KPC EHS Consultants

Technical Memorandum

To: EPC Consulting, Ernest Perea

From: Kevin P. Carr, MS., KPC EHS Consultants

Date: September 08, 2023

Re: 8th Street West, Lancaster Industrial Development Project - Air Quality/GHG Assessment

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1.0 Purpose

The purpose of this memorandum is to document the impacts of construction, mobile, and operational air quality (AQ) and greenhouse gas (GHG) emissions as it relates to the potential environmental impacts associated with the construction and operation of the proposed industrial project on approximately 4.33 acres.

2.0 Project Location & Description

2.1 Project Location: The proposed project site is located in the City of Lancaster, Los Angeles County, California on the south side of Rancho Road, on 8th Street West, south of West Avenue L.

2.2 Description: The Applicant is proposing to develop a 92,932 square foot (SF) industrial building project consisting of 8,000 SF of office area and 84,932 SF warehouse area, 16 loading docks and 55 parking spaces with 13 being parking for EV/Clean air vehicles on an approximately 4.33-acre vacant parcel.

3.0 Air Quality & Greenhouse Gas (GHG) Assessment

3.1 **Determination of Significance:** The criteria used to determine the significance related to potential Project related air quality and greenhouse gas emission impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines, California Code of Regulations §15000, et seq. Based on these thresholds, a project would result in a significant impact related to air quality if it would:

Would the Project: Conflict with or obstruct implementation of the applicable air quality plan?

Would the Project: 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?

Would the Project: Expose sensitive receptors to substantial pollutant concentrations?

Would the Project: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Would the Project: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Would the Project: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

3.1.1 Air Quality / GHG Thresholds:

The Antelope Valley Air Quality Management District (AVAQMD) has developed regional significance thresholds for regulated pollutants as well as GHG emissions. The AVAQMD's CEQA and Federal Conformity Guidelines (2016) provide significance thresholds as indicted in Table 3.1 below.

Table 3.1 – Emissions Significance Thresholds

Criteria Pollutant / Emission	Annual Threshold (Tons)	Daily Threshold (pounds)
Carbon Monoxide (CO)	100	548
Oxides of Nitrogen (NO_x)	25	137
Volatile Organic Compounds (VOC)	25	137
Sulfur Oxides (SO_x)	25	137
Particulate Matter 10 microns (PM_{10})	15	82
Particulate Matter 2.5 microns ($PM_{2.5}$)	12	65
Carbon Dioxide Equivalent (CO_2e) for GHG.	**100,000**	**548,000**

Source: AVAQMD CEQA and Federal Conformity Guidelines, August 2016.

3.2 California Emissions Estimator Model (CalEEMod):

Land uses such as the proposed Project affect air quality through construction-source and operational- source emissions.

The SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model (CalEEMod) version 2022.1.1.14 which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies to quantify potential criteria pollutant emissions associated with both construction and operations emissions. CalEEMod is authorized for use to assess project emissions by the Antelope Valley Air Quality Management District (AVAQMD). The purpose of this model is to calculate construction and operational-source criteria pollutant (NO_X, VOC, PM_{10}, $PM_{2.5}$, SO_X, and CO) and greenhouse

gas (GHG) emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this Project to determine construction, operational air quality, and GHG emissions. Datasheet outputs from the model runs are provided in Appendix A.

3.3 Construction Emissions:

Construction activities associated with the Project will result in emissions of CO, VOCs, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating
- Materials Deliveries and Construction Workers Commuting

Construction is expected to commence in November 2023 and will last through December 2024, approximately 14 months. The construction schedule utilized in the analysis represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[1] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per CEQA guidelines. Site specific construction fleet may vary due to specific project needs at the time of construction. The duration of construction activity was based on CalEEMod default schedule for the various construction phases with a scheduled 2025 opening year. The associated construction equipment was based on CalEEMod 2022.1.1.14 defaults. Please refer to specific detailed modeling inputs/outputs contained in Appendix A of this analysis.

The Project construction emissions were based on CalEEMod Land Uses as identified in the Table 3.2 CalEEMod Land Use Types.

Table 3.2 –CalEEMod Land Use Types

Land Use	Size
Unrefrigerated Warehouse No Rail	92,932 Square Feet
General Office Building	4,000 Square Feet
Parking Lot	55 Spaces

Construction emissions modeling was estimated using a CalEEMod 279-day construction schedule, with default values for off-road construction equipment and construction schedules. Peak emissions represent the highest value from the summer and winter modeling. AVAQMD

[1] As shown in the California Emissions Estimator Model (CalEEMod) User's Guide Version 2022.1.1.14, Appendix C Section 4.3"OFFROAD Equipment Emissions Factors Screen" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

significance thresholds were used for determining the project's impacts. Construction emissions are summarized in Table 3.3 for the Project Summary of Summer Emissions and Table 3.4 for the Project Summary of Winter Emissions.

Table 3.3 –Summary of Peak Construction Summer Emissions (Without Mitigation)

Year	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2024	1.46	12.0	17.6	<0.1	1.17	0.63
Maximum Daily Emissions	**1.46**	**12.0**	**17.6**	**<0.1**	**1.17**	**0.63**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.14 Datasheets.

Table 3.4 –Summary of Peak Construction Winter Emissions (Without Mitigation)

Year	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2023	4.05	39.9	36.6	<0.1	21.7	11.8
2024	31.7	12.0	16.2	<0.1	1.17	0.63
Maximum Daily Emissions	**31.7**	**39.9**	**36.6**	**<0.1**	**21.7**	**11.8**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.14 Datasheets.

As indicated in Tables 3.3 and 3.4 the project construction emissions are estimated to be below the AVAQMD Regional Thresholds.

3.4 Operational Emissions:

Operational activities associated with the proposed Project will result in emissions of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- On-site Equipment Emissions

AREA SOURCE EMISSIONS

Architectural Coatings

Over a period of time the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod model defaults.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on default assumptions provided in the CalEEMod model. In the case of the commercial uses proposed by the Project, no substantive on-site use of consumer products is anticipated.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on default assumptions provided in the CalEEMod model.

Energy Source Emissions

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the MDAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using the CalEEMod model.

Mobile Source Emissions

Vehicles

Project-related operational air quality impacts derive primarily from vehicle trips generated by the Project. CalEEMod Version 2022.1.1.14 default values were used for the projects trip characteristics for operational truck and passenger vehicle totals.

Fugitive Dust Related to Vehicular Travel

Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust inclusive of tire wear particulates. The emissions estimates for travel on paved roads were calculated using the CalEEMod model.

On-Site Equipment Emissions

Industrial warehouse projects commonly require forklifts and pallet jacks as common pieces of equipment used in warehouse operations. For purposes of the AQA forklifts and pallet jacks are assumed to be electric consistent with industry standards.

3.4.1 Operational Emissions Summary

Operational-source emissions are summarized on Table 3.5. Detailed operational model outputs are presented in Appendix A. As indicated in Table 3.5 the project operational emissions are estimated to be below the AVAQMD Regional Thresholds.

Table 3.5 - Summary of Peak Operational Emissions

Operational Activities – Summer	Emissions (pounds per day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile	1.07	0.73	7.30	0.01	1.16	0.30
Area Source	2.92	0.04	4.22	<0.005	0.01	0.01
Energy Source	0.03	0.04	0.43	<0.005	0.04	0.04
Total Maximum Daily Emissions	**4.02**	**1.28**	**11.9**	**0.02**	**1.21**	**0.35**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter	**Emissions (pounds per day)**					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Mobile	0.93	0.80	5.83	0.02	1.16	0.30
Area Source	2.23	-	-	-	-	-
Energy Source	0.03	0.51	0.43	<0.005	0.04	0.04
Total Maximum Daily Emissions	**3.19**	**1.30**	**6.26**	**0.02**	**1.20**	**0.34**
AVAQMD Regional Threshold	137	137	548	137	82	65
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod 2022.1.1.14 Datasheets.

3.5 Potential Impacts to Sensitive Receptors:

The potential impact of Project-generated air pollutant emissions at sensitive receptors has also been considered. Sensitive receptors can include uses such as long-term health care facilities, rehabilitation centers, and retirement homes. Residences, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors.

AVAQMD Guidelines state that the following project types located within a specified distance to an existing or planned sensitive receptor land use must be evaluated to determine exposure of substantial pollutant concentrations to sensitive receptors:

- Any industrial project within 1,000 feet;
- A distribution center (40 or more trucks per day) within 1,000 feet;
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet;
- A dry cleaner using perchloroethylene within 500 feet;

- A gasoline dispensing facility within 300 feet.

The proposed Project consists of 92,932 square foot (SF) industrial building consisting of 84,932 SF warehouse and 8,000 SF office area. The closest sensitive receptor is the Shekinah Worship Center located 42640 10th Street West, located approximately 525 feet northwest of the property northwestern boundary. The Project is located in an area with Land Use and Zoning for Industrial use and future developments with future sensitive receptors being located greater than 1,000 feet from the site.

3.6 Greenhouse Gas Emissions (GHG):

GHG emissions for the Project were estimated by using the California Emissions Estimator Model (CalEEMod) version 2022.1.1.14 which is a statewide land use emissions computer model designed to provide a uniform platform for government agencies to quantify potential criteria pollutant emissions associated with both construction and operations emissions. CalEEMod is authorized for use to assess project emissions by the Antelope Valley Air Quality Management District (AVAQMD). The City uses the AVAQMD significance thresholds to determine a project's impacts on GHG emissions. The thresholds established by the AVAQMD for GHG emissions included an annual threshold of 100,000 short tons CO_2e per year (90,718 $MTCO_2e$/year) and a daily threshold of 548,000 pounds per day. The AVAQMD significance thresholds were used for determining the project's impacts. Construction and operation GHG emissions are presented in Table 3.8 and summarized in Table 3.9.

Table 3.8 - Project Greenhouse Gas Emissions

Source	GHG Emissions MT/yr			
	N_2O	CO_2	CH_4	CO_2e
Mobile Sources	0.01	204	0.01	207
Area	<0.005	1.42	<0.005	1.42
Energy	<0.005	183	0.02	184
Water/Wastewater	0.02	27.3	0.72	50.6
Solid Waste	0.00	8.13	0.81	28.4
Refrigerant	-	-	-	<0.005
30-year Amortized Construction GHG				13.41
TOTAL			*Tons / Metric Tons*	***535 / 485***
AVAQMD Threshold			*Tons / Metric Tons*	**100,000/90,718**
Exceed Threshold?				**NO**

As indicated in Table 3.8 the proposed Project GHG emissions are estimated to be below the AVAQMD Threshold of 100,000 TCO_2e/year for annual GHG emissions with an estimated 535 TCO_2e/year (485 $MTCO_2e$/year).

Table 3.9 - Project Greenhouse Gas Emissions - Summary

GHG Emissions Source	Daily Emissions	Daily Threshold	Annual Emissions Tons / Metric Tons	Annual Threshold Tons/Metric Tons	Exceeds Threshold?
Construction 2023	5,550	**548,000**	66 / 60	**100,000 / 90,718.5**	**NO**
Construction 2024	6,964	**548,000**	377 / 342	**100,000 / 90,718.5**	**NO**
Operations	5,890	**548,000**	*520 /472*	**100,000 / 90,718.5**	**NO**

As indicated in Tables 3.9 the proposed Project GHG emissions are estimated to be below the AVAQMD Threshold for daily of 548,000 CO_2e pounds per day and annual emissions of 100,000 TCO_2e/year.

3.7 Objectionable Odors:

The potential for the Project to generate objectionable odors has also been considered. Land uses generally associated with odor complaints include:

- Agricultural uses (livestock and farming)
- Wastewater treatment plants
- Food processing plants
- Chemical plants
- Composting operations
- Refineries
- Landfills
- Dairies
- Fiberglass molding facilities

The Project does not propose or require land uses that would be substantive sources of objectionable odors. Potential temporary and intermittent odors may result from construction equipment exhaust, the application of asphalt and architectural coatings. Temporary and intermittent construction-source emissions are controlled through existing requirements and industry BMPs addressing proper storage and application of construction materials.

Over the life of the Project, odors may result from storage of municipal solid waste pending its transport to area landfills. Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations.

The proposed Project would involve the use of diesel-powered construction equipment and diesel-powered vehicles pulling trailers for deliveries during operations. Diesel exhaust during construction may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. During operations diesel vehicles entering the site are required to limit idling to less than 5-minutes which will reduce the impacts of diesel odors.

The proposed Project would also be required to comply with AVAQMD Rule 402 Nuisance. Rule 402 provides that "[a] person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health

or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property." Based on the preceding, the potential for the Project to create objectionable odors affecting a substantial number of people is considered less-than-significant.

3.8 CO "Hotspot" Analysis

As discussed below, the Project would not result in potentially adverse CO concentrations or "hotspots." Further, detailed modeling of Project-specific carbon monoxide (CO) "hot spots" is not needed to reach this conclusion.

The Basin is designated attainment under the CAAQS and NAAQS for CO. An adverse CO hotspot would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur.

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. Due to changing regulations vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the Basin have steadily declined.

The SCAQMD as part of their 2003 AQMP conducted modeling for CO Hotspot Analysis at multiple congested intersections in their South Coast Air Basin including the intersection of Wilshire Boulevard and Veteran Avenue- considered one of the most congested intersections in Southern California with an ADT of approximately 100,000 vehicles. The CO concentrations modeled by the SCAQMD's analysis identified all traffic induced CO levels below Federal and State thresholds. As the CO hotspots were not modeled at an intersection that accommodates over 100,000 vehicles per day, it can be reasonably deduced that CO hotspots would not be experienced at any intersections in the vicinity of the proposed project.

The project would be approximately 1.25 miles to State Highway 395 as the major traffic route. As shown in 2020 Traffic Volumes on California State Highways (Caltrans 2020), average daily trips (ADT) are 22,700 on State Highway 395. According to the applicant the project would generate 170 average daily trips on weekdays, which includes 130 employee trips during day shift, 20 employees during swing shift, and 20 truck trips per day (10 in and 10 out), which is nominal representing an approximately 0.75 % increase compared to traffic on State Highway 395. Therefore, the project would not contribute a significant increase in traffic to the adjacent roadways and would not cause an impact to intersection operations.

Given the extremely low level of CO concentrations in the project area and no project-traffic related impacts at any intersections, project-related vehicle emissions are not expected to result in the CO concentrations exceeding the State or federal CO standards.

