

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

FINAL NEGATIVE DECLARATION FOR: CARPENTER COMPANY TANK INSTALLATION PROJECT

SCH No. 1012101076

December 2012

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PREFACE

This document constitutes the Final Negative Declaration (ND) for the Carpenter Company Tank Installation Project. The Draft ND was circulated for a 30-day public review and comment period (October 26, 2012 through November 27, 2012). One email and one comment letter were received during the public comment period. Those comments were reviewed and evaluated and are included in Appendix D of this Final ND, along with responses to those comments.

Minor modifications have been made to the Draft ND such that it is now a Final ND. The SCAQMD has evaluated all modifications to the proposed project and concluded that none of the modifications alter any conclusions reached in the Draft ND, nor provide new information of substantial importance relative to the draft document that would require recirculation of the Draft ND pursuant to CEQA Guidelines §15073.5. Therefore, this document is now a Final ND. Additions to the text of the ND are denoted using italics. Text that has been eliminated is shown using ~~strike-outs~~.

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CHAPTER 1

PROJECT DESCRIPTION

Introduction
Agency Authority
Project Objective
Project Location
Project Description

CHAPTER 1.0

PROJECT DESCRIPTION

1.1 INTRODUCTION

Carpenter Company manufactures polyurethane foam in a facility in Riverside, California. The foam is for use in furniture, bedding, carpet cushion underlay and other applications. Currently, the facility primarily manufactures two types of foam, flexible polyurethane foam (Prime Foam) and bonded foam. The proposed project would consist of installing a new 10,000-gallon bulk tank for the storage of methyl formate, a hazardous substance, which is used as a blowing agent in the Prime Foam pouring process. Methyl formate is currently stored in a 350-gallon storage tank. Carpenter Company wants to install a larger tank as it is more economical to purchase methyl formate in bulk than in small quantities. The facility has limits on the throughput of methyl formate used at the facility, no change in the throughput of methyl formate or any other chemical is proposed as part of this project, and no increase in production capacity is proposed.

1.2 AGENCY AUTHORITY

The California Environmental Quality Act (CEQA), Public Resources Code Section 21000 et seq., requires that the environmental impacts of proposed “projects” be evaluated and that feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects be identified and implemented. The proposed modifications constitute a “project” as defined by CEQA. To fulfill the purpose and intent of CEQA, the SCAQMD is the “lead agency” for this project and has prepared this Negative Declaration to address the potential adverse environmental impacts associated with the proposed project at Carpenter Company.

The lead agency is the public agency that has the principal responsibility for carrying out or approving a project that may have a significant adverse effect upon the environment (Public Resources Code §21067). Since the proposed project requires discretionary approval from the SCAQMD and the SCAQMD has the greatest responsibility for supervising or approving the project as a whole, the SCAQMD has been determined to be the most appropriate public agency to act as lead agency (CEQA Guidelines §15051(b)).

To fulfill the purpose and intent of CEQA, the SCAQMD has prepared this Negative Declaration to address the potential adverse environmental impacts associated with the proposed project. A Negative Declaration for a project subject to CEQA is prepared when an environmental analysis of the project shows that there is no substantial evidence that the project may have a significant effect on the environment (CEQA Guidelines §15070(a)). As discussed in Chapter 2, the proposed project is not expected to result in any significant adverse environmental impacts; therefore, a Negative Declaration is the appropriate document.

1.3 PROJECT LOCATION

Carpenter Company operates its existing manufacturing facility on a 39.8-acre site, located at 7809 Lincoln Avenue in the City of Riverside, approximately one-third of a mile southeast of the Riverside 91 Freeway between the Adams Street (Exit 59) and Madison Street (Exit 60) exits (see Figure 1). Carpenter Company is immediately bounded on the northwest by residences, on the northeast by Grace Street, on the southeast by Lincoln Avenue, and on the southwest by Jefferson Street. The properties across Grace Street make up a residential neighborhood and the properties across Lincoln Avenue and Jefferson Street consist solely of commercial/industrial uses (see Figure 2).

1.4 OVERVIEW OF CURRENT OPERATIONS

Carpenter Company manufactures two types of foam, flexible polyurethane foam and bonded foam. These are produced on two separate manufacturing lines: the Prime Foam Line and the Bonded Foam Line. Each foam line is described in the following subsections.

1.4.1 Prime Foam Line

Flexible polyurethane foam is produced in batches on the Prime Foam production line. The chemicals, which are stored separately on-site, are mixed prior to introduction to the pour line. Polyurethane foam is produced by a chemical reaction between toluene diisocyanate (TDI), polypropylene glycol, and water. Flame retardant additives, a blowing agent (carbon dioxide and methyl formate), silicone surfactants, and catalysts are added to this reaction in varying amounts to produce the desired type of foam. Client demand determines which type and quantity of foam will be produced on a given day. After the foam is poured, it is transported to storage areas where it cures for varying amounts of time before shipment.

Methyl formate is currently used as a blowing agent in the Prime Foam Line covered by SCAQMD application number 526038 (Flexible Polyurethane Slabstock Foam Manufacturing), permit number G16129 (350-gallon Methyl Formate Storage Tank), and permit number G16128 (Carbon Adsorption Air Pollution Control System).

1.4.2 Bonded Foam Line

Slabs of bonded foam are produced from a combination of a prepolymer, steam and granulated polyurethane foam on the Bonded Foam production line. The prepolymer mixture consists of the following components:

- TDI or Diphenylmethane Diisocyanate (MDI)
- Polyethylene Glycol
- Castor Oil

CHAPTER 1: PROJECT DESCRIPTION

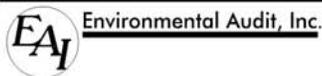
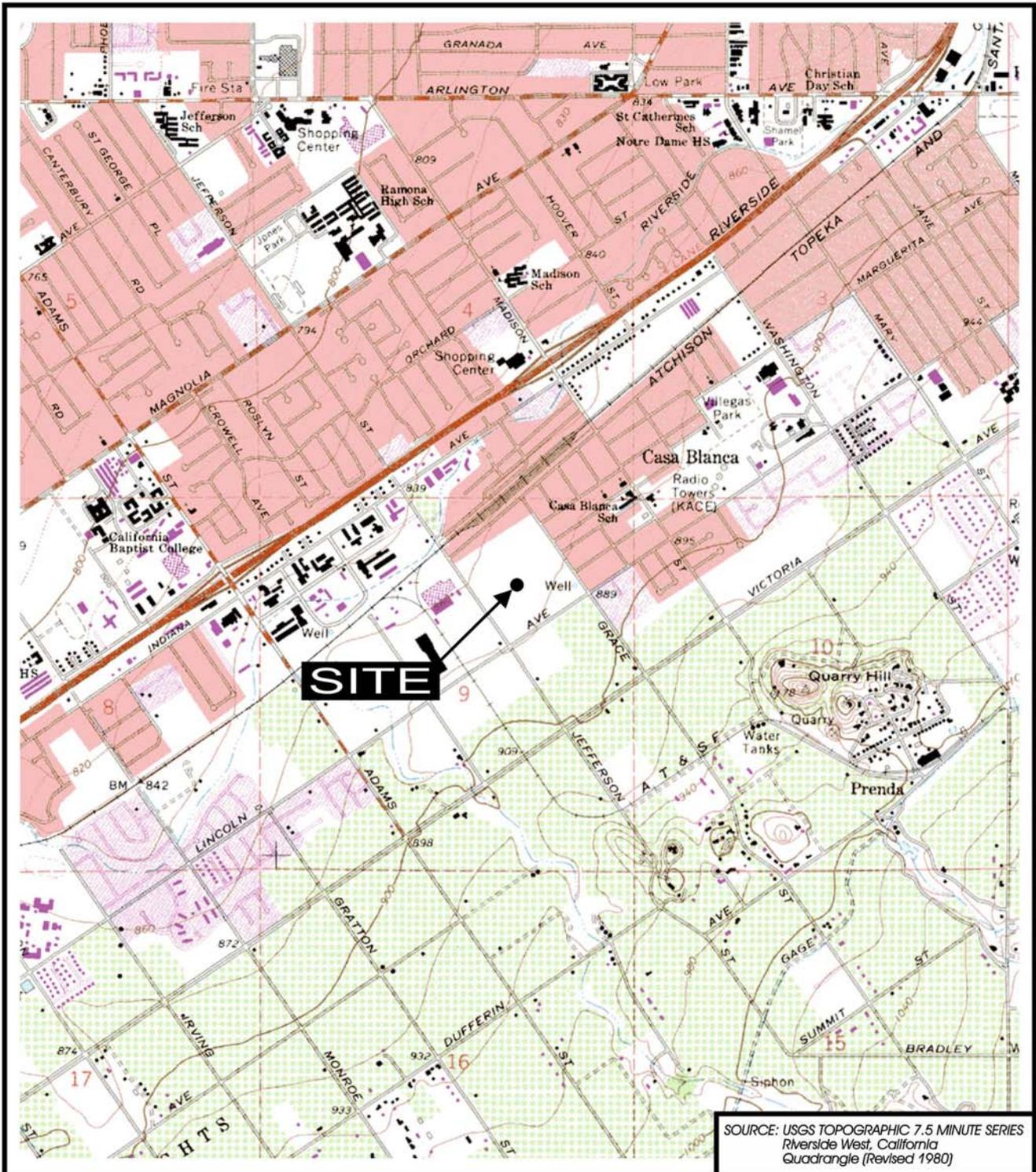


FIGURE 1
SITE LOCATION MAP
CARPENTER COMPANY
7809 Lincoln Ave
Riverside, CA 92504

CARPENTER COMPANY - STORAGE TANK INSTALLATION PROJECT



 Environmental Audit, Inc.

FIGURE 2
AERIAL SITE PLAN
CARPENTER COMPANY
7809 Lincoln Ave
Riverside, CA 92504

0 ~333'



The production line consists of a wet mixer, where the prepolymer is added to the granulated foam, and a four-walled moving conveyor, where the steam is added as a catalyst for the reaction. The bonded foam slabs produced from this process are eventually processed into rolls of carpet cushion underlayment.

The Bonded Foam Line is currently covered by SCAQMD permit number F62238. The wet mixer is vented to an air pollution control system consisting of a wet electrostatic scrubber covered by SCAQMD permit number F62239.

1.5 PROPOSED PROJECT

Carpenter Company is proposing to construct a 10,000 gallon bulk tank for the storage of methyl formate in the southeast corner of the facility (see Figure 2). Carpenter Company wants to install a larger tank as it is more economical to purchase methyl formate in bulk than in small quantities. Because methyl formate is a flammable substance listed in the California Accidental Release Prevention (CalARP) Program (California Code of Regulations, Title 19, Division 2, Chapter 4.5) and because the amount of methyl formate stored in the proposed new tank exceeds the threshold quantity of 10,000 pounds, SCAQMD staff has concluded that the analysis of potential impacts from the proposed project pursuant to CEQA is warranted.

The construction and operation of the methyl formate storage tank requires a permit to construct/operate from the SCAQMD. The storage tank will be 20 feet long and 10 feet high, with a 10-foot diameter and will be constructed within a containment berm. In the event of an accidental release of methyl formate, the containment berm would be able to hold 110 percent of the storage tank capacity. The methyl formate will be purchased as a blend of 97 percent methyl formate and three percent methanol. The storage tank will be located entirely within the confines of the existing Carpenter Company facility as shown in Figure 2.

The proposed tank will be used exclusively for the storage of methyl formate, which Carpenter Company currently uses as an auxiliary blowing agent in its polyurethane foam manufacturing process. The new 10,000-gallon methyl formate storage tank would allow Carpenter Company to store larger quantities of methyl formate, than the existing 350-gallons methyl formate storage tank. Existing pumps that currently transfer methyl formate to the foam lines will continue to be used to transfer methyl formate to the foam lines so no new pumps are required at the facility. No other changes are proposed to any of the equipment in the Prime Foam Line or the Bonded Foam Line at Carpenter Company and the proposed project will not increase the production capacity of the facility, change any of the processing capabilities, or increase the use of methyl formate at the facility. The Carpenter Company currently uses methyl formate as a blowing agent at the facility and will continue to use methyl formate for this purpose. The facility has limits on the throughput of methyl formate used at the facility and no change in the throughput of methyl formate or any other chemical is proposed as part of this project. No new employees will be required at the Carpenter Company as a result of the proposed project.

Construction activities are limited to the installation of the 10,000 gallon storage tank which is expected to take five days and require four workers. Construction equipment that may be used includes an air compressor, a crane, a forklift, and a welder. The construction area at the Carpenter Company is expected to be about 30 by 16 feet for a total of area of about 480 square feet. Construction activities will begin as soon as all permits and approvals for the 10,000 gallon storage tank have been received.

Carpenter Company will discontinue using the existing 350 gallon storage tank and it will be taken out of methyl formate service. Since the 350 gallon storage tank is relatively new, it is expected to be used for another purpose but there are no current plans for its use. The required permits and applicable environmental review will be evaluated when the storage tank is put back into service.

1.6 REQUIRED PERMITS

The proposed project will require an SCAQMD Permit to Construct/Operate the methyl formate storage tank from the SCAQMD and will require a building permit from the City of Riverside. No other permits are expected to be required.

CHAPTER 2

ENVIRONMENTAL CHECKLIST

- Introduction
- General Information
- Environmental Factors Potentially Affected
- Determination
- Environmental Checklist and Discussion
 - Aesthetics
 - Agriculture Resources
 - Air Quality
 - Biological Resources
 - Cultural Resources
 - Energy
 - Geology and Soils
 - Hazards and Hazardous Materials
 - Hydrology and Water Quality
 - Land Use and Planning
 - Mineral Resources
 - Noise
 - Population and Housing
 - Public Services
 - Recreation
 - Solid/Hazardous Waste
 - Transportation/Traffic
 - Mandatory Findings of Significance
- References
- Acronyms

INTRODUCTION

The environmental checklist provides a standard evaluation tool to identify a proposed project's adverse environmental impacts. This checklist identifies and evaluates potential adverse environmental impacts that may be created by the proposed project.

GENERAL INFORMATION

Project Title:	Carpenter Company – Storage Tank Installation Project
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
Contact Person:	Jeff Inabinet
Contact Phone Number:	(909) 396-2453
Project Sponsor's Name:	Carpenter Company
Project Sponsor's Address:	7809 Lincoln Avenue Riverside, CA 92504
General Plan Designation:	B/OP – Business/Office Park
Zoning:	BMP – Business and Manufacturing Park Zone
Description of Project:	Carpenter Company is proposing to construct a 10,000-gallon storage tank for the storage of methyl formate. The proposed tank would be used exclusively for methyl formate storage, which Carpenter Company currently uses as an auxiliary blowing agent in its polyurethane foam manufacturing process. The proposed project would not increase the use of methyl formate or increase the production capacity of the facility.
Surrounding Land Uses and Setting:	Carpenter Company is immediately bounded on the northwest by residences, on the northeast by Grace Street, on the southeast by Lincoln Avenue, and on the southwest by Jefferson Street. The properties across Grace Street make up a residential neighborhood, and the properties across Lincoln Avenue and Jefferson Street are office parks.
Other Public Agencies Whose Approval is Required:	City of Riverside City of Riverside Fire Department

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 "✓" may be adversely affected by the proposed project. An explanation relative to the determination of impacts can be found following the checklist for each area.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Geology and Soils | <input type="checkbox"/> Population and Housing |
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Hazards and Hazardous Materials | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Air Quality and Greenhouse Gas Emissions | <input type="checkbox"/> Hydrology and Water Quality | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Land Use and Planning | <input type="checkbox"/> Solid/Hazardous Waste |
| <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Energy | <input type="checkbox"/> Noise | <input type="checkbox"/> Mandatory Findings |

DETERMINATION

On the basis of this initial evaluation:

- I find the proposed project COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION will be 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. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- 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 IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: October 24, 2012

Signature: 
Steve Smith, Ph.D.
Program Supervisor

ENVIRONMENTAL CHECKLIST AND DISCUSSION

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
1.0 AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

1.1 Significance Criteria

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

The project will block views from a scenic highway or corridor.

The project will adversely affect the visual continuity of the surrounding area.

The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

1.2 Environmental Setting and Impacts

1. a), b), and c). The project consists of the installation of a 10,000-gallon storage tank. All project elements would be built within the confines of the existing facility. The tank will be located adjacent to the existing manufacturing/warehouse building near the southern portion of the facility. The facility is surrounded by eight-foot block walls or lattice-type chain link fencing. The proposed storage tank would be about 10 feet in height and would not be visible to the residential neighborhoods north and northeast of the site, primarily because the facility building, which is about 41 feet high is between the storage tank and most of the residential neighborhoods north of the facility. The existing fencing is also expected to block views of the storage tank from the adjacent commercial/industrial properties to the south and southwest.

