energy Use (gal/yr) ^a	163,830	8,144
Year 2017 South Coast AQMD Jurisdiction Estimated Fuel Demand (gal/yr)	775,000,000	7,086,000,000
Total Increase Above Baseline	0.02114%	0.000115%
Significance Threshold	1%	1%
Significant?	No	No

Notes:

^a Estimated peak fuel usage from construction activities. Diesel usage estimates are based on the vendor trips and offroad equipment. Gasoline usage estimates are derived from worker trips.

APPENDIX C

List of Affected Facilities

Facility ID	Facility Name	Address	Located within Two Miles of an Airport?
116931	Equilon Enterprises LLC DBA Shell Oil Products US	2457 Redondo Ave, Signal Hill	Yes
117560	Equilon Enterprises LLC Shell Oil Products	Berth 167-169, Suite Mormon Island, Wilmington 90744	No
171107	Phillips 66 Co/LA Refinery Wilmington PI	1660 W Anaheim St, Wilmington 90744	No
171109	Phillips 66 Los Angeles Refinery Carson Plant	1520 E Sepulveda Blvd, Carson 90745	No
171326	Phillips 66 Pipeline LLC - bulk loading	13500 S Broadway, Los Angeles 90061	No
171327	Phillips 66 Pipeline LLC	2650 Lomita Blvd, Torrance 90505	No
174655	Tesorero Refining & Marketing Company LLC	2350 E 223rd St, Carson 90810	No
174704	Tesoro Logistics East Hynes Terminal	5905 Paramount Blvd, Long Beach 90805	No
174710	Tesoro Logistics Vinvale Terminal	8601 Garfield Ave, South Gate 90280	No
176377	Tesoro Logistics, Marine Terminal 2	1350 Pier B St, Long Beach 90813	No
181667	Torrance Refining Company LLC	3700 W 190th St, Torrance 90504	No
182752	Torrance Logistics Company LLC	2619 & 2709 E 37th St, Vernon 90058	No
187165	Altair Paramount, LLC	14700-08 Downey Ave, Paramount 90723	No
800022	Calnev Pipe Line LLC	2051 E Slover Ave, Bloomington 92316	No
800026	Ultramar Inc Wilmington Refinery	2402 E Anaheim St, Wilmington 90744	No
800030	Chevron Products Company	324 W El Segundo Blvd, El Segundo 90245	Yes
800057	Kinder Morgan Liquids Terminal	2000 E Sepulveda Blvd, Carson 90810	No
800079	Petro Diamond Terminal Company	1920 Lugger Berth 83 Way, Long Beach 90813	No
800129	SFPP LP Colton Terminal	2359 Riverside Ave, Bloomington 92316	No
800198	Ultramar Inc Wilmington Marine Terminal	961 La Paloma Ave, Wilmington 90744	No
800278	SFPP LP Watson Station	20410 S Wilmington Ave, Carson 90810	No
800369	Equilon Enter. LLC, Shell Oil Prod. U.S.	8100 Haskell Ave, Van Nuys 91406	Yes
800372	Equilon Enterprises LLC	20945 S Wilmington, Carson 90810	No
800393	Valero Energy Corporation	1651 Alameda St, Wilmington 90744	No
800436	Tesorero Refining and Marketing Company LLC	2101 E Pacific Coast Hwy, Wilmington 90744	No
101977	Signal Hill Petroleum	1215 E 29th St, Signal Hill, CA 90755	Yes
800330	THUMBS Long Beach	1105 Harbor Scenic Dr, Suite PIERS J1-J6, Long Beach, CA 90802	No