3.9 Valley Fever Management Plan

The Los Angeles County Department of Public Health published the Coccidioidomycosis (Valley Fever) Management Plan Guidelines for Employers in August 2019. (Appendix B) The Valley Fever Management Plan (VFMP) established guidelines for training personnel involved in construction specifically on the site preparation and grading phases on Valley Fever health risks, symptoms, and the causes of Valley Fever with information on reducing the hazards.

Fever exposure is highest during ground disturbing activities such as grading, trenching, and landscaping. Therefore, the following Mitigation Measure is required during construction and operations of projects to prevent exposure of construction personnel, operations and maintenance staff, and surrounding communities to Valley Fever.

Mitigation Measure (MM) AQ-1 Valley Fever Management Plan

Prior to any ground disturbance activities, the General Contractor or Project Operator shall provide construction and operations personnel training to understand and manage the risks associated with Valley Fever. Training includes information on how to recognize symptoms of Valley Fever and ways to minimize exposure; proper cleaning procedures to minimize accidental exposure; and demonstrations on how to use personal protective equipment, such respiratory protection, skin and eye protection.

The General Contractor shall distribute the Valley Fever educational materials provided by the Los Angeles Department of Public Health to construction and operations personnel and are posted next to the Cal OSHA poster.

The General Contractor provides respirators to construction and operations personnel upon request during ground disturbing activities.

> *a. National Institute for Occupational Safety and Health (NIOSH)-approved half-face respirators equipped with minimum N-95 protection factor shall be available upon request for use during worker collocation with surface disturbance activities. Upon request, a worker shall be provided with a higher level of respiratory protection.*
>
> *b. For employees who request respirators, the General Contractor shall ensure they are medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Standard (8 CCR 5144).*

Heavy equipment with factory enclosed cabs should be provided with HEPA rated air filtration and positive pressure air. The General Contractor utilizing applicable heavy equipment provides proof of worker training on proper use of applicable heavy equipment cabs. Provide communication methods, such as two-way radios, for use in enclosed cabs.

Provide separate, clean eating areas with hand-washing facilities, and a changing of clothing area. Separate bins with proper labels be provided for on-site disposables.

Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary,

before equipment is moved off-site.

Any employee experiencing symptoms of Valley Fever shall promptly reports to their supervisor and consult a medical professional as necessary. Maintain an accessible log of all employees reporting symptoms and disease of Valley Fever.

When possible, position workers upwind or crosswind when performing ground disturbing activities.

Prohibit smoking at the project site in or outside of designated smoking areas. Designate smoking areas shall be equipped with handwashing facilities.

Maintain an Injury and Illness Prevention Program (IIPP) which should include a cold and heat illness prevention section. Make the IIPP available upon request.

3.10 CARB 2022 Scoping Plan Consistency

On December 15, 2022, CARB adopted the Final 2022 Scoping Plan Update, which identifies the State's progress towards the statutory 2030 target, while providing a path towards carbon neutrality and reduce greenhouse gases emissions by 85% below 1990 levels by 2045. Recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40% below 1990 levels by 2030 (55). The Project would not conflict with any of the 2022 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project.

Additionally, the Project is consistent with the general plan land use designation, density, building intensity, and applicable policies specified for the Project area in SCAG's Sustainable Community Strategy/Regional Transportation Plan, which pursuant to SB 375 calls for the integration of transportation, land-use, and housing policies to plan for achievement of the GHG-emissions target for the region. Therefore, the Project will have a less than significant impact related to GHG emissions from construction and operation.

3.11 Cumulative Impacts

Air Quality Cumulative Impacts

Individual projects that do not generate operational or construction emissions that exceed the AVAQMD's recommended significance thresholds for project-specific impacts would not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. As previously noted, the Project construction-source and operational-source air pollutant emissions would not exceed applicable AVAQMD regional thresholds. As such, Project construction and operational-source emissions are considered less than significant.

GHG Cumulative Impacts

According to CAPCOA, "GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective."[2] The resultant consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change.

Individual projects that do not generate operational or construction emissions that exceed the AVAQMD's recommended daily and annual thresholds for project-specific impacts would also not cause a cumulatively considerable increase in GHG, and, therefore, would not be considered to have a significant, adverse GHG impact. As previously noted, the Project construction-source and operational-source GHG emissions would not exceed applicable AVAQMD thresholds. As such, Project construction and operational-source GHG emissions are considered less than significant.

4.0 AVAQMD Rules

The Antelope Valley Air Quality Management District maintains a set of Rules & Regulations to improve and maintain healthy air quality for the entire population within their jurisdiction. When developing new regulations, the AVAQMD must comply with complex procedures established by statutes in federal and state codes. The project is required to adhere to all applicable AVAQMD Rules and Regulations during construction and operations including but not limited to the following examples are some of the Rules that would apply to the project:

Rule 201 Permit to Construct A person shall not build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants without first obtaining written authorization for such construction from the Air Pollution Control Officer. A permit to construct shall remain in effect until the permit to operate the equipment for which the application was filed is granted or denied, or the application is canceled.

Rule 203 Permit to Operate A person shall not operate or use any equipment, the use of which may cause the issuance of air contaminants or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit from the Air Pollution Control Office. The equipment shall not be operated contrary to the conditions specified in the permit to operate.

Rule 204 Permit Conditions To assure compliance with all applicable regulations, the Air Pollution Control Officer may impose written conditions on any permit. Commencing work or operation under such a permit shall be deemed acceptance of all the conditions so specified.

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[2] *California Air Pollution Control Officers Association, CEQA & Climate change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, (2008).*

Rule 401 Visible Emissions The purpose of the Rule is to provide limits for the visible emissions from sources within the District.

Rule 402 Nuisance A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.

Rule 403 Fugitive Dust The purpose of this rule is to reduce the amount of PM10 entrained in the ambient air from anthropogenic Fugitive Dust sources within the District by requiring actions to prevent, reduce, or mitigate Fugitive Dust.

Rule 1113 Architectural Coatings. The purpose of this rule is to limit the quantity of Volatile Organic Compounds (VOC) in Architectural Coatings

5.0 Conclusion

Based on the assessment in Section 3.0 all estimated Project air quality and greenhouse gas emissions for construction and operations are below the AVAQMD significance threshold levels and as such impacts to the environment for Air Quality and Greenhouse Gases are less than significant. Additionally, the proposed Project will not conflict with any air quality or GHG policies or plans.

APPENDIX A

Lancaster 8th Street Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Lancaster 8th Street
Construction Start Date	10/12/2023
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.50
Precipitation (days)	13.0
Location	34.65652533253041, -118.14443166977236
County	Los Angeles-Mojave Desert
City	Lancaster
Air District	Antelope Valley AQMD
Air Basin	Mojave Desert
TAZ	3664
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.14

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

Unrefrigerated Warehouse-No Rail	92.9	1000sqft	3.74	92,932	1,000	—	—	—
General Office Building	4.00	1000sqft	0.09	4,000	0.00	—	—	—
Parking Lot	55.0	Space	0.49	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-10-A	Water Exposed Surfaces
Construction	C-11	Limit Vehicle Speeds on Unpaved Roads
Construction	C-12	Sweep Paved Roads

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.46	12.0	17.6	0.03	0.50	0.66	1.17	0.47	0.16	0.63	—	3,477	3,477	0.12	0.11	3.91	3,517
Mit.	1.46	12.0	17.6	0.03	0.50	0.66	1.17	0.47	0.16	0.63	—	3,477	3,477	0.12	0.11	3.91	3,517
% Reduced	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	31.7	39.9	36.8	0.05	1.81	19.9	21.7	1.66	10.2	11.8	—	5,528	5,528	0.23	0.11	0.11	5,550
Mit.	31.7	39.9	36.8	0.05	1.81	7.89	9.70	1.66	3.99	5.65	—	5,528	5,528	0.23	0.11	0.11	5,550

% Reduced	—	—	—	—	—	60%	55%	—	61%	52%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.43	7.25	10.0	0.02	0.31	0.47	0.70	0.28	0.23	0.38	—	2,043	2,043	0.08	0.06	1.00	2,065
Mit.	2.43	7.25	10.0	0.02	0.31	0.39	0.70	0.28	0.10	0.38	—	2,043	2,043	0.08	0.06	1.00	2,065
% Reduced	—	—	—	—	—	17%	—	—	58%	—	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.44	1.32	1.83	< 0.005	0.06	0.09	0.13	0.05	0.04	0.07	—	338	338	0.01	0.01	0.17	342
Mit.	0.44	1.32	1.83	< 0.005	0.06	0.07	0.13	0.05	0.02	0.07	—	338	338	0.01	0.01	0.17	342
% Reduced	—	—	—	—	—	17%	—	—	58%	—	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	137	137	548	137	—	—	82.0	—	—	65.0	—	—	—	—	—	—	548,000
Unmit.	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	No
Mit.	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	No
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	137	137	548	137	—	—	82.0	—	—	65.0	—	—	—	—	—	—	548,000
Unmit.	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	No
Mit.	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	No
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No
Mit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.46	12.0	17.6	0.03	0.50	0.66	1.17	0.47	0.16	0.63	—	3,477	3,477	0.12	0.11	3.91	3,517
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	4.05	39.9	36.8	0.05	1.81	19.9	21.7	1.66	10.2	11.8	—	5,528	5,528	0.23	0.11	0.11	5,550
2024	31.7	12.0	16.2	0.03	0.50	0.66	1.17	0.47	0.16	0.63	—	3,411	3,411	0.13	0.11	0.10	3,447
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.20	1.78	2.02	< 0.005	0.08	0.47	0.55	0.07	0.23	0.30	—	361	361	0.01	0.01	0.13	364
2024	2.43	7.25	10.0	0.02	0.31	0.39	0.70	0.28	0.10	0.38	—	2,043	2,043	0.08	0.06	1.00	2,065
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.04	0.33	0.37	< 0.005	0.01	0.09	0.10	0.01	0.04	0.05	—	59.7	59.7	< 0.005	< 0.005	0.02	60.2
2024	0.44	1.32	1.83	< 0.005	0.06	0.07	0.13	0.05	0.02	0.07	—	338	338	0.01	0.01	0.17	342

2.3. Construction Emissions by Year, Mitigated

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

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.46	12.0	17.6	0.03	0.50	0.66	1.17	0.47	0.16	0.63	—	3,477	3,477	0.12	0.11	3.91	3,517
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2023	4.05	39.9	36.8	0.05	1.81	7.89	9.70	1.66	3.99	5.65	—	5,528	5,528	0.23	0.11	0.11	5,550
2024	31.7	12.0	16.2	0.03	0.50	0.66	1.17	0.47	0.16	0.63	—	3,411	3,411	0.13	0.11	0.10	3,447
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.20	1.78	2.02	< 0.005	0.08	0.21	0.29	0.07	0.09	0.17	—	361	361	0.01	0.01	0.13	364
2024	2.43	7.25	10.0	0.02	0.31	0.39	0.70	0.28	0.10	0.38	—	2,043	2,043	0.08	0.06	1.00	2,065
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.04	0.33	0.37	< 0.005	0.01	0.04	0.05	0.01	0.02	0.03	—	59.7	59.7	< 0.005	< 0.005	0.02	60.2
2024	0.44	1.32	1.83	< 0.005	0.06	0.07	0.13	0.05	0.02	0.07	—	338	338	0.01	0.01	0.17	342

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.02	1.28	11.9	0.02	0.05	1.15	1.21	0.06	0.29	0.35	91.6	2,630	2,721	9.45	0.18	5.71	3,016
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.19	1.30	6.26	0.02	0.05	1.15	1.20	0.05	0.29	0.34	91.6	2,493	2,585	9.45	0.18	0.16	2,874
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.50	1.30	8.50	0.02	0.05	1.10	1.15	0.05	0.28	0.33	91.6	2,468	2,560	9.45	0.18	2.36	2,851
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.64	0.24	1.55	< 0.005	0.01	0.20	0.21	0.01	0.05	0.06	15.2	409	424	1.56	0.03	0.39	472
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Threshold	25.0	25.0	100	25.0	—	—	15.0	—	—	11.0	—	—	—	—	—	—	548,000
Unmit.	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	No
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	25.0	25.0	100	25.0	—	—	15.0	—	—	11.0	—	—	—	—	—	—	548,000
Unmit.	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	No
Exceeds (Annual)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	100,000
Unmit.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.07	0.73	7.30	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,382	1,382	0.07	0.06	5.70	1,408
Area	2.92	0.04	4.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Energy	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.10	0.01	—	1,113
Water	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Waste	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	4.02	1.28	11.9	0.02	0.05	1.15	1.21	0.06	0.29	0.35	91.6	2,630	2,721	9.45	0.18	5.71	3,016
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.93	0.80	5.83	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,263	1,263	0.07	0.07	0.15	1,285
Area	2.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Energy	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.10	0.01	—	1,113
Water	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Waste	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01	
Total	3.19	1.30	6.26	0.02	0.05	1.15	1.20	0.05	0.29	0.34	91.6	2,493	2,585	9.45	0.18	0.16	2,874
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.89	0.78	6.00	0.01	0.01	1.10	1.11	0.01	0.28	0.29	—	1,229	1,229	0.07	0.06	2.35	1,253
Area	2.57	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.55	8.55	< 0.005	< 0.005	—	8.58
Energy	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.10	0.01	—	1,113
Water	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Waste	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01	
Total	3.50	1.30	8.50	0.02	0.05	1.10	1.15	0.05	0.28	0.33	91.6	2,468	2,560	9.45	0.18	2.36	2,851
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	1.09	< 0.005	< 0.005	0.20	0.20	< 0.005	0.05	0.05	—	204	204	0.01	0.01	0.39	207
Area	0.47	< 0.005	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.42	1.42	< 0.005	< 0.005	—	1.42
Energy	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	183	183	0.02	< 0.005	—	184
Water	—	—	—	—	—	—	—	—	—	—	7.04	20.2	27.3	0.72	0.02	—	50.6
Waste	—	—	—	—	—	—	—	—	—	—	8.13	0.00	8.13	0.81	0.00	—	28.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.64	0.24	1.55	< 0.005	0.01	0.20	0.21	0.01	0.05	0.06	15.2	409	424	1.56	0.03	0.39	472