Therefore, the views of the Carpenter Company from the surrounding land uses are not expected to noticeably change.

No scenic highways, vistas, or corridors are located in the vicinity of Carpenter Company, therefore, the storage tanks will not be visible to any scenic highways, vistas or corridors. Therefore, no significant adverse aesthetic impacts are expected due to the installation of the proposed storage tank at the Carpenter Company.

1. d). Construction activities will not require additional lighting because they will take place during daylight hours and no nighttime construction activities will occur. The proposed storage tank will be located within an existing industrial facility, which is already lighted at night for nighttime operations and security reasons, so that no increase in lighting associated with the proposed project at Carpenter Company is required. Further, the proposed new storage tank will be painted white. Therefore, no significant light and glare impacts are anticipated from the proposed project.

1.3 Mitigation Measures

No significant adverse impacts from the proposed project on aesthetics are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
2.0 AGRICULTURE AND FOREST RESOURCES. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.1 Significance Criteria

Project-related impacts on agricultural 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 would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural uses.

2.2 Environmental Setting and Impacts

2. a), b), c), and d). The Carpenter Company is located within the urbanized portions of the City of Riverside. There are no agricultural resources, i.e., food crops grown for commercial purposes, located in or near the vicinity of Carpenter Company. According to the Riverside County Land Information System, the facility is not located within or adjacent to an agricultural preserve and is not considered to be prime farmland. Further, there are no forest land resources located within or near the Carpenter Company. Agricultural activities would not be compatible because of the location of the Carpenter Company within an industrial area and the area surrounding the facility is developed with commercial, industrial and residential uses. No forestland is located within or adjacent to the facility so timberland production would not occur within the area. The proposed project would not involve construction outside of the existing boundaries of the Carpenter Company and no agricultural or forest land resources are located within or adjacent to the Carpenter Company facility. The zoning of the Carpenter Company would remain “Business and Manufacturing Park Zone” and polyurethane manufacturing is consistent with the uses allowed within this zone. No existing agricultural land would be converted to non-agricultural land uses. Further, the project will not conflict with a Williamson Act contract. Finally, no forest land would be converted to non-forest land uses. Therefore, the proposed project will have no significant adverse impacts on agricultural resources.

2.3 Mitigation Measures

No significant adverse impacts from the proposed project on agricultural resources are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
3.0 AIR QUALITY AND GREENHOUSE GAS EMISSIONS.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Diminish an existing air quality rule or future compliance requirement resulting in a significant increase in air pollutant(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

3.1 Significance Criteria

Impacts will be evaluated and compared to the significance criteria in Table 1. If impacts equal or exceed any of the following criteria, they will be considered significant.

TABLE 1
Air Quality Significance Thresholds

Mass Daily Thresholds^(a)		
Pollutant	Construction^(b)	Operation^(c)
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM10	150 lbs/day	150 lbs/day
PM2.5	55 lbs/day	55 lbs/day
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, Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Chronic and Acute Hazard Index ≥ 1.0 (project increment) Cancer Burden ≥ 0.5 excess cancer cases (in areas ≥ 1 in 1 million)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000MT/yr CO ₂ eq for industrial facilities	
Ambient Air Quality for Criteria Pollutants^(d)		
NO₂ 1-hour average annual average	In attainment; significant if project causes or contributes to an exceedance of any standard: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM10 24-hour annual average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^(e) and 2.5 $\mu\text{g}/\text{m}^3$ (operation) 1.0 $\mu\text{g}/\text{m}^3$	
PM2.5 24-hour average	10.4 $\mu\text{g}/\text{m}^3$ (construction) ^(e) and 2.5 $\mu\text{g}/\text{m}^3$ (operation)	
SO₂ 1-hour average 24-hour average	0.255 ppm (state) and 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	In attainment; significant if project causes or contributes to an exceedance of any standard: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day average Rolling 3-month average Quarterly average	1.5 $\mu\text{g}/\text{m}^3$ (state) 0.15 $\mu\text{g}/\text{m}^3$ (federal) 1.5 $\mu\text{g}/\text{m}^3$ (federal)	

a) Source: SCAQMD CEQA Handbook (SCAQMD, 1993)

b) Construction thresholds apply to both the SCAB and Coachella Valley (Salton Sea and Mojave Desert Air Basin)

c) For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.

d) Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

e) Ambient air quality threshold based on SCAQMD Rule 403.

KEY: ppm = parts per million; $\mu\text{g}/\text{m}^3$ = microgram per cubic meter; lbs/day = pounds per day; MT/yr CO₂eq = metric tons per year of CO₂ equivalents, \geq greater than or equal to, $>$ = greater than

3.2 Environmental Setting and Impacts

3. a) & f) The 2007 Air Quality Management Plan (AQMP) demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. The 2012 AQMP, which is currently undergoing public review, also demonstrates attainment of the federal 24-hour PM_{2.5} standard. Growth projections from local general plans adopted by cities and counties in the district are provided to the Southern California Association of Governments (SCAG), who then develops region-wide growth projections used to develop the AQMP. As indicated in the Population and Housing and Transportation/Traffic sections of this Negative Declaration, the proposed project would not require additional employees or generate additional traffic during operation. Therefore, the proposed project would not cause increases in the growth projections beyond those contained in the currently adopted AQMP (2007 AQMP). Additionally, this project must comply with applicable existing SCAQMD requirements and applicable AQMP control measures promulgated as rules or regulations in the future. For example, new emission sources associated with the proposed project are required to comply with best available control technology (BACT), and modeling requirements pursuant to the SCAQMD's Regulation XIII – New Source Review.

By meeting the above requirements, the proposed project would be consistent with the goals and objectives of the AQMP to improve air quality in the Basin. As a result, the proposed project is consistent with the 2007 AQMP. Further, the proposed storage tank requires an air permit from the SCAQMD and is required to comply with applicable air quality rules and regulations. Thus, the proposed project would not diminish an existing air quality rule or future compliance requirement.

3. b) Emissions Estimates

Construction Emissions: Construction activities associated with the proposed project would result in emissions of volatile organic compounds (VOCs), carbon monoxide (CO), nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter (PM) less than 10 microns in diameter (PM₁₀), and PM less than 2.5 microns in diameter (PM_{2.5}). Construction activities include installation of a new storage tank berm within an existing paved area, and associated connections that will involve the use of cranes, a forklift, an air compressor, and welders. The site is already graded and paved, so no grading or paving activities are expected. The location of the proposed storage tank is shown in Figure 2. Construction activities are expected to take about one week.

Daily construction emissions were calculated for the peak construction day activities using off-road emission factors developed from the California Air Resources Board's (CARB) OFFROAD 2007 Model. The off-road emission factors were derived based on the equipment category (tractor, dozer, scraper, etc.), average fleet make-up for each year through 2020, vehicle population (number) in each equipment category by horsepower rating and load factor. To calculate on-road mobile source emissions, SCAQMD staff derived mobile source emission factors from CARB's EMFAC 2007 (v2.3) BURDEN model, which were used for the analysis. The emission factors were derived by dividing the total daily district-wide emissions by total daily vehicle miles traveled by vehicle category to obtain emission factors in pounds per mile traveled.

Peak day emissions are the sum of the highest daily emissions from construction equipment, employee vehicles, fugitive dust sources, and transport activities, during the construction period. The peak day is based on the day in which the highest emissions occur for each pollutant. The criteria pollutant emissions for that peak day were then compared to their respective significance thresholds. Construction emissions for the proposed project are provided in detail in Appendix A and the peak construction emissions are summarized in Table 2.

TABLE 2

Peak Construction Emissions

Source/Activity	Construction Emissions (lbs/day) ⁽¹⁾					
	VOC	CO	NOx	SOx	PM10	PM2.5
Construction Equipment	0.13	6.17	8.78	0.01	0.64	0.59
Vehicle Emissions	0.06	0.92	0.41	0.00	0.05	0.02
Paint Emissions	2.52	0.00	0.00	0.00	0.00	0.00
Total Emissions	2.71	7.09	9.19	0.01	0.69	0.61
SCAQMD Regional Threshold	75	550	100	150	150	55
Regionally Significant?	No	No	No	No	No	No

(1) See Appendix A for further details and calculation methodology.

The proposed project emissions during the construction phase are compared to the SCAQMD CEQA significance thresholds for construction in Table 2. The peak construction emissions are expected to be less than the SCAQMD CEQA significance thresholds so that no significant adverse impacts on air quality are expected during the construction phase.

On-site construction emissions were also compared to the SCAQMD’s localized significance thresholds (SCAQMD, 2003) (see Table 3 and Appendix A) for a one-acre project. The construction area at the Carpenter Company is expected to be about 30 by 16 feet for a total of area of about 480 square feet, which is much less than one acre (43,560 square feet); therefore, this analysis is conservative. The localized significance thresholds (LST) are used to determine whether or not a project may generate significant adverse air quality impacts to the local sensitive receptors in the vicinity of the proposed project. The proposed project site is in the metropolitan Riverside area located in source receptor area 23. The estimated onsite construction emissions associated with installation of the storage tank were compared to the localized significance thresholds for CO, NOx, PM10, and PM2.5. The LST analysis is not required for SOx or VOC emissions because they do not generate localized criteria pollutant air quality impacts, in all cases, the construction emissions were below the localized significance thresholds (see Appendix A). Therefore, no significant localized air quality impacts are expected.

TABLE 3

Localized Emission Impacts Analysis

Source/Activity	On-site Source Emissions (lbs/day)					
	VOC	CO	NOx	SOx	PM10	PM2.5
Construction Equipment	1.69	6.17	8.78	0.01	0.64	0.59
Screening Value ⁽¹⁾	NA	602	118	NA	4	3
Significant?	-	No	No	-	No	No

(1) Screening values for LST analysis from SCAQMD Final Localized Significance Threshold Methodology, Appendix C, Tables C-1, C-2, and C-4 for SRA No. 23 for one-acre sites at 25 meters (October 2009).

Operational Emissions

Emission calculations for the new storage tank were estimated using the U.S. EPA TANKS Model. The new storage tank will contain a mixture of about 97 percent methyl formate and three percent methanol. The new tank is expected to generate an annual average daily emission rate of approximately 10.55 pounds per day of total emissions, and peak daily emissions of 13.49 pounds per day (see Appendix B). Methyl formate is considered to be a VOC exempt compound, based on its negligible photochemical reactivity. However, methanol is considered to be a VOC. Worst-case VOC emission estimates have been provided in Table 4 (0.4 lb/day or 115 pounds per year) that assumes the maximum potential vapor pressure and throughput in the highest month (note that the VOC emissions are limited to methanol, which is three percent of the total emissions). No increase in fugitive components (e.g., valves) or loading emissions are expected because the proposed new tank would not change the amount of methyl formate used at the facility. The proposed project would not require offsets as the emissions increase would be less than one pound per day.

TABLE 4

Storage Tank Operational Emissions Increases

Tank	Emissions (lbs/day) ⁽¹⁾		
	Existing VOC Emissions ⁽²⁾	Proposed Project Estimated VOC Emissions	Proposed Project VOC Emission Changes
New Storage Tank	0.00	0.40	0.40
SCAQMD Threshold	NA	55	55
Significant	NA	No	No

(1) No emissions of NOx, SOx, VOC, PM10, and PM2.5 are expected due to operation of the proposed project, as the only project-related emissions are VOC emissions associated with the proposed new storage tank.

(2) See Appendix B for more details on the emission calculations. Because the VOC emissions are less than 1 pound per day, the project is exempt from offsets.

The proposed project would reduce truck deliveries from 52 trucks per year to about four trucks per year, resulting in about a 93 percent reduction in truck trips to the facility. Fewer truck trips will be required since the capacity of the new methyl formate storage tank will be 10,000 gallons as compared to the existing capacity of 350 gallons. The peak daily operational emissions from delivery trucks would not change, i.e., the peak day would include one truck visit to the facility. However, the annual emissions associated with delivery trucks will be reduced by an estimated 93 percent, however, these potential emission reductions have not been calculated or included as emission reductions. Detailed emission calculations for delivery trucks are presented in Appendix B.

The proposed project would only result in VOC emissions increases associated with the operation of the proposed new storage tank. The estimated increase in VOC emissions was calculated and compared to the SCAQMD CEQA significance thresholds in Table 4. The emission increases are below the applicable SCAQMD operational significance threshold and VOC emissions are not subject to a localized air quality impact analysis; therefore, no significant adverse impacts on air quality are expected during operation of the proposed project.

3. c) Cumulative Impacts

The construction activities associated with the proposed project are expected to last about one week and construction emissions were concluded to be less than significant. The operation of the storage tank is expected to result in a maximum increase of 0.4 lb/day which is also less than significant. Because project-specific emissions during construction and operation do not exceed any applicable significance thresholds in Table 1, project emissions are not considered to be cumulatively considerable pursuant to CEQA Guidelines §15064(h)(1). As a result, the proposed project is not expected to create significant adverse cumulative air quality impacts during either construction or operation. The project specific emission increases would be less than significant. Therefore, the cumulative air quality impacts are not expected to be cumulative considerable.

3. d) Toxic Air Contaminants

Methyl formate is not considered to be a toxic air contaminant (TAC) under SCAQMD Rule 1401 – New Source Review for Toxic Air Contaminants, the California Accidental Release Prevention (CalARP) Program, or any other state or federal program. Methyl formate used and stored at Carpenter Company will continue to be 97 percent methyl formate and three percent methanol. Methanol is regulated as a TAC under SCAQMD Rule 1401, therefore, a screening risk assessment was completed for the proposed project, assuming that three percent of the VOC emissions are methanol (see Appendix B and Table 5).

TABLE 5

Screening Health Risk Assessment for Methanol

	On-Site Tank Emissions			
	Total Emissions (lbs/yr)	Total Emissions (lbs/hr)	Methanol (lbs/yr)	Methanol (lbs/hr)
Tank Emissions ⁽¹⁾	3,849.53	13.49	115.49	0.02
Cancer/Chronic Screening Value ⁽²⁾	NA	NA	1,030,000	NA
Acute Screening Value ⁽²⁾	NA	NA	NA	75
Significant?	-	-	No	No

(1) Methanol is three percent of the storage tank VOC emissions.

(2) SCAQMD Rule 1401 Table 1A screening value at 100 meters (September 2010). OEHHA’s interim REL value was used for methyl formate.

The total emissions and total VOC emissions from the storage tank were calculated using the U.S. EPA’s TANKS model (see Appendix B). Three percent of the total VOC emissions were assumed to be methanol. The estimated methanol emissions were compared to the SCAQMD’s screening thresholds for cancer, chronic, and acute health effects. The screening health risk value is equivalent to a cancer risk of 1×10^{-6} for carcinogens or 1.0 for chronic/acute non-carcinogens. If a chemical is both a carcinogen and a non-carcinogen, the screening health risk value represents the most stringent value of the cancer risk, chronic hazard index or acute hazard index (SCAQMD, 2007). The estimated annual methanol emissions (115.49 lbs/year) were compared to the SCAQMD’s screening health risk value (1,030,000 lbs/year) for cancer and chronic health risks. The estimated methanol emissions from the proposed project are well below the SCAQMD’s screening health risk value for cancer and chronic health risks which indicates that the cancer risk is less than 1×10^{-6} ; therefore, the proposed project is not expected to result in an increased cancer or chronic health risk. Similarly, the estimated maximum hourly methanol emissions (0.02 lb/hour) were compared to the SCAQMD’s screening health risk value (75 lbs/hour) for acute health risks. The estimated methanol emissions from the proposed project are well below the SCAQMD’s screening health risk value for acute health risks; therefore, the acute health risks from the proposed project are expected to be less than 1.0 and, therefore, less than significant. Therefore, TAC emissions from the proposed project are expected to be less than significant.

3. e) Odors

The proposed project will not result in the storage of new chemicals at the site. Methyl formate is currently stored at the Carpenter Company and will continue to be stored at the facility. Methyl formate is currently used at the facility and no odor impacts have been associated with its use. Methyl formate has an odor threshold of 2,000 parts per million and is reported to be a colorless liquid with a pleasant odor (U.S. OSHA, 1978). The proposed project would result in an increase in the quantity of methyl formate stored at the facility, but not in the amount of methyl formate used at the facility. Thus, no odor impacts are expected from the storage tanks. Potential odor impacts from the proposed project are not expected to be significant.