2.6. Operations Emissions by Sector, Mitigated

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

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

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.07	0.73	7.30	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,382	1,382	0.07	0.06	5.70	1,408
Area	2.92	0.04	4.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Energy	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.10	0.01	—	1,113
Water	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Waste	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	4.02	1.28	11.9	0.02	0.05	1.15	1.21	0.06	0.29	0.35	91.6	2,630	2,721	9.45	0.18	5.71	3,016
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.93	0.80	5.83	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,263	1,263	0.07	0.07	0.15	1,285
Area	2.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.10	0.01	—	1,113
Water	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Waste	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	3.19	1.30	6.26	0.02	0.05	1.15	1.20	0.05	0.29	0.34	91.6	2,493	2,585	9.45	0.18	0.16	2,874
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.89	0.78	6.00	0.01	0.01	1.10	1.11	0.01	0.28	0.29	—	1,229	1,229	0.07	0.06	2.35	1,253
Area	2.57	0.02	2.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.55	8.55	< 0.005	< 0.005	—	8.58
Energy	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.10	0.01	—	1,113
Water	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Waste	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	3.50	1.30	8.50	0.02	0.05	1.10	1.15	0.05	0.28	0.33	91.6	2,468	2,560	9.45	0.18	2.36	2,851

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.16	0.14	1.09	< 0.005	< 0.005	0.20	0.20	< 0.005	0.05	0.05	—	204	204	0.01	0.01	0.39	207
Area	0.47	< 0.005	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.42	1.42	< 0.005	< 0.005	—	1.42
Energy	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	183	183	0.02	< 0.005	—	184
Water	—	—	—	—	—	—	—	—	—	—	7.04	20.2	27.3	0.72	0.02	—	50.6
Waste	—	—	—	—	—	—	—	—	—	—	8.13	0.00	8.13	0.81	0.00	—	28.4
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	0.64	0.24	1.55	< 0.005	0.01	0.20	0.21	0.01	0.05	0.06	15.2	409	424	1.56	0.03	0.39	472

3. Construction Emissions Details

3.1. Site Preparation (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	19.7	19.7	—	10.1	10.1	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.05	0.54	0.49	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	0.27	0.27	—	0.14	0.14	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.13	1.34	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.29	3.29	< 0.005	< 0.005	0.01	3.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.2. Site Preparation (2023) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.54	0.49	< 0.005	0.02	—	0.02	0.02	—	0.02	—	72.5	72.5	< 0.005	< 0.005	—	72.8
Dust From Material Movement	—	—	—	—	—	0.11	0.11	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.10	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	12.0	12.0	< 0.005	< 0.005	—	12.1
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.13	1.34	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	233	233	0.01	0.01	0.03	236
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.29	3.29	< 0.005	< 0.005	0.01	3.33
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.54	0.54	< 0.005	< 0.005	< 0.005	0.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Grading (2023) - Unmitigated

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

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

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968
Dust From Material Movement	—	—	—	—	—	7.08	7.08	—	3.42	3.42	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.44	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	64.8	64.8	< 0.005	< 0.005	—	65.1
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.08	0.08	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	0.03	0.03	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.11	1.15	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.03	202
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.51	4.51	< 0.005	< 0.005	0.01	4.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.4. Grading (2023) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.04	20.0	19.7	0.03	0.94	—	0.94	0.87	—	0.87	—	2,958	2,958	0.12	0.02	—	2,968

Dust From Material Movement	—	—	—	—	—	2.76	2.76	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.44	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02	—	64.8	64.8	< 0.005	< 0.005	—	65.1
Dust From Material Movement	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.7	10.7	< 0.005	< 0.005	—	10.8
Dust From Material Movement	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.11	1.15	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	200	200	0.01	0.01	0.03	202
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.51	4.51	< 0.005	< 0.005	0.01	4.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.75	0.75	< 0.005	< 0.005	< 0.005	0.76
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Building Construction (2023) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.13	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.9	24.9	< 0.005	< 0.005	—	24.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.30	3.09	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	537	537	0.03	0.02	0.07	544
Vendor	0.02	0.56	0.22	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	492	492	< 0.005	0.07	0.04	513
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.22	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.6	34.6	< 0.005	< 0.005	0.07	35.1
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.8	30.8	< 0.005	< 0.005	0.04	32.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.73	5.73	< 0.005	< 0.005	0.01	5.81
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	0.01	5.32
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.6. Building Construction (2023) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.26	11.8	13.2	0.02	0.55	—	0.55	0.51	—	0.51	—	2,397	2,397	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.74	0.82	< 0.005	0.03	—	0.03	0.03	—	0.03	—	150	150	0.01	< 0.005	—	151
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	24.9	24.9	< 0.005	< 0.005	—	24.9
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.30	3.09	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	537	537	0.03	0.02	0.07	544
Vendor	0.02	0.56	0.22	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	492	492	< 0.005	0.07	0.04	513
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.02	0.22	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	34.6	34.6	< 0.005	< 0.005	0.07	35.1
Vendor	< 0.005	0.04	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	30.8	30.8	< 0.005	< 0.005	0.04	32.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.73	5.73	< 0.005	< 0.005	0.01	5.81
Vendor	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.09	5.09	< 0.005	< 0.005	0.01	5.32
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	6.39	7.47	0.01	0.28	—	0.28	0.26	—	0.26	—	1,365	1,365	0.06	0.01	—	1,370

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.17	1.36	< 0.005	0.05	—	0.05	0.05	—	0.05	—	226	226	0.01	< 0.005	—	227
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.25	4.27	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	594	594	0.03	0.02	2.52	603
Vendor	0.02	0.51	0.20	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	485	485	< 0.005	0.07	1.39	507
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.27	2.90	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	528	528	0.03	0.02	0.07	535
Vendor	0.02	0.54	0.20	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	485	485	< 0.005	0.07	0.04	506
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.16	1.85	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	309	309	0.02	0.01	0.62	314
Vendor	0.01	0.31	0.11	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	276	276	< 0.005	0.04	0.34	289
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.34	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.10	51.9
Vendor	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.7	45.7	< 0.005	0.01	0.06	47.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.8. Building Construction (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.20	11.2	13.1	0.02	0.50	—	0.50	0.46	—	0.46	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.68	6.39	7.47	0.01	0.28	—	0.28	0.26	—	0.26	—	1,365	1,365	0.06	0.01	—	1,370
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	1.17	1.36	< 0.005	0.05	—	0.05	0.05	—	0.05	—	226	226	0.01	< 0.005	—	227
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.25	4.27	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	594	594	0.03	0.02	2.52	603
Vendor	0.02	0.51	0.20	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	485	485	< 0.005	0.07	1.39	507
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.22	0.27	2.90	0.00	0.00	0.53	0.53	0.00	0.12	0.12	—	528	528	0.03	0.02	0.07	535
Vendor	0.02	0.54	0.20	< 0.005	0.01	0.14	0.14	0.01	0.04	0.04	—	485	485	< 0.005	0.07	0.04	506
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.16	1.85	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	309	309	0.02	0.01	0.62	314
Vendor	0.01	0.31	0.11	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	276	276	< 0.005	0.04	0.34	289
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.03	0.34	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	51.2	51.2	< 0.005	< 0.005	0.10	51.9
Vendor	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.7	45.7	< 0.005	0.01	0.06	47.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2024) - Unmitigated

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

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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	6.87	8.89	0.01	0.33	—	0.33	0.30	—	0.30	—	1,351	1,351	0.05	0.01	—	1,355
Paving	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.34	0.44	< 0.005	0.02	—	0.02	0.01	—	0.01	—	66.6	66.6	< 0.005	< 0.005	—	66.8
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.13	1.44	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	0.01	0.01	0.03	265
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	0.03	13.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.20	2.20	< 0.005	< 0.005	< 0.005	2.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.10. Paving (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	6.87	8.89	0.01	0.33	—	0.33	0.30	—	0.30	—	1,351	1,351	0.05	0.01	—	1,355
Paving	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.34	0.44	< 0.005	0.02	—	0.02	0.01	—	0.01	—	66.6	66.6	< 0.005	< 0.005	—	66.8
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.0	11.0	< 0.005	< 0.005	—	11.1
Paving	< 0.005	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.13	1.44	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	262	262	0.01	0.01	0.03	265
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	0.03	13.5
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.20	2.20	< 0.005	< 0.005	< 0.005	2.23
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2024) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.58	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	106	106	0.01	< 0.005	0.01	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.36	5.36	< 0.005	< 0.005	0.01	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.12. Architectural Coating (2024) - Mitigated

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

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.91	1.15	< 0.005	0.03	—	0.03	0.03	—	0.03	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	31.5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.58	6.58	< 0.005	< 0.005	—	6.61
Architectural Coatings	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.09	1.09	< 0.005	< 0.005	—	1.09
Architectural Coatings	0.28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	0.58	0.00	0.00	0.11	0.11	0.00	0.02	0.02	—	106	106	0.01	< 0.005	0.01	107
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.36	5.36	< 0.005	< 0.005	0.01	5.43
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.90
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.86	0.59	5.88	0.01	0.01	0.93	0.94	0.01	0.24	0.24	—	1,114	1,114	0.05	0.05	4.60	1,135
General Office Building	0.21	0.14	1.42	< 0.005	< 0.005	0.22	0.23	< 0.005	0.06	0.06	—	268	268	0.01	0.01	1.11	273
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.07	0.73	7.30	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,382	1,382	0.07	0.06	5.70	1,408
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehou Rail	0.75	0.64	4.70	0.01	0.01	0.93	0.94	0.01	0.24	0.24	—	1,017	1,017	0.06	0.05	0.12	1,035
General Office Building	0.18	0.15	1.13	< 0.005	< 0.005	0.22	0.23	< 0.005	0.06	0.06	—	245	245	0.01	0.01	0.03	249
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.93	0.80	5.83	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,263	1,263	0.07	0.07	0.15	1,285
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehou se-No Rail	0.14	0.12	0.93	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.04	—	172	172	0.01	0.01	0.33	175
General Office Building	0.03	0.02	0.17	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.4	31.4	< 0.005	< 0.005	0.06	32.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.14	1.09	< 0.005	< 0.005	0.20	0.20	< 0.005	0.05	0.05	—	204	204	0.01	0.01	0.39	207

4.1.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehou se-No Rail	0.86	0.59	5.88	0.01	0.01	0.93	0.94	0.01	0.24	0.24	—	1,114	1,114	0.05	0.05	4.60	1,135

General Office Building	0.21	0.14	1.42	< 0.005	< 0.005	0.22	0.23	< 0.005	0.06	0.06	—	268	268	0.01	0.01	1.11	273
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	1.07	0.73	7.30	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,382	1,382	0.07	0.06	5.70	1,408
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.75	0.64	4.70	0.01	0.01	0.93	0.94	0.01	0.24	0.24	—	1,017	1,017	0.06	0.05	0.12	1,035
General Office Building	0.18	0.15	1.13	< 0.005	< 0.005	0.22	0.23	< 0.005	0.06	0.06	—	245	245	0.01	0.01	0.03	249
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.93	0.80	5.83	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	1,263	1,263	0.07	0.07	0.15	1,285
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.14	0.12	0.93	< 0.005	< 0.005	0.17	0.17	< 0.005	0.04	0.04	—	172	172	0.01	0.01	0.33	175
General Office Building	0.03	0.02	0.17	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	31.4	31.4	< 0.005	< 0.005	0.06	32.0
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.16	0.14	1.09	< 0.005	< 0.005	0.20	0.20	< 0.005	0.05	0.05	—	204	204	0.01	0.01	0.39	207

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	415	415	0.04	< 0.005	—	418
General Office Building	—	—	—	—	—	—	—	—	—	—	—	68.1	68.1	0.01	< 0.005	—	68.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	18.0	18.0	< 0.005	< 0.005	—	18.1
Total	—	—	—	—	—	—	—	—	—	—	—	502	502	0.05	0.01	—	504
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	415	415	0.04	< 0.005	—	418
General Office Building	—	—	—	—	—	—	—	—	—	—	—	68.1	68.1	0.01	< 0.005	—	68.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	18.0	18.0	< 0.005	< 0.005	—	18.1
Total	—	—	—	—	—	—	—	—	—	—	—	502	502	0.05	0.01	—	504
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehou Rail	—	—	—	—	—	—	—	—	—	—	—	68.8	68.8	0.01	< 0.005	—	69.2
General Office Building	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	2.99	2.99	< 0.005	< 0.005	—	3.00
Total	—	—	—	—	—	—	—	—	—	—	—	83.0	83.0	0.01	< 0.005	—	83.5

4.2.2. Electricity Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	415	415	0.04	< 0.005	—	418
General Office Building	—	—	—	—	—	—	—	—	—	—	—	68.1	68.1	0.01	< 0.005	—	68.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	18.0	18.0	< 0.005	< 0.005	—	18.1
Total	—	—	—	—	—	—	—	—	—	—	—	502	502	0.05	0.01	—	504
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	415	415	0.04	< 0.005	—	418
General Office Building	—	—	—	—	—	—	—	—	—	—	—	68.1	68.1	0.01	< 0.005	—	68.5
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	18.0	18.0	< 0.005	< 0.005	—	18.1
Total	—	—	—	—	—	—	—	—	—	—	—	502	502	0.05	0.01	—	504
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	—	68.8	68.8	0.01	< 0.005	—	69.2
General Office Building	—	—	—	—	—	—	—	—	—	—	—	11.3	11.3	< 0.005	< 0.005	—	11.3
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	2.99	2.99	< 0.005	< 0.005	—	3.00
Total	—	—	—	—	—	—	—	—	—	—	—	83.0	83.0	0.01	< 0.005	—	83.5

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.48	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	574	574	0.05	< 0.005	—	576

General Office Building	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	607	607	0.05	< 0.005	—	608
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.48	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	574	574	0.05	< 0.005	—	576
General Office Building	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	607	607	0.05	< 0.005	—	608
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.1	95.1	0.01	< 0.005	—	95.3
General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.38	5.38	< 0.005	< 0.005	—	5.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	100	100	0.01	< 0.005	—	101

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.48	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	574	574	0.05	< 0.005	—	576
General Office Building	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	607	607	0.05	< 0.005	—	608
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	0.03	0.48	0.40	< 0.005	0.04	—	0.04	0.04	—	0.04	—	574	574	0.05	< 0.005	—	576
General Office Building	< 0.005	0.03	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.5	32.5	< 0.005	< 0.005	—	32.6
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.03	0.51	0.43	< 0.005	0.04	—	0.04	0.04	—	0.04	—	607	607	0.05	< 0.005	—	608
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	< 0.005	0.09	0.07	< 0.005	0.01	—	0.01	0.01	—	0.01	—	95.1	95.1	0.01	< 0.005	—	95.3

General Office Building	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.38	5.38	< 0.005	< 0.005	—	5.39
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.01	0.09	0.08	< 0.005	0.01	—	0.01	0.01	—	0.01	—	100	100	0.01	< 0.005	—	101