3. g and h) Greenhouse Gas Emissions

Because greenhouse gas emissions are generally considered to affect global climate, applicable impacts are considered to be cumulative impacts. Global climate change refers to changes in average climatic conditions on earth as a whole, including temperature, wind patterns, precipitation and storms. Global warming, a related concept, is the observed increase in average temperature of the earth's surface and atmosphere. One identified cause of global warming is an increase of greenhouse gases (GHGs) in the atmosphere. The six major GHGs identified by the Kyoto Protocol are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), haloalkanes (HFCs), and perfluorocarbons (PFCs). The GHGs absorb longwave radiant energy reflected by the earth, which warms the atmosphere. GHGs also radiate longwave radiation both upward to space and back down toward the surface of the earth. The downward part of this longwave radiation absorbed by the atmosphere is known as the "greenhouse effect." Some studies indicate that the potential effects of global climate change may include rising surface temperatures, loss in snow pack, sea level rise, more extreme heat days per year, and more drought years.

CO₂ is an odorless, colorless natural greenhouse gas. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO₂ are from burning coal, oil, natural gas, wood, butane, propane, etc. CH₄ is a flammable gas and is the main component of natural gas. N₂O, also known as laughing gas, is a colorless greenhouse gas. Some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to the atmospheric load of GHGs. HFCs are synthetic man-made chemicals that are used as a substitute for chlorofluorocarbons (whose production was stopped as required by the Montreal Protocol) for automobile air conditioners and refrigerants. The two main sources of PFCs are primary aluminum production and semiconductor manufacture. SF₆ is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF₆ is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal, etc.), have reportedly contributed to the increase in atmospheric levels of GHGs. The GHG inventory for California is presented in Table 6 (CARB, 2010). Approximately 80 percent of GHGs in California are from fossil fuel combustion and over 70 percent of GHG emissions are carbon dioxide emissions (see Table 6).

The analysis of GHGs is a much different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, CEQA significance thresholds are based on daily emissions because attainment or non-attainment is 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. Since the half-life of CO₂ is approximately 100 years, for example, the effects of GHGs are longer-term, affecting global climate over a relatively long time frame. As a result, the SCAQMD's current

position is to evaluate GHG effects over a longer timeframe than a single day. GHG emissions will be generated by the off-road equipment and on-road vehicles during the construction phase of the proposed project only. GHG emissions were estimated using emission factors from CARB’s EMFAC2007 and OFFROAD2007 models and EPA’s AP-42. The GHG emission factors and calculations can be found in the emission calculation spreadsheets in Appendix A.

TABLE 6
California GHG Emissions and Sinks Summary
 (Million metric tons of CO₂ equivalence)

Categories Included in the Inventory	1990	2009
ENERGY	386.41	389.05
<i>Fuel Combustion Activities</i>	381.16	383.86
Energy Industries	157.33	148.87
Manufacturing Industries & Construction	24.24	18.24
Transport	150.02	172.07
Other Sectors	48.19	44.68
Non-Specified	1.38	0
<i>Fugitive Emissions from Fuels</i>	5.25	5.20
Oil and Natural Gas	2.94	3.76
Other Emissions from Energy Production	2.31	1.44
INDUSTRIAL PROCESSES & PRODUCT USE	18.34	28.07
Mineral Industry	4.85	3.63
Chemical Industry	2.34	0.12
Non-Energy Products from Fuels & Solvent Use	2.29	1.70
Electronics Industry	0.59	0.78
Product Uses as Substitutes for Ozone Depleting Substances	0.04	14.51
Other Product Manufacture & Use Other	3.18	1.65
Other	5.05	5.68
AGRICULTURE, FORESTRY, & OTHER LAND USE	19.11	29.67
Livestock	11.67	19.64
Land	0.19	0.19
Aggregate Sources & Non-CO ₂ Emissions Sources on Land	7.26	9.84
WASTE	9.42	9.98
Solid Waste Disposal	6.26	6.70
Biological Treatment of Solid Waste	0	0.62
Wastewater Treatment & Discharge	3.17	2.66
EMISSION SUMMARY		
Gross California Emissions	433.29	456.77
Sinks and Sequestrations	-6.69	-3.80
Net California Emissions	426.60	452.97

Source: CARB, 2011 – California Greenhouse Gas Inventory for 2000-2009 – by IPCC category

The proposed project is not expected to generate significant GHG emissions. The installation of the new tank is expected to take place over about one week (five days) resulting in about 1.1 metric tons of GHG emissions during construction activities. The proposed storage tank would not emit any GHG emissions during operational activities. The operation of proposed project would reduce delivery trucks to the facility by 48 trucks per year, resulting in a reduction of GHG emissions by 5.5 metric tons per year (see Appendix B). Therefore, during the year of construction the GHG emission reductions would be 4.4 metric tons per year. During the subsequent years, GHG emission reductions would be 5.5 metric tons per year. Because the proposed project would result in a net reduction in GHG emissions the GHG emissions from the proposed project would be well below the CEQA significance threshold of 10,000 metric tons per year. Regardless, since the proposed project is expected to result in a net reduction in GHG emissions, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions. Therefore, the proposed project would not result in significant adverse GHG emission impacts. (Note that the City of Riverside does not have a GHG reduction plan.)

3.3 Mitigation Measures

No significant adverse impacts from the proposed project on air quality are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
4.0 BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

4.1 Significance Criteria

The 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.

4.2 Environmental Setting and Impacts

4. a), b), c), d), e), and f). The proposed project would be located in a developed manufacturing park, entirely within the existing boundaries of Carpenter Company. The facilities at Carpenter Company have been fully developed and are essentially void of vegetation with exception of some landscape vegetation around the periphery of the facility along Jefferson Street, Lincoln Avenue, and Grace Street. Vegetation has been removed from the site for fire safety reasons, for the construction of buildings, for the construction of roads and parking facilities, and to facilitate the movement of trucks and materials throughout the site. The proposed new storage tank will be installed within an existing paved area of the facility, adjacent to the existing facility, and no vegetation is present at this location.

A review of the California Natural Diversity Database revealed nine special status species (Table 7) in the U.S. Geological Survey Quadrangle Map in the same region where the Carpenter Company is located. However, no rare, endangered, or threatened species were identified at the Carpenter Company site. The location of the storage tank is paved and so habitat (native or otherwise) is located at the proposed tank location, therefore, there are no plant or animal resources, locally designated species, natural communities, wetland habitats, or animal migration corridors that would be adversely affected by the proposed project. The proposed project would not have an adverse effect, either directly or indirectly or through habitat modifications, on any sensitive biological species, riparian habitat, or other sensitive natural habitat and no such habitat exists at Carpenter Company due to the developed and industrial nature of the site. No construction activities associated with the proposed project that could adversely affect plant or animal species would occur beyond the facility boundaries. The proposed project would not result in the addition or the elimination of water ponds that could be used by animals or migratory fowl. Further, the proposed project would not adversely affect federally protected wetlands as defined in §404 of the Clean Water Act as no wetlands occur at or adjacent to the site. The proposed project would not adversely affect any local policies or ordinances that protect biological resources or conflict with the provisions of a Habitat Conservation Plan or other similar plan, because, according to the Riverside County Land Information System, no such plans have been implemented at the proposed project site. Because the area in and near

Carpenter Company is devoid of native habitat, impacts to other, non-listed species are not expected.

The proposed project would occur entirely within the boundaries of the existing facility, which has been completely developed with buildings and paved. Therefore, the proposed project site has no value as habitat for endangered, rare or threatened species and no such species would be adversely affected.

TABLE 7

**Carpenter Company
Special Category Species in the West Riverside Quadrangle**

Scientific Name	Common Name	Federal Status	California Status
Coccyzus americanus occidentalis	western yellow-billed cuckoo	Candidate	Endangered
Polioptila californica californica	coastal California gnatcatcher	Threatened	None
Vireo bellii pusillus	Least Bell's vireo	Endangered	Endangered
Catostomus santaanae	Santa Ana sucker	Threatened	None
Dipodomys stephensi	Stephens' kangaroo rat	Endangered	Threatened
Dipodomys merriami parvus	San Bernardino kangaroo rat	Endangered	None
Rhaphiomidas terminatus abdominalis	Delhi Sands flower-loving fly	Endangered	None
Ambrosia pumila	San Diego ambrosia	Endangered	None
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	Endangered	Endangered

Source: California Natural Diversity Database accessed February 23, 2012.

4.3 Mitigation Measures

No significant adverse impacts on biological resources are expected from the proposed project, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
5.0 CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource, site, or feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

5.1 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 to a community or ethnic or social group.

Unique paleontological resources are present that could be disturbed by construction of the proposed project.

The project would disturb human remains.

5.2 Environmental Setting and Impacts

5. a) 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 including the following:

A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;

B) Is associated with the lives of persons important in our past;

- C) Embodies 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;
- D) Has yielded or may be likely to yield information important in prehistory or history” (CEQA Guidelines §15064.5).

The proposed project consists of constructing a new storage tank at Carpenter Company, an existing fully developed manufacturing facility. The proposed project would be located within a paved area of the existing facility and no structures would be removed. Therefore, since no existing structures would be affected by the proposed project, no significant impacts to historic cultural resources would occur as a result of implementing the proposed project. Further, according to the Riverside County Land Use information System, the proposed project is not located on tribal lands. The proposed project does not adversely affect any resources that meet the eligibility criteria presented above (e.g., associated with historically important events or people, embodying distinctive characteristics of a type, period, or method of construction), since no structures would be removed or impacted.

5. b), c), and d) Although the facility is located in an area of high paleontological sensitivity, the entire Carpenter Company site has been previously graded and developed. The existing facility structures and equipment are supported on existing concrete foundations. No significant adverse impacts to cultural resources would occur since the new storage tank would be constructed within an existing paved area. No grading activities are required as part of the proposed project, therefore, the proposed project would not disturb archaeological or paleontological resources. Further, the site does not contain known human remains and would not impact any human remains.

5.3 Mitigation Measures

No significant adverse impacts from the proposed project on cultural resources are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
6.0 ENERGY. Would the project:				
a) Conflict with adopted energy conservation plans?	<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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input checked="" type="checkbox"/>
e) Comply with existing energy standards?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6.1 Significance Criteria

The impacts to energy and mineral resources will be considered significant if any of the following criteria are met:

The project conflicts with adopted energy conservation plans or standards.

The project results in substantial depletion of existing energy resource supplies.

An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.

The project uses non-renewable resources in a wasteful and/or inefficient manner.

6.2 Environmental Setting and Impacts

6. a) and e) The proposed project is not expected to conflict with any adopted energy conservation plan or existing energy standard. There is no known energy conservation plan or existing energy standard that would apply to the existing facility or this proposed project as it involves the replacement of an existing storage tank with a new, larger storage tank.

6. b), c) and d). It is not expected that natural gas-fired or electrically-powered construction equipment would be used; thus, there will be no need for new or substantially altered power or natural gas utility systems during construction of the proposed project. Fuel use would be limited to an air compressor, crane forklift and welder for approximately five days, requiring an estimated 50 to 100 gallons of diesel fuel. In 2011, over 14.73 trillion gallons of gasoline and

2.56 trillion gallons of diesel were sold in California (California State Board of Equalization, 2012). Therefore, the fuel use associated with construction of the proposed project is a minor fraction of the total fuel use in California. No significant adverse impacts on energy are expected during the construction period.

The operation of the new tank would not require any additional energy to operate. Operation of the proposed project is not expected to increase the amount of natural gas consumption because no new equipment is being installed that requires the use of natural gas. No increase in electricity use is expected from operation of the proposed project as the proposed project will use existing pumps and no increase in facility throughput would occur. The facility already contains lighting and no additional lighting is required as part of the proposed project. Therefore, no significant adverse electricity demand impacts are anticipated from the proposed project. Further, the proposed project would reduce delivery trucks to the facility by 48 trucks per year, reducing fuel use and related energy impacts associated with delivery trucks.

6.3 Mitigation Measures

No significant adverse impacts on energy are expected from the proposed project, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
7.0 GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
• Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
• Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

7.1 Significance Criteria

The 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.

7.2 Environmental Setting and Impacts

7. a) Seismicity

Carpenter Company is located within a seismically active region. The most significant potential geologic hazard is expected to be seismic shaking from future earthquakes generated by active or potentially active faults in the region. Table 8 identifies those faults near the Carpenter Company site considered important in terms of potential for future activity.

TABLE 8

Estimated Maximum Earthquake Magnitude and Associated Peak Ground Acceleration for Active Faults in and near Carpenter Company

Fault	Distance to Carpenter Company	M_{max}, magnitude	Peak Ground Acceleration, g⁽¹⁾
San Andreas	13	8.3	0.32-0.22
San Jacinto	9	7.0	0.24-0.13
Elsinore	11	6.0	0.27-0.16

⁽¹⁾ g is the acceleration of gravity

San Andreas Fault: The San Andreas Fault, the main boundary between the Pacific and North American tectonic plates, extends over 750 miles from near Cape Mendocino in northern California to the Salton Sea region of southern California. The fault is divided into several segments; the closest approach to the Carpenter Company site is approximately 13 miles away, abutting the San Bernardino Mountains.

San Jacinto Fault: The San Jacinto Fault Zone consists of a series of closely spaced faults that form the western margin of the San Jacinto Mountains. The fault runs more than 125 miles from its junction with the San Andreas Fault in San Bernardino southeastward through the Imperial Valley into Mexico. The nearest segment of the fault is approximately nine miles to the northeast of the Carpenter Company site.

Elsinore Fault: The Elsinore fault extends along the northeastern front of the Santa Ana Mountains from the Santa Ana River on the northwest, where it merges with the Whittier Fault, and southeastward into San Diego County. The nearest segment of the fault is approximately 11 miles to the southwest of the Carpenter Company site.

Although within a seismically active area, no faults or fault-related features are known to exist at the Carpenter Company site. The site is not located in any Alquist-Priolo Earthquake Fault Zone (California Department of Conservation, 2012) and is not expected to be subject to significant surface fault displacement. Therefore, no significant impacts to the proposed project facilities are expected from seismically-induced ground rupture.

The new storage tank must be designed to comply with the California Building Code requirements since the proposed project is located in a seismically active area. The California Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: (1) resist minor earthquakes without damage; (2) resist moderate earthquakes without structural damage, but with some non-structural damage; and (3) resist major earthquakes without collapse, but with some structural and non-structural damage. The California Building Code bases seismic design on minimum lateral seismic forces ("ground shaking"). The California Building Code requirements operate on the principle that providing appropriate foundations, among other aspects, helps to protect buildings from failure during earthquakes. The basic formulas used for the California Building Code seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site.

The new storage tank at the Carpenter Company facility will be required to obtain building permits, as applicable, for all new structures at the site. The Carpenter Company shall submit building plans to the City of Riverside for review. The facility must receive approval of all building plans and building permits to assure compliance with the latest Building Code adopted by the City prior to commencing construction activities. The issuance of building permits from the City will assure compliance with the California Building Code requirements which include requirements for building within seismic hazard zones. No significant impacts from seismic hazards are expected since the project will be required to comply with the California Building Codes.

7. b) Soil Erosion

The proposed project is located within the boundaries of the existing facility. The previously developed facility consists of manufacturing structures and equipment, paved parking, and minimal decorative landscaping around the perimeter of the facility. No unstable earth conditions, changes in

topography or changes in geologic substructures are anticipated to occur with the project because no grading or excavation is proposed as part of the project. Therefore, no significant adverse impacts on topography or soils are expected.

7. c) and d) Liquefaction and Subsidence

The Carpenter Company site is not subject to landslide or mudflow since the site and surrounding area are flat. Landslides and mudflows are the result of soil movement through gravity, are more common in hillside areas, and are a potential problem in hillside development. The closest hillside to Carpenter Company is over two miles away. The Carpenter Company site and surrounding area is flat, paved, and developed. Further, the surrounding area is paved and developed. Therefore, no significant adverse impacts due to landslides or mudflows are expected.

Liquefaction is a mechanism of seismic ground failure in which earthquake-caused ground motion causes loose, water-saturated, cohesionless soils to be transformed to a liquid state. Based on the latest seismic hazards maps from the County of Riverside (Riverside County Land Information System), the area in which the Carpenter Company facility is located in an area classified as “low” for risks associated with liquefaction and there is no evidence of expansive soils at the site. Liquefaction associated with seismic events has not occurred at the Carpenter Company facility during historic seismic activity. The issuance of building permits from the local agency will assure compliance with the California Building Code requirements, which already takes into consideration requirements for building within potential liquefaction zones.