4.3. Area Emissions by Source

4.3.2. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.69	0.04	4.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Total	2.92	0.04	4.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Architectural Coatings	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	< 0.005	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.42	1.42	< 0.005	< 0.005	—	1.42
Total	0.47	< 0.005	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.42	1.42	< 0.005	< 0.005	—	1.42

4.3.1. Mitigated

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

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.69	0.04	4.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.3	17.3	< 0.005	< 0.005	—	17.4
Total	2.92	0.04	4.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	17.3	17.3	< 0.005	< 0.005	—	17.4

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	2.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	2.23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.06	< 0.005	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.42	1.42	< 0.005	< 0.005	—	1.42
Total	0.47	< 0.005	0.38	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.42	1.42	< 0.005	< 0.005	—	1.42

4.4. Water Emissions by Land Use

4.4.2. Unmitigated

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

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

Unrefrigerated Warehouse-No	—	—	—	—	—	—	—	—	—	—	41.2	118	159	4.23	0.10	—	296
General Office Building	—	—	—	—	—	—	—	—	—	—	1.36	3.91	5.27	0.14	< 0.005	—	9.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	41.2	118	159	4.23	0.10	—	296
General Office Building	—	—	—	—	—	—	—	—	—	—	1.36	3.91	5.27	0.14	< 0.005	—	9.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	6.82	19.6	26.4	0.70	0.02	—	48.9
General Office Building	—	—	—	—	—	—	—	—	—	—	0.23	0.65	0.87	0.02	< 0.005	—	1.62
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.04	20.2	27.3	0.72	0.02	—	50.6

4.4.1. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	41.2	118	159	4.23	0.10	—	296
General Office Building	—	—	—	—	—	—	—	—	—	—	1.36	3.91	5.27	0.14	< 0.005	—	9.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	41.2	118	159	4.23	0.10	—	296
General Office Building	—	—	—	—	—	—	—	—	—	—	1.36	3.91	5.27	0.14	< 0.005	—	9.78
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	42.5	122	165	4.37	0.11	—	305
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated Warehou Rail	—	—	—	—	—	—	—	—	—	—	6.82	19.6	26.4	0.70	0.02	—	48.9
General Office Building	—	—	—	—	—	—	—	—	—	—	0.23	0.65	0.87	0.02	< 0.005	—	1.62
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	7.04	20.2	27.3	0.72	0.02	—	50.6

4.5. Waste Emissions by Land Use

4.5.2. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehou se-No Rail	—	—	—	—	—	—	—	—	—	—	47.1	0.00	47.1	4.71	0.00	—	165
General Office Building	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	47.1	0.00	47.1	4.71	0.00	—	165
General Office Building	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	7.79	0.00	7.79	0.78	0.00	—	27.3
General Office Building	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	8.13	0.00	8.13	0.81	0.00	—	28.4

4.5.1. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	47.1	0.00	47.1	4.71	0.00	—	165

General Office Building	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	47.1	0.00	47.1	4.71	0.00	—	165
General Office Building	—	—	—	—	—	—	—	—	—	—	2.00	0.00	2.00	0.20	0.00	—	7.01
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	49.1	0.00	49.1	4.91	0.00	—	172
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-No Rail	—	—	—	—	—	—	—	—	—	—	7.79	0.00	7.79	0.78	0.00	—	27.3
General Office Building	—	—	—	—	—	—	—	—	—	—	0.33	0.00	0.33	0.03	0.00	—	1.16
Parking Lot	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	8.13	0.00	8.13	0.81	0.00	—	28.4

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

4.6.2. Mitigated

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

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Office Building	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	< 0.005	< 0.005

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	11/10/2023	11/17/2023	5.00	5.00	—
Grading	Grading	11/18/2023	11/29/2023	5.00	8.00	—
Building Construction	Building Construction	11/30/2023	10/17/2024	5.00	230	—
Paving	Paving	10/18/2024	11/12/2024	5.00	18.0	—
Architectural Coating	Architectural Coating	11/13/2024	12/8/2024	5.00	18.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29

Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	2.00	6.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	6.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	40.3	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	15.9	10.2	HHDT,MHDT

Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	8.06	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	0.00	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	40.3	18.5	LDA,LDT1,LDT2

Building Construction	Vendor	15.9	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	20.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	8.06	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	145,398	48,466	1,294

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

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

Site Preparation	—	—	7.50	0.00	—
Grading	—	—	8.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.49

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-No Rail	0.00	0%
General Office Building	0.00	0%
Parking Lot	0.49	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	349	0.03	< 0.005
2024	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	162	162	162	59,021	1,310	1,310	1,310	478,078
General Office Building	39.0	8.84	2.80	10,764	316	71.6	22.7	87,193
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Unrefrigerated Warehouse-No Rail	162	162	162	59,021	1,310	1,310	1,310	478,078
General Office Building	39.0	8.84	2.80	10,764	316	71.6	22.7	87,193
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	145,398	48,466	1,294

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value

Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	434,955	349	0.0330	0.0040	1,791,371
General Office Building	71,281	349	0.0330	0.0040	101,386
Parking Lot	18,888	349	0.0330	0.0040	0.00

5.11.2. Mitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-No Rail	434,955	349	0.0330	0.0040	1,791,371
General Office Building	71,281	349	0.0330	0.0040	101,386
Parking Lot	18,888	349	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	21,490,525	16,184
General Office Building	710,935	0.00
Parking Lot	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-No Rail	21,490,525	16,184
General Office Building	710,935	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	87.4	—
General Office Building	3.72	—
Parking Lot	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Unrefrigerated Warehouse-No Rail	87.4	—
General Office Building	3.72	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00

General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
General Office Building	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
General Office Building	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

8. User Changes to Default Data

Screen	Justification
Land Use	Acreage per site plan
Construction: Construction Phases	No demolition

APPENDIX – B
LA County Dept of Health
Valley Fever Guidelines

ACUTE COMMUNICABLE DISEASE CONTROL PROGRAM
and DEPARTMENT OF ENVIROMENTAL HEALTH

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

August 2019

COUNTY OF LOS ANGELES
Public Health

LOS ANGELES COUNTY
HEALTH AGENCY

www.publichealth.lacounty.gov/acd/Diseases/Cocci.htm

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

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Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

INTRODUCTION

The purpose of a Valley Fever Management Plan (VFMP) is to establish guidelines for educating and training personnel on the management of Valley Fever during construction in Los Angeles County (LAC). The VFMP outlines the health risks, symptoms, and causes of Valley Fever, and provides information on hazard reduction. (Hazard reduction plans include engineering controls, best work practices and administrative controls.) The VFMP provides steps that can be taken to help reduce risk of Valley Fever to workers and surrounding community.

Coccidioidomycosis (Cocci), or Valley Fever is an illness caused by a fungus. The fungus lives in the soil and dirt in some places in California and other areas in the Southern US, as well as Central and South America. It can get inside the lungs and cause an illness that might seem like the flu. Most people who get Valley Fever have mild symptoms and often get better on their own. More severe sickness is rare, but it can be serious and even deadly.

GENERAL INFORMATION AND GUIDELINES

Valley Fever exposure is highest during ground disturbing activities such as grading, trenching, and landscaping. Therefore, the following preventative measures should be implemented during construction and operations of projects to prevent exposure of construction personnel, operations and maintenance staff, and surrounding communities to Valley Fever. It is recommended that projects comply with the following:

1. The requirements of Antelope Valley Air Quality Management District (AVAQMD) Rule 403 and South Coast Air Quality Management District (SCAQMD) for Fugitive Dust provided in Appendix A.

2. Provide construction and operations personnel training to understand and manage the risks associated with Valley Fever. Training includes information on how to recognize symptoms of Valley Fever and ways to minimize exposure; proper cleaning procedures to minimize accidental exposure; and demonstrations on how to use personal protective equipment, such respiratory protection, skin and eye protection. Health Education materials can be found in Appendix B. Attendance rosters are included in Appendix C.

3. The General Contractor distributes the Valley Fever educational materials provided in Appendix B to construction and operations personnel and are posted next to the Cal OSHA poster. Community outreach is also recommended. (see Appendix D)

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

4. The General Contractor provides respirators to construction and operations personnel upon request during ground disturbing activities.

a. National Institute for Occupational Safety and Health (NIOSH)-approved half-face respirators equipped with minimum N-95 protection factor shall be available upon request for use during worker collocation with surface disturbance activities. Upon request, a worker shall be provided with a higher level of respiratory protection.

b. For employees who request respirators, the General Contractor shall ensure they are medically evaluated, fit-tested, and properly trained on the use of the respirators, and implement a full respiratory protection program in accordance with the applicable Cal/OSHA Respiratory Standard (8 CCR 5144).

5. Heavy equipment with factory enclosed cabs should be provided with HEPA rated air filtration and positive pressure air. The General Contractor utilizing applicable heavy equipment provides proof of worker training on proper use of applicable heavy equipment cabs. Provide communication methods, such as two-way radios, for use in enclosed cabs.

6. Provide separate, clean eating areas with hand-washing facilities, and a changing of clothing area. Separate bins with proper labels be provided for on-site disposables.

7. Install equipment inspection stations at each construction equipment access/egress point. Examine construction vehicles and equipment for excess soil material and clean, as necessary, before equipment is moved off-site.

8. Any employee experiencing symptoms of Valley Fever shall promptly reports to their supervisor and consult a medical professional as necessary. Maintain an accessible log of all employees reporting symptoms and disease of Valley Fever.

9. When possible, position workers upwind or crosswind when performing ground-disturbing activities.

10. Prohibit smoking at the project site in or outside of designated smoking areas. Designated smoking areas shall be equipped with handwashing facilities.

11. Maintain an Injury and Illness Prevention Program (IIPP) which should include a cold and heat illness prevention section. Make the IIPP available upon request.

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

Appendix A

Rule 403 & R403

(**Adopted**: 02/07/76; **Amended**: 11/06/92; **Amended**: 07/09/93; **Amended**: 02/14/97: **Amended**: 04/20/10)

RULE 403
Fugitive Dust

(A) General

(1) Purpose

(a) The purpose of this rule is to reduce the amount of Particulate Matter entrained in the ambient air as a result of anthropogenic (man-made) Fugitive Dust sources by requiring actions to prevent, reduce or mitigate Fugitive Dust emissions.

(2) Applicability

(a) The provisions of this rule shall apply to any activity or man-made condition capable of generating Fugitive Dust.

(B) Definitions

(1) "Active Operations" – Any activity capable of generating Fugitive Dust, including, but not limited to, Earth-Moving Activities, Construction/Demolition Activities, or heavy- and light-duty vehicular movement.

(2) "Agricultural Operation" – The growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. Agricultural Operations do not include activities involving the processing or distribution of crops or fowl.

(3) "Air Pollution Control Officer (APCO)" – The person appointed to the position of Air Pollution Control Officer pursuant to the provisions of Health and Safety Code §40750 and his or her designee.

(4) "Anemometers" – Devices used to measure wind speed and direction.

(5) "Bulk Material" – Sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic Particulate Matter.

(6) "Chemical Stabilizers" – Any non-toxic chemical Dust Suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the United States Environmental Protection Agency, or any applicable law, rule or regulation; and should meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic Chemical Stabilizer shall be of sufficient concentration and application frequency to maintain a Stabilized Surface.

(7) "Construction/Demolition Activities" – Any on-site mechanical activities preparatory to or related to the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities; grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(8) "Contractor" – Any person who has a contractual arrangement to conduct an active operation for another person.

(9) "Disturbed Surface Area" – A portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of Fugitive Dust. This definition excludes those areas which have:

(a) Been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(b) Been paved or otherwise covered by a permanent structure; or

(c) Sustained a vegetative ground cover over at least 70 percent of an area for a period of at least six months.

(10) "Dust Control Plan (DCP)" – A District-approved document that describes what measures will be taken at a location to comply with this rule, prepared in accordance with section (D).

(11) "Dust Suppressants" – Water, hygroscopic materials, or non-toxic Chemical Stabilizers used as a treatment material to reduce Fugitive Dust emissions.

(12) "Earth-Moving Activities" – The use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or Bulk Materials, adding to or removing from Open Storage Piles of Bulk Materials, landfill operations, weed abatement through disking, and soil mulching.

(13) "Fugitive Dust" – Any solid Particulate Matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man.

(14) "High Wind Conditions" – Instantaneous wind speeds (gusts) which exceed 25 miles per hour.

(15) "Inactive Disturbed Surface Area" – Any Disturbed Surface Area upon which Active Operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(16) "Non-Routine" – Any non-periodic active operation which occurs no more than three times per year, lasts less than 30 cumulative days per year, and is scheduled less than 30 days in advance.

(17) "Open Storage Pile" – Any accumulation of Bulk Material with five percent or greater Silt content which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet. Silt content level is assumed to be five percent or greater unless a person can show, by sampling and analysis in accordance with ASTM Method C-136 or other equivalent method approved in writing by the APCO and the California Air Resources Board, that the Silt content is less than five percent. The results of ASTM Method C-136 or equivalent method are valid for 60 days from the date the sample was taken.

(18) "Particulate Matter" – Any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(19) "Paved Road" – An improved street, highway, alley, public way, or easement that is covered by typical roadway materials excluding access roadways that connect a facility with a public Paved Road and are not open to through traffic. Public Paved Roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private Paved Roads are any Paved Roads not defined as public.

(20) "PM_{10}" – Particulate Matter with an aerodynamic diameter smaller than or equal to ten microns as measured by the applicable state and federal reference test methods.

(21) "Property Line" – The boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the Property Line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(22) "Silt" – Any aggregate material with a particle size less than 74 micrometers in diameter which passes through a No. 200 sieve.

(23) "Simultaneous Sampling" – The operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(24) "Stabilized Surface" – Any previously Disturbed Surface Area or Open Storage Pile which, through the application of Dust Suppressants, shows visual or other evidence of surface crusting and is resistant to Wind-Driven Fugitive Dust and is demonstrated to be stabilized and where Visible Dust Emissions are limited to 20 percent opacity. Chemical treatment must be performed with a substance not disapproved for such use by the applicable Regional Water Quality Control Board.

(25) "Track-out" – Any Bulk Material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(26) "Unpaved Roads" – Any unsealed or earthen roads, equipment paths, or travel ways that are not covered by one of the following: concrete, asphaltic concrete, recycled asphalt, or asphalt.

(27) "United States Environmental Protection Agency (USEPA)" – Refers to the Administrator or the appropriate designee of the United States Environmental Protection Agency.

(28) "Visible Dust Emissions (VDE)" – Any dust emissions that are visible to an observer.

(29) "Wind-Driven Fugitive Dust" – Visible emissions from any Disturbed Surface Area which is generated by wind action alone.

(30) "Wind Gust" – The maximum instantaneous wind speed as measured by an Anemometer.

(C) Requirements

(1) A person shall not cause or allow the emissions of Fugitive Dust from:

(a) Any Active Operation, Open Storage Pile, or Disturbed Surface Area such that the presence of such dust remains visible in the atmosphere beyond the Property Line of the emission source; or

(b) Any applicable source such that the dust causes 20 percent opacity or greater during each observation and the total duration of such observations (not necessarily consecutive) is a cumulative three minutes or more in any one hour. Only opacity readings from a single source shall be included in the cumulative total used to determine compliance.

(2) A person shall not cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by Simultaneous Sampling, as the difference between upwind and downwind samples collected on high-volume Particulate Matter samplers or other USEPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(a) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate USEPA-published documents for USEPA-approved equivalent method(s) for PM_{10}.

(b) Reasonably placed upwind and downwind of key activity areas and as close to the Property Line as feasible, such that other sources of Fugitive Dust between the sampler and the Property Line are minimized.

(3) Track-out Operations

(a) A person shall not allow Track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation.

Notwithstanding the preceding, all Track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(b) A person shall not conduct an Active Operation with a Disturbed Surface Area of five or more acres, or with a daily import or export of 100 cubic yards or more of Bulk Material without utilizing at least one of the measures listed in subparagraphs (C)(3)(b)(i) through (C)(3)(b)(v) at each vehicle egress from the site to a paved public road.

(i) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long;

(ii) Pave or apply chemical stabilization at sufficient concentration and frequency to maintain a Stabilized Surface starting from the point of intersection with the public paved surface, and extending at least 100 feet and at least 20 feet wide;

(iii) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and ten feet wide to remove Bulk Material from tires and vehicle undercarriages before vehicles exit the site;

(iv) Install and utilize a wheel washing system to remove Bulk Material from tires and vehicle undercarriages before vehicles exit the site; or

(v) Any other control measure approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(3)(b)(i) through (C)(3)(b)(iv).

(4) Earth-Moving Operations

(a) A person shall not conduct an Active Operation of Construction, excavation, extraction and other Earth-Moving Activities with a Disturbed Surface Area of five or more acres, or with a daily import or export of 100 cubic yards or more of Bulk Material without utilizing at least one of the measures listed for each of the operation stages specified in subparagraphs (C)(4)(a)(i) through (C)(4)(a)(iv).

(i) Pre-activity:

a. Pre-water site sufficient to limit VDE to 20 percent opacity; and
b. Phase work to reduce the amount of Disturbed Surface Area at any one time

(ii) During Active Operations:

a. Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
b. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity. If utilizing wind barriers, control measure (a) above shall also be implemented; or
c. Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20 percent opacity and meet the requirements of section (C)(9).

(iii) Temporary Stabilization During Periods of Inactivity:

a. Restrict vehicular access to the area; and
b. Apply water or chemical/organic stabilizers/suppressants, sufficient to limit VDE to 20 percent opacity, or to comply with the conditions of a Stabilized Surface. If an area having one-half acres or more of Disturbed Surface Area remains unused for seven or more days, the area must comply with the conditions for a Stabilized Surface area.

(iv) Any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(4)(a)(i) through(C)(4)(a)(iii).

(5) Demolition Operations

(a) A person shall implement the requirements of (C)(5)(a)(i) through (C)(5)(a)(v) when using wrecking balls or other wrecking equipment to raze or demolish buildings:

(i) Apply sufficient water to building exterior surfaces and razed building materials to limit VDE to 20 percent opacity throughout the duration of razing and demolition activities;
(ii) Apply sufficient Dust Suppressants to unpaved surface areas where materials from razing or demolition activities will fall, or where wrecking or hauling equipment will be operated, in order to limit VDE to 20 percent opacity;
(iii) Handling, storage, and transport of Bulk Materials on-site or off-site resulting from the demolition or razing of buildings shall comply with the requirements specified in section (C)(6);
(iv) Prevention and removal of carryout or Track-out on paved public access roads from demolition operations shall be performed in accordance with (C)(3); or
(v) Any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(5)(a)(i) through (C)(5)(a)(iv).

(6) Bulk Material Operations

(a) No person shall conduct an active operation of handling Bulk Material with a daily import or export of 100 cubic yards or more of Bulk Material without utilizing at least one of the measures listed for each of the operation stages specified in subparagraphs (C)(6)(a)(i) through (C)(6)(a)(vi):

(i) Handling of Bulk Materials:

a. When handling Bulk Materials, apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity; or
b. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity and with less than 50 percent porosity. If utilizing fences or wind barriers, control measure (C)(6)(a)(i)[a.] shall also be implemented.

(ii) Storage of Bulk Materials:

a. When storing Bulk Materials, comply with the conditions for a Stabilized Surface;
b. Cover Bulk Materials stored outdoors with tarps, plastic, or other suitable material and anchor in such a manner that prevents the cover from being removed by wind action;
c. Construct and maintain wind barriers sufficient to limit VDE to 20 percent opacity and with less than 50 percent porosity. If utilizing fences or wind barriers, apply water or chemical/organic stabilizers/suppressants to limit VDE to 20 percent opacity;
d. Utilize a three-sided structure with a height at least equal to the height of the storage pile and with less than 50 percent porosity; or
e. Installation of wind breaks of such design so as to reduce maximum Wind Gusts to less than 25 miles per hour in the area of the Bulk Material deposits.

(iii) On-site Transporting of Bulk Materials:

a. Limit vehicular speed while traveling on the work site sufficient to limit VDE to 20 percent opacity;
b. Load all haul trucks such that the freeboard is not less than six inches when material is transported across any paved public access road sufficient to limit VDE to 20 percent opacity;
c. Apply water to the top of the load sufficient to limit VDE to 20 percent opacity; or
d. Cover haul trucks with a tarp or other suitable cover.

(iv) Off-site Transporting of Bulk Materials:

a. Clean the interior of the cargo compartment or cover the cargo compartment before the empty truck leaves the site;
b. Prevent spillage or loss of Bulk Material from holes or other openings in the cargo compartment's floor, sides, and/or tailgate; and
c. Load all haul trucks such that the freeboard is not less than six inches when material is transported on any paved public access road, and apply water to the top of the load sufficient to limit VDE to 20 percent opacity; or cover haul trucks with a tarp or other suitable cover.

(v) Outdoor Transport of Bulk Materials With a Chute or Conveyor:

a. Fully enclose the chute or conveyor;
b. Operate water spray equipment that sufficiently wets materials to limit VDE to 20 percent opacity; or
c. Wash separated or screened materials to remove conveyed materials having an aerodynamic diameter of ten microns or less sufficient to limit VDE to 20 percent opacity.

(vi) Any other control measures approved by the APCO and USEPA as equivalent to the methods specified in subparagraphs (C)(6)(a)(i) through(C)(6)(a)(v).

(7) Disturbed Open Area of Three or More Acres

(a) An owner/operator of an open area with a Disturbed Surface of three or more acres that has remained undeveloped, unoccupied, unused, or vacant for more than seven days shall do at least one of the following:

(i) Apply and maintain water or Dust Suppressant(s) to all unvegetated areas sufficient to limit VDE to 20 percent opacity;
(ii) Establish vegetation on all previously disturbed areas sufficient to limit VDE to 20 percent opacity;
(iii) Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
(iv) Upon evidence of trespass, prevent unauthorized vehicle access by posting "No Trespassing" signs or installing physical barriers such as fences, gates, posts, and/or other appropriate barriers to effectively prevent access to the area; or
(v) Any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in subparagraphs (C)(7)(a)(i) through(C)(7)(a)(iv).

(8) Unpaved Roads at Industrial or Commercial Facilities

(a) An owner/operator of an Unpaved Road at an industrial or commercial facility shall limit VDE to 20 percent opacity from the Unpaved Road segment by application and/or maintenance of at least one of the following control measures, or shall implement an APCO approved Dust Control Plan:

(i) Apply and maintain water or Dust Suppressant(s) sufficient to limit VDE to 20 percent opacity;
(ii) Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
(iii) Restrict vehicle speed to 15 miles per hour; or
(iv) Any other method that effectively limits VDE to 20 percent opacity and results in a stabilized Unpaved Road surface.

(9) Unpaved Vehicle/Equipment Traffic Area

(a) An owner/operator of an unpaved vehicle/equipment traffic area shall limit VDE to 20 percent opacity from the unpaved vehicle/equipment traffic area by application and/or maintenance of at least one of the following control measures, or shall implement an APCO approved Dust Control Plan:

(i) Apply and maintain water or Dust Suppressant(s) sufficient to limit VDE to 20 percent opacity;
(ii) Pave, apply and maintain gravel, or apply and maintain chemical/organic stabilizers/suppressants sufficient to limit VDE to 20 percent opacity;
(iii) Restrict vehicle speed to 15 miles per hour;
(iv) An owner/operator shall restrict access and periodically stabilize a Disturbed Surface Area whenever a site becomes an Inactive Disturbed Surface Area to comply with the conditions for a Stabilized Surface; or
(v) Any other method that effectively limits VDE to 20 percent opacity and results in a Stabilized Surface.

(10) A person performing Earth-Moving Activities during High Wind Conditions shall:

(a) Cease all Active Operations; or

(b) Apply water to soil not more than 15 minutes prior to moving such soil to limit VDE to 20 percent opacity.

(11) The owner/operator of Disturbed Surface Areas during High Wind Conditions shall:

(a) Apply water with a mixture of Chemical Stabilizer diluted to not less than 1/20 of the concentration required to maintain a Stabilized Surface for a period of six months only on the last day of Active Operations prior to a weekend, holiday, or any other period when Active Operations will not occur for not more than four consecutive days;

(b) Apply Chemical Stabilizers prior to high wind event;

(c) Apply water to all unstabilized Disturbed Areas three times per day. Watering frequency should be increased to a minimum of four times per day if there is any evidence of visible Wind-Driven Fugitive Dust;

(d) Establish a vegetative ground cover within 30 days after Active Operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter;

(e) Apply Chemical Stabilizers within seven working days of grading completion; or

(f) Utilize any combination of control actions listed such that, in total, these actions apply to all Disturbed Surface Areas.

(12) Owners/operators of Unpaved Roads during high winds shall:

(a) Apply Chemical Stabilizers prior to wind event;

(b) Apply water once per hour during active operation; or

(c) Stop all vehicular traffic.

(13) Owners/operators of Open Storage Piles during high winds shall:

(a) Apply Chemical Stabilizers;

(b) Apply water to at lest 70 percent of the surface area of all Open Storage Piles on a daily basis when there is evidence of Wind-Driven Fugitive Dust;

(c) Install temporary coverings; or

(d) Install a three sided enclosure which will extend, at a minimum, to the top of the pile.

(14) Owners/operators of all categories during high winds shall:

(a) Use any other control measures approved by the APCO and the USEPA as equivalent to the methods specified in section (C).

(D) Dust Control Plan

(1) An owner/operator shall submit a Dust Control Plan (DCP) to the APCO prior to the start of any construction activity on any site that will include ten acres or more of Disturbed Surface Area for residential developments, or five acres or more of Disturbed Surface Area for non-residential development, or will include moving, depositing, or relocating more than 2,500 cubic yards per day of Bulk Materials on at least three days. Construction activities shall not commence until the APCO has approved or conditionally approved the DCP. An owner/operator shall provide written notification to the APCO within ten days prior to the commencement of Earth-Moving Activities via fax or mail. The requirement to submit a DCP shall apply to all such activities conducted for residential and non-residential (e.g., commercial, industrial, or institutional) purposes or conducted by any governmental entity.

(a) Install and maintain project signage with project contact prior to initiating any Earth-Moving Activities that;

(i) Identifies phone numbers for dust complaints; and
(ii) Meets minimum standards of Rule 403, Appendix "A".

(b) An owner/operator may submit one DCP covering multiple projects at different sites where construction will commence within the next 12 months provided the DCP includes each project size, location, and types of activities to be performed. The DCP shall specify the expected start and completion date of each project.

(c) The DCP shall describe all Fugitive Dust control measures to be implemented before, during, and after any dust generating activity.

(d) A DCP shall contain all the information described in section (D)(1)(h)(i) through (D)(1)(h)(viii). The APCO shall approve, disapprove, or conditionally approve the DCP within ten days of DCP submittal. A DCP is deemed automatically approved if, after ten days following receipt by the District, the District does not provide any comments to the owner/operator regarding the DCP.

(e) An owner/operator shall submit a copy of a DCP approval letter to the building and safety authority prior to issuance of a grading permit.

(f) An owner/operator shall retain a copy of an approved DCP at the project site. The approved DCP shall remain valid until the termination of all dust generating activities. Failure to comply with the provisions of an approved DCP is deemed to be a violation of this rule. Regardless of whether an approved DCP is in place or not, or even when the owner/operator responsible for the DCP is complying with an approved DCP, the owner/operator is still subject to comply with all requirements of Rule 403 at all times.

(g) An owner/operator shall maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the APCO upon request.

(h) A DCP shall contain all of the following information:

(i) Name(s), address(es), and phone number(s) of person(s) and owner(s)/operator(s) responsible for the preparation, submittal, and implementation of the DCP and responsible for the dust generating operation and the application of dust control measures.

(ii) A plot plan which shows the type and location of each project.

(iii) The total area of land surface to be disturbed, daily throughput volume of earthmoving in cubic yards, and total area in acres of the entire project site.

(iv) The expected start and completion dates of dust generating and soil disturbance activities to be performed on the site.

(v) The actual and potential sources of Fugitive Dust emissions on the site and the location of Bulk Material handling and storage areas, paved and Unpaved Roads; entrances and exits where carryout/Track-out may occur; and traffic areas.

(vi) Dust Suppressants to be applied, including: product specifications; manufacturer's usage instructions (method, frequency, and intensity of application); type, number, and capacity of application equipment; and information on environmental impacts and approvals or certifications related to appropriate and safe use for ground application.

(vii) Specific surface treatment(s) and/or control measures utilized to control material carryout, Track-out, and sedimentation where unpaved and/or access points join paved public access roads.

(viii) Identify a dust control supervisor that:

a. Is employed by or contracted with the property owner or developer;
b. Is on the site or available on-site within 30 minutes during working hours;
c. Has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with Rule requirements; and
d. Has completed the AVAQMD Fugitive Dust Control Class and has been issued a valid Certification of Completion for the class.