The County of Riverside has listed all valley portions of the County as “susceptible” to subsidence (City of Riverside, 2012). Carpenter Company is located within an area designated as susceptible to subsidence. Subsidence is a gradual settling or sinking of the ground surface with little or no horizontal movement. In Riverside County, subsidence and fissuring have been caused by falling groundwater tables. However, active subsidence has only been documented in three areas: (1) the Elsinore Trough including Temecula and Murrieta; (2) the San Jacinto Valley from Hemet to Moreno Valley; and (3) the southern Coachella Valley. None of these active subsidence areas is located near Carpenter Company or the City of Riverside. Further, ground water use, removal and recharge are monitored by agencies such as the Eastern Municipal Water District that pumps ground water from aquifers in the City of Riverside. The issuance of building permits from the local agency will assure compliance with the California Building Code requirements, which takes into consideration requirements for building within potential subsidence areas. Therefore, no significant subsidence impacts for the proposed project are expected.

7. e) Wastewater Discharge

The Carpenter Company currently generates wastewater and discharges wastewater into the local sewer system. Because the proposed project would not increase production capacity, it is not expected to generate additional wastewater discharged by the facility. Neither the facility nor the proposed project would use septic tanks or alternative wastewater disposal systems, but would

continue to release wastewater into the local sewer system. Therefore, no significant adverse impacts on soils from alternative wastewater disposal systems are expected.

7.3 Mitigation Measures

No significant adverse impacts from the proposed project on geology and soils are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
8.0 HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Significantly increased fire hazard in areas with flammable materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

8.1 Significance Criteria

The 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.

Greater exposure to radiant heat exposures in excess of five kilowatt per square meter (kW/m²), i.e., the endpoint developed as part of the California Accidental Release Prevention Program (CalARP).

8. a), b, and h) Potential Hazards

The proposed project consists of constructing of a 10,000-gallon methyl formate storage tank and increasing the volume of methyl formate currently stored onsite at the Carpenter Company. The facility has an existing 350-gallon storage tank. Methyl formate is regulated under the CalARP if total quantities of the material onsite are 10,000 pounds or more. Methyl formate has a density of about 8.18 pounds per gallon. Therefore, the proposed project would result in the storage of up to 81,800 pounds of methyl formate. As a result, the proposed project triggers the requirement for compliance with CalARP regulations.

Under CalARP, methyl formate is regulated as a flammable material (California Code of Regulations (CCR) Table 2, §2770.5). Therefore, the hazards and impacts associated with the use of methyl formate are associated with fires and subsequent exposure to thermal radiation. Thermal radiation is the heat generated by a fire and the potential impacts associated with exposure. Exposure to thermal radiation would result in burns, the severity of which would depend on the intensity of the fire, the duration of exposure, and the distance of an individual to the fire. Therefore, a hazard analysis was conducted for the proposed new storage tank and the results are summarized in Table 9 (see Appendix C for further details).

The hazard analysis was completed assuming that the storage tank failed and discharged its contents into the containment area. Assuming the methyl formate caught fire, the distance to the CalARP thermal radiation endpoint was calculated for different wind speeds using the CANNARY by Quest® hazard model. The Final CalARP regulations (§2750.3(g)) allow the use of proprietary models to perform hazardous materials releases provided that the owner or operator allows the implementing agency access to the model and describes the model features and differences from publicly available models to local emergency planners upon request. The

project proponent will adhere to these requirements. For additional information about the CANNARY by Quest® model, see Appendix C.

The model predicted the maximum downwind distances for the radiant hazards evolving from the methyl formate containment area. The fire radiation hazards can extend up to 66 feet (see Table 9) from the impoundment and the property boundary is about 100 feet from the storage tank containment area. As shown in Figure 3, the fire hazards associated with the proposed storage tank would remain within the boundaries of the Carpenter Company site and no exposure to off-site receptors of the thermal radiation and points shown in Table 9 would occur. Therefore, the fire hazard impacts associated with the proposed project are expected to be less than significant.

TABLE 9

Maximum Hazard Distances for Maximum Credible Event ⁽¹⁾

Wind Speed (meters/sec)	Maximum Distance (ft) from Center of Unit to Pool/Torch Fire Thermal Radiation (5 kW/m²)
1.5	51
5.0	66

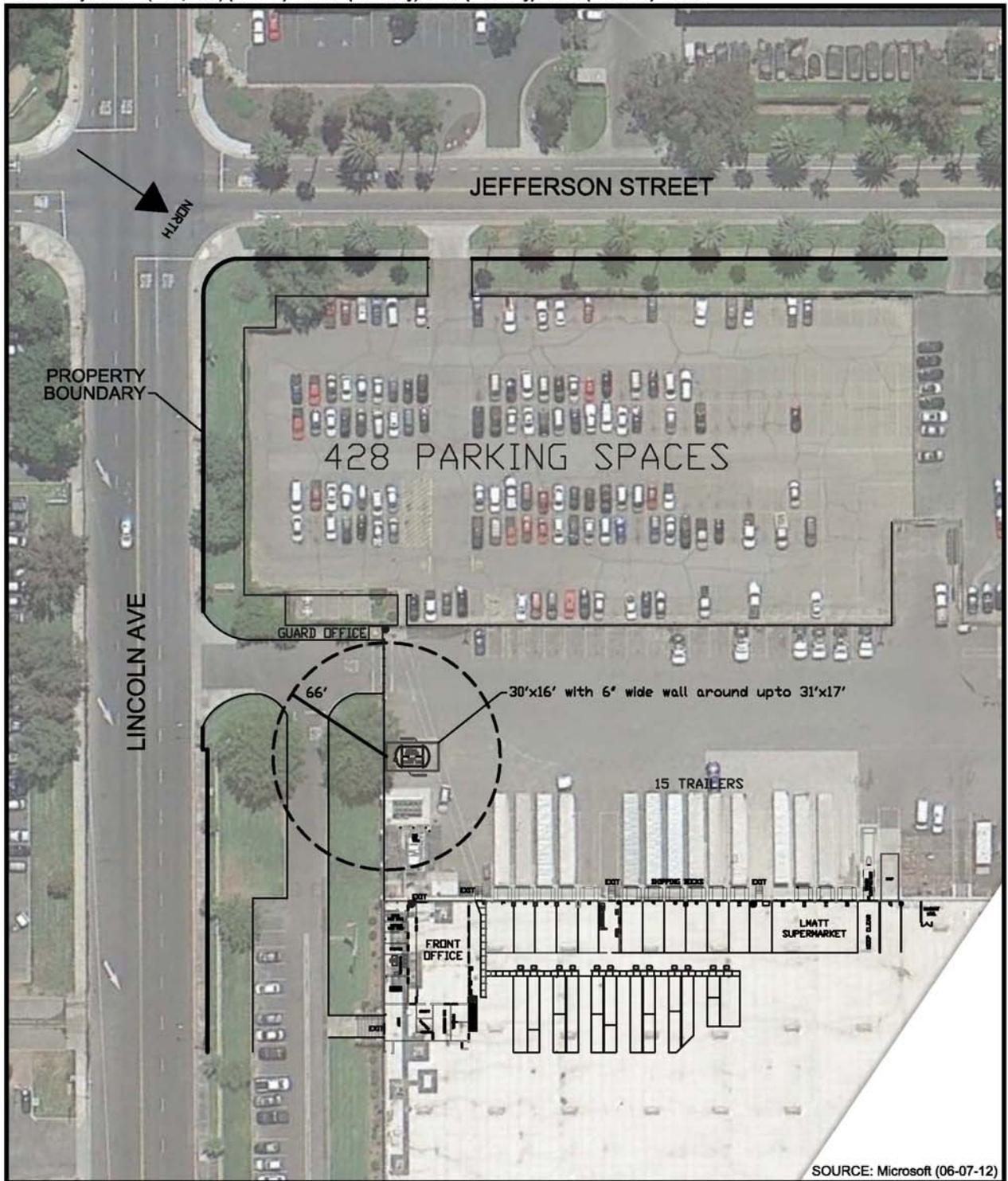
(1) See Appendix C for further details on the hazard modeling and impacts.

The proposed project would reduce truck deliveries from 52 trucks per year to about four trucks per year, resulting in about a 93 percent reduction in truck trips to the facility. No increase or change in the size of trucks delivering methyl formate would occur. Fewer truck trips would be required since the capacity of the new methyl formate storage tank will be 10,000 gallons as compared to the existing capacity of 350 gallons. Therefore, the transportation hazards associated with the transport of methyl formate will be reduced as fewer truck trips to deliver methyl formate will be required.

A variety of safety laws and regulations have been developed to reduce the risk of accidental releases of chemicals at industrial facilities, including CalARP requirements and fire protection requirements as discussed below. A Risk Management Program (RMP) is required under the CalARP requirements for the proposed new storage tank. RMPs must include a number of components including hazard assessments of both worst-case and more credible accidental release scenarios, an accident prevention program, and an emergency response program. The City of Riverside Fire Department Certified Unified Program Agency (CUPA) is the agency that would be responsible for administering the RMP for the Carpenter Company. In addition, the Carpenter Company has prepared an emergency response manual which describes the emergency response procedures that would be followed in the event of any of several release scenarios of methyl formate along with the responsibilities of key personnel. The Carpenter Company has a Business Emergency Plan which lists emergency response procedures in the event of a major release. The Carpenter Company relies on the Riverside Fire Department for first response. In the event of an uncontrolled release, Carpenter Company is required to have appropriate mechanisms in place as stated in the California Code of Regulations Title 19 §2765.1 for notifying emergency responders when there is a need for

CHAPTER 2: ENVIRONMENTAL CHECKLIST

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 Environmental Audit, Inc.

FIGURE 3
HAZARD RADIUS MAP
CARPENTER COMPANY
7809 Lincoln Avenue
Riverside, CA 92504


0 80'

response. Carpenter Company is required to have an Emergency Response Program with the following elements:

- An emergency response plan that includes procedures for informing and interfacing with the public and local emergency response agencies about accidental releases, emergency planning and emergency response; documentation of proper first-aid and emergency medical treatment necessary to treat accidental human exposures; and procedures and measures for emergency response after an accidental release of a regulated substance
- Procedures for the use of emergency response equipment and for its inspection, testing, and maintenance;
- Training for all employees in relevant procedures and relevant aspects of the Incident Command System; and
- Procedures to review and update, as appropriate, the emergency response plan to reflect changes at the stationary source and ensure that employees are informed of changes.

Based on the above analysis, and the regulatory requirements for emergency actions and response, hazard impacts are expected to be less than significant.

8. c) Carpenter Company is not located within one-quarter mile of an existing school site. Therefore, no significant adverse hazard impacts to schools are expected.

8. d) Carpenter Company is not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5. Therefore, the proposed project would not occur at a hazardous materials site compiled pursuant to Government Code §65962.5 so, no impacts to the public due to exposure to a contaminated site are expected.

8. e) Carpenter Company is located over two miles from the Riverside Municipal Airport, a public airport. Carpenter Company is located within Safety and/or Airport Compatibility Zone E (no restrictions on residential or commercial population densities) as depicted on Figure 5.7-2 of the City of Riverside General Plan 2025 for Riverside Municipal Airport as noted in the Riverside County Airport Land Use Compatibility Plan (RCALUCP) (Riverside County, 2012). Although the proposed project is located within Compatibility Zone E of the RCALUCP, the proposed project would not expose people to additional hazards. As discussed in 8 a), b) and h), potential fire hazards associated with the storage of additional quantities of methyl formate would be limited to within the boundaries of Carpenter Company and would not migrate off-site. Therefore, no significant adverse hazard impacts to the airport are expected due to the proposed project.

8. f) The proposed project is located within the existing operating footprint of the Carpenter Company. The proposed project would require compliance with the CalARP regulations which require preparation of an emergency response plan. Therefore, emergency response activities associated with the new methyl formate tank will be incorporated into the Carpenter Company's existing emergency response plan. Carpenter Company already uses methyl formate so emergency response procedures have been developed and implemented for the use of methyl formate in the production process. Emergency response related to the storage tank would be limited to actions related to storage tank emergencies, such as accidental releases and spills. The

emergency procedures would include detailed requirements of specific actions for employees to take (including evacuation and spill control), individuals to be notified, and agencies to call when assistance is required. Since the proposed storage tank and fire radiation hazards associated with the proposed storage tank would remain on-site, no significant impacts to emergency response activities or emergency response plans at other adjacent facilities would be expected. The proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Evacuation plans generally require employees to head towards the employee parking area and away from the production area. Further, the storage tank is located along the perimeter of the facility and is located such that it would not block or interfere with access to the facility. Therefore, no significant adverse impacts to emergency response or evacuation plans are expected.

8. g) The proposed project will not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees because the proposed project is located in an urbanized area and no wildlands are located in the immediate or surrounding areas. Also, no substantial or native vegetation exists within the Carpenter Company. For these reasons, the proposed project would not expose people or structures to wildland fires. Therefore, the proposed project does not have the potential to expose people or structures to significant risk of loss, injury, or death involving wildfires.

8.3 Mitigation Measures

The effects of an accidental release of hazardous material being stored, used, or transported from the proposed project are expected to be less than significant. Therefore, no mitigation is necessary or proposed.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
9.0 HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami,	<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
or mudflow?				
g) Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

9.1 Significance Criteria

Potential impacts on water resources will be considered significant if any of the following criteria apply:

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.

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 potable water per day.

The project increases demand for water by more than five million gallons per day.

9.2 Environmental Setting and Impacts

9. a), g), and i) Water Quality and Wastewater Generation

The manufacture of flexible poly-urethane and bonded foam requires water in the form of steam as part of the manufacturing process. However, the proposed project would not increase foam production capacity. The operation of a new storage methyl formate tank would not require water for operation. Therefore, the proposed project would not result in an increase in wastewater generated or discharged from Carpenter Company nor require a change in any wastewater treatment facility. The proposed storage tank would be constructed within a containment berm of sufficient size to contain 110 percent of the contents of the storage tank. Therefore, a rupture of the storage tank would result in a release into the containment structure, but no material would be expected to migrate offsite. Any material discharged into the berm would be pumped back into the tank or into a vacuum truck if the tank's integrity is compromised. As a result, no significant adverse impacts associated with wastewater discharges or water quality are associated with the proposed project at Carpenter Company.

9. b) and h) Water Supply

The proposed project would not result in any increase in water during construction activities. The location of the proposed storage tank is paved and the storage tank will be placed on the existing paved area, therefore, no excavation or grading activities are required, and no water use would be required.

The proposed project activities would not increase water usage at Carpenter Company, since the operation of storage tank would not require water to operate. Further, the proposed project does not require hiring new employees, so no increased demand for water for toilets, etc., would be required. Therefore, no increase in water use is associated with the proposed project at Carpenter Company so that no significant adverse impacts on water demand are expected. For the same reasons, no significant adverse impacts from the proposed project are anticipated for ground water supplies.

9. c) and d) Surface Runoff

The facility is already completely paved and the proposed project does not require any grading at the site, therefore, there would be no alteration of any existing drainage patterns. The proposed project is not expected to increase the storm water runoff from the facility as no new paved surfaces will be

required. No new storm water drainage facilities, expansion of existing storm water drainage facilities, changes to drainage facilities, or changes in the drainage patterns are expected as a result of the proposed project. Since storm water discharge or runoff is not expected to change in volume or water quality, adverse storm water quality or storm water drainage impacts from the operation of the proposed project are expected to be less than significant.

9. e) and f) Flood Hazards

The proposed project involves the construction of a new storage tank within the boundaries of the existing Carpenter Company facility. The proposed project does not include the construction of any housing, nor would it require placing housing within a 100-year flood hazard area. The facility is not located within a 100-year flood hazard area (Riverside County Land Information System, 2012). Since the proposed project is located within the existing facility boundaries and the facility is not located in a flood hazard zone, it would not impede or redirect flood flows. Since the proposed project is not located within a flood zone, it would not expose people or property to a significant risk of loss, injury or death related to flood hazards. As indicated in discussion 7. c) and d), based on the flat topography, the proposed project is not expected to result in an increased risk of mud flow hazards. The Pacific Ocean is approximately 50 miles west of the Carpenter Company facility and Lake Mathews, the nearest large lake, is approximately 10 miles south of the Carpenter Company facility. Because of the distance between these bodies of water and the proposed project site, there are minimal, if any, risk of exposure to tsunamis or seiches. Therefore, no significant adverse impacts associated with flooding, seiches, tsunamis, or mud flow are expected from the proposed project.

9.3 Mitigation Measures

No significant adverse impacts from the proposed project on hydrology and water quality are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
10.0 LAND USE AND PLANNING.				
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

10.1 Significance Criteria

Land use and planning impacts will be considered significant if the project conflicts with the land use and zoning designations established by the City of Riverside.