(i) Notify the APCO in writing within 30 days after the site no longer qualifies as an active operation.

(j) Any approved DCP shall be valid for a period of one year from the date of approval or conditional approval of the DCP. DCPs must be resubmitted annually, at least 60 days prior to the expiration date, or the DCP shall become disapproved as of the expiration date. If all Fugitive Dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously approved DCP, the resubmittal may contain a simple statement of no-change. Otherwise, a resubmittal must contain all the items specified in subparagraphs (D)(1)(h).

(E) Compliance Schedule

All the newly amended provisions of this rule shall become effective upon adoption of this rule amendment.

(F) Exemptions

(1) The provisions of this rule shall not apply to:

(a) Agricultural Operations.

(b) Unpaved Roads not part of an industrial or commercial facility.

(c) Any Disturbed Surface Area less than one-half acre on property zoned for residential uses.

(d) Active Operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(e) Active Operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(f) Any Contractor subsequent to the time the contract ends, provided that such Contractor implemented the required control measures during the contractual period.

(g) Any grading Contractor, for a phase of Active Operations, subsequent to the contractual completion of that phase of Earth-Moving Activities, provided that the required control measures have been implemented during the entire phase of Earth-Moving Activities, through and including five days after the final grading inspection.

(h) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) Mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) Any disking or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in (F)(1)(h)(i). The provisions of this clause shall not exempt the owner of any property from stabilizing Disturbed Surface Areas which have been created as a result of the weed abatement actions.

(i) Blasting operations which have been permitted by the California Division of Industrial Safety.

(j) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the APCO must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(2) The provisions of paragraphs (C)(1) through (C)(14) shall not apply:

(a) When high winds exceed 25 miles per hour, provided that:

(i) The required control measures for High Wind Conditions are implemented for each applicable Fugitive Dust source type, as specified in section (C)(10) through (C)(14);

(ii) Maintain daily records to document the specific actions taken;

(iii) Maintain such records for a period of not less than six months; and

(iv) Make such records available to the APCO upon request.

(b) To Unpaved Roads, provided such roads:

(i) Are used solely for the maintenance of wind-generating equipment; or

(ii) Meet all of the following criteria:

a. Are less than 50 feet in width at all points along the road;

b. Are within 25 feet of the Property Line; and

c. Have a traffic volume less than 20 vehicle-trips per day.

(c) To any Active Operation, Open Storage Pile, or Disturbed Surface Area for which necessary Fugitive Dust preventive or mitigative actions are in conflict with the federal Endangered Species Act.

(d) To Non-routine or emergency maintenance of flood control channels and water spreading basins.

(4) The provisions of section (C)(3) shall not apply to earth coverings of public Paved Roads where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles.

(5) The provisions of section (D) shall not apply to:

(a) Officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(G) Fees

(1) Any person subject to a Dust Control Plan submittal pursuant to section (D) shall be assessed applicable filing and evaluation fees pursuant to Rule 306.

(2) The submittal of an annual statement of no-change, pursuant to section (D)(1)(i), shall not be considered as an annual review, and therefore shall not be subject to annual review fees, pursuant to Rule 306.

(3) The owner/operator of any facility for which the APCO conducts upwind/downwind monitoring for PM_{10} pursuant to section (C)(2) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1.

[SIP: Submitted as amended mm/dd/yy on mm/dd/yy; Submitted as amended 2/14/97 on 8/1/97; Submitted as amended 7/9/93 on 7/13/94; Approved 9/8/78, 43 FR 40011, 40 CFR 52.220(c)(39)(iii)(C); Approved 6/14/78, 43 FR 25684, 40 CFR 52.220(c)(32)(iv)(A)]

Appendix "A"

CONSTRUCTION SITE SIGNAGE GUIDELINES
(Minimum Requirements)

The purpose of this signage is to allow the public to contact the responsible party if Visible Dust Emissions or Track-out of material is observed from a construction site.

Project size	≥ Ten Acres
Sign size	48" x 96"

Sign Template

Permit # (if applicable)	4"
Site Name	4"
Project Name / Tract # # # #	4"
IF YOU SEE DUST COMING FROM THIS PROJECT CALL	4"
Name, Phone Number(XXX) XXX-XXXX	6"
If you do not receive a response, Please call The Antelope Valley AQMD at 1-877-723-8070	3"

Notes:

Signage must be located within 50 feet of each project site entrance.

No more than four signs are required per site/facility.

One sign is sufficient for multiple site entrances located within 300 yards of each other.

Text height shall be at a minimum as shown on right side of sign template above.

Sign background must contrast with lettering, typically black text with white background.

Sign should be one inch AC laminated plywood board.

The lower edge of the sign board must be a minimum of six feet and a maximum of seven feet above grade.

The telephone number listed for the contact must be a local or a toll-free number and shall be accessible 24 hours per day.

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

RULE 403 -- FUGITIVE DUST

(Adopted: May 7, 1976)(Amended: November 6, 1992, July 9, 1993, February 14, 1997, December 11, 1998, April 2, 2004, June 3, 2005)

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

(1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.

(2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.

(3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.

(4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.

(5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

(6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.

(7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.

(8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.

(9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.

(10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.

(11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.

(12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.

(13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.

(14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:

(A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;

(B) been paved or otherwise covered by a permanent structure; or

(C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.

(15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.

(16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.

(17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.

(18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.

(19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.

(20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.

(21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

meters (5,000 cubic yards) or more three times during the most recent 365-day period.

(22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.

(23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.

(24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.

(25) PM_{10} means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.

(26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.

(27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.

(28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.

(29) SIMULTANEOUS SAMPLING means the operation of two PM_{10} samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.

(30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

(31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.

(32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.

(34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.

(35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.

(36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.

(37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

(d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

(A) the dust remains visible in the atmosphere beyond the property line of the emission source; or

(B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.

(2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.

(3) No person shall cause or allow PM_{10} levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM_{10} monitoring. If sampling is conducted, samplers shall be:

(A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM_{10}.

(B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.

(4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.

(5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.

(A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

(B) Pave the surface extending at least 100 feet and at least 20 feet wide.

(C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.

(E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).

(6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

(e) Additional Requirements for Large Operations

(1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:

(A) submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;

(B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;

(C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

(D) install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;

(E) identify a dust control supervisor that:

(i) is employed by or contracted with the property owner or developer;

(ii) is on the site or available on-site within 30 minutes during working hours;

(iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;

(iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and

(F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).

(2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

(f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

(g) Exemptions

(1) The provisions of this Rule shall not apply to:

(A) Dairy farms.

(B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.

(C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.

(D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:

(i) voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and

(ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and

(iii) makes the completed self-monitoring form available to the Executive Officer upon request.

(F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.

(G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.

(H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.

(I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earth-moving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.

(J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:

(i) mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil; and

(ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.

(K) sandblasting operations.

(2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:

(A) When wind gusts exceed 25 miles per hour, provided that:

(i) The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;

(ii) records are maintained in accordance with subparagraph (e)(1)(C).

(B) To unpaved roads, provided such roads:

(i) are used solely for the maintenance of wind-generating equipment; or

(ii) are unpaved public alleys as defined in Rule 1186; or

(iii) are service roads that meet all of the following criteria:

(a) are less than 50 feet in width at all points along the road;

(b) are within 25 feet of the property line; and

(c) have a traffic volume less than 20 vehicle-trips per day.

(C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.

(3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.

(4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:

(A) Blasting operations which have been permitted by the California Division of Industrial Safety; and

(B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.

(5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).

(6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.

(7) The provisions of subdivision (e) shall not apply to:

(A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.

(B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a District-approved dust control ordinance.

(C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.

(8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.

(h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for PM_{10} pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	✓ Mix backfill soil with water prior to moving ✓ Dedicate water truck or high capacity hose to backfilling equipment ✓ Empty loader bucket slowly so that no dust plumes are generated ✓ Minimize drop height from loader bucket
Clearing and grubbing	02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and 02-2 Stabilize soil during clearing and grubbing activities; and 02-3 Stabilize soil immediately after clearing and grubbing activities.	✓ Maintain live perennial vegetation where possible ✓ Apply water in sufficient quantity to prevent generation of dust plumes
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	✓ Follow permit conditions for crushing equipment ✓ Pre-water material prior to loading into crusher ✓ Monitor crusher emissions opacity ✓ Apply water to crushed material to prevent dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration ✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	✓ Limit vehicular traffic and disturbances on soils where possible ✓ If interior block walls are planned, install as early as possible ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	✓ Grade each project phase separately, timed to coincide with construction phase ✓ Upwind fencing can prevent material movement on site ✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	09-1 Stabilize material while loading to reduce fugitive dust emissions; and 09-2 Maintain at least six inches of freeboard on haul vehicles; and 09-3 Stabilize material while transporting to reduce fugitive dust emissions; and 09-4 Stabilize material while unloading to reduce fugitive dust emissions; and 09-5 Comply with Vehicle Code Section 23114.	✓ Use tarps or other suitable enclosures on haul trucks ✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage ✓ Comply with track-out prevention/mitigation requirements ✓ Provide water while loading and unloading to reduce visible dust plumes
Landscaping	10-1 Stabilize soils, materials, slopes	✓ Apply water to materials to stabilize ✓ Maintain materials in a crusted condition ✓ Maintain effective cover over materials ✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes ✓ Hydroseed prior to rain season
Road shoulder maintenance	11-1 Apply water to unpaved shoulders prior to clearing; and 11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs ✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Screening	12-1 Pre-water material prior to screening; and 12-2 Limit fugitive dust emissions to opacity and plume length standards; and 12-3 Stabilize material immediately after screening.	✓ Dedicate water truck or high capacity hose to screening operation ✓ Drop material through the screen slowly and minimize drop height ✓ Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point
Staging areas	13-1 Stabilize staging areas during use; and 13-2 Stabilize staging area soils at project completion.	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	14-1 Stabilize stockpiled materials. 14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	✓ Add or remove material from the downwind portion of the storage pile ✓ Maintain storage piles to avoid steep sides or faces

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	15-1 Stabilize all off-road traffic and parking areas; and 15-2 Stabilize all haul routes; and 15-3 Direct construction traffic over established haul routes.	✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas ✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes
Trenching	16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and 16-2 Stabilize soils at the completion of trenching activities.	✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching ✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	✓ Empty loader bucket such that no visible dust plumes are created ✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

TABLE 1
BEST AVAILABLE CONTROL MEASURES
(Applicable to All Construction Activity Sources)

Source Category	Control Measure	Guidance
Unpaved roads/parking lots	19-1 Stabilize soils to meet the applicable performance standards; and 19-2 Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	✓ Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements
Vacant land	20-1 In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR
	(2d)	Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR
	(3b)	Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR
	(3c)	Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR
	(3d)	Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

FUGITIVE DUST SOURCE CATEGORY	CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.
Open storage piles	(5a)	Apply chemical stabilizers; OR
	(5b)	Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR
	(5c)	Install temporary coverings; OR
	(5d)	Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

FUGITIVE DUST SOURCE CATEGORY	CONTROL MEASURES
Earth-moving	(1A) Cease all active operations; OR (2A) Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B) On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR (1B) Apply chemical stabilizers prior to wind event; OR (2B) Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR (3B) Take the actions specified in Table 2, Item (3c); OR (4B) Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C) Apply chemical stabilizers prior to wind event; OR (2C) Apply water twice per hour during active operation; OR (3C) Stop all vehicular traffic.
Open storage piles	(1D) Apply water twice per hour; OR (2D) Install temporary coverings.
Paved road track-out	(1E) Cover all haul vehicles; OR (2E) Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

Table 4
(Conservation Management Practices for Confined Animal Facilities)

SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling **(Only applicable to Commercial Poultry Ranches)**	(1a) Cover manure prior to removing material off-site; AND (1b) Spread the manure before 11:00 AM and when wind conditions are less than 25 miles per hour; AND (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d). (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR (3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR (3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.
Unpaved Roads	(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR (4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR (4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.
Equipment Parking Areas	(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR (5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

Appendix B

Attendance Roster

Coccidioidomycosis (Valley Fever) Management Plan Guidelines for Employers

Attendance Roster of Employees

Date	Name	Title	Comments

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

Appendix C

Educational Brochures

Preventing Work-Related Coccidioidomycosis (Valley Fever)

Valley Fever is an illness that usually affects the lungs. It is caused by the fungus *Coccidioides immitis* that lives in soil in many parts of California. When soil containing the fungus is disturbed by digging, vehicles, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get Valley Fever.

Is Valley Fever a serious concern in California? YES!

Often people can be infected and not have any symptoms. In some cases, however, a serious illness can develop which can cause a previously healthy individual to miss work, have long-lasting and disabling health problems, or even result in death.

This fact sheet describes actions employers can take to prevent workers from getting Valley Fever and to respond appropriately if an employee does become ill.

In October 2007, a construction crew excavated a trench for a new water pipe. Within three weeks, 10 of 12 crew members developed coccidioidomycosis (Valley Fever), an illness with pneumonia and flu-like symptoms. Seven of the 10 had abnormal chest x-rays, four had rashes, and one had an infection that had spread beyond his lungs and affected his skin. Over the next few months, the 10 ill crew members missed at least 1660 hours of work and two workers were on disability for at least five months.

FACT SHEET HESIS

HAZARD EVALUATION SYSTEM & INFORMATION SERVICE
California Department of Public Health, Occupational Health Branch
850 Marina Bay Parkway, Building P, 3rd Floor, Richmond, CA 94804
510-620-5757 • www.cdph.ca.gov/programs/ohb

JUNE 2013

California Department of Public Health • California Department of Industrial Relations

How do workers get Valley Fever?