10.2 Environmental Setting and Impacts

10. a) and b) The proposed project would be developed entirely within the existing Carpenter Company property boundaries so it would not be expected to physically divide any established communities. Land use on the Carpenter Company property is designated as B/OP, which is business/office park uses. The proposed project is consistent with the current land use designation of business/office park. No new property would be acquired, so there would be no impacts to established communities. The proposed project would not trigger changes in the zoning designations at the project site. Based on these considerations, no significant adverse impacts to established communities or conflicts with any applicable land use plans are expected.

10.3 Mitigation Measures

No significant adverse impacts from the proposed project on land use and planning are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
11.0 MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

11.1 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.

11.2 Environmental Setting and Impacts

11. a) and b) Implementation of the proposed project would occur entirely within the boundaries of the existing Carpenter Company facility. There are no known mineral resources currently on the project site. Therefore, the proposed project would not be located on a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan. Furthermore, because there are no known mineral resources at the site, the proposed project would not 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.

11.3 Mitigation Measures

No significant adverse impacts from the proposed project on mineral resources are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
12.0 NOISE. Would the project result in:				
a) Exposure of persons to or generation of permanent noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

12.1 Significance Criteria

Impacts on noise will be considered significant if:

Construction noise levels exceed the City of Riverside noise ordinance 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 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.

The noise standards from the City of Riverside municipal code are outlined in Table 10.

TABLE 10

City of Riverside Noise Standards

Land Use Category	Time Period	Noise Level
Residential	Night (10 pm to 7 am)	45 dBA
	Day (7 am to 10 pm)	55 dBA
Office/Commercial	Any time	65 dBA
Industrial	Any time	70 dBA
Community Support	Any time	60 dBA
Public Recreation Facility	Any time	65 dBA
Nonurban	Any time	70 dBA

Source: Riverside Municipal Code 7.25.010A

12.2 Environmental Setting and Impacts

12. a), b), and c) Construction Activities

Construction activities associated with the proposed project would generate noise from heavy construction equipment and construction-related traffic. The types of construction equipment that would be used include an air compressor, crane, trucks, and welding machines. The estimated noise sources for these types of construction equipment are provided in Table 11. Based on the noise level analysis values shown in Table 11, the estimated noise level during the installation of the storage tank is expected to average about 75 dBA at 50 feet from the construction site. With the exception of the cranes, construction noise from other construction sources would be located at or near ground level, so the noise levels are expected to attenuate substantially before reaching residential areas.

TABLE 11

Construction Noise Sources

EQUIPMENT	ANALYSIS VALUE (decibels)⁽¹⁾
Truck	82
Compressors	75
Cranes	75

(1) City of Los Angeles, 2006. Levels are in dBA at 50-foot reference distance. Analysis values reflect equipment noise levels in good conditions, with appropriate mufflers, air intake silencers, etc.

Carpenter Company is immediately bounded on the northwest by residences, on the northeast by Grace Street, on the southeast by Lincoln Avenue, and on the southwest by Jefferson Street. The properties across Grace Street make up a residential neighborhood, and the properties across

Lincoln Avenue and Jefferson Street are office parks. The closest resident is about 1,000 feet from the proposed location of the storage tank and the related construction activities.

Construction activity for the proposed project would produce noise as a result of operation of construction equipment. The estimated noise level during equipment installation is expected to be a maximum of about 75 dBA at 50 feet from the construction site. Using an estimated six dBA reduction for every doubling distance, the noise levels at the residential area are expected to be about 50 dBA (see Table 12). Additional noise attenuation, of about 10 dBA, is expected between the construction noise sources and the residential area because of interference with the existing building (see Figure 2). Therefore, the construction noise levels are estimated to be about 40 dBA at the closest residential area. These noise levels would comply with the Riverside noise ordinance as they would be less than 55 dBA during the day time. No construction activities would occur during the nighttime (10 pm to 7 am).

TABLE 12

Construction Noise Impact Estimates

Distance from Construction Activities (feet)	Estimated Noise Levels (dBA)
50	75
100	69
200	63
400 ⁽¹⁾	57
800	51
1,000 ⁽²⁾	49.5
1,200	48
1,600	45

(1) Distance to closest commercial receptor.

(2) Distance to closest resident (sensitive receptor).

Construction activities are located about 400 feet from the closest commercial area. At this location, construction noise levels would be approximately 57 dBA, which is less than the noise ordinance of 65 dBA. The construction activities that generate noise would be carried out during the daytime from Monday to Friday and will last approximately one week. Construction noise sources would be temporary and would cease following construction activities. Noise levels at the closest residential areas are not expected to increase during construction activities, i.e., background noise levels in residential areas generally are in the range of 55-65 dBA. The noise levels from the construction equipment are expected to be within the allowable noise levels established by the local noise ordinances for industrial areas (70 dBA), and the adjacent commercial areas (65 dBA). Therefore, no significant adverse noise impacts are expected. Construction activities would not require earthmoving or other types of construction equipment (e.g., jackhammers) that can cause vibration. Therefore, no adverse groundborne vibration impacts are expected due to the proposed project construction activities.

The proposed project would not result in an increase in noise during project operations. The storage tank would not be a source of noise and no new equipment is proposed that would generate noise, following the completion of construction. The proposed project would decrease the annual number of truck trips associated with the delivery of methyl formate resulting in a decrease in noise from trucks. Therefore, no significant adverse noise impacts would occur due to the operation of the proposed storage tank.

12. d) Carpenter Company is located within Safety and/or Airport Compatibility Zone E as depicted on Figure 5.7-2 of the City of Riverside General Plan 2025 for Riverside Municipal Airport as noted in the Riverside County Airport Land Use Compatibility Plan (RCALUCP) (Riverside County, 2012). The noise impact of Compatibility Zone E is defined as low and beyond the 55-CNEL contour of the airport. Although the proposed project is located within Compatibility Zone E of the RCALUCP, the proposed project would not expose residents to excessive noise, as shown in 12 a), b), and c) above. Construction noise impacts associated with the proposed project at the closest residence are expected to be less than 50 dBA at about 1,000 feet from construction activities and last approximately five days. The noise impacts to other residential areas would be even less than 50 dBA. In addition, storage tanks do not generate noise as part of their operation, therefore the operation activities of the proposed project would not expose people residing or working in Compatibility Zone E to excessive noise levels or ground borne vibration.

12.3 Mitigation Measures

Potential noise impacts from the proposed project are expected to be less than significant, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
13.0 POPULATION AND HOUSING.				
Would the project:				
a)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?				
b)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?				

13.1 Significance Criteria

The 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.

13.2 Environmental Setting and Impacts

13. a) and b) Construction activities at Carpenter Company would not involve the relocation of individuals, impact housing or commercial facilities, or change the distribution of the population because the proposed project will occur completely within the boundaries of the existing facility. The construction work force, which is temporary, is limited to four workers who would come from the existing labor pool in the southern California area. Additionally, once the proposed project is complete, operational activities are not expected to require new permanent employees, because production capacity would not increase. No displacement of existing housing or people would occur because the proposed project would occur within the confines of the existing facility. Therefore, implementation of the proposed project is not expected to have a significant adverse impact on population, population distribution, or housing.

13.3 Mitigation Measures

No significant adverse impacts from the proposed project on population and housing are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
14.0 PUBLIC SERVICES. Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
a) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

14.1 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.

14.2 Environmental Setting and Impacts

14. a) The Carpenter Company facility is served by the City of Riverside Fire Department. There are thirteen fire stations that serve the City of Riverside. Carpenter Company is primarily served by Arlington Heights Station Number 10 located at 2590 Jefferson Street.

Construction activities are estimated to take about one week to complete and are not expected to result in an increased need for fire response services because standard types of construction equipment would be used that do not pose unusual fire hazards. Construction activities also include safeguards, monitoring for hazards with equipment designed to detect sources of flammable gases and vapors, written procedures, and employee training.

Once implemented, the proposed project would not expand the existing Carpenter Company facilities or increase the need for additional fire protection. The proposed project would require a CalARP RMP, which must be reviewed and approved by the Riverside Fire Department CUPA. The preparation of the RMP, as well as compliance with other hazardous materials

regulations (including continued implementation of an Emergency Response Plan), assures that the Fire Department would be aware of the location, types, and hazards associated with the chemicals stored at Carpenter Company. This emergency response information is expected to minimize fire-related impacts in the event of an emergency. The Carpenter Company would continue to be subject to routine safety inspections from the Fire Department, with or without the proposed storage tank. Thus, no additional or altered fire protection will be required for the proposed project.

14. b) The Riverside Police Department is the responding agency for law enforcement needs in the vicinity of Carpenter Company. Because police units are in the field, response times vary depending on the location of the nearest unit.

Construction activities are not expected to result in an increased need for police response services. Construction activities would be conducted during day time hours and would be limited to within the boundaries of the facility. Once implemented, the proposed project is not expected to change Carpenter Company staffing or substantially expand existing facilities. Thus, no additional or altered police protection would be required for the proposed project.

14. c) and d) Because four construction workers for the proposed project could easily be provided from the existing labor pool in southern California and the proposed project is not expected to require additional staffing during operations, an increase in the local population is not expected. Therefore, no impacts are expected to schools, parks, or other public facilities, such as government services, as a result of implementing the proposed project.

14.3 Mitigation Measures

No significant adverse impacts from the proposed project on public services are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
15.0 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"/>

15.1 Significance Criteria

The 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.

15.2 Environmental Setting and Impacts

15. a) and b) As discussed in Population and Housing (Section 13), the existing labor pool in southern California is sufficient to fulfill the labor requirements of four workers for the construction of the proposed project. The operation of the proposed project would not require additional workers. Therefore, there would be no significant changes in population densities resulting from the proposed project and thus no increase in the use of existing neighborhood and regional parks or other recreational facilities.

The proposed project does not include recreational facilities or require the construction or expansion of existing recreational facilities. No significant adverse impacts to recreational facilities are expected.

15.3 Mitigation Measures

No significant adverse impacts from the proposed project on recreation are expected, therefore, no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
16.0 SOLID/HAZARDOUS WASTE.				
Would the project:				
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

16.1 Significance Criteria

The proposed project impacts on solid/hazardous waste will be considered significant if the following occur:

The generation and disposal of hazardous and non-hazardous waste exceeds the capacity of designated landfills.

16.2 Environmental Setting and Impacts

16. a) and b) Waste

Construction activities associated with the proposed project are not expected to generate any solid or hazardous waste. No demolition of existing facilities or structures is required and construction activities are limited to the placement of the new storage tank within an existing paved area. The existing 350-gallon storage tank is expected to be reutilized at this or another Carpenter Company facility. Construction activities are limited to the placement of a storage tank within an existing paved area and are expected to be completed within about one week. Therefore, no demolition or construction wastes are expected.

The proposed project would not result in the generation of any additional waste from the Carpenter Company. During operation, the proposed project is not expected to generate additional solid waste, which is currently primarily generated from administrative or office activities. The proposed project would not result in an increase in permanent employees, so no significant increase in solid waste is expected.

The replacement of the existing storage tank with a new, larger storage tank will not result in an increase in the generation of hazardous waste. The operation of the storage tank does not generate hazardous wastes. The proposed project will not result in an increase in overall product throughput or use of methyl formate, therefore, no increase in the generation of hazardous waste is expected. The facility is expected to continue to comply with federal, state, and local statutes and regulations related to solid and hazardous wastes.

16.3 Mitigation Measures

No significant adverse impacts to the generation or disposal of solid/hazardous wastes are expected and thus no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
17.0 TRANSPORTATION/TRAFFIC.				
Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable congestion management program, including but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

17.1 Significance Criteria

The impacts on transportation/traffic will be considered significant if any of the following criteria apply:

Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.

An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.

A major roadway is closed to all through traffic and no alternate route is available.

There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.

The demand for parking facilities is substantially increased.

Water borne, rail car or air traffic is substantially altered.

Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.

17.2 Environmental Setting and Impacts

17 a), b), and f) Traffic Impacts

Carpenter Company is located approximately one-third of a mile southeast of the Riverside 91 Freeway between the Adams Street (Exit 59) and Madison Street (Exit 60) exits. Carpenter Company is immediately bounded on the northwest by residences, on the northeast by Grace Street, on the southeast by Lincoln Avenue, and on the southwest by Jefferson Street. Jefferson Street is a northwest/southeast two lane collector road and Lincoln Avenue is a northeast/southwest four lane arterial road.

A maximum of four construction workers is expected to be required during peak construction activities. Construction activities are anticipated to occur for approximately five days (Monday through Friday). The eight-hour work shift is scheduled to begin at 8:00 am and end at 5:00 pm. The proposed project is only expected to generate a maximum of four peak hour trips per day. The City of Riverside follows the Riverside County Transportation Department Traffic Impact Analysis (TIA) requirements. The County requires traffic impact analyses for projects that will add 50 or more peak hour trips (Riverside County Transportation Department, 2008). Projects that would generate less than 50 peak hour trips are generally considered to be less than significant. The proposed project will only add four peak hour trips on five days during the construction period. Trucks delivering or removing materials are expected to occur primarily off-peak hour and only one truck delivery per day is expected. Therefore, traffic impacts during the construction phase are expected to be less than significant.

The operation of the proposed project would not result in an increase in workers or an increase in truck traffic at the facility. The proposed project would reduce truck deliveries from 52 trucks per year to about four trucks per year, resulting in about a 93 percent reduction in truck trips to the facility. Fewer truck trips would be required since the capacity of the new methyl formate storage tank would be 10,000 gallons as compared to the existing capacity of 350 gallons. Therefore, no increase in traffic is expected due to the operation of the proposed project. The proposed project would be constructed within the confines of the existing facility and would not conflict with adopted circulation policies/plans, or programs supporting alternative transportation modes (e.g., bus turnouts, bicycle racks).

17. c) The proposed project is to construct a 10,000-gallon storage tank for the storage of methyl formate within the existing facility. The tank would be about 10 feet in height, which is less than the existing buildings at the facility, which are approximately 41 feet high. Carpenter Company is in Compatibility Zone E of the Riverside Municipal Airport influence area which allows for structures much larger than the proposed storage tank, including major sports stadiums and concert halls (RCALUCP, 2004). In addition, the proposed project would not involve the delivery of materials via air cargo, so no increase in air traffic is expected.

17. d) and e) The proposed project would not substantially increase traffic hazards or create incompatible uses at or adjacent to Carpenter Company. The proposed project does not include construction of roadways that could include design hazards. Emergency access at the facility would not be impacted by the proposed project and Carpenter Company will continue to maintain the existing emergency access ways at the facility. See also the RMP discussion in Section 8. a), b), and h).

17.3 Mitigation Measures

Potential transportation/traffic impacts are expected to be less than significant and thus no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
18.0 MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	<input type="checkbox"/>	<input type="checkbox"/>	<input 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

18. a) The proposed project does not have the potential to adversely affect the environment, reduce or eliminate any plant or animal species or destroy prehistoric records of the past. The proposed project is located at a site that is part of an existing manufacturing facility, which has been previously disturbed, graded and developed, and this project would not extend into environmentally sensitive areas but would remain within the confines of an existing, operating facility. For additional information, see Section 4.0 – Biological Resources (page 2-18) and Section 5.0 – Cultural Resources (page 2-21).

18. b) The proposed project is not expected to result in significant adverse cumulative environmental impacts. As discussed in Section 3. c), project-specific construction emissions are

not expected to be significant or exceed the SCAQMD regional significance thresholds. The proposed project's construction emissions were also compared to the SCAQMD LSTs. In all cases, the construction emissions were below the localized significance thresholds. Therefore, construction air quality impacts are not considered to be cumulatively considerable as defined in CEQA Guidelines §15064(h)(1). Consequently, cumulative construction air quality impacts are not considered to be significant.

The proposed project includes constructing a new 10,000-gallon storage tank at Carpenter Company which would be required to comply with the current BACT requirements. The proposed project would result in an increase of approximately 0.4 pound per day of VOC emissions from operations, which is below the SCAQMD's operational VOC significance threshold of fifty-five pounds per day. Therefore, no significant adverse air quality impacts are expected, either individually or cumulatively. The proposed project is not expected to result in significant adverse cumulative impacts.