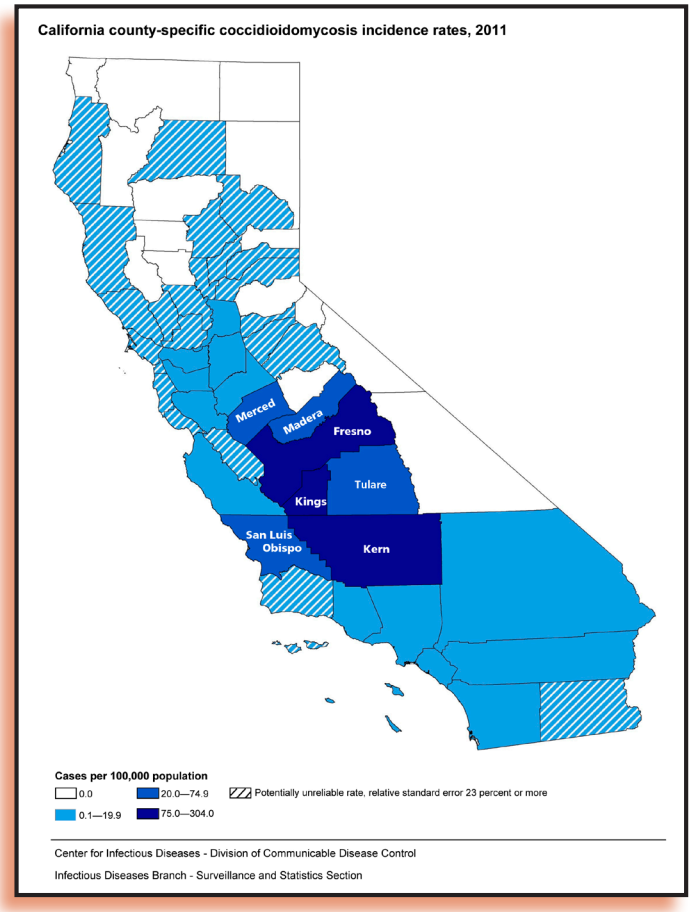
In California, Valley Fever is caused by the fungus *Coccidioides immitis* that lives in the top two to 12 inches of soil in many parts of the state. When soil containing this fungus is disturbed by activities such as digging, vehicles, or by the wind, the fungal spores get into the air. When people breathe the spores into their lungs, they may get Valley Fever. Fungal spores are small particles that can grow and reproduce in the body. The illness is not spread from one person to another.

How do employers know if the fungus is present in soil at their worksites?

The Valley Fever fungal spores are too small to be seen by the naked eye, and there is no reliable way to test the soil for spores before working in a particular place. Some California counties consistently have the Valley Fever fungus present in the soil. In these regions Valley Fever is considered endemic. Health departments track the number of cases of Valley Fever illness that occur. This information is used to map illness rates as seen on the figure above. Employers can contact their local health department for more information about the risk in their counties.

Where do people get Valley Fever?

Highly endemic counties, i.e., those with the highest rates of Valley Fever (more than 20 cases per 100,000 population per year), are Fresno, Kern, Kings, Madera, Merced, San Luis Obispo, and Tulare. Other counties or parts of counties also have the fungus present.



California county-specific coccidioidomycosis incidence rates, 2011

Who is at risk for Valley Fever?

Workers who disturb the soil by digging, operating earth-moving equipment, driving vehicles, or working in dusty, wind-blown areas are more likely to breathe in spores and become infected. Some occupations at higher risk for Valley Fever include:

- Construction workers, including road-building and excavation crews
- Archeologists
- Geologists
- Wildland firefighters
- Military personnel
- Workers in mining, quarrying, gas and oil extraction jobs
- Agricultural workers*

* Cultivated, irrigated soil may be less likely to contain the fungus compared to undisturbed soils.

Anyone, even healthy young people, can get Valley Fever. Once a person has had Valley Fever, their body may develop some immunity against future infections.

How does Valley Fever affect health?

- Experiments on laboratory animals indicate that a very small dose, 10 spores or fewer, may cause an infection.
- After breathing in the spores, the following can happen:
  - In about 60% of cases, symptoms are mild or not present.
  - In about 40% of cases, symptoms vary from moderate to severe. Usually symptoms are those of a flu-like illness that may last up to a month but goes away on its own. However, some people develop pneumonia (at times severe).
  - In a small proportion of cases (about 5%), disease spreads outside of the lungs causing very serious illness. Parts of the body that may be affected include the brain (meningitis), bones, joints, skin, or other organs. This is called ***disseminated Valley Fever*** (or disseminated coccidioidomycosis).
- People who are more likely to have severe or disseminated Valley Fever include those who have weakened immune systems, such as people who are HIV positive, have AIDS, cancer, or diabetes; who smoke; or who are pregnant. People of African and Filipino descent are much more likely to get disseminated disease; however, others can get disseminated disease, too.

Earth-moving equipment may stir up spores

What are signs or symptoms of Valley Fever?

When present, symptoms usually occur between seven to 21 days after breathing in spores, and can include:

- Cough
- Fever
- Chest pain
- Headache
- Muscle aches
- Rash on upper trunk or extremities
- Joint pain in the knees or ankles
- Fatigue.

Symptoms of Valley Fever can be mistaken for other diseases such as the flu (influenza) and TB (tuberculosis), so it is important for workers to obtain medical care for an accurate diagnosis and possible treatment.

Disseminated Valley Fever

Dissemination refers to spread of infection beyond the lungs to other parts of the body. With Valley Fever this usually occurs within the first six to 12 months after the initial illness.

Signs or symptoms of disseminated Valley Fever may vary but usually consist of some combination of the following:

- Fever
- Raised skin lesions with irregular surfaces
- Lymph node swelling, especially in the neck
- Pain and swelling in one or more joints
- Recurrent, persistent, new headaches (may be mild)
- Stiff neck.

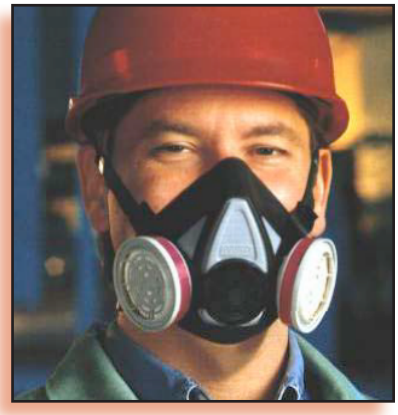
Preventing Valley Fever exposure

There is no vaccine to prevent Valley Fever. Employers can reduce worker exposure by incorporating the following elements into the company's Injury and Illness Prevention Program and project-specific health and safety plans:

1. Determine if the worksite is in an area where Valley Fever is endemic (consistently present). Check with your local health department to determine whether cases have been known to occur in the proximity of your work area. See the map on page 2 to determine whether your company will be working in an endemic county.
2. Train workers and supervisors on the location of Valley Fever endemic areas, how to recognize symptoms of illness (see page 3), and ways to minimize exposure. Encourage workers to report respiratory symptoms that last more than a week to a crew leader, foreman, or supervisor.
3. Limit workers' exposure to outdoor dust in disease-endemic areas. For example, suspend work during heavy wind or dust storms and minimize amount of soil disturbed.
4. When soil will be disturbed by heavy equipment or vehicles, wet the soil before disturbing it and continuously wet it while digging to keep dust levels down.
5. Heavy equipment, trucks, and other vehicles generate heavy dust. Provide vehicles with enclosed, air-conditioned cabs and make sure workers keep the windows closed. Heavy equipment cabs should be equipped with high efficiency particulate air (HEPA) filters. Two-way radios can be used for communication so that the windows can remain closed but allow communication with other workers.
6. Consult the local Air Pollution Control District regarding effective measures to control dust during construction. Measures may include seeding and using soil binders or paving and laying building pads as soon as possible after grading.
7. When digging a trench or fire line or performing other soil-disturbing tasks, position workers upwind when possible.
8. Place overnight camps, especially sleeping quarters and dining halls, away from sources of dust such as roadways.

PAPR with helmet (APF=1000)

Full-face respirator (APF=50)



Half-mask respirator (APF=10)

9. When exposure to dust is unavoidable, provide NIOSH-approved ***respiratory protection*** with particulate filters rated as N95, N99, N100, P100, or HEPA. Household materials such as washcloths, bandanas, and handkerchiefs do not protect workers from breathing in dust and spores.

Respirators for employees must be used within a Cal/OSHA compliant respiratory protection program that covers all respirator wearers and includes medical clearance to wear a respirator, fit testing, training, and procedures for cleaning and maintaining respirators.

Different classes of respirators provide different levels of protection according to their Assigned Protection Factor (APF) (see table below). Powered air-purifying respirators (PAPRs) have a battery-powered blower that pulls air in through filters to clean it before delivering it to the wearer's breathing zone. PAPRs will provide a high level of worker protection, with an APF of 25 or 1000 depending on the model. When PAPRs are not available, provide a well-fitted NIOSH-approved full-face or half-mask respirator with particulate filters.

Fit-tested half-mask or filtering facepiece respirators are expected to reduce exposure by 90% (still allowing about 10% faceseal leakage), which can result in an unacceptable risk of infection when digging where Valley Fever spores are present.

The table below shows the relative effectiveness of various types of respirators for particles of dust and spores.

Respiratory Protection for Reducing Dust and Spore Exposure

	Respirator Type (worn with particulate filters)	**Assigned Protection Factor (APF)**	**Expected Reduction of Exposure to Dust and Spores (%)**
	No respirator	None	0
Increasing Protection ↓	Half-mask respirator (elastomeric or filtering facepiece)	10	90
	Powered air-purifying respirator with loose-fitting face covering	25	96
	Full-face respirator	50	98
	Some powered air-purifying respirators are designed to offer higher protection (check with manufacturer)	1000	99.9

Preventing transport of spores

- **Clean tools, equipment, and vehicles with water to remove soil before transporting offsite** so that any spores present won't be re-suspended in air and inhaled at a later time.
- **Provide workers with coveralls or disposable Tyvek™ daily.** At the end of the work day, require workers to remove their work clothes at the worksite.
- **Keep street clothes and work clothes separate by providing separate lockers or other storage areas.** If possible, store work boots at the worksite; otherwise, have workers use a boot wash before getting into their vehicles.
- **Encourage workers to shower and wash their hair at the workplace** (if at a fixed location) or as soon as they get home.

What should employers do if a worker reports Valley Fever symptoms?

- If the worker disturbed soil or otherwise did dusty work in an endemic area, **the employer should send the worker to their workers' compensation health care provider or occupational medicine clinic**. The employer should provide the health care provider with the details about the dust or soil exposure. The worker should give a copy of this fact sheet to the health care provider.
- When two or more workers report symptoms that suggest Valley Fever, workers should be sent to a single medical provider or occupational medicine clinic for coordinated medical care, if possible. This can facilitate better communication between the medical provider, public health agencies, and employer.
- **Travel through endemic areas has resulted in Valley Fever cases.** When a worker who has traveled through an endemic area reports a respiratory illness that lasts more than a week, the employer should send the worker to their workers' compensation health care provider or occupational medicine clinic.
- **Complete the "Employer's Report of Occupational Injury or Illness" (Form 5020) for each occupational Valley Fever illness** which results in "lost time" or medical treatment beyond first aid.
- **List cases on the Cal/OSHA Form 300,** "Log of Work-Related Injuries and Illnesses".
- **Report immediately any serious injury, illness or death occurring in a place of employment** or in connection with any employment to the local Cal/OSHA district office. A "serious injury or illness" is defined in 8 CCR 330(h) found at **www.dir.ca.gov/title8/330.html**.

What is the treatment for Valley Fever?

Although many people with Valley Fever do not require treatment, those with symptoms should seek medical attention. When Valley Fever is suspected, doctors can order specialized tests to confirm the diagnosis. If treatment is indicated, anti-fungal medications are available. Workers who develop severe or chronic infections may need to stay in the hospital.

It is especially important for people at risk for severe disease, such as people infected with HIV or those with weakened immune systems, to be diagnosed and receive treatment as quickly as possible. People with severe infections need to be treated because advanced Valley Fever can be fatal.

Summary of Controls to Minimize Workers' Dust Exposure and Risk of Valley Fever in Endemic Areas

Type of Control	Actions
Engineering and Work Practice Controls ➤ *to control dust at the source or isolate worker from exposure.*	Minimize exposure to outdoor dust: • Suspend (stop) work in dust storms or high winds. • Minimize the amount of digging by hand. Instead, use heavy equipment with operator in an enclosed, air-conditioned, HEPA-filtered cab. Continuously wet the soil before and while digging or moving the earth. Landing zones for helicopters and areas where bulldozers, graders, or skid steers operate are examples where wetting the soil is necessary. When digging in soil is required, train workers to reduce the amount of dust inhaled by staying upwind when possible.
Administrative Controls ➤ *to increase hazard awareness and knowledge of safe work practices and select safer work practices.*	Train workers and supervisors on: • Distribution of endemic areas • Symptoms and signs, and need to report to supervisor to obtain medical evaluation • People at highest risk of serious disease • Effective controls, including proper use of equipment.
Personal Protective Equipment ➤ *to decrease quantity of fungal spores inhaled.*	Provide respirators when digging or working near earth-moving trucks or equipment: • Powered air-purifying respirator (PAPR) with high efficiency particulate air (HEPA) filter or • Full-face respirator with particulate filter or • Half-mask respirator with particulate filter and • Implement a comprehensive respirator program including medical clearance, training, fit testing, and procedures for cleaning and maintaining respirators. Provide coveralls to prevent street clothes from being contaminated with fungal spores and then taken home.
Clean up ➤ *to decrease quantity of fungal spores inhaled.*	Provide lockers and require change of clothing and shoes at worksite so workers don't take dust and spores home. Wash equipment before moving offsite.
Medical care for disease recognition and prompt, appropriate treatment.	Contract with local medical clinics • Provide prompt evaluation and care • Make sure clinic has a protocol for evaluation, follow-up, and treatment of Valley Fever Make sure in-house physician is aware of work in Valley Fever endemic areas.

Valley Fever in the general population in California (*includes individuals exposed at work*):

- In 2011, 5123 people were diagnosed with new infections.
- The number of new Valley Fever cases reported in California increased dramatically in the past few years. In 2011, there were 20% more cases compared to 2010.
- Every year, about 1,430 people are hospitalized with Valley Fever.
- About 8% (8 out of 100) of people hospitalized with Valley Fever die due to the infection.

RESOURCES

FOR MORE INFORMATION

- **California Department of Public Health,** *"Coccidioidomycosis (Valley Fever) Fact Sheet"* **www.cdph.ca.gov/healthinfo/discond/pages/coccidioidomycosis.aspx** Available in English, Spanish, and Tagalog. Also see *Yearly Summary Report of Coccidioidomycosis in California.*
- **California Department of Public Health, Hazard Evaluation System and Information Service (HESIS).** HESIS answers questions about workplace hazards for California workers, employers, and health care professionals. Call **(510) 620-5817 or (866) 282-5516 (toll free in CA).** HESIS has many free publications available. To request publications, leave a message at **(510) 620-5717 or toll free (866) 627-1586**, or visit our website at **www.cdph.ca.gov/programs/ohb**
- **Centers for Disease Control and Prevention,** *"Coccidioidomycosis, Valley Fever"* **www.cdc.gov/fungal/coccidioidomycosis/.**
- **Centers for Disease Control and Prevention,** *"Increase in Reported Coccidioidomycosis-United States, 1998-2011,"* March 29, 2013 **http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6212a1.htm**
- **Injury and Illness Prevention Program.** This standard (California Code of Regulations (CCR) Title 8, Section 3203), requires employers to implement an injury and illness prevention program (IIPP). For links to publications on IIPPs, see **www.dir.ca.gov/title8/3203.html.**
- **Respiratory Protection.** This standard, CCR Title 8, Section 5144, requires employers to provide respirators when necessary to protect the health of employees. See **www.dir.ca.gov/title8/5144.html**.