The proposed project would result in an increase of approximately 0.02 pound per day of methanol emissions, and methanol is considered to be a toxic air contaminant. The methanol emissions were compared to screening health risk values, and it was determined that methanol emissions would be well below both cancer/chronic and acute SCAQMD screening health risk values. The health risks from the proposed project are expected to be less than the significance thresholds of 1.0×10^{-6} for carcinogenic risk and 1.0 for chronic and acute non-carcinogenic health risks. Therefore, TAC emissions from the proposed project are expected to be less than significant. TAC emissions are not considered to be cumulatively considerable as defined in CEQA Guidelines §15064(h)(1). Consequently, cumulative air quality impacts associated with TAC emissions are not considered to be significant.

With respect to hazards, no cumulative hazard impacts are expected because a new larger storage tank would replace an existing storage tank. The storage tank would be located at the same facility and would be located within the confines of the existing Carpenter Company facility. In addition, the contents of the storage tank would be the same, although a larger quantity of material would be stored. As discussed in Section 8 – Hazards and Hazardous Materials and Appendix C, the hazards associated with the proposed tank would remain on-site. Therefore, no significant adverse project-specific increase in hazards is expected, so hazard impacts are not considered to be cumulatively considered as defined in CEQA Guideline §15064(h)(1). Therefore cumulative hazard impacts are concluded to be less than significant.

The construction activities associated with the proposed project that generates noise would be carried out during daytime hours. Therefore, noise impacts would be limited to the noise impact analysis described in Section 12 of Chapter 2 herein. Construction noise sources would be temporary and will cease following construction activities that are expected to last for about one week. Construction noise levels are expected to be below the City of Riverside noise ordinance. Further, noise levels at the closest residential areas are not expected to increase during construction activities, i.e., background noise levels in residential areas generally are in the range of 55-65 dBA. Noise and groundborne vibration impacts associated with the proposed project construction activities are expected to be less than significant. Project-specific impacts associated with the proposed project construction activities are expected to be less than the noise

ordinance and less than significant and, therefore, are not cumulatively considerable as defined in CEQA Guideline §15064(h)(1). Therefore, cumulative noise impacts would be less than significant.

A maximum of four construction workers are expected to be required during peak construction activities. Construction activities are temporary and anticipated to be completed within about one week. The proposed project is only expected to generate a maximum of four peak hour trips per day, which is a small fraction of the peak hour traffic. Therefore, project-specific traffic impacts during the construction phase are less than significant. No increase in traffic is expected due to the operation of the proposed project as no additional workers or delivery of materials would be required. The proposed project will reduce truck deliveries from 52 trucks per year to about four trucks per year, resulting in a 93 percent reduction in truck trips. Therefore, cumulative traffic impacts during operation of the proposed project are less than significant.

Where a lead agency is examining a project with an incremental effect that is not cumulatively considerable, a lead agency need not consider the effect significant, but must briefly describe the basis for concluding that the incremental effect is not cumulatively considerable. Therefore the project's contribution to air quality, hazards, noise and traffic and all other environmental topics evaluated in this IS are not cumulatively considerable and thus not significant. This conclusion is consistent with CEQA Guidelines §15064 (h)(4), which states, "The mere existence of cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable". Therefore, the proposed project is not expected to result in significant adverse cumulative impacts.

18. c) The proposed project includes constructing a new storage tank at Carpenter Company and would comply with the current BACT requirements. The proposed project would result in an increase of approximately 0.4 pound per day of VOC emissions from operations, which is below the SCAQMD's operational VOC significance threshold of fifty-five pounds per day. The potential health impacts of the emission increases were evaluated in a health risk assessment (see Appendix B). The results of the health risk assessment indicated that the TAC emissions in the vicinity of Carpenter Company would be less than significant. The hazard impacts were determined to be less than significant and, therefore, the proposed project is not expected to increase the potential hazard impacts associated with the operation of the facility. As a result, no significant health impacts or other adverse impacts to humans are expected due to operation of the proposed project.

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ACRONYMS

ABBREVIATION	DESCRIPTION
AQMP	Air Quality Management Plan
Btu	British Thermal Units
CalARP	California Accidental Release Prevention Program
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CH ₄	Methane
CO	Carbon monoxide
CO ₂	Carbon Dioxide
dba	Decibels
DTSC	California Environmental Protection Agency, Department of Toxic Substances Control
ERPG	Emergency Response Planning Guideline
GHG	Greenhouse Gases
HFC	Haloalkanes
LOS	level of service
LST	Localized Significance Thresholds
N ₂ O	Nitrous Oxide
NPDES	National Pollutant Discharge Elimination System
OSHA	Occupational Safety and Health Administration
PFC	Perfluorocarbons
PM	particulate matter
PM _{2.5}	PM less than 2.5 microns in diameter
PM ₁₀	PM less than 10 microns in diameter
PSM	Process Safety Management Program
RCALUCP	Riverside County Airport Land Use Compatibility Plan
RCRA	Resource Conservation and Recovery Act
RMP	Risk Management Program
SF ₆	sulfur hexafluoride
SLIC	Spills, Leaks, Investigation & Cleanup Program
TDI	toluene diisocyanate
VOC	volatile organic compounds

APPENDIX A

CONSTRUCTION EMISSION CALCULATIONS

Appendix A

Carpenter Company

New Storage Tank

Construction Emission Summary

Emissions from Equipment	2012				
	Day 1	Day 2	Day 3	Day 4	Day 5
CO (lb/day)	6.17	6.17	0.37	0.37	0.37
NOx (lb/day)	8.78	8.78	0.63	0.63	0.63
VOC (lb/day)	1.69	1.69	0.13	0.13	0.13
SOx (lb/day)	0.01	0.01	0.00	0.00	0.00
PM10 (lb/day)	0.64	0.64	0.04	0.04	0.04
PM2.5 (lb/day) ⁽¹⁾	0.59	0.59	0.04	0.04	0.04
CO ₂ (lb/day)	873.96	873.96	67.97	67.97	67.97

Emission from Trips	2012				
	Day 1	Day 2	Day 3	Day 4	Day 5
CO (lb/day)	0.92	0.61	0.61	0.61	0.61
NOx (lb/day)	0.41	0.06	0.06	0.06	0.06
VOC (lb/day)	0.11	0.06	0.06	0.06	0.06
SOx (lb/day)	0.00	0.00	0.00	0.00	0.00
PM10 (lb/day)	0.05	0.02	0.02	0.02	0.02
Exhaust PM (lb/day)	0.02	0.01	0.01	0.01	0.01
Fugitive PM (lb/day)	0.03	0.02	0.02	0.02	0.02
PM2.5 (lb/day) ⁽¹⁾	0.02	0.01	0.01	0.01	0.01
Exhaust PM (lb/day)	0.02	0.01	0.01	0.01	0.01
Fugitive PM (lb/day)	0.00	0.00	0.00	0.00	0.00
CO ₂ (lb/day)	143.61	88.24	88.24	88.24	88.24

Paint	2012				
	Day 1	Day 2	Day 3	Day 4	Day 5
VOC (lb/day)	0.00	0.00	0.00	0.00	2.52

Total Emissions	Thresholds	2012				
		Day 1	Day 2	Day 3	Day 4	Day 5
CO (lb/day)	550	7.09	6.79	0.98	0.98	0.98
NOx (lb/day)	100	9.19	8.84	0.69	0.69	0.69
VOC (lb/day)	75	1.79	1.75	0.20	0.20	2.72
SOx (lb/day)	150	0.01	0.01	0.00	0.00	0.00
PM10 (lb/day) ⁽²⁾	150	0.68	0.66	0.07	0.07	0.07
PM2.5 (lb/day) ⁽¹⁾⁽²⁾	55	0.61	0.60	0.05	0.05	0.05
CO ₂ (lb/day)	NA	1017.57	962.20	156.21	156.21	156.21
CO ₂ (metric tons)	NA					1.11

(1) https://www.aqmd.gov/ceqa/handbook/PM2_5/pm2_5ratio.xls

(2) Mitigated PM.

Appendix A
Carpenter Company
New Storage Tank
Construction Equipment Emission Rates

Equipment Type	2012 Emission Factors lb/hr ⁽¹⁾								
	Hp	VOC	CO	NOx	SOx	PM10	CO ₂	CH ₄	CO _{2EQ}
Air Compressor	50	0.1010	0.2646	0.2310	0.0003	0.0239	22.2713	0.0091	22.4626
Crane	175	0.1089	0.4838	0.8259	0.0009	0.0479	80.3446	0.0098	80.5508
Forklift	120	0.0489	0.2195	0.3017	0.0004	0.0277	31.2249	0.0044	31.3176
Welder	25	0.0224	0.0609	0.1044	0.0001	0.0068	11.2861	0.0020	11.3285

(1) SCAQMD, 2006 : http://www.aqmd.gov/ceqa/handbook/offroad/offroadEF07_25.xls

(2) Carbon Dioxide Equivalents (CO₂) = CO₂ + 21 * CH₄

Appendix A
Appendix A
Carpenter Company
New Storage Tank
Construction Equipment Emissions

Equipment	Hours (hr/day)	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Air Compressor	6	1	1			
Crane	6	1	1			
Forklift	6	1	1			
Welder	6	1	1	1	1	1

VOC	Emission Rate (lb/hr) 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
15 Ton Crane	0.101	0.61	0.61	0.00	0.00	0.00
400 Ton Crane	0.109	0.65	0.65	0.00	0.00	0.00
65 Ton RTC Crane	0.049	0.29	0.29	0.00	0.00	0.00
Backhoe	0.022	0.13	0.13	0.13	0.13	0.13
Total		1.69	1.69	0.13	0.13	0.13

CO	Emission Rate (lb/hr) 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
15 Ton Crane	0.265	1.59	1.59	0.00	0.00	0.00
400 Ton Crane	0.484	2.90	2.90	0.00	0.00	0.00
65 Ton RTC Crane	0.220	1.32	1.32	0.00	0.00	0.00
Backhoe	0.061	0.37	0.37	0.37	0.37	0.37
Total		6.17	6.17	0.37	0.37	0.37

NOX	Emission Rate (lb/hr) 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
15 Ton Crane	0.231	1.39	1.39	0.00	0.00	0.00
400 Ton Crane	0.826	4.96	4.96	0.00	0.00	0.00
65 Ton RTC Crane	0.302	1.81	1.81	0.00	0.00	0.00
Backhoe	0.104	0.63	0.63	0.63	0.63	0.63
Total		8.78	8.78	0.63	0.63	0.63

SOx	Emission Rate (lb/hr) 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
15 Ton Crane	0.000	0.00	0.00	0.00	0.00	0.00
400 Ton Crane	0.001	0.01	0.01	0.00	0.00	0.00
65 Ton RTC Crane	0.000	0.00	0.00	0.00	0.00	0.00
Backhoe	0.000	0.00	0.00	0.00	0.00	0.00
Total		0.01	0.01	0.00	0.00	0.00

PM10	Emission Rate (lb/hr) 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
15 Ton Crane	0.024	0.14	0.14	0.00	0.00	0.00
400 Ton Crane	0.048	0.29	0.29	0.00	0.00	0.00
65 Ton RTC Crane	0.028	0.17	0.17	0.00	0.00	0.00
Backhoe	0.007	0.04	0.04	0.04	0.04	0.04
Total		0.64	0.64	0.04	0.04	0.04

CO2EQ	Emission Rate (lb/hr) 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
15 Ton Crane	22.463	134.78	134.78	0.00	0.00	0.00
400 Ton Crane	80.551	483.31	483.31	0.00	0.00	0.00
65 Ton RTC Crane	31.318	187.91	187.91	0.00	0.00	0.00
Backhoe	11.328	67.97	67.97	67.97	67.97	67.97
Total		873.96	873.96	67.97	67.97	67.97

Appendix A
Appendix A
Carpenter Company
New Storage Tank
Offsite Construction Vehicle Trip Emissions

Vehicle	Miles per Day	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Commuters	20	3	3	3	3	3
Pickup Trucks	20	1	1	1	1	1
Total Light Vehicle Miles		80	80	80	80	80
Delivery Truck	20	1				
Total Medium Truck Miles		20	0	0	0	0
Semi Tractor	20					
Total Heavy Truck Miles		0	0	0	0	0

VOC	Emission Rate (lb/mi) ⁽¹⁾ 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Light Duty	0.0007963	0.06	0.06	0.06	0.06	0.06
Medium Duty	0.0022378	0.04	0.00	0.00	0.00	0.00
Heavy Duty	0.0025276	0.00	0.00	0.00	0.00	0.00
Total		0.11	0.06	0.06	0.06	0.06

CO	Emission Rate (lb/mi) ⁽¹⁾ 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Light Duty	0.0076547	0.61	0.61	0.61	0.61	0.61
Medium Duty	0.0154574	0.31	0.00	0.00	0.00	0.00
Heavy Duty	0.0102152	0.00	0.00	0.00	0.00	0.00
Total		0.92	0.61	0.61	0.61	0.61

NOx	Emission Rate (lb/mi) ⁽¹⁾ 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Light Duty	0.0007758	0.06	0.06	0.06	0.06	0.06
Medium Duty	0.0173242	0.35	0.00	0.00	0.00	0.00
Heavy Duty	0.0309238	0.00	0.00	0.00	0.00	0.00
Total		0.41	0.06	0.06	0.06	0.06

SOx	Emission Rate (lb/mi) ⁽¹⁾ 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Light Duty	0.0000107	0.00	0.00	0.00	0.00	0.00
Medium Duty	0.0000267	0.00	0.00	0.00	0.00	0.00
Heavy Duty	0.0000404	0.00	0.00	0.00	0.00	0.00
Total		0.00	0.00	0.00	0.00	0.00

PM10	Emission Rate (lb/mi) ⁽¹⁾ 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Light Duty Exhaust	0.0000898	0.01	0.01	0.01	0.01	0.01
Medium Duty Exhaust	0.0006497	0.01	0.00	0.00	0.00	0.00
Heavy Duty Exhaust	0.0014957	0.00	0.00	0.00	0.00	0.00
Total Exhaust PM		0.02	0.01	0.01	0.01	0.01
Light Duty Fugitive ⁽²⁾	0.000221	0.02	0.02	0.02	0.02	0.02
Medium Duty Fugitive ⁽²⁾	0.000467	0.01	0.00	0.00	0.00	0.00
Heavy Duty Fugitive ⁽²⁾	0.001922	0.00	0.00	0.00	0.00	0.00
Total Fugitive PM		0.03	0.02	0.02	0.02	0.02
Total		0.05	0.02	0.02	0.02	0.02

CO _{2EQ}	Emission Rate (lb/mi) ⁽¹⁾ 2012	Emissions (lb/day)				
		Day 1	Day 2	Day 3	Day 4	Day 5
Light Duty	1.103	88.24	88.24	88.24	88.24	88.24
Medium Duty	2.769	55.37	0.00	0.00	0.00	0.00
Heavy Duty	4.218	0.00	0.00	0.00	0.00	0.00
Total		143.61	88.24	88.24	88.24	88.24

(1) Based on 2007 SCAQMD on-road emission rates. (<http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>)

(2) Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.1

$$E = k(sL)^{0.91} \times (W)^{1.02}$$

Where: k = 0.0022 lb/VMT for PM10, sL = road silt loading (gms/m²)

(0.03 for roads with >10,000 avg. daily trips), W = weight of vehicles (2.4 tons for cars, 5 tons for medium duty trucks and 20 for heavy trucks).

(3) Carbon Dioxide Equivalence (CO_E) = CO₂ + CH₄ * 23

Chemical	Light	Medium	Heavy
	2012	2012	2012
CO ₂	1.1015	2.7663	4.2159
CH ₄	0.0001	0.0001	0.0001
CO _E	1.103	2.769	4.218

Appendix A
Carpenter Company
New Storage Tank
Paint Emissions

Activity	2011				
	1	2	3	4	5
Volume paint applied per day (gal)	0.0	0.0	0.0	0.0	3.0
VOC content (lb/gal) ⁽¹⁾	0.8	0.8	0.8	0.8	0.8
VOC Emissions (lb/day)	0.0	0.0	0.0	0.0	2.5

(1) Based on SCAQMD Rule 1113 VOC limit of 100g/L.

**Appendix A
Carpenter Company
New Storage Tank
LST Analysis for Construction Emissions**

	On-site Source Emissions (lbs/day)					
	CO	VOC	NOx	SOx	PM10	PM2.5
Peak Construction Emissions	6.17	1.69	8.78	0.01	0.64	0.59
Screening Value ⁽¹⁾⁽²⁾	602	NA	118	NA	4	3
Significant?	NO	-	NO	-	NO	NO

(1) Screening values for LST analysis from SCAQMD Final Localized Significance Threshold Methodology, Appendix C (October 2009).

(2) 1 acre site located in SRA No. 23 at 25 meters.

APPENDIX B

OPERATIONAL EMISSION CALCULATIONS

**Appendix B
Carpenter Company
New Storage Tank
Operational Emission Summary**

Emission from Delivery Trucks	lb/day⁽¹⁾	lb/year
CO	0.00	-29.42
NOx	0.00	-89.06
VOC	0.00	-7.28
SOx	0.00	-0.12
PM10	0.00	-9.84
Exhaust PM	0.00	-4.31
Fugitive PM	0.00	-5.53
PM2.5 ⁽²⁾	0.00	-5.25
Exhaust PM	0.00	-4.31
Fugitive PM	0.00	-0.94
CO2	0.00	-12148.86

Tank Fugitives	lb/day	lb/year
VOC	0.40	115.49

Total Emissions	Thresholds	lb/day	lb/year
CO	550	0.00	-29.42
NOx	100	0.00	-89.06
VOC	75	0.40	108.21
SOx	150	0.00	-0.12
PM10	150	0.00	-9.84
PM2.5 ⁽¹⁾	55	0.00	-5.25
CO2	NA	0.00	-12148.86
CO ₂ (metric tons)	NA	0.00	-5.51

(1) The number of truck trips will not change on a daily basis, therefore, no change in peak daily emissions is expected.

(2) https://www.aqmd.gov/ceqa/handbook/PM2_5/pm2_5ratio.xls

**Appendix B
Carpenter Company
New Storage Tank
Post Project Delivery Truck Emissions**

	Miles per Trip	Current Operations ⁽¹⁾		Proposed Project ⁽²⁾		Net Difference	
		Peak Day	Annual	Peak Day	Annual	Peak Day	Annual
Delivery Trucks	60	1	52	1	4	0	-48
Total Heavy Truck Miles		60	3120	60	240	0	-2880

Pollutant	Emission Rate (lb/mi) ⁽³⁾	Emissions (lb)		Emissions (lb)		Emissions (lb)	
		2012	Peak Day	Annual	Peak Day	Annual	Peak Day
VOC	0.0025276	0.15	7.89	0.15	0.61	0.00	-7.28
CO	0.0102152	0.61	31.87	0.61	2.45	0.00	-29.42
NOx	0.0309238	1.86	96.48	1.86	7.42	0.00	-89.06
SOx	0.0000404	0.00	0.13	0.00	0.01	0.00	-0.12
PM10 - Heavy Duty Exhaust	0.0014957	0.09	4.67	0.09	0.36	0.00	-4.31
PM10 - Heavy Duty Fugitive ⁽⁴⁾	0.001922	0.12	6.00	0.12	0.46	0.00	-5.53
PM10 - Total		0.21	10.66	0.21	0.82	0.00	-9.84
CO ₂ e ⁽⁵⁾	4.2183545	253.10	13161.27	253.10	1012.41	0.00	-12148.86

(1) Based on 52 truck trips per year.

(2) Based on 4 truck trips per year.

(3) Based on SCAQMD On-road emission factors.

(4) Emission Calculations for travel on paved roads from EPA AP-42 Section 13.2.1

$$E = k(sL)^{0.91} \times (W)^{1.02}$$

Where: k = 0.0022 lb/VMT for PM10, sL = road silt loading (gms/m2)

(0.03 for roads with >10,000 avg. daily trips), W = weight of vehicles (assumed 20 tons for delivery trucks)

(5) Carbon Dioxide Equivalence (CO₂e) = CO₂ + CH₄ * 21 (<http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html>)

Chemical	lb/mile
	Heavy
	2012
CO ₂	4.2159
CH ₄	0.0001
CO ₂ eQ	4.218

Appendix B
Carpenter Company
New Storage Tank
Tank Emission Summary

Fugitive Tank Emissions

Month	Total Emissions⁽¹⁾ (lb/month)	Average Emissions (lb/day)	VOC Emissions⁽²⁾ (lb/day)
January	259.12	8.36	0.25
February	251.54	8.98	0.27
March	294.38	9.50	0.28
April	322.88	10.76	0.32
May	337.89	10.90	0.33
June	354.21	11.81	0.35
July	418.11	13.49	0.40
August	401.50	12.95	0.39
September	352.70	11.76	0.35
October	321.16	10.36	0.31
November	281.15	9.37	0.28
December	254.87	8.22	0.25
Annual Average	320.79	10.55	0.32
Total/Peak	3849.53	13.49	0.40

(1) Emissions based on the U.S. EPA TANKS model (see page B-6). All monthly values are based on a 10,000 gallon tank, however, emissions vary by month because of weather variability which takes average temperature into consideration.

(2) Methyl formate is an exempt VOC, however, contains 3 percent methanol.

**Appendix B
Carpenter Company
New Storage Tank
LST Analysis for Operational Emissions**

	On-site Source Emissions (lbs/day)					
	CO	VOC	NOx	SOx	PM10	PM2.5
Peak Construction Emissions	0.00	0.40	0.00	0.00	0.00	0.00
Screening Value ⁽¹⁾⁽²⁾	602	NA	118	NA	1	1
Significant?	NO	-	NO	-	NO	NO

(1) Screening values for LST analysis from SCAQMD Final Localized Significance Threshold Methodology, Appendix C (October 2009).

(2) 1 acre site located in SRA No. 23 at 25 meters.

**Appendix B
Carpenter Company
New Storage Tank
Health Risk Analysis for Operational Emissions**

	On-site Tank Emissions			
	Tank Emissions (lb/yr)	Tank Emissions (lb/hr)	Methanol (lb/yr)	Methanol (lb/hr)
Tank Emissions ⁽¹⁾	3849.53	0.56	115.49	0.02
Cancer/Chronic Screening Value ⁽²⁾	NA	NA	1030000	NA
Acute Screening Value ⁽²⁾	NA	NA	NA	75
Significant?	-	-	NO	NO

(1) Methanol is 3% of the tank emissions. See MSDS for methyl formate.

(2) Rule 1401 Table 1A screening value at 100 meters. (September 2010)

TANKS 4.0.9d
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	MT1
City:	Los Angeles AP
State:	California
Company:	Carpenter
Type of Tank:	Horizontal Tank
Description:	Methyl Formate

Tank Dimensions

Shell Length (ft):	20.00
Diameter (ft):	10.00
Volume (gallons):	10,000.00
Turnovers:	4.00
Net Throughput(gal/yr):	40,000.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: Los Angeles AP, California (Avg Atmospheric Pressure = 14.67 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

MT1 - Horizontal Tank
Los Angeles AP, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F)			Liquid Bulk Temp (deg F)	Vapor Pressure (psia)			Vapor Mol. Weight.	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Methyl Formate	Jan	61.48	57.15	65.80	62.97	7.8728	7.1189	8.7272	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Feb	62.24	57.80	66.67	62.97	8.0232	7.2247	8.8990	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Mar	62.96	58.33	67.58	62.97	8.1654	7.3101	9.0796	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Apr	64.33	59.38	69.28	62.97	8.4361	7.4800	9.4142	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	May	65.60	60.86	70.33	62.97	8.6867	7.7506	9.6367	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Jun	67.02	62.26	71.77	62.97	8.9676	8.0282	9.9807	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Jul	68.74	63.75	73.74	62.97	9.3090	8.3217	10.4523	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Aug	69.03	64.33	73.74	62.97	9.3658	8.4357	10.4519	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Sep	68.28	63.86	72.69	62.97	9.2165	8.3446	10.2005	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Oct	66.42	62.12	70.73	62.97	8.8504	8.0001	9.7310	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Nov	63.69	59.35	68.04	62.97	8.3108	7.4753	9.1694	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557
Methyl Formate	Dec	61.44	57.19	65.69	62.97	7.8654	7.1248	8.7053	60.0500			60.05	Option 1: VP80 = 7.581 VP70 = 9.557

TANKS 4.0.9d
Emissions Report - Detail Format
Detail Calculations (AP-42)

MT1 - Horizontal Tank
Los Angeles AP, California

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	221.5975	213.3016	255.4694	282.8753	296.4882	311.4731	373.7473	356.8684	308.7761	278.9847	241.5421	217.3876
Vapor Space Volume (cu ft):	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072
Vapor Density (lb/cu ft):	0.0845	0.0860	0.0874	0.0901	0.0925	0.0953	0.0986	0.0991	0.0977	0.0941	0.0889	0.0845
Vapor Space Expansion Factor:	0.2608	0.2767	0.2981	0.3382	0.3411	0.3677	0.4238	0.4041	0.3625	0.3196	0.2900	0.2559
Vented Vapor Saturation Factor:	0.3240	0.3199	0.3161	0.3091	0.3028	0.2962	0.2884	0.2872	0.2805	0.2989	0.3123	0.3242
Tank Vapor Space Volume:	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072	1,000.5072
Vapor Space Volume (cu ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Tank Diameter (ft):	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617	15.9617
Effective Diameter (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Space Outage (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Tank Shell Length (ft):												
Vapor Density	0.0845	0.0860	0.0874	0.0901	0.0925	0.0953	0.0986	0.0991	0.0977	0.0941	0.0889	0.0845
Vapor Density (lb/cu ft):	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500
Vapor Molecular Weight (lb/lb-mole):	7.8728	8.0232	8.1654	8.4361	8.6867	8.9676	9.3090	9.3658	9.2165	8.8504	8.3108	7.8654
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	521.1468	521.9076	522.6275	523.9974	525.2658	526.6870	528.4148	528.7026	527.9468	526.0939	523.3636	521.1094
Daily Avg. Liquid Surface Temp. (deg. R):	56.7500	57.6000	58.0000	60.1000	62.6500	65.7000	69.0500	70.4000	69.9000	66.8000	61.5500	56.9000
Daily Average Ambient Temp. (deg. F):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Ideal Gas Constant R (psia cu ft / (lb-mol-deg R)):	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400	522.6400
Liquid Bulk Temperature (deg. R):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Shell):	926.0000	1,214.0000	1,619.0000	1,951.0000	2,060.0000	2,119.0000	2,308.0000	2,080.0000	1,681.0000	1,317.0000	1,004.0000	649.0000
Daily Total Solar Insulation Factor (Btu/sqft day):	0.2608	0.2767	0.2981	0.3382	0.3411	0.3677	0.4238	0.4041	0.3625	0.3196	0.2900	0.2559
Vapor Space Expansion Factor:	17.2958	17.7306	18.5064	19.7988	18.9496	19.0144	19.9861	18.8288	17.6496	17.2129	17.3790	17.0012
Vapor Pressure Range (deg. R):	1.6083	1.6743	1.7695	1.9342	1.8651	1.9525	2.1306	2.0162	1.8559	1.7310	1.6941	1.5805
Daily Vapor Pressure Range (psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Breather Vent Press. Setting Range (psia):	7.8728	8.0232	8.1654	8.4361	8.6867	8.9676	9.3090	9.3658	9.2165	8.8504	8.3108	7.8654
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.1189	7.2247	7.3101	7.4800	7.7506	8.0282	8.3217	8.4357	8.3446	8.0001	7.4753	7.1248
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	8.7272	8.8690	9.0796	9.4142	9.6357	9.9807	10.4523	10.4519	10.2005	9.7310	9.1694	8.7053
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	521.1468	521.9076	522.6275	523.9974	525.2658	526.6870	528.4148	528.7026	527.9468	526.0939	523.3636	521.1094
Daily Avg. Liquid Surface Temp. (deg R):	516.6229	517.4749	518.0009	519.0477	520.5284	521.9334	523.4183	523.9954	523.5344	521.7907	519.0188	516.8591
Daily Min. Liquid Surface Temp. (deg R):	525.4708	526.3403	527.2541	528.8471	530.0032	531.4406	533.4114	533.4098	532.3592	530.3972	527.7083	525.3597
Daily Max. Liquid Surface Temp. (deg R):	17.9000	16.8000	15.0000	14.6000	12.7000	12.4000	12.5000	12.4000	13.4000	15.2000	17.5000	18.0000
Daily Ambient Temp. Range (deg. R):	0.3240	0.3199	0.3161	0.3091	0.3028	0.2962	0.2884	0.2872	0.2805	0.2989	0.3123	0.3242
Vented Vapor Saturation Factor:	7.8728	8.0232	8.1654	8.4361	8.6867	8.9676	9.3090	9.3658	9.2165	8.8504	8.3108	7.8654
Vapor Space Outage (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Working Losses (lb):	37.5209	38.2373	38.9153	40.2053	41.3996	42.7383	44.3654	44.6365	43.9246	42.1797	39.6085	37.4856
Vapor Molecular Weight (lb/lb-mole):	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500	60.0500
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.8728	8.0232	8.1654	8.4361	8.6867	8.9676	9.3090	9.3658	9.2165	8.8504	8.3108	7.8654
Net Throughput (gal/mo.):	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333	3,333.3333
Annual Turnovers:	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	259.1184	251.5390	294.3846	322.8807	337.8881	354.2113	418.1127	401.5048	352.7008	321.1644	281.1506	254.8732

TANKS 4.0.9d
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January, February, March, April, May, June, July, August, September, October, November, December

MT1 - Horizontal Tank
Los Angeles AP, California

Components	Losses(lbs)		Total Emissions
	Working Loss	Breathing Loss	
Methyl Formate	491.22	3,358.31	3,849.53

APPENDIX C
HAZARD ANALYSIS



April 10, 2012

Ms. Debra Bright Stevens
Environmental Audit, Inc.
1000-A Ortega Way
Placentia, CA 92670-7125

Re: Methyl Formate Storage
QCI Project 6842

Dear Ms. Stevens:

The Carpenter Company, is proposing to install a 10,000 gallon methyl formate (97 % methyl formate and 3 % methanol) storage tank in its Riverside, California facility. The methyl formate will be used in a polyurethane foam manufacturing process.

Methyl formate is not considered a covered toxic substance under CalARP¹, but it is flammable and is covered under CalARP as a flammable material. The threshold quantity for methyl formate under CalARP is 10,000 pounds. Methyl formate has a density of approximately 980 kg/m³ or 8.18 lbs/gal. Thus, if the 10,000 gallon methyl formate tank were 80 % full (8,000 gallons), the mass in the tank would be over 65,000 lbs, putting the mass above the CalARP threshold limit.

The location of the proposed tank and impoundment is identified in Figure 1.

This letter report details the calculations made to identify the maximum radiant hazard zones associated with a release of methyl formate into the impounding basin followed by ignition of the flammable vapors. The scenarios selected represent the largest, credible releases of methyl formate from containment.

Release Analyzed

Rupture of liquid outlet line on the 10,000 gallon methyl formate tank. The methyl formate drains into the impoundment basin and subsequently ignites.

Atmospheric Conditions

Wind speed = 1.5 m/s and 5 m/s
Relative humidity = 50%
Air temperature = 77°F

¹ CalARP (2005), California Accidental Release Prevention (CalARP) Program, *Administering Agency Guidance*. California Emergency Management Agency. January 31, 2005.



Figure 1
Layout of Carpenter Facility

Project-Specific Information

Methyl formate in storage tank
97 % methyl formate, 3 % methanol
Temperature = 77°F
Storage tank capacity = 10,000 gallons
Impoundment = 30 feet by 16 feet

Fire Radiation Hazards

If flammable vapors from the released methyl formate were to encounter an ignition source and ignite, a pool fire would develop in the impounding area. The most commonly referenced fire radiation hazard limit for people is 1,600 Btu/hr-ft², or about 5 kW/m². This radiant flux level has the potential to cause second-degree skin burns to unprotected skin. 5 kW/m² is the radiant flux hazard endpoint (hazard limit) defined in the CalARP regulations for fire radiation calculations and presented in Table 1.

Table 1
Consequence Analysis Hazard Levels
(Endpoint Criteria for Consequence Analysis)

Hazard Type	Injury Threshold		
	Exposure Duration	Hazard Level	Reference
Radiant heat exposure ²	40 sec	5 kW/m ² †	CalARP (2005)

CalARP (2005), California Accidental Release Prevention (CalARP) Program, *Administering Agency Guidance*. California Emergency Management Agency. January 31, 2005.

† Corresponds to second-degree skin burns.

Consequence Analysis

When performing site-specific consequence analysis studies, the ability to accurately model the release, dilution, and dispersion of gases and aerosols is important if an accurate assessment of potential exposure is to be attained. For this reason, Quest uses a modeling package, CANARY by Quest[®], that contains a set of complex models that calculate release conditions, initial dilution of the vapor (dependent upon the release characteristics), and the subsequent dispersion of the vapor introduced into the atmosphere. The models contain algorithms that account for thermodynamics, mixture behavior, transient release rates, gas cloud density relative to air, initial velocity of the released gas, and heat transfer effects from the surrounding atmosphere and the substrate. The release and dispersion models contained in the QuestFOCUS package (the predecessor to CANARY by Quest) were reviewed in a United States Environmental Protection Agency (EPA) sponsored study² and an American Petroleum Institute (API) study³. In both studies, the QuestFOCUS software was evaluated on technical merit (appropriateness of

² *Evaluation of Dense Gas Dispersion Models*. Prepared for the U.S. Environmental Protection Agency by TRC Environmental Consultants Inc., East Hartford, Connecticut, 06108, EPA Contract No. 68-02-4399, May, 1991.

³ *Hazard Response Modeling Uncertainty (A Quantitative Method); Volume II, Evaluation of Commonly-Used Hazardous Gas Dispersion Models*, S. R. Hanna, D. G. Strimaitis, and J. C. Chang, Study cosponsored by the Air

models for specific applications) and on model predictions for specific releases. One conclusion drawn by both studies was that the dispersion software tended to overpredict the extent of the gas cloud travel, thus resulting in too large a cloud when compared to the test data (i.e., a conservative approach).

A study prepared for the Minerals Management Service⁴ reviewed models for use in modeling routine and accidental releases of flammable and toxic gases. CANARY by Quest received the highest possible ranking in the science and credibility areas. In addition, the report recommends CANARY by Quest for use when evaluating toxic and flammable gas releases. The specific models contained in the CANARY by Quest software package have also been extensively reviewed.

CANARY by Quest also contains models for pool fire and torch (jet) fire radiation. These models account for material composition, target height relative to the flame, target distance from the flame, atmospheric attenuation (includes humidity), wind speed, and atmospheric temperature. The fire models are based on information in the public domain (published literature) and have been validated with experimental data.

Fire Radiation Results

CANARY by Quest was used to model the potential pool fires associate with releases from the methyl formate storage tank. The results of these calculations are presented in Table 2.

Table 2
Fire Radiation Results

Release Scenario	Wind Speed (m/s)	Distance to 5 kW/m ² (ft)*
Release of methyl formate from storage tank into impoundment followed by ignition (pool fire)	1.5	51
	5.0	66

* – note that distance is measured from center of impoundment

Conclusions

Table 2 presents the maximum downwind distances for the radiant hazards evolving from the methyl formate impoundment. As can be seen from the table, the impact distances can extend up to about 70 feet from the impoundment area. This maximum impact distance is displayed on the plot plan presented in Figure 2. Under no condition would the 5 kW/m² radiant impact extend off-site.

Force Engineering and Services Center, Tyndall Air Force Base, Florida, and the American Petroleum Institute, and performed by Sigma Research Corporation, Westford, Massachusetts, September 1991.

⁴ *A Critical Review of Four Types of Air Quality Models Pertinent to MMS Regulatory and Environmental Assessment Missions*, Joseph C. Chang, Mark E. Fernau, Joseph S. Scire, and David G. Strimaitis. Mineral Management Service, Gulf of Mexico OCS Region, U.S. Department of the Interior, New Orleans, November, 1998.

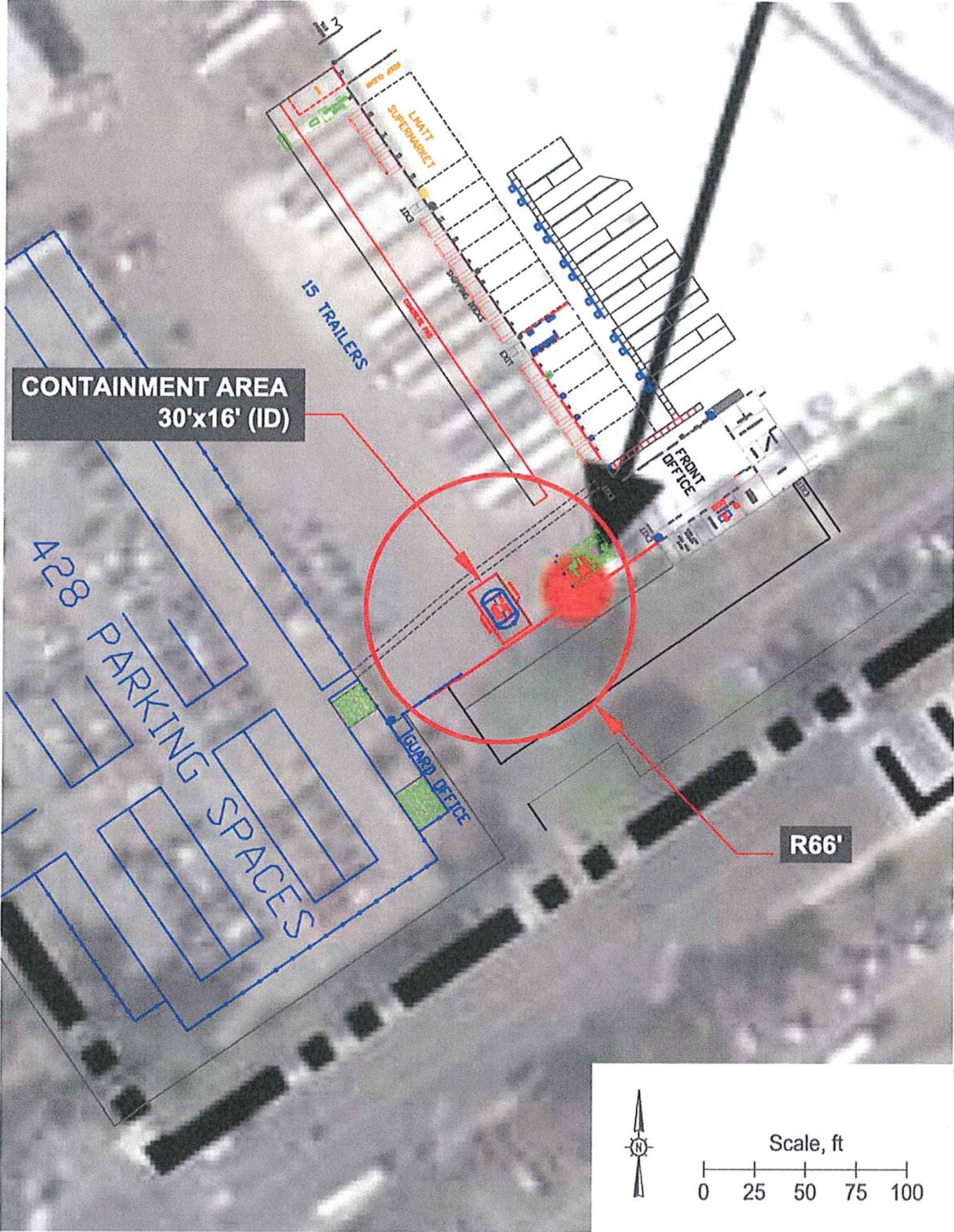


Figure 2
Maximum Extent of 5 kW/m² Radiant Impact for Fire in Methyl Formate Containment Area

Ms. Debra Bright Stevens
April 10, 2012
Page 6

I believe this covers the analysis requested. If you have any questions, please give us a call.

Sincerely,

A handwritten signature in black ink, appearing to read "JBC", with a stylized flourish extending to the right.

John B. Cornwell.
Principal Engineer

tml

APPENDIX D

**COMMENTS AND RESPONSE TO COMMENTS RECEIVED ON DRAFT
NEGATIVE DECLARATION**

APPENDIX D

FINAL NEGATIVE DECLARATION

**CARPENTER COMPANY
STORAGE TANK REPLACEMENT PROJECT**

RESPONSE TO COMMENTS

INTRODUCTION

This Appendix, together with the Draft Negative Declaration, constitutes the Final Negative Declaration for the Carpenter Company Storage Tank Installation Project. The Draft Negative Declaration was circulated for a 30-day public review and comment period, which started on October 26, 2012 and ended November 27, 2012. The Draft Negative Declaration is available at the SCAQMD Headquarters located at 21865 Copley Drive, Diamond Bar, California 91765 or by phone at (909) 396-2039.

The Draft Negative Declaration included a detailed project description, the environmental setting for each environmental resource, and an analysis of the each environmental resource on the California Environmental Quality Act (CEQA) checklist, including all potentially significant environmental impacts. Based on the Draft Negative Declaration, no significant adverse environmental impacts were identified associated with the proposed project.

The SCAQMD received one email and one comment letter on the Draft Negative Declaration during the public comment period. Responses to these comments are presented in this Appendix. The comments are bracketed and numbered. The related responses are identified with the corresponding number and are included in the following pages. Pursuant to CEQA Guidelines §15073.5(c)(2), recirculation is not necessary since the information provided in response to written comments on the project's effects does not identify any new, avoidable significant effects.

APPENDIX D – RESPONSE TO COMMENTS

From: Johntommy Rosas [<mailto:tattnlaw@gmail.com>]
Sent: Friday, October 26, 2012 9:53 AM
To: CEQA_Admin
Cc: Jeffrey Inabinet; Dave Singleton
Subject: Re: Notice of Intent to Adopt a Draft Negative Declaration for Carpenter Company Storage Tank Installation Project

We are lodging our objections to this DND and request further review under CEQA and NEPA because of our concerns on cultural resources being illegally impacted.

we are also concerned about the chemicals and amounts being considered and those negative impacts .

I will respond more on this soon .

/s/ JOHNTOMMY ROSAS

1-1

Response 1-1

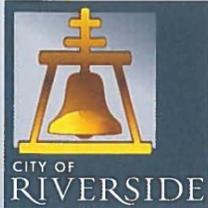
The potential cultural resources impacts associated with the proposed project were evaluated in the Negative Declaration (see pages 2-21 through 2-22). The analysis determined that no significant cultural resources would be impacted for the following reasons:

- The proposed new storage tank would be located within the confines of an existing facility that has already been graded, paved, and developed.
- The proposed new storage tank would be placed on top of an existing paved area of the facility. No grading activities are required as part of the proposed project, therefore, the proposed project would not disturb archaeological or paleontological resources.
- Accordingly to the Riverside County Land Use Information System, the proposed project is not located on tribal lands.
- The proposed project would not impact historical resources since no structures would be removed or impacted as part of the project.

The comment does not provide any additional information to refute the cultural resources analysis. Therefore, based on the evaluation of the proposed project impacts, no cultural resources would be impacted and no further evaluation of the proposed project under CEQA is required. Note that the proposed project does not require approval from any federal agency; therefore, the requirements of the National Environmental Policy Act (NEPA) do not apply to the proposed project.

Methyl formate is currently used and stored at the Carpenter Company. The proposed project would allow the storage of additional quantities of methyl formate, up to 10,000 gallons. The potential hazard impacts associated with the increased storage of methyl formate were evaluated in the hazard section of the Negative Declaration (see pages 2-30 through 2-35 and Appendix C). Methyl formate is regulated (CCR Table 2, §2770.5) as a flammable material. Based on hazard modeling, it was determined that thermal radiation hazards associated with a tank fire would remain onsite and that the public would not be exposed to fire hazards. Therefore, the hazards associated with the proposed storage tank were determined to be less than significant.

The Negative Declaration is the appropriate CEQA document for the proposed project as no significant impacts have been identified.



Community Development
Department
Planning Division

November 27, 2012

Mr. Jeff Inabinet
South Coast Air Quality Mgmt District
21865 Copley Drive
Diamond Bar, CA 91765-4182

SUBJECT: PSP12-0220 - Notice of Intent to Adopt a Negative Declaration for the Carpenter Company Storage Tank Installation Project

Dear Mr. Inabinet:

Thank you for the opportunity to comment on the above noted case for the proposed Carpenter Company Storage Tank Installation project. The proposed Negative Declaration is to facilitate the installation of a 10,000 gallon above ground tank for the storage of Methyl Formate, a product that is currently used in the manufacturing of foam products on site. The existing 350 gallon tank is proposed to be removed and replaced with the new 10,000 gallon storage tank. The replacement of the 350 gallon tank with the new 10,000 gallon tank would allow the Carpenter Company to store larger quantities of Methyl Formate. The proposed project would not increase the use of Methyl Formate or increase the production capacity of the facility but would allow the Carpenter Company the ability to buy more product at a lower cost because of the greater storage capacity. City staff offers the following comments:

- The subject property is located within the BMP – Business Manufacturing Zone where above ground fuel tanks are a Conditionally Permitted Use. Approval of a Minor Conditional Use Permit and Administrative Design Review are required for the installation of the above ground tank. Please submit the appropriate applications and filing fees so that City Planning staff can evaluate the project and process the necessary entitlements. 2-1
- Since a Minor Conditional Use Permit and Design Review are required for the installation of any above ground storage tanks within the BMP – Business Manufacturing Park Zone, section 10.0 LAND USE AND PLANNING (response 10 a) and b)) should be revised to reflect the appropriate entitlements required in order to facilitate this project. 2-2
- While the project description indicates that because of the larger storage capacity on site, truck traffic in and around the area is anticipated to decrease from approximately 52 trips per year to approximately 4 trips per year, staff would like to review the routing plan for 2-3

trucks that are transporting hazardous materials in and around the area. When submitting application for entitlements, please provide a routing plan that indicates the traffic pattern for trucks that are transporting all hazardous materials to and from the site.

2-3
Cont.

- Although the containment area is proposed to hold 110% of the product contained within the 10,000 gallon tank, staff would still recommend that the applicant obtain any comments from Riverside Fire Department as well as Public Utilities, Water Division to ensure that any potential leakage from the tank is contained in a safe and effective manner. Once the submittals for the Minor Conditional Use Permit and Design Review are received, staff will route a project description transmittal to the respective departments to obtain comments regarding the installation of the tank. Any comments received can be incorporated into the staff report and Conditions of Approval for the MCUP and DR cases.

2-4

City staff appreciates your collaboration on this project and looks forward to continue working alongside the SCAQMD. Should you have any questions regarding this letter, please feel free to contact Yvette Sennewald, Senior Planner, at (951) 826-5168 or YSennewald@RiversideCa.gov

Sincerely,



Steve Hayes, AICP
City Planner

Attachment

- c: Steve Libring, Traffic Engineer
Steve Earley, Fire Chief
David H. Wright, Public Utilities General Manager
Kevin Milligan, Public Utilities Assistant General Manager/Water
Carpenter Company, 7809 Lincoln Avenue, Riverside, CA 92504

**COMMENT LETTER NO. 2
CITY OF RIVERSIDE, COMMUNITY DEVELOPMENT DEPARTMENT
NOVEMBER 27, 2012**

Response 2-1

The comments provided by the City of Riverside are generally related to the City’s permitting process and not the analysis in the Negative Declaration. Nonetheless, responses to those comments as they related to the CEQA analysis are provided to the extent possible.

Carpenter Company has applied for and received permits from the City of Riverside Building and Safety Division for the installation of the proposed storage tank (Permits No. 11-0281 and 11-0556) in February and April 2011. Building inspectors have been out to inspect the site as well. Carpenter Company will discuss the project with the City and determine if any further approvals are required. Note that the proposed project would allow the installation of a methyl formate tank, which would not be considered a “fuel tank.”

Response 2-2

Section 10.0 Land Use and Planning evaluates if the project will physically divide an established community or conflict with applicable land use regulations or policies. The analysis concludes that the proposed project is consistent with the current land uses (business/office park) and would not divide a community as it would be located within the confines of the existing facility. Please see page 1-6, Required Permits, and page 2-1, Other Public Agencies Whose Approval is Required, as both sections acknowledge that permits are required from the City of Riverside.

Response 2-3

Methyl formate is currently transported to the facility using existing truck routes and the proposed project would not change the transportation routes associated with the existing facility, but would result in a reduction in the number of truck trips to deliver methyl formate. The primary transportation route to the facility is currently the Interstate 91, south on Adams Street (exit 59), and east on Lincoln Avenue. The transportation route would not change as part of the proposed project.

Response 2-4

As part of the building permits referenced in Response 2-1, the Fire Department reviewed the project and commented on the proposed project and provided the following conditions (Permit 11-0281):

APPENDIX D – RESPONSE TO COMMENTS

- Provide signage per California Fire Code Chapter 3404 to include “NO SMOKING” and NFPA 704 signage Health 2, Flammability 4, Reactivity 0.
- As stated on plans all piping under separate permit.
- A fire extinguisher with a minimum rating of 40B shall be provided and located such that it is not more than 30 feet from the tank.
- An inspection by the Fire Department is required prior to occupancy. Contact Inspector Moore @ (951) 826-5387 to schedule your inspection.

These conditions have been implemented, except for the last condition which is pending installation of the proposed new storage tank. Carpenter Company will discuss the project with the City of Riverside to determine if any additional approvals are required.