To obtain a copy of this document in an alternate format, please contact: (510) 620-5757. (CA Relay Service: 800-735-2929 or 711). Please allow at least ten (10) working days to coordinate alternate format services.

Adapted from the California Department of Public Health

County of Los Angeles Public Health

VALLEY FEVER (Coccidioidomycosis)

An infection caused by breathing in fungal spores in soil found in hot, dry places like the Antelope Valley.

PEOPLE AT MOST RISK

- Farmers
- Construction workers
- People who spend time outside in dirt or dusty areas

SIGNS & SYMPTOMS

- Cough
- Fever
- Feeling tired
- Rash
- Night sweats

You might be sick for a few weeks and miss work or school.

Do you have a cough and fever?

ASK YOUR DOCTOR ABOUT VALLEY FEVER.

Visit http://publichealth.lacounty.gov/acd/Diseases/Cocci.htm for more information.

CDCP-ACDC-0079-01 (1/11/2016)

Los Angeles County Department of Public Health
http://publichealth.lacounty.gov

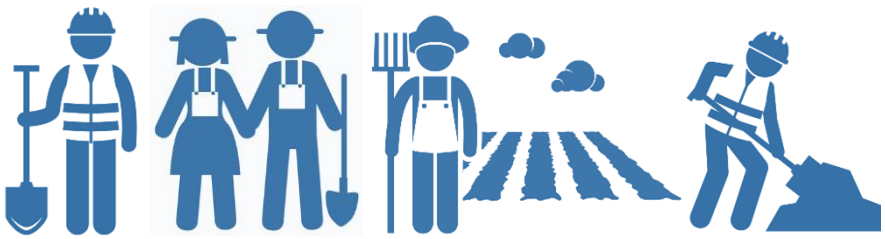
County of Los Angeles Public Health

FIEBRE DEL VALLE (Coccidioidomycosis)

Una infección causada por la inhalación de esporas del hongo encontradas en el suelo en lugares calientes y secos como en Antelope Valley.

PERSONAS CON MAYOR RIESGO

- **Agricultores**
- **Trabajadores de construcción**
- **Personas que pasan mucho tiempo fuera en áreas de tierra o polvo**



SIGNOS Y SÍNTOMAS

- **Tos**
- **Fiebre**
- **Sensación de cansancio**
- **Salpullido**
- **Sudor por la noche**

Usted podría estar enfermo por unas semanas y faltar al trabajo o a la escuela.

¿Tiene tos y fiebre?

PREGÚNTELE A SU MÉDICO SOBRE LA FIEBRE DEL VALLE.

Visite http://publichealth.lacounty.gov/acd/Diseases/Cocci.htm para más información.

CDCP-ACDC-0079-02 (01/13/16)

Departamento de Salud Pública del Condado de Los Ángeles
http://publichealth.lacounty.gov

Condado de Los Angeles Salud Pública

Frequently Asked Questions (FAQ)

Valley Fever (Coccidioidomycosis)

1. What is Valley Fever?

Valley Fever is an illness caused by a fungus. The fungus lives in the soil and dirt in some places in California and other areas in the Southern US, as well as Central and South America. It can get inside the lungs and cause an illness that might seem like the flu. Most people who get Valley Fever have mild symptoms and often get better on their own. More severe sickness is rare, but it can be serious and even deadly.

2. How do people get Valley Fever?

People can get sick when they breathe in spores, a form of the Valley Fever fungus. Spores are too small to be seen. They can get into the air when anything disturbs the soil, such as farming, construction, and wind. Valley Fever cannot spread from person to person.

3. Where is Valley Fever found?

The fungus that causes Valley Fever is often found in the Antelope Valley, which includes cities like Palmdale and Lancaster. Around the state, the fungus has been found in Kern County and around Central California. Since this fungus may be in other areas, it's always important to take basic safety measures around soil and dirt when you work, play, or travel.

4. What are symptoms of Valley Fever?

About 3 out of every 5 people who come in contact with the Valley Fever fungus will not get sick. People who get sick can have symptoms that last a month or more. These include:

- Fever
- Tiredness
- Cough
- Chest pain
- Muscle or joint aches
- Headaches
- Weight loss
- Night sweats
- Rash

In more serious cases, Valley Fever can sometimes infect the brain, joints, bone, skin, or other organs. Most people who get Valley Fever fully recover and are usually protected from getting it again.

Key Points:

- Valley fever is caused by a fungus found in some soil and dirt. People get sick when they work or play in the dirt and breathe in the fungus (spores).
- Most illness from Valley Fever is mild and people get better on their own. Rarely, it can cause serious illness and death.
- The best way to lower your risk is to avoid breathing in dirt or dust in areas where Valley Fever is more common.

For more information:

Los Angeles County Department of Public Health
www.publichealth.lacounty.gov/acd/Diseases/Cocci.htm

California Department of Public Health
www.cdph.ca.gov/healthinfo/discond/Pages/Coccidioidomycosis.aspx

Centers for Disease Control and Prevention
http://www.cdc.gov/features/valleyfever/

CDCP-ACDC-0037-01 (8/3/15)

5. How is Valley Fever diagnosed and treated?

See your doctor if you think you might have Valley Fever. Since the symptoms are like other illnesses, your doctor may order tests, such as a blood test or chest x-ray, to find out if you have Valley Fever. People with mild symptoms usually get better on their own without treatment. Your doctor can tell you if you need antifungal treatment.

6. Who is most at risk to get Valley Fever?

Anyone can get this illness, even young and healthy people. People who live, work, or travel in areas where dirt and soil is sent into the air, like construction, farming, and military have higher risk. Some people are more likely to suffer from severe illness from Valley Fever. These include people who have a health condition that makes them unable to fight off disease or a genetic (born with) risk. Other people at high risk include:

- Infants younger than 1 year old
- Adults who are 60 years or older
- African Americans and Filipinos
- Pregnant women (especially in the later stages of pregnancy)
- People with diabetes
- People with conditions that weaken their immune system (such as cancer, HIV, chemotherapy, steroid treatment, or organ transplant)

7. How can I lower my risk of getting Valley Fever?

The best way to lower your risk is to avoid breathing in dirt or dust in areas where Valley Fever is more common. If you can't avoid it, make sure to wet- down dirt and soil before working or playing in it to help prevent "dust clouds" or soil being sent into the air.

During dust storms, or when it is windy and the air is dusty:

- Stay inside and keep windows and doors closed
- While driving, keep car windows shut. Use "recirculating" air conditioning if you have it
- If you must be outside during a dust storm, wear a special (N95) face mask to help avoid breathing in dust.

8. What is being done about Valley Fever in Los Angeles County?

The Los Angeles County Department of Public Health tracks the number of people who get Valley Fever and the places where people become ill. We also teach doctors, other health care providers, and the public about this illness. Many cities in Los Angeles County have laws that limit the amount of dust from construction activities.

Preguntas más frecuentes

Fiebre del Valle (Coccidioidomicosis)

1. ¿Qué es la Fiebre del Valle?

La Fiebre del Valle es una infección causada por el hongo llamado Coccidioides. Se sabe que el hongo vive en los suelos de California y del suroeste de los EE. UU. al igual que en zonas de México, América Central y América del Sur. El hongo también se encontró últimamente en la zona sur central de Washington. Puede entrar a los pulmones y causar una enfermedad que puede parecer como la gripe. La mayoría de las personas que contraen la Fiebre del Valle tienen síntomas leves y a menudo mejoran por sí solos. Enfermedad más severa es rara, pero puede ser grave y hasta mortal.

2. ¿Cómo contraen las personas la Fiebre del Valle?

Las personas pueden enfermarse de Fiebre del Valle al inhalar las esporas microscópicas del hongo que están en el aire en estas zonas. Las esporas son demasiado pequeñas para ser observadas a simple vista. Pueden entrar en el aire cuando algo perturba el suelo, como la agricultura, la construcción, y el viento. La Fiebre del Valle no se puede propagar de persona a persona.

3. ¿Dónde se encuentra la Fiebre del Valle?

El hongo que causa la Fiebre del Valle se encuentra a menudo en Antelope Valley, que incluye ciudades como Palmdale y Lancaster. En todo el estado, el hongo se ha encontrado en el Condado de Kern y alrededor del centro de California. Ya que este hongo puede estar en otras áreas, siempre es importante tomar medidas de seguridad alrededor de la tierra y suciedad al trabajar, jugar o viajar.

4. ¿Cuáles son los síntomas de Fiebre del Valle?

Alrededor de 3 de cada 5 personas que entran en contacto con el hongo de la Fiebre del Valle no se enferman. Las personas que se enferman pueden tener síntomas que duran un mes o más. Estos incluyen:

- Fiebre
- Cansancio
- Tos
- Dolor en el pecho
- Dolores musculares o en las articulaciones
- Dolores de cabeza
- Perdida de peso
- Sudores nocturnos
- Salpullido

En casos más graves, la Fiebre del Valle puede a veces infectar el cerebro, articulaciones, huesos, piel u otros órganos. La mayoría de las personas que contraen Fiebre del Valle se recuperan totalmente y son por lo general protegidas de contraer la Fiebre del Valle otra vez.

Puntos claves:

- La Fiebre del Valle es causada por un hongo que se encuentra en algunos suelos y tierra. Las personas se enferman cuando trabajan o juegan en la tierra e inhalan el hongo (esporas).
- La mayor parte de enfermedades causadas por la Fiebre del Valle son leve y las personas se mejoran por sí solos. En raras ocasiones, puede causar enfermedad grave y la muerte.
- La mejor manera de disminuir el riesgo es evitar la inhalación de tierra o polvo en áreas donde la Fiebre del Valle es más común.

Para más información:

Departamento de Salud Pública del Condado de Los Ángeles
www.publichealth.lacounty.gov/acd/Diseases/Cocci.htm

Departamento de Salud Pública de California
www.cdph.ca.gov/healthinfo/discond/Pages/Coccidioidomycosis.aspx

Centros para la el Control y la Prevención de Enfermedades
http://www.cdc.gov/features/valleyfever/

CDCP-ACDC-0037-02 (09/10/15)

5. ¿Cómo es diagnosticada y tratada la Fiebre del Valle?

Consulte a su médico si usted piensa que podría tener la Fiebre del Valle. Dado que los síntomas son como los de otras enfermedades, su médico puede ordenar exámenes, tales como un examen de sangre o radiografía del pecho, para averiguar si usted tiene Fiebre del Valle. Personas con síntomas leves generalmente mejoran por sí solos sin tratamiento. Su médico puede indicarle si usted necesita tratamiento antifúngico.

6. ¿Quién tiene mayor riesgo de contraer Fiebre del Valle?

Cualquier persona puede contraer esta enfermedad, incluso personas jóvenes y sanas. Personas que viven, trabajan o viajan a áreas donde la suciedad y la tierra son mezcladas con el aire, como la construcción, la agricultura, y militares tienen mayor riesgo. Algunas personas son más propensas a sufrir enfermedades graves causadas por la Fiebre del Valle. Entre estos se incluyen a las personas que tienen una condición de salud que les hace incapaces de luchar contra la enfermedad o un riesgo genético (con el cual se nace). Otras personas de alto riesgo incluyen:

- Niños menores de 1 año de edad
- Adultos mayores de 60 años
- Afro-Americanos y Filipinos
- Mujeres embarazadas (especialmente en las últimas etapas del embarazo)
- Personas con diabetes
- Personas con condiciones que debilitan su sistema inmunológico (como cáncer, VIH, quimioterapia, tratamientos con esteroides, o trasplante de órganos)

7. ¿Cómo puedo reducir mi riesgo de contraer la Fiebre del Valle?

La mejor manera de reducir el riesgo es evitar la inhalación de polvo o suciedad en las zonas donde la Fiebre del Valle es más común. Si no puede evitarlo, asegúrese de humedecer el polvo y la tierra antes de trabajar o jugar en ella para ayudar a prevenir "las nubes de polvo" o que el polvo se mezcle con el aire.

Durante tormentas de polvo o cuando hay mucho viento y el aire este polvoriento:

- Manténgase dentro de su hogar y mantenga las ventanas y puertas cerradas
- Mientras maneje, mantenga las ventanas de su auto cerradas. Use el aire acondicionado “circulante” si lo tiene
- Si debe estar afuera durante una tormenta de polvo, use una mascarilla (N95) especial para ayudar a evitar la inhalación de polvo.

8. ¿Qué acciones están siendo tomadas con respecto a la Fiebre del Valle en el Condado de Los Ángeles?

El Departamento de Salud Pública del Condado de Los Ángeles observa el número de personas que contraen la Fiebre del Valle y los lugares donde la gente enferma. También enseñamos a los médicos, otros proveedores de atención médica y al público sobre esta enfermedad. Muchas ciudades en el Condado de Los Angeles tienen leyes que limitan la cantidad de polvo generado por las actividades de construcción.

Coccidioidomycosis (Valley Fever) Management Plan: Guidelines for Employers

Appendix D

Checklist

COCCIDIOIDOMYCOSIS (VALLEY FEVER) MANAGEMENT PLAN FOR EMPLOYERS CHECK LIST

ACTION	PLAN ELEMENT	COMMENTS
☐ Completed	Provided supervisors with Valley Fever educational materials	
☐ Completed	Provided supervisors with attendance rosters	
☐ Completed	Provided Valley Fever health education materials to all persons entering job site	
☐ Completed	Are OSHA poster and valley fever awareness sheet posted	
☐ Completed	Is there an accessible copy of the Injury and Illness Prevention Program on site?	
☐ Completed	Were site assessment and job hazard analysis conducted?	
☐ Completed	Are there personnel training records available?	
☐ Completed	Is there a dust plan?	
☐ Completed	Is there a responsible person for monitoring and assessing fugitive dust and implementing the dust plan?	
☐ Completed	Are grading plans available?	
☐ Completed	List engineering controls and best management practices for dust control on unpaved roads and disturbed areas	
☐ Completed	Is the applicant aware of AQMD Rule 403?	
☐ Completed	Are Best Management Practices (BMPs) in place for the pre-construction and the construction phases of the project?	
☐ Completed	Valley Fever information posted at job site.	
	Name:	Title: