SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Final Environmental Assessment for Proposed Rule 1430 – Control of Emissions From Metal Grinding Operations at Metal Forging Facilities

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Authors:	Sam Wang	Air Quality Specialist
Technical Assistance:	Daniel Garcia	Program Supervisor
Reviewed By:	Jillian Wong, Ph. D.	Planning and Rules Manager, CEQA
	Barbara Radlein	Program Supervisor, CEQA
	Eugene Kang	Program Supervisor
	Barbara Baird	Chief Deputy Counsel
	William Wong	Principal Deputy District Counsel
	Daphne Hsu	Senior Deputy District Counsel

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PREFACE

This document constitutes the Final Environmental Assessment (EA) for Proposed Rule (PR) 1430 - Control of Emissions From Metal Grinding Operations at Metal Forging Facilities. A Draft EA was released for a 30-day public review and comment period from January 11, 2017 to February 10, 2017. Analysis of PR 1430 in the Draft EA did not result in the identification of any environmental topic areas that would be significantly adversely affected. Three comment letters were received from the public regarding the analysis in the Draft EA. The comment letters received relative to the Draft EA and responses to individual comments are included in Appendix E of this document.

In addition, subsequent to release of the Draft EA, modifications were made to PR 1430 and some of the revisions were made in response to verbal and written comments received. To facilitate identification, modifications to the document are included as underlined text and text removed from the document is indicated by ~~strikethrough~~. To avoid confusion, minor formatting changes are not shown in underline or strikethrough mode.

Staff has reviewed the modifications to PR 1430 and concluded that none of the revisions constitute: 1) significant new information; 2) a substantial increase in the severity of an environmental impact; or, 3) provide new information of substantial importance relative to the draft document. In addition, revisions to the proposed project in response to verbal or written comments would not create new, avoidable significant effects. As a result, these revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5 and §15088.5. Therefore, this document now constitutes the Final EA for PR 1430.

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PROJECT DESCRIPTION

INTRODUCTION

The California Legislature created the South Coast Air Quality Management District (SCAQMD or District) in 1977[1] as the agency responsible for developing and enforcing air pollution control rules and regulations in the South Coast Air Basin (Basin) and portions of the Salton Sea Air Basin and Mojave Desert Air Basin. By statute, the SCAQMD is required to adopt an air quality management plan (AQMP) demonstrating compliance with all federal and state ambient air quality standards for the District[2]. Furthermore, the SCAQMD must adopt rules and regulations that carry out the AQMP[3]. The AQMP is a regional blueprint for how the SCAQMD will achieve air quality standards and healthful air and the Draft Final 2016 AQMP[4] contains multiple goals promoting reductions of criteria air pollutants, greenhouse gases, and toxics. In particular to toxics emissions, more information has become available about metal forging facilities with metal grinding and cutting operations indicating that more controls are needed to address fugitive toxic particulate emissions, especially metal particulates. Since heavy metals, such as nickel, cadmium, hexavalent chrome, cobalt and metal particulate have high relative risks compared to other toxics and can create health problems from ingestion, dermal exposure, and through consumption of breast-milk, the Draft Final 2016 AQMP contains SCAQMD's air toxics control strategy TXM-01 - Control of Metal Particulate from Metal Grinding Operation, to specifically address reducing metal particulate emissions from metal grinding activities at metal forging facilities, metal foundries, and plating operations.

Proposed Rule (PR) 1430 - Control of Emissions From Metal Grinding Operations at Metal Forging Facilities, would partially implement TXM-01, by reducing toxic emissions, particulate matter emissions, and odors from metal grinding and metal cutting operations at metal forging facilities. Both metal grinding and metal cutting operations are currently exempt from SCAQMD permits, and as such operations are currently an unregulated source category. Although some of the metal grinding and metal cutting operations have air pollution controls, most are not permitted and do not have controls. PR 1430 will ensure that metal particulate emissions are appropriately vented to air pollution control equipment, fugitive emissions are contained within a building enclosure, and housekeeping measures are implemented to further minimize emissions from metal grinding and metal cutting operations at metal forging facilities. Upon implementation, PR 1430 would be expected to reduce health risks and minimize public nuisance and odors affecting neighboring businesses and residents.

PR 1430 would apply to metal forging facilities located within SCAQMD's jurisdiction and classified by the North American Industry Classification System (NAICS) code for ~~these industries: 332111 - Iron and Steel Forging, and 332112 - Nonferrous Forgings~~ the fabricated metal manufacturing sector (NAICS 332). There are 22 facilities within the District with 14 located in Los Angeles County, four located in Orange County, and four located in San Bernardino County.

[1] The Lewis-Presley Air Quality Management Act, 1976 Cal. Stats., ch. 324 (codified at Health and Safety Code §§40400-40540).
[2] Health and Safety Code §40460(a).
[3] Health and Safety Code §40440(a).
[4] SCAQMD, Draft Final 2016 Air Quality Management Plan. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016(clean).pdf

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act (CEQA), California Public Resources Code §21000 *et seq.*, requires environmental impacts of proposed projects to be evaluated and feasible methods to reduce, avoid or eliminate significant adverse impacts of these projects to be identified and implemented. The lead agency is the "public agency that has the principal responsibility for carrying out or approving a project that may have a significant effect upon the environment" (Public Resources Code §21067). Since the SCAQMD has the primary responsibility for supervising or approving the entire project as a whole, which is a proposed District rule, it is the most appropriate public agency to act as lead agency (CEQA Guidelines[5] §15051 (b)).

CEQA requires that all potential adverse environmental impacts of proposed projects be evaluated and that methods to reduce or avoid identified significant adverse environmental impacts of these projects be implemented if feasible. The purpose of the CEQA process is to inform the lead agency, responsible agencies, decision makers and the general public of potential adverse environmental impacts that could result from implementing PR 1430 (the proposed project) and to identify feasible mitigation measures or alternatives, when an impact is significant.

Public Resources Code §21080.5 allows public agencies with regulatory programs to prepare a plan or other written documents in lieu of an environmental impact report once the Secretary of the Resources Agency has certified the regulatory program. The SCAQMD's regulatory program was certified by the Secretary of Resources Agency on March 1, 1989, and has been adopted as SCAQMD Rule 110 – Rule Adoption Procedures to Assure Protection and Enhancement of the Environment.

PR 1430 would regulate toxic emissions, particulate matter emissions, and odors from metal grinding and metal cutting operations at metal forging facilities. Because the proposed project requires discretionary approval by a public agency, it is a "project" as defined by CEQA. The proposed project will reduce metal particulate matter (PM) emissions, and the odors and associated health risks associated with these emissions and will provide an overall environmental benefit to air quality. However, SCAQMD's review of the proposed project also shows that implementation of PR 1430 may also create secondary adverse effects on the environment. SCAQMD's review of the secondary adverse effects shows that PR 1430 would not have a significant adverse effect on the environment. Thus, the type of CEQA document appropriate for the proposed project is an Environmental Assessment (EA). The EA is a substitute CEQA document, prepared in lieu of a Negative Declaration (CEQA Guidelines §15252), pursuant to the SCAQMD's Certified Regulatory Program (CEQA Guidelines §15251 (l); codified in SCAQMD Rule 110). The EA is also a public disclosure document intended to: 1) provide the lead agency, responsible agencies, decision makers and the general public with information on the environmental impacts of the proposed project; and, 2) be used as a tool by decision makers to facilitate decision making on the proposed project.

The SCAQMD, as lead agency for the proposed project, ~~has~~ prepared the<u>is</u> Draft EA showing no significant adverse impacts pursuant to its Certified Regulatory Program. The<u>is</u> Draft EA includes an Environmental Checklist and project description. The Environmental Checklist provides a standard evaluation tool to identify a project's adverse environmental impacts. Because PR 1430 will have no statewide, regional or areawide significance, no CEQA scoping meeting is required to be held for the proposed project pursuant to Public Resources Code §21083.9(a)(2). Further,

[5] The CEQA Guidelines are codified at Title 14 California Code of Regulations §15000 *et seq.*

pursuant to CEQA Guidelines §15252, since no significant adverse impacts were identified, no alternatives or mitigation measures are required to be included in the~~is~~ Draft EA. The analysis in Chapter 2 supports the conclusion of no significant adverse environmental impacts. The Draft EA was released for a 30-day public review and comment period from January 11, 2017 to February 10, 2017 and three comment letters were received. All ~~Any~~ comments received during the public comment period on the analysis presented in the~~is~~ Draft EA ~~will~~ have been responded to and included in Appendix E of ~~the~~ this Final EA.

Subsequent to release of the Draft EA, minor modifications were made to PR 1430 and some of the revisions were made in response to verbal and written comments on the project's effects. Staff has reviewed the modifications to PR 1430 and concluded that none of the modifications constitute significant new information or a substantial increase in the severity of an environmental impact, nor provide new information of substantial importance relative to the draft document. In addition, revisions to PR 1430 in response to verbal or written comments would not create new, avoidable significant effects. As a result, these minor revisions do not require recirculation of the EA pursuant to CEQA Guidelines §15073.5 and §15088.5.

Prior to making a decision on the adoption of PR 1430, the SCAQMD Governing Board must review and certify the Final EA as providing adequate information on the potential adverse environmental impacts that may occur as a result of adopting PR 1430.

PROJECT LOCATION

PR 1430 would affect 22 metal forging facilities located within SCAQMD's jurisdiction, with 14 located in Los Angeles County, four located in Orange County, and four located in San Bernardino County. The SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of the four-county South Coast Air Basin (Basin) (Orange County and the non-desert portions of Los Angeles, Riverside and San Bernardino counties), and the Riverside County portions of the Salton Sea Air Basin (SSAB) and Mojave Desert Air Basin (MDAB). The Basin, which is a subarea of SCAQMD's jurisdiction, is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. It includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Riverside County portion of the SSAB is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley. A federal nonattainment area (known as the Coachella Valley Planning Area) is a subregion of Riverside County and the SSAB that is bounded by the San Jacinto Mountains to the west and the eastern boundary of the Coachella Valley to the east (see Figure 1-1).

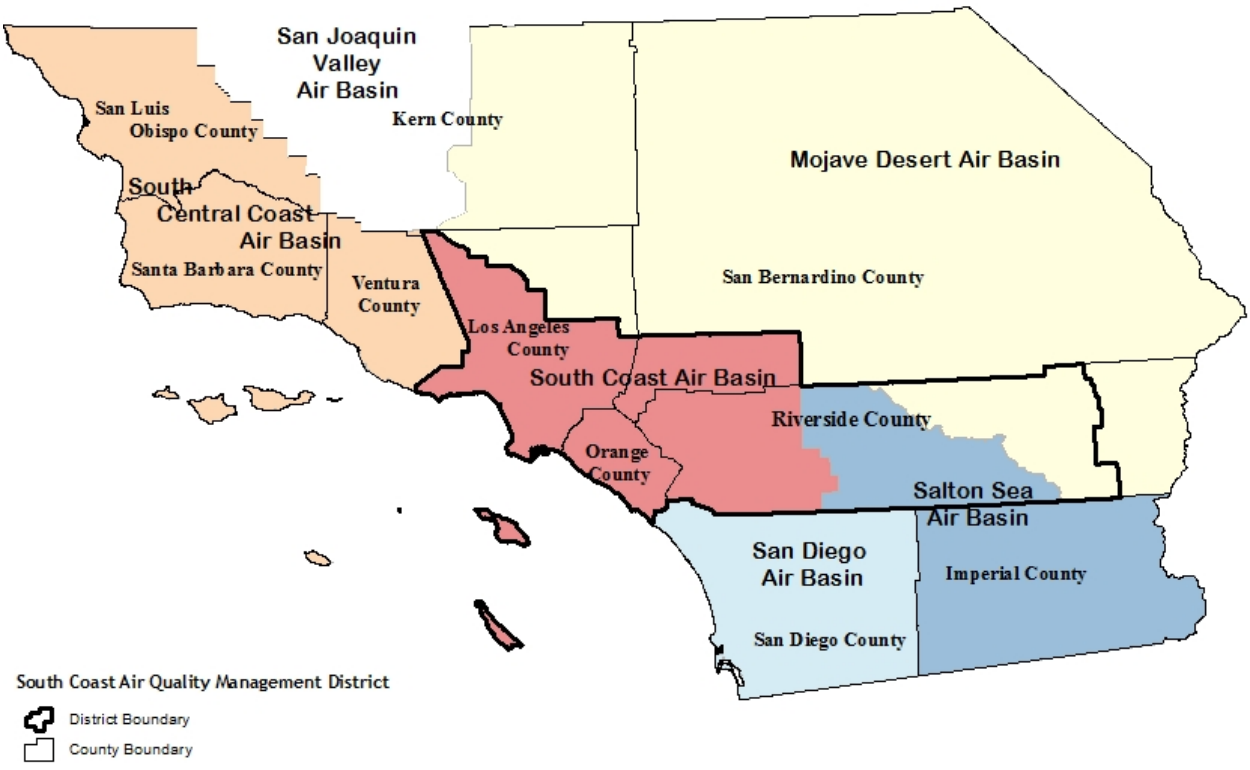


Figure 1-1
Southern California Air Basins

PROJECT BACKGROUND

Metal grinding and metal cutting operations at metal forging facilities are currently exempt from SCAQMD permitting requirements and there are currently no SCAQMD source-specific regulatory requirements for these activities. Through the rule development process, SCAQMD staff have obtained additional information about metal grinding and metal cutting operations at metal forging facilities from collecting particulate samples, conducting source tests, conducting ambient monitoring, and site visits. The SCAQMD has identified 22 active metal forging facilities in the District that conduct metal grinding operations and SCAQMD staff visited many of these facilities. The following are key findings from the site visits:

- Prior to November 2016, there were five facilities that were conducting metal grinding operations in the open air. Because of the fugitive nature of grinding operations, with no containment structure such as an enclosure and no air pollution control device, the metal particulates were being released in the open air and into the community. One of the five facilities recently moved their grinding operations within a building enclosure and is in the process of constructing a total enclosure. Another facility is in the process of moving their grinding operations within an enclosure also.
- Although air pollution control equipment is not currently required by the SCAQMD, 14 forging facilities currently have some type of air pollution control device. However, many

baghouses did not appear to have proper ventilation, operation, and maintenance of their air pollution control equipment.

- Housekeeping measures varied at each facility. There was variation in the cleaning method, such as using brooms to mobile vacuum sweepers, variation in the frequency, and variation in the areas cleaned, such as cleaning the inside and/or outside of a building.

As a result, some facilities were identified as currently conducting metal grinding and metal cutting operations with no air pollution control equipment while other facilities were identified as having air pollution control equipment that are not properly operated and maintained.

Metal grinding is a common material removal and surface preparation process that shapes and finishes the surfaces of metal parts. Both heavy and light industrial processes such as metal foundries and forging and plating operations that produce parts for the aerospace, automotive, and oil and gas industry conduct metal grinding. The grinding process employs an abrasive device, such as a rotating wheel that is brought into controlled contact with the metal part's surface, to smooth slight imperfections and remove tiny metal pieces from the part. The grinding process generates metallic chips and dust as a by-product.

Metal grinding is prone to generate fugitive metal particulate, particularly if the grinding operation is not properly controlled. The results of sampling data collected by SCAQMD staff at multiple forging facilities have shown that fugitive metallic dust generated from metal grinding activities contain toxic air contaminants (TACs) such as cadmium, hexavalent chromium, cobalt, and nickel. Additionally, extensive ambient air monitoring conducted at one forging facility has confirmed elevated concentrations of nickel in the ambient air due to metal grinding activities.

In conclusion, SCAQMD staff determined that PR 1430 is necessary to reduce toxics and metal particulate emissions from metal grinding and metal cutting operations at metal forging facilities. It would ensure that these operations have the appropriate pollution control equipment, are conducted within an enclosure so that fugitive emissions that do not make it to the control device are contained, and basic housekeeping requirements are followed to ensure any accumulation of metal particulate in or around grinding operations is not re-entrained into the air or tracked outside of the facility.

TECHNOLOGY OVERVIEW

The following discussion provides a general overview of the manufacturing processes at metal forging facilities, the associated emission sources, and emission control options.

Metal Forging

Forging is a manufacturing process where metal is pressed, pounded, or squeezed under great pressure into high strength parts known as forgings. The process is normally performed hot by preheating the metal to a desired temperature before it is worked. Any metal can be forged, however, some of the most common metals include, carbon steel, alloy steel, stainless steel, very hard tool steels, aluminum, titanium, brass, copper, cobalt, nickel, and molybdenum. These metals are found in billets or ingots that are delivered to the respective forging company. The forging industry is composed of plants that: make parts to order for customers (custom forgings), make parts for their own company's internal use (captive forgings), or make standard parts for resale (catalog forgings). Metal forging creates parts that vary in size, shape, and sophistication. Some of the largest customer markets include: aerospace, national defense, automotive, oil industry,

agriculture, construction, and general industrial equipment. The applicable NAICS code for ~~these industries are 332111, Iron and Steel Forging, and 332112 Nonferrous Forgings~~ metal forging facilities subject to PR 1430 are all classified as being in the fabricated metal manufacturing sector (NAICS 332). The following process description reflects the operational characteristics at metal forging facilities. Metal forging is done because it strengthens the material by sealing cracks and closing empty spaces within the metal. The hot forging process will highly reduce or eliminate inclusions in the forged part by breaking up impurities and redistributing their material throughout the metal work. Forging a metal will alter the metal's grain structure creating a material of increased strength. This makes forging more advantageous than casting or machining. In metal forging operations, a metal ingot or billet is prepared to the correct pre-dimensions prior to going through forging. This can include cutting, sawing, grinding, or torch cutting. The following paragraphs describe the various processes involved in preparation of the forging process:

Billet Cutting or Sawing

A processed metal billet or ingot is received by the metal forging facility. In order to forge the piece of metal, the metal forging facility may need to reduce the size. This is done by cutting or sawing. At the metal forging facility, the unprocessed metal billet or ingot is place in a sawing machine. The sawing machine is equipped with a blade capable of cutting into a metal billet or ingot at a slow rate. Typically, a continuous flow of metal removal fluid and coolant is supplied where the blade makes contact with the metal. This helps maintain the blade at a cooler temperature with a co-benefit of preventing metal emissions. The metal ingot or billet is cut to the desired dimensions.

Metal Grinding Operations

Irregularities observed on the billet or ingot can be removed via grinding which will create the desired finish and dimensions prior to forging. Based on site visits to the forging facilities, SCAQMD staff identified five categories of metal grinding activities: billet grinding, swing grinding, stand grinding, large and small hand grinding, and torch cutting. Based on observations, all of these activities have the ability to generate fugitive metal particulates if not properly controlled. Each of these metal grinding activities are discussed below.

Billet grinding

Billet grinding consists of large traveling grinders designed to prepare large billets prior to forging. The billet grinder would traverse the entire length of the billet, going back and forth to create the appropriate dimensions. All billet grinders that will be subject to PR 1430 are currently vented to baghouses without high efficiency particulate arrestor (HEPA) filters.

Swing grinding

Swing grinders are rugged, heavy duty grinders with full lateral movement to prepare medium sized billets. An employee manually operates them. Multiple levels of control were observed ranging from a baghouse with HEPA filters to no air pollution controls.

Stand grinding

Stand grinders are designed for smaller castings and forging. Mounted in a permanent position, utility grinders have a slotting wheel on one end for reaching into recesses of the material. Multiple levels of controls were observed ranging from venting to a baghouse to not venting to any air pollution controls.

Large and small grinding

Hand grinding involves using power tools for preparing, cutting, grinding, and polishing forgings of various sizes. Multiple hand grinding stations can be in one room or one area. Larger forgings utilize larger hand grinders, while smaller forgings utilize smaller hand grinders.

Torch Cutting

Torch cutting is a process by which metal is preheated with a flame and then oxidized rapidly and removed by a jet of oxygen issued centrally through the preheating flame. Torch cutting in the metal forging industry often uses acetylene gas and is used to remove flash (excess metal) from large metal parts that have been forged. Basic torch cutting equipment consists of two high-pressure cylinders (one apiece for oxygen and acetylene) and two corresponding pressure regulators. A dual-line hose transfers oxygen and acetylene from the regulators to the torch handle. The torch handle can hold a cutting attachment or cutting tip that controls the thickness of metal being cut, along with the gas pressures set at the regulators. Torches that use oxygen and acetylene reach a working temperature of 5,620 degrees Fahrenheit (^{o}F).

Heating

Metal billets or ingot are heated to the desired temperature prior to and/or during the forging process. The heated metal billets or ingots become malleable and are able to be forged. Aluminum alloys are heated to 800 °F, while titanium and nickel are heated to temperatures between 1,700 and 2,300 °F. Furnaces range in heating capacity and size, but typically use natural gas for heating. The combustion of natural gas produces NO_x, SO_x, and combustion related PM emissions. The furnaces are subject to SCAQMD permitting requirements and are evaluated by SCAQMD staff. NO_x is regulated by SCAQMD Rule 1147 - NO_x Reductions from Miscellaneous Sources for Non-RECLAIM facilities. Facilities with NO_x emissions that exceed more than four tons per year are regulated by SCAQMD Regulation XX - Regional Clean Air Incentives Market (RECLAIM). Non-combustion related emissions, such as emissions generated in the oven space of the furnace produced as result of refractory brick decomposition or off gassing of metals are unknown at this time. Further studies of non-combustion related emissions from metal furnaces are needed.

Forging

Forging includes pressing, hammering, rolling, or piercing of metal using a mechanical tool. The type of forges discussed herein are drop forge press, hammer press, and ring

rollers. During the forging process, a lubricant is applied to facilitate the release of die and forging material.

Drop Forge
A drop forge is a forging made in a closed or impression die under a drop or steam hammer. A closed die forging is formed to the required shape and size by machined impression in specifically prepared dies that exert three-dimensional control on the workpiece. Excess metal, known as flash, that did not form in the die will be removed in finishing operations. Open die forging involves the repeated striking of metal in a die to get the desired dimension. The metal piece may be rotated or moved around to get the desired shape.

Hammer Press
It is a forging made by means of a hammer. The action of the hammer is that of an instantaneous application of pressure in the form of a sudden blow.

Ring Rollers
A metal ring preform is rolled between two rolls that move toward each other to form a continuously reducing gap.

Lubricant
A liquid or powder lubricant is applied to facilitate the release of the die and forged metal. The lubricant can be applied multiple times depending on the forging operation. Visible emissions are observed when lubricants contact the die and forged metal. VOC levels in lubricants are regulated by SCAQMD Rule 1144 - Metalworking Fluids and Direct-Contact Lubricants. Similar to non-combustion emissions from the furnace, emissions from heated processes need further study.

Finishing Operations
Following the creation of a forging, physical or chemical methods are utilized to produce dimensional corrections to the forging or to perform surface treatment. While preparation operations remove irregularities, finishing operations remove flashing and scale deposits. Methods observed include abrasive blasting, buffing/polishing, sawing/cutting, and grinding.

Abrasive Blasting
Abrasive blasting is a stream of abrasive material that is propelled against a surface under high pressure to alter the surface. The abrasive material can be composed of metal, silica, or other material. The abrasive blasting process is used to smooth or "clean" forged material. Fugitive metal particulates from the forging and shot material may be generated if not adequately controlled. These emissions can be controlled by operating in a blast cabinet or room vented to an air pollution control system. Varying housekeeping measures can be implemented to reduce the accumulation of particles that can become fugitive. SCAQMD permits are required if the volume of the blasting cabinet is greater than 53 cubic feet. Abrasive blasting is regulated under SCAQMD Rule 1140 - Abrasive Blasting.

Buffing/Polishing
Polishing and buffing are finishing processes for smoothing a workpiece's surface using an abrasive and a work wheel or a leather strop.

Sawing/Cutting
It is used to remove portions of forged metal that are not desired in the finished product. This can be flash material or parts of the forging that may be needed to be changed to meet the correct dimensions.

Grinding
Similar to the metal grinding activities conducted during the pre-metal forging operations, grinding is also conducted during the post-metal forging operations to further refine the metal surfaces. The grinding types include billet grinding, swing grinding, stand grinding, large and small hand grinding, and torch cutting. All of these activities have the ability to generate fugitive metal particulates if not properly controlled.

Controlling Emissions From Metal Forging
PR 1430 has been developed in order to reduce metal particulate emissions, health risks and odors from metal grinding and metal cutting operations at metal forging facilities. The key emission release points for metal grinding and metal cutting activities are point source emission stacks and fugitive emissions. Uncontrolled grinding that is conducted in the open air is of greatest concern because emissions are generated at the point of contact where the abrasion or removal of metal occurs. These metal particulates get entrained in the air and dispersed both on and off the property depending on meteorological conditions or they accumulate in metal removal areas and get tracked off the property by foot or vehicular traffic. For these reasons, an air pollution control system with effective capture and control efficiencies is necessary. In addition, enclosures and capture technology are essential for capturing the emissions to be fed into the air pollution control system.

Potential methods for reducing emissions and odors from metal grinding and metal cutting operations include: 1) relocating metal grinding and metal cutting activities within permanent enclosures to ensure that fugitive emissions that are not routed to an air pollution control device are contained within the enclosure; 2) capturing and controlling the metallic chips and dust through add-on air pollution control devices such as cyclones, baghouses and HEPA filter technology; 3) employing routine housekeeping measures such as wet cleaning or vacuuming to ensure that any accumulation of metal particulates in or around grinding and cutting operations is not re-entrained into the air or tracked outside of the facility; 4) following material storage and disposal procedures; and, 5) conducting routine maintenance of air pollution control devices.

The following discussion describes the various strategies to first contain and collect emissions and then route emissions from point sources to air pollution control equipment.

Containment and Collection Strategies

Containment
An enclosure is a structure that can be an effective containment tool to ensure that fugitive metal dust generated from grinding activities conducted inside the enclosure remains inside the enclosure. The design of the structure will determine the effectiveness of the enclosure's containment ability as well as the collection efficiency of air pollution control devices located downstream. As illustrated in Figure 1-2, there are four types of enclosures: Temporary Enclosure; Building; Total Enclosure; Total Enclosure with Negative Air. The following provides a general description of each type of enclosure.

- A temporary enclosure is a structure comprised of walls or partitions on at least three sides or three-quarters of the perimeter with a floor and a roof. As shown in the figure below, one side of the structure is open.
- A building is a type of enclosure that is a permanent containment structure, completely enclosed with a floor, four walls, or an entire perimeter, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, and run-off), with openings to allow ingress and egress for people and vehicles, but is not necessarily free of breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust to escape.
- A total enclosure is a permanent containment structure, completely enclosed with a floor, walls, and a roof to prevent exposure to the elements, (e.g., precipitation, wind, and run-off), with limited openings to allow access and egress for people and vehicles, that is free of breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust to escape.
- A total enclosure with negative air (e.g., air being pulled or drawn into the building) that is vented to pollution control equipment is a total enclosure with negative airflow. This total enclosure must meet the industrial ventilation guidelines at each opening and the air within the enclosure is vented to an air pollution control device.

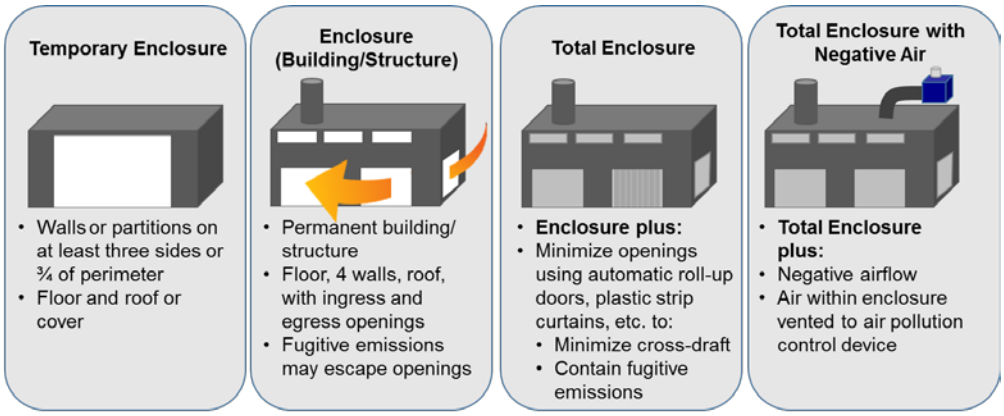


Figure 1-2
Types of Enclosures

Collection

A collection system allows air and emissions of particulate matter (PM) to be collected. Designing air pollution control equipment with ventilation in a manner that is consistent with the Industrial Ventilation Guidelines will ensure that metal PM can be captured and delivered to the air pollution control equipment. The collection system can be designed to capture emissions from an individual point source such as a grinding station, or from the entire enclosure. The collection system consists of an intake port, ducting, and a device that creates negative air to draw the emissions away from the individual point source or the entire enclosure. In order to consistently achieve a desired capture efficiency, the collection system needs to be properly maintained, which includes assuring proper intake flow rate, duct integrity, and proper positioning of the grinding activity to the intake vent.

Point Source Emission Control Technologies

Baghouses, HEPA filters, and cyclones, are technologies typically used to control PM emissions at metal forging facilities. These technologies can be connected in series to further control PM emissions and reduce the wear and tear on downstream processes.

Baghouse

A baghouse is an air filtration control device designed to remove PM from an exhaust gas stream using filter bags, cartridge-type filters, or envelope-type filters. A baghouse consists of the following components: filter medium and housing for the filter, filter cleaning device, collection hopper, shell, and fan. Most baghouse designs in the United States consist of long cylindrical tubes (bags) made of fabric which acts as the filter medium. A baghouse functions like a vacuum cleaner with a fan either blowing air from the grinding source through (positive pressure) the filter or drawing air into (negative pressure) the filter. When PM laden air flows to the inlet of a baghouse, the PM is captured in the filter bags inside the baghouse and filtered air flows from the outlet of the baghouse. Dust layers (dust cakes) deposit on the surface of the bags which need to be cleaned periodically to ensure proper baghouse function.

Effective performance of a baghouse is determined by pressure drop which is a measurement of the difference in air pressure between the clean and dirty sides of the filter. Static pressure gauges can be installed at the inlet and outlet of the fabric filter to determine the pressure drop across the filter. In addition, baghouses can be equipped with a bag leak detection system (BLDS) to continuously monitor the performance of the baghouse functions by detecting early bag leak or malfunction. A BLDS consists of a stainless steel probe that is energized with a direct current (DC) electrical voltage. When the particles flow near the probe placed in the PM laden exhaust gas stream, the small current changes (called triboelectric current) in its electric field are measured.

Pressure drop monitoring is a useful indicator of baghouse performance since pressure drop measurements can help determine if the filter media is being properly cleaned and whether the baghouse is operating in accordance with manufacturer specifications. For example, during operation of the baghouse, an increased pressure drop signals that the filter media is becoming clogged and needs to be cleaned. Similarly, a low pressure drop may indicate that there are holes in the filter media or a mechanical failure of baghouse components. In either case, there will be a reduction in the baghouse's ability to efficiently capture and control PM emissions. For these reasons, the filter media need to be cleaned periodically to prevent excessive increases in pressure drop, leaking bag, and improper baghouse function.

Baghouses are typically cleaned in sections, with jets of counter-flowing air used to blow dust build-up off of the filter and into a hopper. For many baghouse installations, the baghouse follows a routine cycle with the pressure drop increasing as the bag becomes coated with dust, and dropping back to a baseline value after it is cleaned. Common types of baghouses include reverse-air, pulse-jet and cartridge type baghouse. A reverse air-type baghouse uses a low pressure flow of air to break the dust cake and clean the bags of material build-up. Cleaning air is supplied by a separate fan which is normally smaller than the main stream fan, since only one compartment is cleaned at a time. A pulse jet-type baghouse uses a high pressure jet of compressed air to back-flush the bags. Cleaning is performed while the baghouse remains in operation. Cartridge (cylindrical) type filters

have pleated, non-woven filter media supported on a perforated metal cartridge. Due to its pleated design, total filtering area is greater than in a conventional bag of the same diameter, resulting in reduced air-to-cloth ratio, pressure drop, and overall collector size. Too heavily loaded cartridges can either be cleaned by a pulse jet compressed air or replaced with new cartridges. Cartridge type filters have high particle collection efficiency of, at a minimum, 99.9 percent, and are usually used for industrial process handing exhaust gas flow rates less than 50,000 cubic feet per minute (cfm).

The National Fire Protection Association has special designations for deflagrations (e.g., explosion prevention) from metal dust. Therefore, operators of metal grinding activities that require baghouse emission control technologies will also need to select reliable, economical and effective means of explosion control such as baghouse explosion suppression, containment and venting. Additional information pertaining to these types of protective measures is available in Chapter 8 of the *Industrial Ventilation, A Manual for Recommended Practice for Design* 28th Edition, published by the American Conference of Governmental Industrial Hygienists, ©2013.

High Efficiency Particulate Arrestor (HEPA) Filters

HEPA filters are capable of capturing fine PM as small as 0.3 micron (µm) diameter or larger. HEPA filters have a minimum efficiency rating of 99.97% which means that they have a high collection efficiency when compared to other PM control devices. HEPA filters are best utilized in situations when a high collection efficiency of submicron PM is necessary, when toxic and or hazardous PM cannot be cleaned from the filter, or when the filter is difficult to clean. Unlike bags or cartridge filters in baghouses, HEPA filters are not automatically cleaned. When a HEPA filter element becomes loaded with PM, the filter element is replaced and the loaded filter is disposed of as hazardous waste.

A HEPA filter is generally installed as the final component in a PM collection system downstream from other PM collection devices. The use of a HEPA filter requires a pre-filter upstream to remove large PM for dust concentrations greater that 0.03 grams per square centimeter (g/cm^2) or 0.06 pounds per square feet squared (lbs/ft^2). In metal grinding applications at forging facilities, a mechanical collector such as a cyclone can be used as a pre-filter to be followed by a standard baghouse or cartridge filters in order to reduce larger diameter PM prior to venting emissions to a HEPA filter.

Cyclone

A cyclone is typically used as a pre-filter or pre-cleaner and is located upstream of a baghouse or HEPA filter to capture the largest particles. A cyclone is not equipped with its own blower to draw in the PM laden exhaust stream. Instead, particles are forced to move toward the cyclone walls by the centrifugal force of the spinning exhaust causing the large particles to be removed by inertia. Since small particles may be too small to be captured in a cyclone, secondary air pollution control such as a baghouse or HEPA filter are used to capture PM that escapes from the cyclone.

PROJECT DESCRIPTION

The purpose of PR 1430 is to reduce PM, toxic emissions, and odors from metal grinding and metal cutting operations at metal forging facilities. As previously explained, metal grinding and metal cutting operations are currently exempt from SCAQMD permits and are unregulated

emissions sources. PR 1430 establishes standards for metal grinding and cutting options for both point sources and fugitive emission sources. Point sources are addressed through requirements for emission control devices, emission standards, and periodic monitoring. Fugitive PM emissions are addressed through requirements for total enclosures, housekeeping, and maintenance and repair activities. Additionally, signage, reporting, and recordkeeping requirements are also being proposed to ensure compliance. The following is a detailed summary of the key elements contained in PR 1430. A copy of PR 1430 can be found in Appendix A.

Purpose – subdivision (a)

Subdivision (a) establishes the purpose of PR 1430 which is to reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities.

Applicability – subdivision (b)

Subdivision (b) explains that PR 1430 applies to metal forging facilities that conduct metal grinding or cutting operations onsite. Subdivision (b) also clarifies that PR 1430 does not apply to metal grinding or cutting operations that are conducted under a continuous flood of metal removal fluid, or grinding activities conducted to maintain or repair equipment at a facility.

Definitions – subdivision (c)

Subdivision (c) includes definitions of the following terms: Bag Leak Detection System; Billet; Billet Grinding; Building; Capture Velocity; Confirmed Odor Complaint; Duct Section; Effective Zone; Emission Collection System; Emission Control Device; Fugitive Metal Dust; Hand Grinding; HEPA; Maintenance and Repair Activity; Metal; Metal Cutting; Metal Forging Facility; ~~Metal Grinding~~; Metal Grinding Operation; Metal Removal Fluid; ~~School; Sensitive Receptor;~~ Small ~~Hand~~Part Grinding; Stand Grinding; Swing Grinding; Temporary Enclosure; Torch Cutting; and, Total Enclosure.

Total Enclosures – subdivision (d)

Paragraph (d)(1) prohibits metal grinding or metal cutting operations, or small hand grinding activities from occurring outside of a temporary enclosure, building, or total enclosure.

Paragraph (d)(2) allows metal grinding or metal cutting operations that occur inside a building and exist at the time PR 1430 is adopted to continue to operate until ~~the requirements in paragraph (d)(3) are met~~a total enclosure is completed.

Subp~~P~~aragraph (d)(~~3~~2)(A) requires existing metal grinding or metal cutting operations that occur inside a building to conduct these operations in a total enclosure within six months of rule adoption. Subp~~P~~aragraph (d)(2)(B) requires existing metal grinding or metal cutting operations that occur inside a temporary enclosure or building to conduct these operations in a total enclosure within 12 months of rule adoption, provided the owner or operator provides written notice to the Executive Officer within 60 days after [Date of Rule Adoption] that a new total enclosure will be constructed.

In addition, paragraph (d)(~~3~~2) also requires an owner or operator to minimize fugitive metal dust emissions from passages, doorways, and bay doors by installing automatic roll-up doors, plastic strip curtains, or vestibules for doors and openings in the total enclosure. This paragraph also allows for alternative methods to minimize the release of fugitive metal dust from the total enclosure provided that the owner or operator can demonstrate to the Executive Officer an equivalent or more effective method can be applied.

~~Paragraph (d)(4) requires metal grinding or metal cutting operations that do not currently occur inside a building to conduct these operations in a total enclosure within 12 months of rule adoption. In addition, p~~Paragraph (d)(~~4~~3) ~~also~~ allows the use of a temporary enclosure or building until a total enclosure is completed provided that cleanings by wet cleaning or HEPA vacuum after or at the end of each operating shift are conducted.

Paragraph (d)(~~5~~4) requires all types of enclosures to be designed in a manner that does not conflict with requirements set forth by the federal Occupational Safety and Health Administration (OSHA) or the California Division of Occupational Safety and Health (CAL-OSHA) regarding worker safety.

Paragraph (d)(~~6~~5) requires inspections of any temporary enclosure or total enclosure at least once a calendar month for breaks, cracks, gaps, or deterioration that could cause or result in fugitive metal dust.

Paragraph (d)(6) requires that metal grinding or metal cutting operations be immediately stopped if inspection of a total enclosure where these operations are conducted reveals a break, crack, gap or deterioration which results in fugitive metal dust. The metal grinding or metal cutting operation may resume until the total enclosure is repaired pursuant to paragraph (d)(7) if the owner or operator implements temporary measures to ensure that no fugitive metal dust results from the break, crack, gap or deterioration.

Paragraph (d)(7) requires any breaks, cracks, gaps, or deterioration from any ~~temporary enclosure or~~ total enclosure to be repaired within 72 hours of discovery. An owner or operator may request an extension beyond the 72-hour limit if the request is submitted before the 72-hour time limit has expired, and the owner or operator must provide information to substantiate that the repair will take longer than 72 hours or that the equipment, parts or materials needed for the repair cannot be obtained within 72 hours.

Paragraph (d)(8) requires existing metal grinding or metal cutting operations that occur inside a total enclosure that is located within ~~3~~500 feet of any ~~sensitive receptor~~ residence or 1,000 feet of any public or private school to vent the total enclosure to air pollution control equipment in accordance with negative air specifications within six months of receiving a Permit to Construct from SCAQMD for the air pollution control equipment. Residences include private homes, condominiums, apartments, and living quarters; daycare centers; health care facilities such as hospitals or retirement and nursing homes; long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing. Public or private school includes juvenile detention facilities with classrooms, used for purposes of the education of more than 12 children at the school, including kindergarten and grades 1 through 12, inclusive; and early head start schools, head start schools, and preschools. This provision does apply to any private school in which education is primarily conducted in private homes.

Metal Grinding and Cutting Emission Requirements – subdivision (e)

Paragraph (e)(1) requires emissions from all metal grinding and metal cutting operations to be vented to an air pollution control device no later than 6 months after a SCAQMD Permit to Construct is issued for the air pollution control device. Paragraph (e)(1) also establishes a PM outlet concentration of ~~0.01~~ 0.002 grains of particulate matter per dry standard cubic foot (dscf) for the air pollution control device as determined by a source test. ~~SCAQMD staff is considering a PM outlet concentration of 0.002 grains of particulate matter per dry standard cubic foot, which~~

~~would be more representative of the emission rate after fitting the control device with HEPA filters as required by paragraph (e)(2) as discussed below.~~

Paragraph (e)(2) requires an air pollution control device to be fitted with HEPA filters, or filter media rated by the manufacturer to achieve a minimum of 99.97% control efficiency for 0.3 µm particles, and designed in a manner that does not conflict with requirements or guidelines set forth by the OSHA or CAL-OSHA regarding worker safety, or the National Fire Protection Association regarding safety.

Paragraph (e)(3) allows the use of alternative filter media rated by the manufacturer to achieve a minimum of 98% control efficiency for 0.3 µm particles provided that: 1) billet grinding, metal cutting, swing grinding, or torch cutting is not conducted; 2) a combination of 10 or fewer hand grinding units or stand grinding stations are operated; and, 3) the toxic emissions from the air pollution control device does not exceed the screening levels identified in Table I – Toxic Air Contaminants in Rule 1401 - New Source Review of Toxic Air Contaminants, or does not result in a cancer risk of over one in a million.

Paragraph (e)(4) requires the air pollution control device to be operated at the minimum hood induced capture velocity specified in the most current edition of the *Industrial Ventilation, A Manual of Recommended Practice for Design*, published by the American Conference of Governmental Industrial Hygienists.

Paragraph (e)(5) requires that within 30 days of rule adoption, permanent visual indicators or markings at all hand grinding, stand grinding, swing grinding, and torch cutting stations be added that identify the maximum distance metal grinding may occur from the air pollution control device to ensure the emission collection system meets the requirements of subdivision (e). Paragraph (e)(5) also requires all metal grinding activity to be conducted in front of the hood face and within the designated maximum distance metal area without obstructing the air flow between the metal grinding operation and the hood for the emission collection system.

Paragraph (e)(6) requires either the removal of any weather cap from any stack that is a source of metal PM emissions or the installation of a butterfly valve on the stack no later than 30 days after rule adoption.

Housekeeping Requirements – subdivision (f)

Subdivision (f) requires housekeeping practices to be implemented no later than 30 days after rule adoption.

Paragraph (f)(1) requires semi-annual wet cleaning or HEPA vacuuming to be conducted, no more than six calendar months apart, on roof tops for total enclosures that house areas associated with metal grinding or metal cutting operations. ~~Paragraph (f)(1) does not apply to areas associated with the storage of raw, unprocessed metal containing materials, finished metal containing products, storage of metal grinding waste, and non-metal grinding or metal cutting activities.~~

Paragraph (f)(2) requires daily wet cleaning or HEPA vacuuming in specified areas where metal grinding, metal cutting, or small hand grinding is conducted.

Paragraph (f)(3) requires the following housekeeping measures to be conducted: 1) monthly wet cleaning or HEPA vacuuming of floors of a temporary enclosure, building or total enclosure areas where metal grinding or metal cutting operations occur; and, 2) the storage in sealed containers of

all fugitive metal dust producing materials such as metal containing waste generated from conducting housekeeping and maintenance and repair activities, unless located within a total enclosure. Paragraph (f)(3) also prohibits conducting compressed air cleaning operations or dry sweeping within 30 feet of any metal cutting or metal grinding operation, unless the compressed air cleaning operation or dry sweeping is vented to an air pollution control device.

Maintenance and Repair Activity Requirements – subdivision (g)

On and after 30 days after rule adoption, subdivision (g) requires the following requirements when certain maintenance and repair activities are conducted. PR 1430 defines maintenance and repair activities as those that are conducted outside of a total enclosure that generates or has the potential to generate fugitive metal dust during maintenance or repair activities on any emission control device that vents metal grinding or cutting operations; or replacement or removal of any duct section used to vent metal grinding or cutting operations.

Paragraph (g)(1) requires the floors located within 20 feet of where the maintenance or repair activity occurred to be wet cleaned or HEPA vacuumed within one hour after completion of the maintenance or repair activity.

Paragraph (g)(2) requires maintenance and repair activities that are not conducted within a building, temporary enclosure, ~~or total enclosure~~ to be stopped immediately when instantaneous wind speeds are greater than or equal to 20 miles per hour (mph).

Paragraph (g)(3) requires all metal-contaminated equipment and materials used for maintenance and repair activities to be wet cleaned or HEPA vacuumed immediately after completion of work in a manner that does not generate fugitive metal dust.

Source Tests – subdivision (h)

Paragraph (h)(1) requires the following source tests for any emission control device venting metal grinding or metal cutting operations: 1) a source test for PM emissions once every 12 months to demonstrate compliance with the emission standard and capture velocity requirements in subdivision (e) unless the source test demonstrates no more than 50% of the PM emissions standard then the source test may be performed no later than 24 months after the date of the most recent test; ~~and,~~ 2) a source test for hexavalent chromium and multiple metal emissions once every 48 months~~.~~; and , 3) the owner or operator of a metal forging facility is exempt from a source test for hexavalent chromium if a metals analysis by X-ray fluorescence (XRF) of bulk samples from the baghouse catch demonstrates a total chromium concentration of no greater than 1% by weight. The metals analysis by XRF is required to be conducted upon each removal or disposal of the baghouse catch. A metals analysis by XRF that demonstrates a total chromium greater than 1% by weight would require the owner or operator to conduct a hexavalent chromium source test for the associated baghouse within 60 days of the XRF analysis with subsequent source tests conducted every 48 months.

Paragraph (h)(2) requires a source test protocol to demonstrate compliance with the requirements in paragraph (h)(1) to be submitted no later than 60 days after rule adoption for the initial source test and no later than 90 days prior to the compliance deadline for subsequent source tests. Paragraph (h)(2) allows the use of the initial source test protocol for subsequent source tests if there are no changes.

Paragraph (h)(3) requires a source test protocol to demonstrate compliance with paragraph (h)(1) no later than 30 days after initial start-up of a new or modified metal grinding or metal cutting

emission control device that occurs on or after the date of rule adoption and no later than 90 days prior to the compliance deadline for subsequent source tests. Paragraph (h)(3) allows the use of the initial source test protocol for subsequent source tests if there are no changes.

Paragraph (h)(4) requires the source test protocol to include the source test criteria, all assumptions, required data, and calculated targets for testing the following: 1) target particulate mass emission standard; 2) preliminary target pollutant analytical data; 3) planned sampling parameters; and, 4) information on equipment, logistics, personnel, and other resources necessary for an efficient and coordinated test.

Paragraph (h)(5) requires source tests specified in paragraph (h)(1) to be conducted for an emission control device no later than 60 days from approval of the source test protocol, unless otherwise approved in writing by the Executive Officer.

Paragraph (h)(6) requires that if the pressure across the HEPA filter is not maintained pursuant to paragraph (i)(4) then a source test for the emissions control device that triggered the monitored pressure change must be performed within 60 days. A source test must be conducted for the following: PM emissions, multiple metals, and hexavalent chromium unless the facility conducts a metals analysis with XRF that demonstrates all bulk samples from the baghouse catch are no greater than a concentration of 1% by weight for total chromium.

Paragraph (h)(~~6~~7) requires the owner or operator to provide written notification within 10 calendar days prior to conducting any source test.

Paragraph (h)(~~7~~8) requires the owner or operator to provide notification by calling 1-800-CUT-SMOG within three business days (Monday through Friday) of when the facility knew or should have known of any source test result that exceeds the emission standard. Paragraph (h)(7) also requires the owner or operator to provide written notification containing the source test results within seven business days of the initial notification by phone.

Paragraph (h)(~~8~~9) establishes the applicable test methods that may be used when conducting a source test during typical operating conditions.

Paragraph (h)(~~9~~10) allows the use of alternative or equivalent test methods as defined in 40 CFR 60.2 when conducting a source test during typical operating conditions provided that written approval is granted by the SCAQMD's Executive Officer, in addition to the California Air Resources Board (CARB), or the U.S. EPA, as applicable.

Paragraph (h)(~~10~~11) requires the use of an approved test laboratory pursuant to the SCAQMD Laboratory Approval Program. Paragraph (h)(10) also allows the use of a non-approved test laboratory if granted by the Executive Officer on a case-by-case basis based on SCAQMD protocols and procedures.

Paragraph (h)(~~11~~12) requires a specific set of test conditions to be applied, which are subject to approval by the Executive Officer, when more than one source test method or set of source test methods are specified for any testing. Paragraph (h)(11) defines a violation of Rule 1430 to occur if the results of any one of the specified source test methods or set of source test methods demonstrate an exceedance of an emission standard.

Paragraph (h)(~~12~~13) requires testing to be performed according to the most recent SCAQMD-approved test protocol for the same purpose or compounds regardless of whether the testing is conducted by the facility, by SCAQMD, or by a contractor acting on behalf of SCAQMD or the facility to determine compliance.

Paragraph (h)(~~13~~14) requires source test reports to be submitted to SCAQMD in 60 days or less after source testing has been completed.

Paragraph (h)(~~14~~15) allows for an extension of the compliance deadline date for conducting source tests as specified in paragraph (h)(1) provided that the facility can demonstrate that a complete source test protocol and associated information was provided according to the required timeline, and is unable to meet the deadline due to reasons beyond the facility's control. Paragraph (h)(~~14~~15) also requires a request for extension to be submitted to the Executive Officer for approval no later than 30 days before the compliance deadline date.

Monitoring – subdivision (i)

Paragraph (i)(1) requires the installation, operation, calibration and maintenance of a BLDS pursuant to SCAQMD Rule 1155 – Particulate Matter (PM) Control Devices.

Paragraph (i)(2) requires the minimum hood induced capture velocity to be measured by static pressure once per operating shift using the measurement procedures specified in the most current edition of the *Industrial Ventilation, A Manual of Recommended Practice for Operation and Maintenance,* published by the American Conference of Governmental Industrial Hygienists, at the time a permit application is deemed complete with SCAQMD, or any more stringent methods required by OSHA or CAL-OSHA.

Paragraph (i)(3) requires continuous monitoring of the pressure drop across the HEPA filter of an emission control device with a mechanical gauge positioned so that it is easily visible and in clear sight of the operator or maintenance personnel. Paragraph (i)(3) also establishes requirements for the continuous monitoring device. Paragraph (i)(~~3~~4) ~~also~~ requires the pressure drop across the HEPA filter to be maintained within -1/2 times to +2 times the inches of water of the value established during the performance test to demonstrate compliance with the emission limitation for the emission control device based on hourly recordings by the continuous monitoring device for the averaging periods specified in subparagraphs (i)(5)(A) and (i)(5)(B).

Paragraph (i)(~~4~~5) requires confirmation of the capture velocity and a periodic smoke test to be conducted at least once every three months using the procedure set forth in Appendix 1 of Rule 1430 for each emission collection system, unless performing such test presents an unreasonable risk to safety.

Recordkeeping – subdivision (j)

Paragraph (j)(1) requires the following monthly records to be kept indicating: ~~1) the weight of metal processed by the facility; 2~~1) the weight of metal waste collected by the baghouse catch, including, if applicable any metal analyses for bulk samples of baghouse catches conducted for XRF analyses; and, ~~3~~2) the weight of metal waste collected by housekeeping activities. Paragraph (j)(1) also requires the following records to be kept indicating: 1) the dates when bags for baghouses, cartridges, or HEPA filters are replaced; 2) periodic smoke tests; 3) emission control device inspection and maintenance; 4) housekeeping activities; 5) maintenance and repair activities including the name of the person performing the activity, and the dates and times at which specific activities were completed; and, 6) a log of reports to the facility regarding odors or

other air quality related issues that includes the date, time, name and contact information for the person reporting the issue, source of the issue, ~~and~~ how the issue was resolved, and how it would be avoided in the future.

Paragraph (j)(2) requires records to be kept for BLDS ~~pursuant to SCAQMD Rule 1155~~.

Paragraph (j)(3) requires all records to be maintained for five years, ~~with at least the two most recent years kept onsite~~ and shall be made available to SCAQMD personnel upon request with at least the two most recent years kept onsite.

Signage – subdivision (k)

Paragraph (k)(1) requires the installation of a sign, measuring 16 square feet with lettering at least three inches tall with text contrasting with the sign background, within 50 feet of each entrance of the facility that is visible to the public, and in a location on each side of the facility that is visible to the public, that states the following: "TO REPORT AIR QUALITY ISSUES SUCH AS ODORS, DUST OR SMOKE FROM THIS FACILITY, CALL EITHER ~~[*FACILITY CONTACT PHONE NUMBER*] OR~~ THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT AT 1-800-CUT-SMOG."

Permit Application Submittals for Existing Metal Grinding or Cutting Operations – subdivision (l)

Subdivision (l) requires permit applications to be submitted no later than 60 days after rule adoption for all construction and/or necessary equipment required by paragraphs (d)(8) – Total Enclosures with Negative Air and (e)(1) – Emission Control Devices, for existing metal grinding or metal cutting operations, and Bag Leak Detection Systems.

Odor Contingency Measures (m)

Paragraph (m)(1) requires the owner or operator of a metal forging facility that has been notified by the Executive Officer of four (4) confirmed odor complaints in any consecutive six (6) months to implement an odor reducing measure(s) from the list specified in subparagraphs (m)(1)(A) through (m)(1)(D) of the proposed rule. Odor reducing measures include: 1) operational changes, 2) process changes, 3) enhancements to enclosures, and 4) other types of modifications approved by the Executive Officer.

Paragraph (m)(2) requires odor reducing measures to be implemented within a specific time period from the date the owner or operator is notified by the Executive Officer of four (4) confirmed odor complaints. The time period implement odor reducing measures are as follows: 60-days for measures related to operational or process changes, 90 days for measures related to enhancements to enclosures and on a schedule approved by the Executive Officer for measures that require Executive Officer approval. Paragraph (d)(3) requires the owner or operator to notify the Executive Officer within 30 days after implementing a measure required under paragraph (m)(1).

Paragraph (m)(4) requires that the consecutive 6-month period referenced in paragraph (m)(1) is restarted upon implementation of an odor reducing measure selected to comply with subparagraphs (m)(1)(A) through (m)(1)(D).

Rule 219 Exemption – subdivision (~~m~~n)

Subdivision (~~m~~n) clarifies that as of the date of rule adoption, any equipment subject to the requirements of Rule 1430 for metal grinding or metal cutting operations and associated emission

control devices will no longer be exempt from the requirement of a written permit pursuant to SCAQMD Rule 219 – Equipment Not Requiring A Written Permit Pursuant to Regulation II.

Appendix 1 - Smoke Test to Demonstrate Capture Efficiency for Ventilation Systems of (an) Emission Control Device(s) Pursuant to Paragraph (i)(4)

Appendix 1 contains procedures for conducting a smoke test of point sources where an emission control device is used to capture and control emissions from metal grinding or metal cutting operations.

CHAPTER 2

ENVIRONMENTAL CHECKLIST

INTRODUCTION

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

GENERAL INFORMATION

Project Title:	~~Draft~~ Final Environmental Assessment for Proposed Rule (PR) 1430 – Control of Emissions From Metal Grinding Operations at Metal Forging Facilities
Lead Agency Name:	South Coast Air Quality Management District
Lead Agency Address:	21865 Copley Drive Diamond Bar, CA 91765
CEQA Contact Person:	Mr. Sam Wang (909) 396-2649
PR 1430 Contact Person	Mr. Eugene Kang (909) 396-3524
Project Sponsor's Name:	South Coast Air Quality Management District
Project Sponsor's Address:	21865 Copley Drive Diamond Bar, CA 91765
General Plan Designation:	Not applicable
Zoning:	Not applicable
Description of Project:	SCAQMD staff is proposing a new rule, Rule 1430 to reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities located in industrial, commercial, or mixed land use areas throughout the entire SCAQMD jurisdiction. PR 1430 does not apply to grinding or cutting operations that are conducted under a continuous flood of metal removal fluid. PR 1430 would require owners or operators of the affected facilities to: 1) construct total enclosures; 2) modify existing or install new air pollution control devices; 3) install a BLDS (as applicable); 4) implement housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming; 5) conduct source testing and monitoring to assure compliance; and, 6) conduct recordkeeping. Some facilities that may be affected by PR 1430 are identified on lists compiled by the California Department of Toxic Substances Control per California Government Code §65962.5. While the reduction of toxic emissions, PM emissions, and odors will be expected to create an environmental benefit, activities that facility operators may undertake to comply with PR 1430 may also create secondary adverse environmental impacts from the construction and operation activities primarily associated with building total enclosures and with installing new or

	modifying existing air pollution control equipment. However, analysis of the proposed project in the ~~Draft~~Final EA did not result in the identification of any environmental topic areas that would be significantly adversely affected by the proposed project.
Surrounding Land Uses and Setting:	Residential, Commercial, Industrial and Mixed Use
Other Public Agencies Whose Approval is Required:	Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The following environmental impact areas have been assessed to determine their potential to be affected by the proposed project. As indicated by the checklist on the following pages, environmental topics marked with an "✓"involve at least one impact that is a "Potentially Significant Impact". An explanation relative to the determination of impacts can be found following the checklist for each area.

☐ Aesthetics	☐ Geology and Soils	☐ Population and Housing
☐ Agriculture and Forestry Resources	☐ Hazards and Hazardous Materials	☐ Public Services
☐ Air Quality and Greenhouse Gas Emissions	☐ Hydrology and Water Quality	☐ Recreation
☐ Biological Resources	☐ Land Use and Planning	☐ Solid and Hazardous Waste
☐ Cultural Resources	☐ Mineral Resources	☐ Transportation and Traffic
☐ Energy	☐ Noise	☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

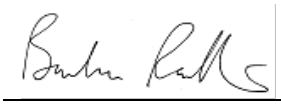
☑ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that an ENVIRONMENTAL ASSESSMENT with no significant impacts has been prepared.

☐ I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. An ENVIRONMENTAL ASSESSMENT with no significant impacts will be prepared.

☐ I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL ASSESSMENT will be prepared.

☐ I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect: 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards; and, 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL ASSESSMENT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects: 1) have been analyzed adequately in an earlier ENVIRONMENTAL ASSESSMENT pursuant to applicable standards; and, 2) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL ASSESSMENT, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Date: January 10, 2017 **Signature:** 

Barbara Radlein
Program Supervisor, CEQA Special Projects
Planning, Rules, and Area Sources

ENVIRONMENTAL CHECKLIST AND DISCUSSION

As discussed in Chapter 1, the main focus of PR 1430 is to reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities. PR 1430 has been evaluated relative to the environmental topics identified in the following environmental checklist (e.g., aesthetics, agricultural and forestry resources, biological resources, etc.). Several requirements in PR 1430 would not be expected to cause any physical changes that that could have secondary adverse environmental effects. For example, activities such as conducting monitoring of the emission collection system, record keeping, posting signage and applying for permit applications, and filing source test protocols are administrative or procedural in nature and would not be expected to create any secondary adverse environmental effects. However, there are activities that facility operators may undertake to comply with PR 1430 and these activities may also create secondary adverse environmental impacts. For example, PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, and the installation of a BLDS (as applicable). In addition, operational activities such as conducting source testing, and implementing housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming may also contribute to secondary adverse environmental impacts. Thus, the analysis in this EA focuses on the potential secondary adverse environmental impacts from these activities. To evaluate these impacts, the following assumptions were relied upon in the foregoing analyses:

Of the 22 metal forging facilities that will be subject to PR 1430:

- 5 are assumed to construct new buildings/enclosures and install new air pollution control equipment (11 baghouses with HEPA filters). While 2 of these facilities have existing air pollution control equipment, the analysis conservatively assumes that the existing air pollution control equipment will be demolished and replaced with new air pollution control equipment (4 baghouses without HEPA filters).
- ~~2~~ 3 facilities are assumed to construct one wall (in order to attain a complete enclosure) and 2 facilities are expected to install new air pollution control equipment (2 baghouses without HEPA filters).
- ~~12~~ 9 facilities are assumed to ~~to~~ install new air pollution control equipment (12 baghouses with HEPA filters and ~~3~~ 1 baghouse~~s~~ without HEPA filters).
- All of the facilities are assumed to meet the requirement for total enclosures by one year after PR 1430 is adopted.
- 5 facilities are assumed to not need any additional air pollution control equipment or building construction to meet the total enclosure requirement but instead, would make minor improvements to their buildings.
- ~~7~~ 11 facilities are assumed to be operated under negative air conditions and ~~6~~ 10 of these facilities are assumed to need new or upgraded ventilation systems for air pollution control equipment, in order to properly ventilate the total enclosures and achieve negative air conditions.
- All of the air pollution control equipment installed or modified will require maintenance which will involve collection and recycling or disposal of collected PM, periodic bag replacement for baghouses, periodic HEPA filter replacement for systems equipped with HEPA filters and the associated delivery and haul trips.

- All of the air pollution control equipment installed or modified will require periodic source testing which will have associated worker trips to visit each facility to conduct the source tests.
- All of the housekeeping activities could require the use of some water to conduct periodic cleaning.

Subsequent to the release of the Draft EA for public review and comment, additional revisions were made to PR 1430 that are described in the Project Description section in Chapter 1. These revisions resulted in adjustments to the number of facilities and the types of modifications that may be made to the affected facilities as indicated in strikeout/underlined text above. Nonetheless, staff has reviewed these modifications and concluded that overall, no new impacts are anticipated to result from these modifications. Further, the impacts previously evaluated in the Draft EA would not be made substantially worse and the conclusions reached in the Draft EA remained unchanged in the Final EA with respect to the currently version of PR 1430. Thus, staff has concluded that none of the modifications constitute significant new information or a substantial increase in the severity of an environmental impact, nor provide new information of substantial importance relative to the Draft EA. In addition, revisions to PR 1430 in response to verbal or written comments would not create new, avoidable significant effects. As a result, these revisions do not require recirculation of the document pursuant to CEQA Guidelines §15073.5 and §15088.5.

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

Significance Criteria

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

- The project will block views from a scenic highway or corridor.
- The project will adversely affect the visual continuity of the surrounding area.
- The impacts on light and glare will be considered significant if the project adds lighting which would add glare to residential areas or sensitive receptors.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

I. a), b) & c) No Impact. To reduce toxic emissions and PM emissions from the affected facilities, older, less efficient air pollution control equipment may need to be replaced with newer, cleaner, more efficient air pollution control equipment or in some cases, new air pollution control equipment such as baghouses and/or HEPA filters will need to be installed. In addition, some facilities may need to build new enclosures or remodel existing enclosures.

Due to the large size profiles of the air pollution control equipment that may need to modified or installed and the enclosures that may need to be modified or built, construction will be needed to carry out these activities, which will require the use of heavy-duty construction equipment such as

cranes, tractor/loader/backhoes, and forklifts, et cetera. The use of cranes, in particular, because of their height when fully extended, may be visible to the surrounding areas and temporarily change the skyline of the affected facilities, depending on where they are located within each facility's property. Except for the use of cranes, the majority of the construction equipment is expected to be low in height and not substantially visible to the surrounding area due to existing fencing along the property lines and existing structures currently within the facilities that may buffer the views of the construction activities.

Because each affected facility is located in existing industrial, commercial or mixed land use areas, the construction equipment is not expected to be substantially discernable from what exists on-site for routine operations and maintenance activities. Further, the construction activities are not expected to adversely impact views and aesthetics resources since most of the heavy equipment and activities are expected to occur within the confines of each existing facility and are expected to introduce only minor visual changes to areas outside each facility, if at all, depending on the location of the construction activities within the facility.

Lastly, the construction activities are expected to be temporary in nature and will cease following completion of the installation of new or modifications to existing buildings and air pollution control equipment. Once construction of any new or modified buildings or air pollution control equipment is completed, all construction equipment will be removed from each facility. These new or modified air pollution control devices would be expected to blend in with the existing industrial profile at the affected facilities because the heights of these units are typically smaller when compared to neighboring existing equipment onsite and their associated stack heights would be about the same or shorter than existing stacks within the affected facilities.

PR 1430 also contains requirements for facility owners or operators to conduct periodic housekeeping and maintenance activities, such as wet cleaning, vacuuming, and make modifications to the air ventilation system so that the air pollution control equipment can operate under negative air pressure conditions. These low-profile activities are limited to each facility's property such that they are not expected to affect any scenic vistas. For facilities that are required to have a BLDS, the installation consists of placing probes within the baghouse system so these modifications are expected to blend in with the existing equipment. In addition, PR 1430 imposes limits on PM concentration levels and strengthens existing visible emission requirements. To that extent, toxic and PM emission reductions are achieved through PR 1430, and, thus, improvements in visibility would also be expected to occur once all of the metal grinding and metal cutting activities are relocated inside an enclosure. Better visibility will be expected to improve the existing visual character or quality of areas in the vicinity of affected sites.

Therefore, any potential construction and operation of new and modified existing equipment or buildings as a result of the proposed project would not be expected to damage, degrade, or obstruct scenic resources and the existing visual character of any site in the vicinity of affected facilities.

I. d). No Impact. There are no components in PR 1430 that would require construction activities to occur at night. Further, cities often have their own limitations and prohibitions that restrict construction from occurring during evening hours and weekends. Therefore, no additional temporary construction lighting at the facility would be expected. Similarly, while the proposed project has no provisions that would require affected equipment to operate at night, some facilities currently operate multiple shifts and existing lighting is utilized during the nighttime shifts. For those facilities that are projected to modify existing or construct new buildings or air pollution

control equipment, once construction is complete, additional permanent light fixtures may be installed on or near the new or modified structures for safety and security reasons. These permanent light fixtures would be positioned to direct light downward toward equipment within the facility so as to not create additional light or glare offsite to residences or sensitive receptors. Therefore, the proposed project is not expected to create a new source of substantial light or glare at any of the affected facilities in a manner that would adversely affect day or nighttime views in the surrounding areas.

Conclusion

Based upon these considerations, significant adverse aesthetics impacts are not expected from implementing PR 1430. Since no significant aesthetics impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

Project-related impacts on agriculture and forest resources will be considered significant if any of the following conditions are met:

- The proposed project conflicts with existing zoning or agricultural use or Williamson Act contracts.
- The proposed project will convert prime farmland, unique farmland or farmland of statewide importance as shown on the maps prepared pursuant to the farmland mapping and monitoring program of the California Resources Agency, to non-agricultural use.
- The proposed project conflicts with existing zoning for, or causes rezoning of, forest land (as defined in Public Resources Code §12220 (g)), timberland (as defined in Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code § 51104 (g)).
- The proposed project would involve changes in the existing environment, which due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

II. a), b), c), & d) No Impact. The affected facilities and their immediately surrounding areas are not located on or near areas zoned for agricultural use, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency. Therefore, the proposed project would not result in any construction of new buildings or other structures that would require converting farmland to non-agricultural use or conflict with zoning for agricultural use or a Williamson Act contract. Since both construction and operation activities that would occur as a result of implementing the proposed project would occur within the existing boundaries of each affected facility, there are no provisions in PR 1430 that would affect land use plans, policies, or regulations. Land use and other planning considerations are determined by local governments and no land use or planning requirements relative to agricultural resources would be altered by the proposed project.

All of the facilities are located in existing industrial, commercial or mixed land use areas in the urban portion of the Basin that is not near forest land. Therefore, the proposed project is not expected to conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code §12220(g)), timberland (as defined by Public Resources Code §4526), or timberland zoned Timberland Production (as defined by Government Code §51104 (g)) or result in the loss of forest land or conversion of forest land to non-forest use.

Since PR 1430 would not require the installation or modification of buildings or equipment to occur near farmland, the proposed project is not expected to result in converting farmland to non-agricultural use; or conflict with existing zoning for agricultural use, or a Williamson Act contract. Similarly, it is not expected that PR 1430 would conflict with existing zoning for, or cause rezoning of, forest land; or result in the loss of forest land or conversion of forest land to non-forest use. Consequently, the proposed project would not create any significant adverse agriculture or forestry impacts.

Conclusion

Based upon these considerations, significant adverse agricultural and forest resources impacts are not expected from implementing PR 1430. Since no significant agriculture and forest resources impacts were identified, no mitigation measures are necessary or required.

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

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
h) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☑	☐

Significance Criteria

To determine whether or not air quality and greenhouse gas impacts from implementing PR 1430 are significant, impacts will be evaluated and compared to the criteria in Table 2-1. PR 1430 will be considered to have significant adverse impacts if any one of the thresholds in Table 2-1 are equaled or exceeded.

Table 2-1
SCAQMD Air Quality Significance Thresholds

Mass Daily Thresholds [a]		
Pollutant	**Construction** [b]	**Operation** [c]
NO_x	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day
SO_x	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs), Odor, and GHG Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Cancer Burden > 0.5 excess cancer cases (in areas ≥ 1 in 1 million) Chronic & Acute Hazard Index ≥ 1.0 (project increment)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
GHG	10,000 MT/yr CO_2eq for industrial facilities	
Ambient Air Quality Standards for Criteria Pollutants [d]		
NO_2 1-hour average annual arithmetic mean	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.18 ppm (state) 0.03 ppm (state) and 0.0534 ppm (federal)	
PM_{10} 24-hour average annual average	10.4 μg/m^3 (construction)[e] & 2.5 μg/m^3 (operation) 1.0 μg/m^3	
$PM_{2.5}$ 24-hour average	10.4 μg/m^3 (construction)[e] & 2.5 μg/m^3 (operation)	
SO_2 1-hour average 24-hour average	0.25 ppm (state) & 0.075 ppm (federal – 99th percentile) 0.04 ppm (state)	
Sulfate 24-hour average	25 μg/m^3 (state)	
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) and 35 ppm (federal) 9.0 ppm (state/federal)	
Lead 30-day Average Rolling 3-month average	1.5 μg/m^3 (state) 0.15 μg/m^3 (federal)	

[a] Source: SCAQMD CEQA Handbook (SCAQMD, 1993)
[b] Construction thresholds apply to both the South Coast Air Basin and Coachella Valley (Salton Sea and Mojave Desert Air Basins).
[c] For Coachella Valley, the mass daily thresholds for operation are the same as the construction thresholds.
[d] Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.
[e] Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million μg/m^3 = microgram per cubic meter ≥ = greater than or equal to
MT/yr CO_2eq = metric tons per year of CO_2 equivalents > = greater than

Revision: March 2015

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

III. a) No Impact. The SCAQMD is required by law to prepare a comprehensive district-wide Air Quality Management Plan (AQMP) which includes strategies (e.g., control measures) to reduce emission levels to achieve and maintain state and federal ambient air quality standards, and to ensure that new sources of emissions are planned and operated to be consistent with the SCAQMD's air quality goals. The AQMP's air pollution reduction strategies include control measures which target stationary, area, mobile and indirect sources. These control measures are based on feasible methods of attaining ambient air quality standards. Pursuant to the provisions of both the state and federal Clean Air Acts, the SCAQMD is also required to attain the state and federal ambient air quality standards for all criteria pollutants.

The 2012 AQMP was adopted by the SCAQMD Governing Board on December 7, 2012. In addition, on November 5, 2010, the Governing Board approved the 2010 Clean Communities Plan (CCP). The CCP is an update to the 2000 Air Toxics Control Plan (ATCP)[6] and its 2004 Addendum. The objective of the 2010 CCP is to reduce the exposure to air toxics and air-related nuisances throughout the district, with emphasis on cumulative impacts. The elements of the 2010 CCP are community exposure reduction, community participation, communication and outreach, agency coordination, monitoring and compliance, source-specific programs, and nuisance.

The most recent regional blueprint for how the SCAQMD will achieve air quality standards and healthful air is outlined the Draft Final 2016 AQMP[7] which contains multiple goals promoting reductions of criteria air pollutants, greenhouse gases, and toxics. At the time of this publication, the 2016 AQMP is scheduled for consideration by the SCAQMD Governing Board on February 3, 2017. In particular to toxics emissions, more information has become available about metal forging facilities with metal grinding and cutting operations indicating that more controls are needed to address fugitive toxic PM emissions, especially metal PM. Since heavy metals, such as nickel, cadmium, hexavalent chrome, cobalt and metal PM have high relative risks compared to other toxics and can create health problems from ingestion, dermal exposure, and through consumption of breast-milk, the Draft Final 2016 AQMP contains SCAQMD's air toxics control strategy TXM-01 - Control of Metal Particulate from Metal Grinding Operation, to specifically address reducing metal PM emissions from metal grinding activities at metal forging facilities, metal foundries, and plating operations.

PR 1430 was developed to partially implement TXM-01, by reducing toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities. Both metal grinding and metal cutting operations are currently exempt from SCAQMD permits,

[6] SCAQMD Air Toxics Control Plan, http://www.aqmd.gov/home/library/clean-air-plans/clean-communities-plan/air-toxics-control-plan.

[7] SCAQMD, Draft Final 2016 Air Quality Management Plan, http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016(clean).pdf.

and as such operations are currently an unregulated source category. Although some of the metal grinding and metal cutting operations have air pollution controls, most are not permitted. PR 1430 will ensure that metal particulate emissions are appropriately vented to air pollution control equipment, fugitive emissions are contained within a building enclosure, and housekeeping measures are implemented to further minimize emissions from metal grinding and metal cutting operations at metal forging facilities. Upon implementation, PR 1430 would be expected to reduce health risks and minimize public nuisance and odors affecting neighboring businesses and residents.

For these reasons, PR 1430 would not obstruct or conflict with the implementation of the 2012 AQMP or the Draft Final 2016 AQMP because the emission reductions from implementing PR 1430 are in addition to emission reductions in the 2012 AQMP and are in accordance with the emission reduction goals in the Draft Final 2016 AQMP. Additionally, PR 1430 does not include any provisions which would conflict with the attainment of ozone and PM standards in either the 2012 AQMP or the Draft Final 2016 AQMP.

PR 1430 would reduce toxic and PM emissions and therefore, be consistent with the goals of the 2012 AQMP, the 2010 CCP, and the Draft Final 2016 AQMP. Therefore, implementing PR 1430 to reduce toxic and PM emissions from metal grinding and metal cutting operations at metal forging facilities would not conflict with or obstruct implementation of the applicable air quality plans. Since no significant impacts were identified for this issue, no mitigation measures are necessary or required.

III. b) and f) Less Than Significant Impact. For a discussion of these items, refer to the following analysis.

New Facilities

SCAQMD staff is not aware of any new metal forging facilities planned to be constructed in the immediate future and is unable to predict or forecast, when, if any, would be built in the long-term. Therefore, in accordance with CEQA Guidelines §15145, an evaluation of construction and operation impacts for new facilities is concluded to be speculative and will not be evaluated further in this analysis. The focus of the analysis will be on the 22 existing facilities as explained in the following discussion.

Existing Facilities

The primary source of air quality construction impacts would be from PR 1430's key requirements to construct total enclosures, remove existing air pollution control devices (as applicable) and install new air pollution control devices and associated ventilation systems as needed, and install BLDS (as applicable). Similarly, the primary source of air quality impacts during operation would be from the requirements to conduct source testing and implement housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming. Thus, the analysis focuses on the potential secondary adverse environmental impacts from these activities during construction and operation.

Table 2-2 summarizes the key requirements in PR 1430 that may create secondary adverse air quality and GHG impacts during construction and operation.

Table 2-2
Sources of Potential Secondary Adverse Air Quality and GHG Impacts During Construction and Operation

Key Requirements in PR 1430	Physical Actions Anticipated During:	
	Construction	**Operation**
Total Enclosures	1. Install total enclosure and make building improvements 2. Install ventilation system to achieve negative air conditions	1. New total enclosure building operation 2. Ventilation system operation using blowers to achieve negative air conditions
Point Source Emission Controls	Air pollution control equipment replacement and/or installation	1. Air pollution control equipment operation 2. Vehicle trips due to filter replacement and waste disposal 3. Collection and recycling or disposal of collected PM 4. Leak detection
Housekeeping Requirements	None needed	1. Vehicle trips due to hauling waste and delivering supplies 2. Cleaning equipment
Source Testing	None needed	Vehicle trips due to periodic source testing

For the purpose of the conducting a worst-case CEQA analysis, for the 22 metal forging facilities that will be subject to PR 1430, the following assumptions[8] have been made:

- 5 facilities are assumed to construct new buildings/enclosures and install new air pollution control equipment (11 baghouses with HEPA filters). While 2 of these facilities have existing air pollution control equipment, the analysis conservatively assumes that the existing air pollution control equipment will be demolished and replaced with new air pollution control equipment (4 baghouses without HEPA filters).
- ~~2~~ 3 facilities are assumed to construct one wall (in order to attain a complete enclosure) and 2 facilities are expected to install new air pollution control equipment (2 baghouses without HEPA filters).
- ~~12~~ 9 facilities are assumed to install new air pollution control equipment (12 baghouses with HEPA filters and ~~3~~ 1 baghouses without HEPA filters).
- All of the facilities are assumed to meet the requirement for total enclosures by one year after PR 1430 is adopted.

[8] SCAQMD staff evaluated the 22 affected facilities and compiled information and data specific to the air pollution control equipment, total enclosures, ventilations systems to create negative air conditions, and the new buildings. This information and data were used to develop the assumptions applied in this CEQA analysis.

- 5 facilities are assumed to not need any additional air pollution control equipment or building construction to meet the total enclosure requirement but instead, would make minor improvements to their buildings.
- ~~7~~ 11 facilities are assumed to be operated under negative air conditions and ~~6~~ 10 of these facilities are assumed to need new or upgraded ventilation systems for their air pollution control equipment, in order to properly ventilate the total enclosures and achieve negative air conditions.
- All of the air pollution control equipment installed or modified will require maintenance which will involve collection and recycling or disposal of collected PM, periodic bag replacement for baghouses, periodic HEPA filter replacement for systems equipped with HEPA filters and the associated delivery and haul trips.
- All of the air pollution control equipment installed or modified will require periodic source testing which will have associated worker trips to visit each facility to conduct the source tests.
- All of the housekeeping activities could require the use of some water to conduct periodic cleaning.

Construction Impacts

Construction emissions were estimated according to the following construction phases: demolition of an existing building, air pollution control equipment, and its foundation; site grading; and, construction of a new building or improve an existing building to meet the total enclosure requirement, installation of the air pollution control equipment, and pouring the foundation[9]. In addition, criteria pollutant emissions were also calculated for all on-road vehicles transporting workers, vendors, and material removal and delivery during construction using the California Emissions Estimator Model[10]® version 2016.3.1 (CalEEMod). The detailed output reports for the CalEEMod runs are included in Appendix B of this EA. Table 2-3 presents the results of the construction air quality analysis. Appendix B also contains the spreadsheets with the results and assumptions used for this analysis.

The construction impact analysis assumes that construction will take from one month up to five months to complete at each affected facility, with the time depending on the numbers of the air pollution control equipment to be constructed and whether the facility needs to demolish the existing building and construct a new building with total enclosure. However, the actual construction time could be substantially less than one month for some facilities. The peak daily emissions vary for each pollutant depending on the construction phase. Further, given the duration of the construction for each facility and the twelve month timeframe for all the affected facilities to comply with the requirements in PR 1430, it was conservatively assumed that the construction phases for some facilities would overlap which resulted in construction occurring at as many as 5 facilities on a peak day.

[9] In general, no or limited construction emissions from grading are anticipated because modifications or installation of new equipment would occur at existing industrial/commercial facilities and, therefore, would not be expected to require digging, earthmoving, grading, etc.

[10] CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects.

Table 2-3 summarizes the peak daily emissions associated with construction at all affected facilities. Therefore, the air quality impacts due to construction from implementation of PR 1430 are expected to be less than significant.

Table 2-3
Peak Daily Construction Emissions

ACTIVITY\POLLUTANT	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Scenario 1 - New Building Construction						
A. Demolition of Building	1.42	12.16	8.75	0.02	1.46	0.89
B. Demolition of Baghouse	1.40	11.60	8.64	0.01	1.37	0.88
C. Demolition of Baghouse Foundation	1.40	11.60	8.64	0.01	1.33	0.87
D. Grading	1.58	20.69	10.43	0.04	2.20	1.34
E. Building Construction	1.30	12.96	8.22	0.01	0.89	0.80
F. Building Paving	1.18	10.33	8.33	0.01	0.83	0.62
G. Baghouse Pad Paving	1.20	10.87	8.73	0.01	0.90	0.67
H. Baghouse Installation	1.97	16.30	9.95	0.02	0.97	0.90
Scenario 2 - New Baghouse/HEPA Installation						
E. Building Construction	0.79	6.98	3.29	0.01	0.39	0.34
B. Demolition of Baghouse	1.40	11.45	8.61	0.01	1.13	0.84
C. Demolition of Baghouse Foundation	1.40	11.45	8.61	0.01	1.13	0.84
G. Baghouse Pad Paving	0.66	5.92	4.47	0.01	0.48	0.37
H. Baghouse Installation	1.09	8.81	5.13	0.01	0.54	0.50
Scenario 3 - Building Improvement For Total Enclosure						
E. Building Construction	0.79	6.98	3.29	0.01	0.39	0.34
Daily Peak Construction Emissions	6	64	40	0.08	5.6	4.1
SIGNIFICANCE THRESHOLD FOR CONSTRUCTION	75	100	550	150	150	55
SIGNIFICANT?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Notes and assumptions:

a. All of the construction activities are expected to be completed 1 year after PR 1430 is adopted except for the construction activities required in the provision of the odor contingency measures which will not occur until 1 year after PR 1430 is adopted.

b. It is expected that five, 12, and five facilities will implement Scenario 1, 2 and 3, respectively. In Scenario 1 and 2, each facility will not have any construction sub-phases (from A to H) overlapping.

c. For all pollutants except VOC, the maximum emissions occur when five facilities with construction activities overlap [three under Scenario 1 (1D and two 1E) and two under Scenario 2 (2B and 2G)]. For VOC, the maximum emissions occur when five facilities with construction activities overlap [three under Scenario 1 (three 1E) and two under Scenario 2 (2C and 2H)].

d. Appendix B contains the detailed calculations.

Operational Impacts

As explained previously, secondary air quality operational impacts are expected to occur from the following activities: maintenance of the air pollution control equipment; source testing; and, housekeeping. Total operational emissions were estimated using CARB's OFFROAD2011for the off-road equipment (aerial lift) and EMFAC2014 for the mobile sources (for example, waste disposal trucks, source testing trucks, filter replacement trucks, and etc.). Currently, the affected facilities periodically send their collected PM, which is considered as hazardous waste, to the certified landfill or recycling facility for proper disposal or recycling. After PR 1430 is implemented, while additional PM is expected to be collected by the air pollution control equipment, the affected facilities are expected to continue their existing practices for handling their waste. PR 1430 would also require roof cleaning and source testing of the applicable air pollution control equipment for each affected facility. Roof cleaning is assumed to be performed with the assistance of aerial lifts. Source testing is assumed to require additional vehicle trips to the facility on the day of source testing. As a reasonable worst case analysis, it is assumed that each facility will utilize the following vehicles and off-road equipment each year: 1 waste/wastewater disposal truck, 1 source testing truck, 1 filter replacement truck, 1 filter inspection truck, and 1 aerial lift. Although it is unlikely, it is assumed that of the 22 facilities, 11 facilities would conduct maintenance of the air pollution control equipment, perform roof cleaning, and conduct source testing on the same day, such that 44 trucks and 11 aerial lifts would be operating on a peak day. In addition, a round trip distance of 40 miles was assumed for every on-road vehicle used during operation. The air quality impacts during operation are summarized in Table 2-4. Appendix B contains the detailed spreadsheets with the assumptions used for this analysis.

As indicated in Table 2-4, operational emissions anticipated from implementing PR 1430 do not exceed any significance threshold. Therefore, the operational air quality impact is considered less than significant. The proposed project is not expected to result in significant adverse operational criteria pollutant emission impacts.

Table 2-4
Peak Daily Operational Emissions

Key Requirements: Operation Phase [a]	**VOC, lb/day**	**NO_x, lb/day**	**CO, lb/day**	**SO_x, lb/day**	**PM_{10}, lb/day**	**$PM_{2.5}$, lb/day**
Point Source Emission Controls	1.41	1.21	0.70	0.30	0.22	0.01
Housekeeping [b]	9.47	15.92	1.44	1.11	2.97	0.02
Source Testing	1.14	1.13	0.34	0.20	0.20	0.00
Total Operational Emissions	12.02	18.26	2.49	1.61	3.39	0.03
SIGNIFICANCE THRESHOLD DURING OPERATION	55	55	550	150	150	55
SIGNIFICANT?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
[a.] The occasional delivery, recycling and disposal of PM or filters and the source testing trips are expected to generate mobile source emissions.
[b.] Housekeeping emissions are generated from the equipment used for conducting roof cleaning at the 11 overlapping facilities.
[c.] See Appendix B for detailed calculations.

Construction and Operation Overlap Impact

Given the number of affected facilities and the varying requirements for the facility's to comply with PR 1430 requirements, there is a possibility that there will be ~~an~~ overlaps between construction emissions at some facilities and operational emissions at other facilities. Based on PR 1430 requirements, the~~is~~ overlap will occur either at the time between month six and month 12 following PR 1430 adoption or ~~,~~ until one year after PR 1430 is adopted when there is a facility which triggers the odor contingency measures. The minor building enclosure enhancement is required to be implemented at the facility when the odor contingency measures are triggered. However, the emissions associated with these building enclosure enhancement activities are consider minimal and therefore will not exceed the maximum emissions previously estimated due to the overlap in construction and operation. The maximum emissions from the overlap period are expected to occur between month six and month twelve following PR 1430 adoption.

During this overlap period between month six and month twelve following PR 1430 adoption, only a limited number of operational vehicles and equipment will be needed at those facilities that have recently completed construction and installed the new baghouse systems and/or constructed the new total enclosure buildings because the compliance schedule for conducting roof top cleaning, baghouse replacement, or waste/wastewater disposal will not have been triggered. Therefore, during this overlap period, it was assumed that 8 source test, delivery, and disposal trucks and 2 aerial lifts will be used for operations on a peak day at two facilities, in addition to the construction emissions at four facilities, as presented in the Table 2-5. According to SCAQMD policy, the peak daily emissions from the construction and operation overlap period are estimated and compared to the SCAQMD's CEQA significance thresholds for operation in Table 2-5. The results show the impact from construction and operation overlap period is less than significant.

Table 2-5
Peak Daily Emissions in Construction and Operation Overlap Phase

Construction and Operation Overlap Phase	VOC, lb/day	NO_x, lb/day	CO, lb/day	SO_x, lb/day	PM_{10}, lb/day	$PM_{2.5}$, lb/day
Construction Emissions[a]	30.10 ~~2.19~~	48.08 ~~3.32~~	4.47 ~~0.45~~	3.06 ~~0.29~~	5.46 ~~0.62~~	0.07 ~~0.01~~
Operational Emissions[b]	2.19 ~~30.10~~	3.32 ~~48.08~~	0.45 ~~4.47~~	0.29 ~~3.06~~	0.62 ~~5.46~~	0.01 ~~0.07~~
Total Emissions	32.29	51.40	4.92	3.35	6.08	0.07
SIGNIFICANCE THRESHOLD DURING OPERATION	55	55	550	150	150	55
SIGNIFICANT?	**No**	**No**	**No**	**No**	**No**	**No**

Notes and assumptions:

a. The maximum construction impacts during the overlap phase occur when one facility is undergoing building construction and three facilities are performing baghouse construction/installation.

b. The maximum operational impact during the overlap phase occur when two facilities have operational emissions (up to 8 source test, delivery, and disposal trucks and 2 aerial lifts used on a peak day).

As indicated in Table 2-4, the emissions during the construction and operational overlap period anticipated from implementing PR 1430 do not exceed the SCAQMD's CEQA air quality significance thresholds. Therefore, the air quality impacts from construction and operation are considered less than significant. The proposed project is not expected to result in significant adverse air quality impacts during the construction and operation overlap period.

Indirect Criteria Pollutant Emissions from Electricity Consumption

Indirect criteria pollutant and GHG emissions are expected from the generation of electricity to operate new air pollution control equipment and ventilation system needed to create negative air conditions that occurs off-site at electricity generating facilities (EGFs). Emissions from electricity generating facilities are already evaluated in the CEQA documents for EGF projects when they are built or modified. The analysis in Section VI. - Energy b), c) and d) demonstrates that there is sufficient capacity from power providers for the increased electricity consumption needed to implement PR 1430.

Under the SCAQMD's RECLAIM program, EGFs were provided annual allocations of NO_x and SO_x emissions that typically decline annually. However, PR 1430 will cause an increase in energy use and a corresponding increase in emissions from the EGFs providing additional electricity (see Section VI. - Energy for the analysis of the energy impacts). Any potential NO_x and SO_x emission increases at the EGFs would need to be offset under the RECLAIM program in accordance with SCAQMD Regulation XX and increases in other pollutants would need to be offset under the New Source Review program in accordance with SCAQMD Regulation XIII – New Source Review. Thus, air quality impacts from electricity consumption are anticipated to be to less than significant.

III. c) Less Than Significant Impact.

Cumulatively Considerable Impacts

Based on the foregoing analysis, since criteria pollutant project-specific air quality impacts from implementing PR 1430 would not be expected to exceed the air quality significance thresholds in Table 2-1, cumulative air quality impacts are also expected to be less than significant. SCAQMD cumulative significance thresholds are the same as project-specific significance thresholds. Therefore, potential adverse impacts from implementing PR 1430 would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for air quality impacts. Per CEQA Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulatively considerable.

The SCAQMD guidance on addressing cumulative impacts for air quality is as follows: "As Lead Agency, the SCAQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR." "Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant."[11]

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the South Coast Air Quality Management District's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria…" "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the SCAQMD has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established SCAQMD significance thresholds. See also *Rialto Citizens for Responsible Growth v. City of Rialto* **(**2012) 208 Cal. App. 4th 899. Here again the court upheld the SCAQMD's approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, it may be concluded that the proposed project will not contribute to a significant unavoidable cumulative air quality impact.

[11] SCAQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf.

III. d) Less Than Significant Impact.

Toxic Air Contaminants During Construction

Diesel particulate matter (DPM) is considered a carcinogenic and chronic toxic air contaminant (TAC). Since the diesel equipment used during the construction of the new building or air pollution control equipment is expected to be a short-term project (i.e. no more than six months at any facility), a Health Risk Assessment (HRA) was not conducted, consistent with OEHHA Guidance (2015). If subsequent site-specific projects have additional details about TAC impacts, they will be evaluated under CEQA at that time. In addition, implementation of PR 1430 will reduce toxic impacts by controlling PM emissions (containing TACs).

Therefore, PR 1430 is not expected to generate significant adverse TAC impacts from construction.

Toxic Air Contaminants During Operation

Direct Health Risk Reductions from PR 1430
PR 1430 is expected to reduce overall TAC emissions from metal forging facilities by requiring total enclosures, air pollution control equipment and other requirements to assure compliance. Therefore, PR 1430 is expected to have the benefit of reducing adverse health risk impacts from these facilities to nearby sensitive receptors.

Secondary Health Risk Impacts from PR 1430
The operation of non-combustion air pollution control equipment, which may be needed to comply with PR 1430, will collect toxic PM but will not be expected to generate any TAC emissions since the types of air pollution control equipment are expected to be powered by electricity.

Based on the above discussion, PR 1430 is not expected be significant for exposing sensitive receptors to substantial concentrations.

III. e) Less Than Significant Impact.

Odor Impacts

As previously explained, this analysis assumes that new buildings and new or modified air pollution control equipment will be constructed at the affected facilities and these facilities already operate diesel equipment and trucks. With regard to odors, currently, for all diesel-fueled equipment and vehicles, the diesel fuel is required to have a low sulfur content (e.g., 15 ppm by weight or less) in accordance with SCAQMD Rule 431.2 – Sulfur Content of Liquid Fuels. Such fuel is expected to minimize odor. Because the operation of construction equipment will occur within the confines of existing affected facilities, sufficient dispersion of diesel emissions over distance generally occurs such that odors associated with diesel emissions may not be discernable to offsite receptors, depending on the location of the equipment and its distance relative to the nearest offsite receptor. Further, the diesel trucks that will be operated onsite as a part of construction activities will not be allowed to idle longer than five minutes per any one location in accordance with the CARB idling regulation, so odors from these vehicles would not be expected. Therefore, the addition of several pieces of construction equipment and haul trucks that will

operate intermittently, over a relatively short period of time, are not expected to generate diesel exhaust odor greater than what is already typically present at the affected facilities.

Operation of the new air pollution control equipment and blowers are also not expected to generate any new odors because these devices are electric and the process of collecting the metal PM in enclosed bags, containers and filters would mean that these odorous materials would be captured, such that the existing odor profiles at the affected facilities would be reduced. PR 1430 prohibits the outside metal grinding and requires all affected facilities to conduct all metal grinding and metal cutting operations inside total enclosures which will also reduce odors at these facilities. PR 1430 also includes a provision of odor contingency measures for any facility that has been notified by the Executive Officer of four confirmed odor complaints in any consecutive six months to implement odor reducing measures.

Thus, PR 1430 is not expected to create significant adverse objectionable odors during construction or operation. Since no significant impacts were identified for this issue, no mitigation measures for odors are necessary or required.

III. g) and h) Less Than Significant Impact.

Greenhouse Gas (GHG) Impacts

Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of GHG emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. The emission of GHGs through the combustion of fossil fuels (i.e., fuels containing carbon) in conjunction with other human activities, appears to be closely associated with global warming. State law defines GHG to include the following: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6) (HSC §38505(g)). The most common GHG that results from human activity is CO_2, followed by CH_4 and N_2O.

Traditionally, GHGs and other global warming pollutants are perceived as solely global in their impacts and that increasing emissions anywhere in the world contributes to climate change anywhere in the world. A study conducted on the health impacts of CO_2 "domes" that form over urban areas cause increases in local temperatures and local criteria pollutants, which have adverse health effects[12].

The analysis of GHGs is a different analysis than the analysis of criteria pollutants for the following reasons. For criteria pollutants, the significance thresholds are based on daily emissions because attainment or non-attainment is primarily based on daily exceedances of applicable ambient air quality standards. Further, several ambient air quality standards are based on relatively short-term exposure effects on human health (e.g., one-hour and eight-hour standards). Since the half-life of CO_2 is approximately 100 years, for example, the effects of GHGs occur over a longer term which

[12] Jacobsen, Mark Z. "Enhancement of Local Air Pollution by Urban CO_2 Domes," Environmental Science and Technology, as describe in Stanford University press release on March 16, 2010 available at: http://news.stanford.edu/news/2010/march/urban-carbon-domes-031610.html.

means they affect the global climate over a relatively long time frame. As a result, the SCAQMD's current position is to evaluate the effects of GHGs over a longer timeframe than a single day (i.e., annual emissions). GHG emissions are typically considered to be cumulative impacts because they contribute to global climate effects. GHG emission impacts from implementing PR 1430 were calculated at the project-specific level during construction and operation. For example, installation and operation of air pollution control equipment has the potential to increase the use of fuel during construction and electricity during operation which will in turn increase CO_2 emissions.

The SCAQMD convened a "Greenhouse Gas CEQA Significance Threshold Working Group" to consider a variety of benchmarks and potential significance thresholds to evaluate GHG impacts. On December 5, 2008, the SCAQMD adopted an interim CEQA GHG Significance Threshold for projects where SCAQMD is the lead agency (SCAQMD 2008). This GHG interim threshold is set at 10,000 metric tons of CO_2 equivalent emissions (CO_2e) per year (MT/yr). Projects with incremental increases below this threshold will not be cumulatively considerable.

Table 2-6 summarizes the GHG analysis which shows that PR 1430 may result in the generation of 17 amortized[13] MT/yr of CO_2e emissions during construction and ~~23~~ 25 MT/yr of CO_2e emissions during operation from all the affected facilities for a total of ~~40~~ 42 MT/yr of CO_2e emissions, which is less than the SCAQMD significance threshold. The detailed calculations of project GHG emissions can be found in Appendix B.

Table 2-6
GHG Emissions From 22 Affected Facilities

Activity	CO_2e (MT/year[a])
Construction [b]	17
Operation	~~23~~25
Total Project Emissions	**~~40~~42**
SIGNIFICANCE THRESHOLD	**10,000**
SIGNIFICANT?	**NO**

[a.] 1 metric ton = 2,205 pounds
[b.] GHGs from short-term construction activities are amortized over 30 years

Thus, as shown in Table 2-6, the SCAQMD's GHG significance threshold for industrial sources will not be exceeded. For this reason, implementing the proposed project is not expected to generate significant adverse cumulative GHG air quality impacts. Further, PR 1430 is not expected to generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment or conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHG gases.

[13] GHGs from short-term construction activities are amortized over 30 years. To amortize GHGs from temporary construction activities over a 30-year period (*est. life of the project/ equipment*), the amount of CO_2e emissions during construction are calculated and then divided by 30.

Conclusion
Based upon these considerations, significant air quality and GHG emissions impacts are not expected from implementing PR 1430. Since no significant air quality and GHG emissions impacts were identified, no mitigation measures are necessary or required.

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

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
f)	Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☑

Significance Criteria

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

- The project results in a loss of plant communities or animal habitat considered to be rare, threatened or endangered by federal, state or local agencies.
- The project interferes substantially with the movement of any resident or migratory wildlife species.
- The project adversely affects aquatic communities through construction or operation of the project.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

IV. a), b), c), & d) No Impact. The sites of the affected facilities that would be subject to PR 1430 currently do not support riparian habitat, federally protected wetlands, or migratory corridors because they are existing developed and established facilities currently used for industrial purposes. Additionally, special status plants, animals, or natural communities identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service are not expected to be found on or in close proximity to the affected facilities. Therefore, PR 1430 would have no direct or indirect impacts that could adversely affect plant or animal species or the habitats on which they rely in the District.

Compliance with PR 1430 is expected to reduce emissions from metal grinding and metal cutting operations at the affected facilities, which would be expected to improve, not worsen, present conditions of plant and animal life, since previously uncontrolled toxic and metal PM emissions would be captured and disposed of properly before they could have the potential to impact plant and animal life. PR 1430 does not require acquisition of additional land or further conversions of

riparian habitats or sensitive natural communities where endangered or sensitive species may be found. Finally, the air pollution control equipment contemplated as part of implementing PR 1430 would be installed at the existing facilities and would not be built on or near a wetland or in the path of migratory species.

IV. e) & f) No Impact. The proposed project is not envisioned to conflict with local policies or ordinances protecting biological resources or local, regional, or state conservation plans. Land use and other planning considerations are determined by local governments and no land use or planning requirements would be altered by implementing PR 1430. Additionally, PR 1430 would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or any other relevant habitat conservation plan, and would not create divisions in any existing communities because all activities associated with complying with PR 1430 would occur at existing facilities in previously disturbed areas which are not typically subject to Habitat or Natural Community Conservation Plans.

The SCAQMD, as the Lead Agency, has found that, when considering the record as a whole, there is no evidence that implementing of PR 1430 would have potential for any new adverse effects on wildlife resources or the habitat upon which wildlife depends. Accordingly, based upon the preceding information, the SCAQMD has, on the basis of substantial evidence, rebutted the presumption of adverse effect contained in Title 14 of the California Code of Regulations §753.5 (d) - Projects Eligible for a No Effect Determination.

Conclusion

Based upon these considerations, significant biological resource impacts are not expected from implementing PR 1430. Since no significant biological resource impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☑
b)	Cause a substantial adverse change in the significance of an archaeological resource as defined in §15064.5?	☐	☐	☐	☑
c)	Directly or indirectly destroy a unique paleontological resource, site, or feature?	☐	☐	☐	☑
d)	Disturb any human remains, including those interred outside formal cemeteries?	☐	☐	☐	☑

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074?	☐	☐	☐	☑

Significance Criteria

Impacts to cultural resources will be considered significant if:

- The project results in the disturbance of a significant prehistoric or historic archaeological site or a property of historic or cultural significance, or tribal cultural significance to a community or ethnic or social group or a California Native American tribe.
- Unique paleontological resources or objects with cultural value to a California Native American tribe are present that could be disturbed by construction of the proposed project.
- The project would disturb human remains.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

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

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

Buildings, structures, and other potential culturally significant resources that are less than 50 years old are generally excluded from listing in the National Register of Historic Places, unless they are shown to be exceptionally important. For any of the buildings or structures that may be affected by PR 1430 that are older than 50 years, they are buildings that are currently utilized for industrial purposes and would generally not be considered historically significant since they would not have

any of the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values. Therefore, PR 1430 is not expected to cause any impacts to significant historic cultural resources.

V. b), c), & d) No Impact. The installation of new or the modification of existing buildings or air pollution control equipment to comply with PR 1430 may require disturbance of previously disturbed areas at the affected existing industrial facilities. However, since construction-related activities are expected to be confined within the existing footprint of the affected facilities that have been fully developed and paved, PR 1430 is not expected to require physical changes to the environment which may disturb paleontological or archaeological resources. Furthermore, it is envisioned that these areas are already either devoid of significant cultural resources or whose cultural resources have been previously disturbed. Therefore, PR 1430 has no potential to cause a substantial adverse change to a historical or archaeological resource, directly or indirectly destroy a unique paleontological resource or site or unique geologic feature, or disturb any human remains, including those interred outside formal cemeteries. Implementing of PR 1430 is, therefore, not anticipated to result in any activities or promote any programs that could have a significant adverse impact on cultural resources in the District.

V. e) No Impact. PR 1430 is not expected to require physical changes to a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American Tribe. Furthermore, PR 1430 is not expected to result in a physical change to a resource determined to be eligible for inclusion or listed in the California Register of Historical Resources or included in a local register of historical resources. For these reasons, PR 1430 is not expected to cause any substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code §21074.

As part of releasing this CEQA document for public review and comment, the SCAQMD also provided a formal notice of the proposed project to all California Native American Tribes (Tribes) that requested to be on the Native American Heritage Commission's (NAHC) notification list per Public Resources Code §21080.3.1(b)(1). The NAHC notification list provides a 30-day period during which a Tribe may respond to the formal notice, in writing, requesting consultation on the proposed project.

In the event that a Tribe submits a written request for consultation during this 30-day period, the SCAQMD will initiate a consultation with the Tribe within 30 days of receiving the request in accordance with Public Resources Code §21080.3.1(b). Consultation ends when either: 1) both parties agree to measures to avoid or mitigate a significant effect on a Tribal Cultural Resource and agreed upon mitigation measures shall be recommended for inclusion in the environmental document [see Public Resources Code §21082.3(a)]; or, 2) either party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached [see Public Resources Code §21080.3.2(b)(1)-(2) and §21080.3.1(b)(1)].

Conclusion

Based upon these considerations, significant adverse cultural resources impacts are not expected from implementing PR 1430. Since no significant cultural resources impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VI.	**ENERGY.** Would the project:				
a)	Conflict with adopted energy conservation plans?	☐	☐	☐	☑
b)	Result in the need for new or substantially altered power or natural gas utility systems?	☐	☐	☑	☐
c)	Create any significant effects on local or regional energy supplies and on requirements for additional energy?	☐	☐	☑	☐
d)	Create any significant effects on peak and base period demands for electricity and other forms of energy?	☐	☐	☑	☐
e)	Comply with existing energy standards?	☐	☐	☐	☑

Significance Criteria

Impacts to energy resources will be considered significant if any of the following criteria are met:

- The project conflicts with adopted energy conservation plans or standards.
- The project results in substantial depletion of existing energy resource supplies.
- An increase in demand for utilities impacts the current capacities of the electric and natural gas utilities.
- The project uses non-renewable resources in a wasteful and/or inefficient manner.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

VI. a) & e) No Impact. PR 1430 is not expected to conflict with any adopted energy conservation plans or violate any energy conservation standards because existing facilities would be expected to continue implementing any existing energy conservation plans that are currently in place regardless of whether PR 1430 is implemented.

PR 1430 is not expected to cause new development because it does not require new metal forging facilities to be built. While PR 1430 will primarily apply to existing facilities, it will also apply to

any new facilities that may be built in the future. However, SCAQMD staff is not aware of any new metal forging facilities planned to be constructed in the immediate future and is unable to predict or forecast, when, if any, would be built in the long-term. Any energy resources that may be necessary to install total enclosures, air pollution control equipment, conduct source tests, conduct monitoring and employ housekeeping would be used to achieve reductions in toxics, PM and odors from metal grinding and metal cutting operations at metal forging facilities, and therefore, would not be using non-renewable resources in a wasteful manner. The air quality benefits that would be expected to occur as a result of implementing these activities would not require utilities that would provide additional electricity and natural gas to the affected facilities to substantially alter power or natural gas system because any additional energy needed to implement PR 1430 can be provided from existing supplies. For these reasons, PR 1430 would not be expected to conflict with energy conservation plans or existing energy standards, or use non-renewable resources in a wasteful manner.

VI. b), c) & d) Less Than Significant Impact. PR 1430 will increase the use of electricity from the operation of air pollution control equipment, including the ventilation systems needed to create negative air conditions in the total enclosures. Diesel fuel would be consumed by construction equipment, maintenance equipment, and on-road vehicles during housekeeping, delivery, and hauling trips. No natural gas will be needed during construction. The following sections evaluate the various forms of energy sources that may be affected by the implementation of PR 1430.

Construction-Related Impacts

During the various phases of construction, diesel and gasoline fuel will be consumed by portable construction equipment (e.g., welders, cranes, pavers, mixers, generators, forklifts, etc.) needed to install air pollution control equipment, total enclosures, and monitoring equipment and by construction workers' vehicles and delivery/haul trucks traveling to and from each construction site. To estimate "worst-case" energy impacts associated with construction activities, the SCAQMD staff took the total construction SO_x emissions to scale to the total diesel fuel usage since the estimated SO_x emissions during construction are derived from CARB's OFFROAD2011 and EMFAC2014 models. These two models both calculate the SO_x emissions based on the mass-balanced method and the sulfur content in the fuel. Therefore, the total diesel fuel consumption from construction associated equipment and trucks can be estimated by scaling the SO_x emissions from one single piece of construction equipment with known diesel fuel usage in gallons per day to the total construction SO_x emissions. Appendix B contains the assumptions and calculations for estimating fuel usage associated with construction.

The fuel usage per construction worker commute round trips was calculated by assuming that each workers' gasoline vehicle would get a fuel economy rate of approximately 15 miles per gallon and would travel 30 miles round trip to and from the construction site in one day. As explained previously, a peak construction day is based on nine facilities with overlapping construction phases occurring on a given day. Table 2-7 lists the projected energy impacts associated with the construction from all affected facilities.

Table 2-7
Total Projected Fuel Usage for Construction Activities

Fuel Type	Year 2015 Estimated Basin Fuel Demand[a] (mmgal/yr)	Fuel Usage[b] (mmgal/yr)	Total % Above Baseline	Exceed Significance?[c]
Diesel	756	0.03	0.004	No
Gasoline	6,783	0.0057	0.0001	No

[a] California Annual Retail Fuel Outlet Report Results in 2015, 2015 California Energy Commission (http://www.energy.ca.gov/almanac/transportation_data/gasoline/2015_A15_Results.xlsx). [Accessed December 27, 2016.]
[b] Estimated peak fuel usage from construction activities. Diesel usage estimates are based on the usage of portable construction equipment and on-road vehicles conducting haul/delivery trips. Gasoline usage estimates are derived from construction workers' vehicle daily trips to and from work.
[c] SCAQMD's energy threshold for both types of fuel used is 1% of fuel supply.

The 2015 California Annual Retail Fuel Outlet Report Results from the California Energy Commission (CEC) state that 585 million gallons of diesel and 6,579 million gallons of gasoline were consumed in 2015 in the South Coast Air Basin. Thus, if an additional 26,451 gallons of diesel consumed and 5,771 gallons of gasoline are consumed during construction, no significant adverse impact on fuel supplies would be expected.

Operational Energy Impacts

Electricity Use

SCAQMD staff estimates there will be additional electricity usage for the new air pollution control equipment, including the ventilation systems needed to create negative air conditions in the total enclosures. The air pollution control equipment (baghouse with or without HEPA) and the ventilation systems (blowers) are expected to be powered by electricity.

The analysis assumes that 23 additional blowers would be needed to operate the air pollution control equipment and ~~5~~ 10 additional blowers to operate the ventilation systems needed to create negative air conditions at ~~five~~ 10 of the 22 facilities. The additional electricity consumption from operation is estimated and presented in Table 2-8. Electrical energy impacts associated with project operation are considered less than significant.

Table 2-8
PR 1430 Additional Electricity Consumption from Operation

Energy Use	Consumption (GW-h)
Air Pollution Control Equipment: Blowers and Baghouses (100 bhp @ 0.001788 GW-h) x 26	0.046
Blowers to create negative air conditions (100 bhp@ 0.001788 GW-h) x ~~6~~10	0.018~~1~~
Total Use:	0.06~~4~~57
SCAQMD Basin Electricity End Use Consumption [a,b]	120,210
Total Impact % of Capacity	**0.00005**
SIGNIFICANT?[b]	**NO**

[a] 2016 Draft Final SCAQMD AQMP Chapter 10, 2012 Electricity Use in GWh (http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/strikeout/11ch10-draft-final-120116.pdf)

[b] It is assumed the energy supply is equal to energy consumption.

[c] SCAQMD's energy threshold for electricity is 1% of supply.

Diesel Use From Trucks

Additional truck trips are expected to be needed for the additional source testing, filter replacement or inspection, and disposal of waste. Each truck is assumed to drive approximately 40 miles, round trip, with a fuel economy of approximately five miles per gallon (mpg) which would mean that each truck would use approximately 8 gallons (40 miles ÷ 5 mpg) of diesel fuel per round trip. As previously explained in Section III. Air Quality and Greenhouse Gases, by assuming that each facility will need 4 trucks per year, 88 trucks per year will be needed for all 22 facilities and the corresponding annual total diesel use would be 704 gallons per year.

Diesel Use From Aerial Lifts

PR 1430 requires roof cleaning of each facility on a semi-annual basis and aerial lifts are assumed to be needed in order for facility employees to be able to access the rooftops. For this analysis, the aerial lifts are assumed to be used for four hours per year at each facility. Diesel fuel use was estimated using a 1.4 gallon per hour fuel consumption rate from CARB's OFFROAD2007 database, which is an older version of OFFROAD2011, is the only model which provides the fuel usage data as an output. The diesel fuel use from one aerial lift is estimated to be approximately 5.6 gallons per year. The worst case for all 22 facilities utilizing aerial lifts according to the annual roof cleaning schedule would be that 123.2 gallons per year of diesel fuel would be consumed.

The 2015 California Annual Retail Fuel Outlet Report Results from California Energy Commission states that 585 million gallons of diesel are consumed in 2015 in South Coast Air Basin. Thus, based on the foregoing analysis and the summary presented in Table 2-9, an additional 827.2 gallons of diesel consumed per year of operation at all 22 facilities is not expected to have a significant adverse impact on fuel supplies.

Table 2-9
Annual Total Projected Fuel Usage for Operational Activities

Type of Equipment	Diesel (gal/yr)
Trucks	704
Aerial Lifts	123.2
Total:	827.2
Year 2015 Estimated Basin Fuel Demand (gal/yr) [a]	585,000,000
Total % Above Baseline	0.0001
SIGNIFICANT?[b]	**NO**

[a] California Annual Retail Fuel Outlet Report Results in 2012, 2015 California Energy Commission (http://www.energy.ca.gov/almanac/transportation_data/gasoline/2015_A15_Results.xlsx). [Accessed December 27, 2016.]

[b] SCAQMD's energy threshold for fuel used is 1% of fuel supply.

Natural Gas Impacts

None of the air pollution control equipment or ventilation systems requires natural gas for operation as these units require electricity. Similarly, none of the vehicles that may be needed to deliver supplies or haul away waste would require natural gas. Thus, no natural gas would be required to implement PR 1430.

Based on the foregoing analysis, the operational-related activities associated with the implementation of PR 1430 are necessary and will not use energy in a wasteful manner and will not result in substantial depletion of existing energy resource supplies. Further, as shown in the preceding analysis, the quantities of electricity, gasoline and diesel fuel needed to implement PR 1430 would not create a significant demand of energy when compared to existing supplies. Thus, there are no significant adverse energy resources impacts associated with the implementation of PR 1430.

Conclusion

Based upon these considerations, significant adverse energy impacts are not expected from implementing PR 1430. Since no significant energy impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

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

- Topographic alterations would result in significant changes, disruptions, displacement, excavation, compaction or over covering of large amounts of soil.
- Unique geological resources (paleontological resources or unique outcrops) are present that could be disturbed by the construction of the proposed project.

- Exposure of people or structures to major geologic hazards such as earthquake surface rupture, ground shaking, liquefaction or landslides.
- Secondary seismic effects could occur which could damage facility structures, e.g., liquefaction.
- Other geological hazards exist which could adversely affect the facility, e.g., landslides, mudslides.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

VII. a) No Impact. Since PR 1430 would result in construction activities at existing facilities located in developed, mostly industrial and commercial settings, to install or modify buildings and air pollution control equipment, minor site preparation is anticipated that could adversely affect geophysical conditions in the District. While some new enclosures and air pollution controls may be installed at existing facilities, the project does not cause or require a new facility to be constructed.

Southern California is an area of known seismic activity. As part of the issuance of building permits, local jurisdictions are responsible for assuring that the Uniform Building Code is adhered to and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The basic formulas used for the Uniform Building Code seismic design require determination of the seismic zone and site coefficient, which represents the foundation condition at the site. The Uniform Building Code requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction.

Accordingly, the installation of new or modification of existing enclosures or air pollution control equipment at existing facilities to comply with PR 1430 is expected to conform to the Uniform Building Code and all other applicable state and local building codes. Structures must be designed to comply with the Uniform Building Code Zone 4 requirements if they are located in a seismically active area. The local city or county is responsible for assuring that the existing affected facilities comply with the Uniform Building Code as part of the issuance of the building permits and can conduct inspections to ensure compliance. The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The goal of the code is to provide structures that will: 1) resist minor earthquakes without damage; 2) resist moderate earthquakes without structural damage but with some non-structural damage; and, 3) resist major earthquakes without collapse but with some structural and non-structural damage.

The Uniform Building Code is considered to be a standard safeguard against major structural failures and loss of life. The Uniform Building Code bases seismic design on minimum lateral seismic forces (“ground shaking”). The basic formulas used for the Uniform Building Code

seismic design require determination of the seismic zone and site coefficient, which represent the foundation conditions at the site. The Uniform Building Code requirements also consider liquefaction potential and establish stringent requirements for building foundations in areas potentially subject to liquefaction.

Accordingly, existing buildings and equipment, as well as any that may be modified or replaced as a result of PR 1430, are likely to conform to the Uniform Building Code and all other applicable state codes in effect at the time they were constructed. Thus, PR 1430 would not alter the exposure of people or property to geological hazards such as earthquakes, landslides, mudslides, ground failure, or other natural hazards. As a result, substantial exposure of people or structures to the risk of loss, injury, or death involving the rupture of an earthquake fault, seismic ground shaking, ground failure or landslides is not anticipated.

VII. b) Less than Significant Impact. Since PR 1430 would require the installation of new or the modification of existing buildings and air pollution control equipment at existing developed facilities, construction activities such as grading may be necessary to prepare a level foundation. As such, temporary erosion resulting from grading activities may be expected. However, these grading activities and any associated temporary erosion that may occur are expected to be relatively minimal since the existing facilities are generally flat and have previously been graded and paved. For this reason, no unstable earth conditions or changes in geologic substructures are expected to result from implementing PR 1430. It is important to note that potential air quality impacts related to grading are addressed in Section III as part of the construction air quality impact discussion.

Further, wind erosion is not expected to occur to any appreciable extent, because operators at sites with the potential to generate dust would be required to comply with the best available control measure (BACM) requirements of SCAQMD Rule 403 – Fugitive Dust. In general, operators must control fugitive dust through a number of soil stabilizing measures such as watering the site, using chemical soil stabilizers, revegetating inactive sites, etc. Therefore, impacts to the loss of topsoil and soil erosion are less than significant.

VII. c) No Impact. Since PR 1430 will affect existing facilities, it is expected that the soil types present at the affected facilities will not be made further susceptible to expansion or liquefaction. Furthermore, subsidence is not anticipated to be a problem since only minor excavation, grading, or filling activities are expected to occur at the affected facilities. Additionally, the areas where the existing facilities are located are not envisioned to be prone to new landslide impacts or have unique geologic features since the existing facilities are currently operational. Any installations of new or modifications to existing buildings or air pollution control equipment would not be expected to increase or exacerbate any existing risks at the affected facility locations. Therefore, because PR 1430 would not involve locating facilities on a geologic unit or soil that is unstable or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse, no impacts are anticipated.

VII. d) & e) No Impact. Since PR 1430 will affect metal grinding and metal cutting operations at existing facilities by requiring the installation of new or the modification of existing building and air pollution control equipment, people or property will not be exposed to new impacts related to expansive soils or soils incapable of supporting water disposal because no water will be necessary to operate the buildings or air pollution control equipment. Further, because each affected facility has an existing sewer system the installation of septic tanks or alternative

wastewater disposal systems or modifications to the existing sewer systems would not be necessary. Thus, implementation of PR 1430 will not adversely affect soils associated with a installing a new septic system or alternative wastewater disposal system or modifying an existing sewer.

Conclusion

Based upon these considerations, significant adverse geology and soils impacts are not expected from the implementation of PR 1430. Since no significant geology and soils impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
VIII.	**HAZARDS AND HAZARDOUS MATERIALS.** Would the project:				
a)	Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials?	☐	☐	☑	☐
b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment?	☐	☐	☑	☐
c)	Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☑	☐
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment?	☐	☐	☐	☑
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public use airport or a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☑

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☑
g)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☑
h)	Significantly increased fire hazard in areas with flammable materials?	☐	☐	☑	☐

Significance Criteria

Impacts associated with hazards will be considered significant if any of the following occur:
- Non-compliance with any applicable design code or regulation.
- Non-conformance to National Fire Protection Association standards.
- Non-conformance to regulations or generally accepted industry practices related to operating policy and procedures concerning the design, construction, security, leak detection, spill containment or fire protection.
- Exposure to hazardous chemicals in concentrations equal to or greater than the Emergency Response Planning Guideline (ERPG) 2 levels.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

VIII. a) & b) Less than Significant Impact. PR 1430 may increase the amount of metal PM that is captured by air pollution control equipment, in lieu of being directly emitted into the air, which will in turn, cause a subsequent increase in the amount of metal particulate matter waste. Additional metal PM emissions will also be captured through facility owners/operators employing additional housekeeping practices on a regular basis. Overall, the capture of these metal PM emissions would reduce health risks to the public and the environment.

Spent metal is currently transported from affected facilities to offsite facilities that either recycle or dispose of the metal waste at a hazardous waste landfill. Once PR 1430 is implemented and the

construction of the total enclosures and air pollution control equipment is completed, the additional metals that will be captured by the new air pollution control systems would continue to be either recycled off-site or hauled away to a hazardous waste landfill, which is what the affected facilities are currently doing. Hence, no new significant hazards are expected to the public or environment through the continued routine transport, disposal or recycling of metal waste generated at metal forging facilities.

Therefore, PR 1430 is not expected to create a significant hazard to the public or environment through reasonably foreseeable upset conditions involving the release of hazardous materials into the environment.

VIII. c) Less than Significant Impact. There are six facilities that are located within a one quarter mile of a school. These facilities and the names of the schools and their proximities are identified in Appendix C. PR 1430, if implemented, would reduce human exposure to toxics by requiring metal PM emissions from metal grinding and metal cutting operations to be collected and vented to air pollution control equipment instead of being vented to the atmosphere. All of the affected facilities, including the six that are located within one quarter mile of a school, are expected to continue to take the appropriate and required actions to ensure proper handling of existing quantities of hazardous or acutely hazardous materials, substances or wastes that are currently generated. Further, any increased quantities that may be collected at each facility by efficient collection systems and air pollution control equipment that will be employed as a result of PR 1430, would also be expected to be handled in the same or similar manner regardless of each facility's proximity to a school because PR 1430 does not include new requirements or alter existing requirements for hazardous waste disposal.

VIII. d) No Impact. Government Code §65962.5 refers to hazardous waste handling practices at facilities subject to the Resources Conservation and Recovery Act (RCRA). PR 1430 would affect four facilities that are identified on lists of California Department of Toxics Substances Control hazardous waste facilities per Government Code §65962.5. These facilities are identified in Appendix C. However, compliance with PR 1430 will ensure that metal PM, which may be toxic and hazardous, will be captured by air pollution control equipment. The more material that is captured, the less that will be emitted directly to the atmosphere. Currently, metal PM waste is stored and transported in closed containers and PR 1430 would not alter existing or add new requirements to change how the metal waste is stored while awaiting to be transported off-site to a recycling facility or a hazardous waste landfill. Hazardous wastes from the existing facilities are required to be managed in accordance with applicable federal, state, and local rules and regulations and compliance with these regulations is expected to continue after PR 1430 is implemented. Therefore, compliance with PR 1430 would not create a new significant hazard to the public or environment.

VIII. e) No Impact. One of the affected facilities, Continental Forge, is located within two miles of an airport (Compton Airport) but it is not located within the airport runway safety areas, airport runway protection zones, or within a transitional surface area which is required to be free of all obstructions. Therefore, if the owner/operator of Continental Forge makes modifications to its facility to comply with PR 1430, the modifications would not be expected to result in a safety hazard for people residing or working in the project area even within the vicinity of an airport.

VIII. f) No Impact. Health and Safety Code §25506 specifically requires all businesses handling hazardous materials to submit a business emergency response plan to assist local administering

agencies in the emergency release or threatened release of a hazardous material. Business emergency response plans generally require the following:

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

In general, every county or city and all facilities using a minimum amount of hazardous materials are required to formulate detailed contingency plans to eliminate, or at least minimize, the possibility and effect of fires, explosion, or spills. In conjunction with the California Office of Emergency Services, local jurisdictions have enacted ordinances that set standards for area and business emergency response plans. These requirements include immediate notification, mitigation of an actual or threatened release of a hazardous material, and evacuation of the emergency area.

Emergency response plans are typically prepared in coordination with the local city or county emergency plans to ensure the safety of not only the public (surrounding local communities), but the facility employees as well. The proposed project would not impair implementation of, or physically interfere with any adopted emergency response plan or emergency evacuation plan. Further, the existing facilities already have an emergency response plan in place, as applicable. While the installation of air pollution control equipment and total enclosures may require an update of each affected facility's existing emergency response plan to reflect the new equipment or building modifications, the action of modifying an emergency response plan will not create any environmental impacts. Thus, PR 1430 is not expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

VIII. g) No Impact. The facilities affected by PR 1430 are currently located in existing industrial, commercial or mixed land use areas and are not located near wildlands; therefore, there is no existing risk from wildland fires and implementation of PR 1430 would not create a new risk.

The proposed project would also not increase the existing risk of fire hazards in areas with flammable brush, grass, or trees since no substantial or native vegetation typically exists on or near the facilities (specifically because they could be a fire hazard). Thus, PR 1430 is not expected to expose people or structures to wildfires. Therefore, no significant increase in wildland fire hazards is expected at the facilities that would be affected by the proposed project.

VIII. h) Less Than Significant Impact. The Uniform Fire Code and Uniform Building Code set standards intended to minimize risks from flammable or otherwise hazardous materials. Local jurisdictions are required to adopt the uniform codes or comparable regulations. Local fire agencies require permits for the use or storage of hazardous materials and permit modifications for proposed increases in their use. Permit conditions depend on the type and quantity of the hazardous materials at the facility. Permit conditions may include, but are not limited to, specifications for sprinkler systems, electrical systems, ventilation, and containment. The fire departments make annual business inspections to ensure compliance with permit conditions and other appropriate regulations. Further, businesses are required to report increases in the storage or use of flammable and otherwise hazardous materials to local fire departments. Local fire departments ensure that adequate permit conditions are in place to protect against the potential risk of upset. PR 1430 would not change the existing requirements and permit conditions for the proper handling of flammable materials. Further, PR 1430 does not contain any requirements that would prompt facility owners/operators to begin using new flammable materials. In addition, the National Fire Protection Association has special designations for deflagrations (e.g., explosion prevention) from metal dust. Therefore, operators of metal grinding activities that require baghouse emission control technologies will also need to select reliable, economical and effective means of explosion control such as baghouse explosion suppression, containment and venting. Additional information pertaining to these types of protective measures is available in Chapter 8 of the *Industrial Ventilation, A Manual for Recommended Practice for Design*, 28th Edition, published by the American Conference of Governmental Industrial Hygienists, ©2013.

Conclusion

Based upon these considerations, significant adverse hazards and hazardous materials impacts are not expected from implementing PR 1430. Since no significant hazards and hazardous materials impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
IX.	**HYDROLOGY AND WATER QUALITY.** Would the project:				
a)	Violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, or otherwise substantially degrade water quality?	☐	☐	☑	☐
b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☑
c)	Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in substantial erosion or siltation on- or off-site or flooding on- or off-site?	☐	☐	☐	☑
d)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☑
e)	Place housing or other structures within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would impede or redirect flood flows?	☐	☐	☐	☑

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
f)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam, or inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☑
g)	Require or result in the construction of new water or wastewater treatment facilities or new storm water drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☑	☐
h)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☑	☐
i)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☑	☐

Significance Criteria

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

Water Demand:

- The existing water supply does not have the capacity to meet the increased demands of the project, or the project would use more than 262,820 gallons per day of potable water.
- The project increases demand for total water by more than five million gallons per day.

Water Quality:

- The project will cause degradation or depletion of ground water resources substantially affecting current or future uses.
- The project will cause the degradation of surface water substantially affecting current or future uses.

- The project will result in a violation of National Pollutant Discharge Elimination System (NPDES) permit requirements.
- The capacities of existing or proposed wastewater treatment facilities and the sanitary sewer system are not sufficient to meet the needs of the project.
- The project results in substantial increases in the area of impervious surfaces, such that interference with groundwater recharge efforts occurs.
- The project results in alterations to the course or flow of floodwaters.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

IX. a) Less than Significant Impact. PR 1430 contains requirements for facility owners/operators to conduct metal grinding and metal cutting operations within total enclosures and to vent these total enclosures to air pollution control equipment such as baghouses and HEPA filters. The ventilation systems, baghouses and HEPA filters do not utilize water as part of their day-to-day functions. Thus, no wastewater will be generated from the use of air pollution control equipment to control emissions from metal grinding and metal cutting activities.

PR 1430 also contains housekeeping requirements that require facility owners/operators to clean: 1) the roof tops that house areas associated with metal grinding or metal cutting operations on a semi-annual basis; 2) the inside of the building or total enclosure areas where metal grinding or metal cutting operations occur on a monthly basis; 3) areas where metal containing wastes generated from metal grinding or metal cutting operations are stored, disposed of, recovered or recycled on a daily basis; 4) floors within 20 feet of metal grinding and metal cutting work stations or any entrance/exit point for an existing enclosure or total enclosure on a daily basis; and, 5) floors within 10 feet of an emission control device dedicated to metal grinding or metal cutting operations on a daily basis. When employing these housekeeping efforts, PR 1430 provides facility owners/operators with a choice of using either wet cleaning or dry HEPA vacuuming. If dry HEPA vacuuming is used to comply with the housekeeping requirements, then no water would be needed and no wastewater would be generated. There are 22 facilities that would be required to conduct housekeeping and some facility operators have indicated to SCAQMD staff during site visits that they would prefer to conduct dry HEPA vacuuming in lieu of wet cleaning because dry HEPA vacuuming would allow for the recycling and sale of the captured precious metals. Further, facility owners/operators indicated that wet cleaning would be less preferable because it would require the use of water and the treatment of the cleaning water prior to disposal, which may increase costs.

Nonetheless, because PR 1430 provides wet cleaning as an option for complying with the housekeeping requirements, this analysis assumes that wet cleaning could potentially occur and wastewater may be generated as a result. For any facility owner/operator that chooses to conduct wet cleaning, but that does not currently have a wastewater treatment system or a wastewater discharge permit, the dirty water resulting from wet cleaning would need to be collected, stored

and disposed of as hazardous materials and these facilities would be required to comply with the applicable hazardous waste disposal regulations. Thus, the collected dirty water at these facilities would not be allowed to be discharged as wastewater.

For any affected facility that has a wastewater discharge permit, the owner/operator will be required to comply with the permitted effluent discharge concentration and flow limits which means the any wastewater generated from conducting housekeeping via wet cleaning would likely need to be treated prior to discharge.

In either of these scenarios, wet cleaning conducted in accordance with complying with the housekeeping requirements in PR 1430 would not be expected to violate any water quality standards, waste discharge requirements, exceed wastewater treatment requirements of the applicable of the Publicly Owned Treatment Works (POTW) or Regional Water Quality Control Board, or otherwise substantially degrade water quality that the requirements are meant to protect.

IX. b) No Impact. As previously explained, water is not needed to operate the total enclosures and vent the metal grinding and metal cutting operations to air pollution control equipment. For any facility owners/operators that choose to conduct wet cleaning, any additional water needed would likely be supplied by each facility's current water supplier. Further, the quality of water that would likely be supplied to each affected facility will be potable water since potable water is currently supplied at all of the affected facilities in order to provide drinking water for employees, water for sinks and toilets, and water for any landscaping, if applicable. Should any of the affected facilities have a groundwater well onsite with groundwater pumping rights, the facility owners/operators would not likely choose to use groundwater in lieu of potable water to conduct wet cleaning because groundwater typically contains sand and other soil particles and debris which would not be a suitable quality for conducting wet cleaning. Therefore, implementation of PR 1430 would not be expected to cause facilities to utilize groundwater for conducting wet cleaning, substantially deplete groundwater supplies, or interfere substantially with groundwater recharge.

IX. c) & d) No Impact. PR 1430 contains requirements for facility owners/operators to conduct metal grinding and metal cutting operations within total enclosures and to vent these total enclosures to air pollution control equipment such as baghouses and HEPA filters. Facilities that are not currently equipped with total enclosures that vent to air pollution control equipment will be required to construct the total enclosures and install ventilation and air pollution control equipment such as baghouses and HEPA filters. Because the ventilation systems, baghouses and HEPA filters do not utilize water as part of their day-to-day functions, no new drainage facilities or alterations to existing drainage facilities will be needed beyond what currently exists at the existing facilities. Similarly, there are no streams or rivers running through the properties of the existing facilities, so any construction activities that may occur as a result of complying with PR 1430 would not be expected to alter the course of a stream or river. Finally, as part of building the total enclosures and installing the ventilation and air pollution control systems, some minor earthwork will be needed to prepare the affected areas for a new foundation at each affected facility. Any construction activities, however, would not be expected to permanently create unpaved areas that would be vulnerable to surface runoff, erosion, siltation or flooding, either on- or offsite. Thus, PR 1430 is not expected to have any significant adverse effects on any existing drainage patterns, or cause an increase rate or amount of surface runoff water that would exceed the capacity of the facilities' existing or planned storm water drainage systems because PR 1430 does not contain any requirements that would change existing drainage patterns or the procedures for how surface runoff water is handled.

IX. e) & f) No Impact. The facilities affected by PR 1430 are currently located in existing industrial, commercial or mixed land use areas. Since PR 1430 would result in construction activities at existing facilities to install or modify buildings, total enclosures, and air pollution control equipment, some minor site preparation and construction activities may be necessary. However, while some new total enclosures and air pollution control equipment may be installed at existing facilities, PR 1430 would not cause or require a new facility or new housing to be constructed. Further, the construction of the new total enclosures and air pollution control equipment would occur on-site at the existing facilities. Therefore, PR 1430 is not expected to result in placing housing or structures in 100-year flood hazard areas that could create new flood hazards or create significant adverse risk impacts from flooding as a result of failure of a levee or dam or inundation by seiches, tsunamis, or mudflows.

IX. g) and i) Less than Significant Impact. As explained in Section IX. a), PR 1430 provides facility owners/operators with a choice of using either wet cleaning or dry HEPA vacuuming. If dry HEPA vacuuming is used to comply with the housekeeping requirements, then no water would be needed and no wastewater would be generated. There are 22 facilities that would be required to conduct housekeeping and some facility operators have indicated to SCAQMD staff during site visits that they would prefer to conduct dry HEPA vacuuming in lieu of wet cleaning because dry HEPA vacuuming would allow for the recycling and sale of the captured precious metals. Further, wet cleaning would be less preferable because it would require the use of water and the treatment of the cleaning water prior to disposal.

Nonetheless, because PR 1430 provides wet cleaning as an option for complying with the housekeeping requirements, this analysis assumes that some wet cleaning could occur and wastewater may be generated. SCAQMD staff is unable to predict with any precision the number of facilities that will actually elect to conduct wet cleaning, the amount of water that would be needed, and the amount of wastewater that may be generated as part of conducting wet cleaning to comply with PR 1430.

To get an idea of the scale of water and water quality impacts that might occur from conducting wet cleaning to comply with PR 1430, SCAQMD staff consulted the hydrology and water quality analysis contained in the Final Environmental Assessment for Rule 1420.2 – Emissions Standards for Lead from Metal Melting Facilities Final Environmental Assessment (October 2015)[14], because Rule 1420.2 contains similar housekeeping requirements to those in PR 1430 and the calculated water use estimates for conducting wet cleaning to comply with Rule 1420.2 was based on a peak daily use. Table 2-10 compares the housekeeping requirements contained in PR 1430 with those adopted in Rule 1420.2.

[14] SCAQMD, Final Environmental Assessment for Proposed Rule 1420.2 - Emissions Standards for Lead from Lead Melting Facilities, certified October 2, 2015. http://www.aqmd.gov/docs/default-source/ceqa/documents/aqmd-projects/2015/pr-1420_2-final-ea.pdf

Table 2-10
Comparison of Housekeeping Requirements in PR 1430 and Rule 1420.2

PR 1430			Rule 1420.2		
Cleaning Task	**Cleaning Method**	**Cleaning Frequency**	**Cleaning Task**	**Cleaning Method**	**Cleaning Frequency**
Areas where metal containing wastes generated from metal grinding or metal cutting operations are stored, disposed of, recovered or recycled	Wet cleaning or Dry HEPA Vacuuming	Daily	Areas where lead-containing wastes generated from housekeeping activities are stored, disposed of, recovered or recycled	Wet cleaning or Dry HEPA Vacuuming	Weekly
Floors within 20 feet of metal grinding and metal cutting work stations or any entrance/exit point for an existing enclosure or total enclosure	Wet cleaning or Dry HEPA Vacuuming	Daily	Surfaces that accumulate lead-containing dust subject to foot traffic.	Wet cleaning or Dry HEPA Vacuuming	Weekly
Floors within 10 feet of an emission control device dedicated to metal grinding or metal cutting operations	Wet cleaning or Dry HEPA Vacuuming	Daily			
Inside of the building or total enclosure areas where metal grinding or metal cutting operations occur on a basis	Wet cleaning or Dry HEPA Vacuuming	Monthly			
Roof tops that house areas associated with metal grinding or metal cutting operations	Wet cleaning or Dry HEPA Vacuuming	Semi-annually	Cleanings of roof tops on structures > 45 feet in height that house areas associated with the processing, handling, or storage of lead-containing materials capable of generating any amount of fugitive lead-dust, excluding areas associated with the storage of raw, unprocessed lead-containing materials or finished lead-containing products	Wet cleaning or Dry HEPA Vacuuming	Semi-annually
			Cleanings of roof tops on structures < 45 feet in height that house areas associated with the processing, handling, or storage of lead-containing materials capable of generating any amount of fugitive lead-dust, excluding areas associated with the storage of raw, unprocessed lead-containing materials or finished lead-containing products	Wet cleaning or Dry HEPA Vacuuming	Quarterly

The hydrology and water quality analysis for Rule 1420.2 estimated that 13 facilities would need a total of 82,372 gallons per day of water and an equivalent amount of wastewater would be generated, which equates to approximately 6,406 gallons per day of water needed and wastewater generated at each facility that conducts wet cleaning to comply with the housekeeping measures. As illustrated in Table 2-9, the cleaning frequencies for the various tasks do not exactly align such that in some cases, the cleaning frequency would be less often under PR 1430 than for Rule 1420.2 while in other cases, the cleaning frequency is more often. Nonetheless, this comparison provides helpful information to grasp what the overall water demand and wastewater impacts from implementing PR 1430 could be.

For PR 1430, while there are 22 facilities that would be required to comply with the housekeeping requirements, facility owners/operators indicated a preference for conducting dry HEPA vacuuming in lieu of wet cleaning. Thus, not all 22 facilities would be expected to conduct wet cleaning to comply with the housekeeping requirements in PR 1430. For a conservative analysis, half of affected facilities (e.g., 11) were assumed to conduct wet cleaning on the same day to comply with the housekeeping requirements in PR 1430. By applying the maximum amount of water that was estimated to be needed per facility for Rule 1420.2 (e.g., 6,406 gallons per day), then an equivalent amount of wastewater may also be generated per facility.

If the maximum amount of water that could be used by 11 facilities on a peak day to conduct wet cleaning in response to PR 1430 is equivalent to the analysis in Rule 1420.2, then PR 1430 could require 70,466 gallons of water to conduct wet cleaning and could generate the same amount as wastewater (e.g., 11 facilities x 6,406 gallons per day). Based on the facility owner/operator preference to use dry HEPA vacuuming, SCAQMD staff believes that the estimated use of water and the corresponding generation of wastewater on a peak day probably substantially overestimates what the actual impact may be. Also, it is important to keep in mind that the maximum amount of water needed to conduct wet cleaning at one facility was estimated to be 6,406 gallons per day so any wastewater generated at an individual facility should be well within the existing and projected overall capacity of POTWs located throughout the District whenever the wet cleaning activities are conducted. Therefore, wastewater impacts associated with the disposal of waterborne clean-up waste material generated from implementing PR 1430 are not expected to significantly adversely affect POTW operations. Further, the small volume of wastewater that may be generated from wet cleaning would not be expected to require or warrant the construction of new or the expansion of existing wastewater treatment or storm water drainage facilities.

IX. h) Less than Significant Impact. As explained in Section IX. g) and i), if half of affected facilities (e.g., 11) are assumed to conduct wet cleaning on the same day at the same water demand rate that was estimated in the hydrology and water quality analysis for Rule 1420.2, then the maximum amount of water that may be needed per facility would be 6,406 gallons per day or 70,466 gallons per day for 11 facilities. Table 2-11 summarizes the projected amount of water that may be needed for the 11 affected facilities to conduct wet cleaning to comply with the housekeeping requirements in PR 1430.

Table 2-11
Projected Water Demand

PR 1430 Wet Cleaning Activity	Additional Water Demand on a Peak Day (gal/day)
PR 1430 Housekeeping Measures	70,466
Significance Threshold for Potable Water:	262,820
SIGNIFICANT FOR POTABLE WATER?	**NO**
Significance Threshold for Total Water:	5,000,000
SIGNIFICANT FOR TOTAL WATER?	**NO**

Therefore, since the estimated potable water demand and total water demand would be less than significance thresholds for potable and total water, respectively, the water demand impacts that are expected occur from implementing PR 1430 would be less than significant. Further, existing water supplies are expected to be sufficiently available to serve the proposed project from existing entitlements and resources without the need for new or expanded entitlements because the projected increased water demand is based on a peak day, but that amount of water will not be needed every day. Therefore, PR 1430 is not expected to have significant adverse water demand impacts.

Conclusion

Based upon these considerations, significant adverse hydrology and water quality impacts are not expected from implementing PR 1430. Since no significant hydrology and water quality impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

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

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

X. a) No Impact. PR 1430 does not require the construction of new facilities, and any physical effects that will result from PR 1430, will occur at existing facilities located in commercial/industrial areas and would not be expected to go beyond existing boundaries. For this reason, implementation of PR 1430 would not be expected to physically divide an established community. Therefore, no impacts are anticipated.

X. b) No Impact. Land use and other planning considerations are determined by local governments and no land use or planning requirements will be altered by PR 1430. All construction and operation activities that are expected to occur as a result of complying with PR 1430 will occur within the confines of the existing facilities and would not be expected to affect or conflict with any applicable land use plans, policies, or regulations. Further, no new development or alterations to existing land designations will occur as a result of the implementation of PR 1430. Therefore, present or planned land uses in the region will not be affected as a result of implementing PR 1430.

Conclusion

Based upon these considerations, significant adverse land use and planning impacts are not expected from implementing PR 1430. Since no significant land use and planning impacts were identified, no mitigation measures are necessary or required.

		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XI.	**MINERAL RESOURCES.** Would the project:				
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☑
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☑

Significance Criteria

Project-related impacts on mineral resources will be considered significant if any of the following conditions are met:

- The project would result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.
- The proposed project results in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XI. a) & b) No Impact. PR 1430 would require the installation of new or the modification of existing buildings and air pollution control equipment. The construction and operation activities necessary to implement PR 1430 would not require the use of a known mineral resource. Thus, there are no provisions in PR 1430 that would result in the loss of availability of a known mineral resource of value to the region and the residents of the state such as aggregate, coal, clay, shale, et cetera, or of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

Conclusion

Based upon these considerations, significant adverse mineral resource impacts are not expected from implementing PR 1430. Since no significant mineral resource impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

Noise impact will be considered significant if:

- Construction noise levels exceed the local noise ordinances or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three decibels (dBA) at the site boundary. Construction noise levels will be considered significant if they exceed federal Occupational Safety and Health Administration (OSHA) noise standards for workers.
- The proposed project operational noise levels exceed any of the local noise ordinances at the site boundary or, if the noise threshold is currently exceeded, project noise sources increase ambient noise levels by more than three dBA at the site boundary.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities

affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XII. a), b), & c) Less than Significant Impact. The facilities affected by PR1430 are currently located in urbanized industrial or commercial areas. The existing noise environment at each of the facilities is typically dominated by noise from existing equipment on-site, vehicular traffic around the facilities, and trucks entering and exiting facility premises. Large, potentially noise-intensive construction equipment would be needed temporarily to build new or modify existing enclosures and install new or modify existing air pollution control equipment as part of implementation of PR 1430. Operation of the construction equipment would be expected to comply with all existing noise control laws and ordinances. Since the facilities are located in industrial and commercial areas, which have a higher background noise level when compared to other areas, the noise generated during construction will likely be indistinguishable from the background noise levels at the property line.

Once the construction of the enclosures is complete, the outdoor noise from the metal grinding and metal cutting activities will be located within the enclosures as required by PR 1430. Thus, the existing noise from these activities is expected to be lessened compared to what is currently being generated on-site. Similarly, for any facility that installs new air pollution control devices such as baghouses and/or HEPA filters, substantial amounts of noise are not typically produced by these types of devices. Due to the attenuation rate of noise based on distance from the source, it is unlikely that noise levels exceeding local noise ordinances from operation new air pollution control equipment would occur beyond a facility's boundaries. Furthermore, OSHA and CAL-OSHA have established noise standards to protect worker health. Furthermore, compliance with local noise ordinances limiting the hours of construction will reduce the temporary noise impacts from construction to sensitive receptors. These potential noise increases are expected to be within the allowable noise levels established by the local noise ordinances for industrial areas, and thus are expected to be less than significant.

XII. d) Less than Significant Impact. One of the affected facilities, Continental Forge, is located within two miles northeast of the Compton Airport but it is not located within the airport runway safety areas, airport runway protection zones, or within a transitional surface area which is required to be free of all obstructions[15]. However, compliance with PR 1430 would not expose people residing or working in the vicinity of Continental Forge to the same degree of excessive noise levels associated with airplanes because all noise producing equipment at Continental Forge, as well as at all the other affected facilities, must comply with local noise ordinances and applicable OSHA or CAL-OSHA workplace noise reduction requirements. Therefore, the impacts are expected to be less than significant.

Conclusion

Based upon these considerations, significant adverse noise impacts are not expected from the implementing PR 1430. Since no significant noise impacts were identified, no mitigation measures are necessary or required.

[15] Compton Airport Master Plan Report, County of Los Angeles, Compton, California, August 1991.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XIII. POPULATION AND HOUSING. Would the project:				
a) Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)?	☐	☐	☐	☑
b) Displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☑

Significance Criteria

Impacts of the proposed project on population and housing will be considered significant if the following criteria are exceeded:

- The demand for temporary or permanent housing exceeds the existing supply.
- The proposed project produces additional population, housing or employment inconsistent with adopted plans either in terms of overall amount or location.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XIII. a) No Impact. The construction activities associated with PR 1430 at each affected facility are not expected to involve the relocation of individuals, require new housing or commercial facilities, or change the distribution of the population. On a peak day, the analysis assumes up to 15 workers may be needed to perform construction activities to comply with PR 1430 at each affected facility and these workers can be supplied from the existing labor pool in the local Southern California area. Further, it is not expected that the installation of new or the modification of existing buildings and air pollution control equipment would require new employees to operate and maintain the equipment because several of the facilities already have existing air pollution control equipment in place with personnel trained to maintain the equipment. In the event that new employees are hired, it is expected that the number of new employees hired at any one facility would be relatively small, perhaps no more than one or two per facility. The human population within the District is anticipated to grow regardless of implementing PR 1430. As a result, PR 1430 is not anticipated to generate any significant adverse effects, either direct or indirect, on population growth in the District or population distribution.

XIII. b) No Impact. PR 1430 affects operations at existing metal forging facilities and as previously explained in Section III – Air Quality, SCAQMD staff is not aware of any new metal forging facilities planned to be constructed in the immediate future and is unable to predict or forecast, when, if any, would be built in the long-term. Thus, PR 1430 is not expected to result in the creation of any industry that would affect population growth, directly or indirectly or cause the displacement of substantial numbers of people that would induce the construction of replacement housing elsewhere in the District. .

Conclusion

Based upon these considerations, significant adverse population and housing impacts are not expected from implementing PR 1430. Since no significant population and housing impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

Impacts on public services will be considered significant if the project results in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response time or other performance objectives.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XIV. a) & b) Less Than Significant Impact. Implementation of PR 1430 is expected to cause facility operators to install new or modify existing buildings and air pollution control devices, all the while continuing current operations at existing affected facilities. New safety hazards are not expected to occur during construction because the construction activities would not involve the use or handling of hazardous materials. The metal PM to be captured by the air pollution control devices, once they become operational, may be explosive in nature. Thus, the design of the air pollution control equipment will need to conform to the National Fire Protection Association standards which have special designations for deflagrations (e.g., explosion prevention) from metal dust. Additional information pertaining to these types of protective measures is available in Chapter 8 of the *Industrial Ventilation, A Manual for Recommended Practice for Design*, 28th Edition, published by the American Conference of Governmental Industrial Hygienists, ©2013.

The increased use of air pollution control equipment, housekeeping and maintenance activities, or the temporary use of construction worker vehicles and delivery trucks would not be expected to substantially alter or increase the need or demand for additional public services (e.g., fire and police departments and related emergency services, et cetera) above current levels, so no significant impact to these existing services is anticipated.

XIV. c) No Impact. As noted in the previous "Population and Housing" discussion, PR 1430 is not expected to induce population growth in any way because the local labor pool (e.g., workforce) is expected to be sufficient to accommodate 15 construction workers to perform any construction activities that may be necessary at affected facilities and operation of new or modified air pollution control equipment is not expected to require additional employees. Even in the event that new employees are hired, it is expected that the number of new employees at any one facility would be small, no more than one or two per facility. Therefore, with no significant increase in local population, no impacts would be expected to local schools.

XIV. d) No Impact. PR 1430 is expected to result in the construction of enclosures and the installation and use of new or modified air pollution control equipment. Besides obtaining building permits from the local agency and SCAQMD permits for installing air pollution control equipment, there is no need for other types of government services. PR 1430 would not result in the need for new or physically altered government facilities in order to maintain acceptable service ratios, response times, or other performance objectives. As explained earlier, there will be no substantive increase in population as a result of implementing PR 1430, and, therefore, no need for physically altered government facilities.

Conclusion

Based upon these considerations, significant adverse public services impacts are not expected from implementing PR 1430. Since no significant public services impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XV. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment or recreational services?	☐	☐	☐	☑

Significance Criteria

Impacts to recreation will be considered significant if:

- The project results in an increased demand for neighborhood or regional parks or other recreational facilities.
- The project adversely affects existing recreational opportunities.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XV. a) & b) No Impact. As explained previously in Section XIII - Population and Housing," the operators of affected facilities who need to perform any construction activities to comply with PR 1430 can draw from the existing labor pool in the local Southern California area. Further, it is not expected that the installation of new or the modification of existing buildings and air pollution control equipment would require new employees to operate and maintain the equipment because several of the facilities already have existing air pollution control equipment in place with

personnel trained to maintain the equipment. In the event that new employees are hired, it is expected that the number of new employees hired at any one facility would be relatively small, perhaps no more than one or two per facility. The human population within the District is anticipated to grow regardless of implementing PR 1430. As a result, PR 1430 is not anticipated to generate any significant adverse effects, either direct or indirect, on population growth in the District or population distribution. Further, there are no provisions in PR 1430 that would affect or increase the demand for or use of existing neighborhood and regional parks or other recreational facilities. Further PR 1430 would not require the construction of new or the expansion of existing recreational facilities that might, in turn, cause adverse physical effects on the environment because PR 1430 will not directly or indirectly substantively increase or redistribute population.

Conclusion

Based upon these considerations, significant adverse recreation impacts are not expected from implementing PR 1430. Since no significant recreation impacts were identified, no mitigation measures are necessary or required.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVI. SOLID AND HAZARDOUS WASTE. Would the project:				
a) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☑	☐
b) Comply with federal, state, and local statutes and regulations related to solid and hazardous waste?	☐	☐	☐	☑

Significance Criteria

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

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

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XVI. a) Less than Significant Impact. Landfills are permitted by the local enforcement agencies with concurrence from the California Department of Resources Recycling and Recovery (CalRecycle). Local agencies establish the maximum amount of solid waste which can be received by a landfill each day and the operational life of a landfill. This analysis of solid waste impacts assumes that safety and disposal procedures required by various agencies in California will provide reasonable precautions against the improper disposal of hazardous wastes in a municipal waste landfill. Because of state and federal requirements, some facilities are attempting to reduce or minimize the generation of solid and hazardous wastes by incorporating source reduction technologies to reduce the volume or toxicity of wastes generated, including improving operating procedures, using less hazardous or nonhazardous substitute materials, and upgrading or replacing inefficient processes.

PR 1430 would require the installation of new or the modification of existing buildings, total enclosures, and air pollution control equipment. In the worst case, the analysis assumes that five existing buildings will be demolished, 600 cubic yards of soil for one building and 300 cubic yards of soil for each of the four buildings will need to be imported and exported. IN addition, 26 existing baghouses will be demolished creating 640 cubic yards of solid waste per baghouse. In total, up to 18,440 cubic yards of solid waste is estimated to be generated during construction.

In addition, the operation of air pollution control equipment such as baghouses and/or HEPA filters could generate solid waste from the collection of metal PM and from the replacement of torn bags and spent filters in the baghouses and HEPA systems, respectively.

Filtration includes usage of baghouse and/or HEPA filters. Mixed metal compounds could be captured with the use of filtration controls at a 99.9 percent control rate. Currently, each affected facility sends their metal materials for recycling or disposal at a hazardous waste landfill. Based on the number of air pollution control equipment that may be needed at the affected facilities, the analysis shows that spent filters, torn bags, and waste collected by the baghouses may generate up to 16,640 cubic yards per year of hazardous waste.

The estimated solid waste from these activities is summarized in Table 2-12.

Table 2-12
Total Solid Waste Generation

Control Type	Potential Number of Affected Units	Total Waste Generated (cubic yards)
Demolition of existing old baghouses and foundation	26	18,440 (construction phase: one-time only)
Demolition of buildings	5	
Disposal of Torn Bags and Spent Filters	26	640 (each) 16,640 (total, worst-case, per year)

The nearest RCRA landfills are Republic Services and US Ecology. The Republic Services La Paz County Landfill has approximately 20,000,000 cubic yards of capacity remaining for the 50 year life expectancy (400,000 cubic yards per year). The US Ecology, Inc., facility in Beatty, Nevada has approximately 638,858 cubic yards of capacity remaining for the three year life expectancy (212,952 cubic yards per year). US Ecology, Inc., currently receives approximately 18,000 cubic yards per year of waste, so 194,952 cubic yards per year (212,952 cubic yards per year – 18,000 cubic yards per year) would be available should any of the affected facilities elect to dispose of their hazardous materials at this facility.

With a disposal of 16,640 cubic yards per year of filters, baghouse fabrics, and metals, the total solid and hazardous waste impacts from PR 1430 are conservatively estimated at 4 percent and 8.5 percent of the available Republic Services and US Ecology landfill capacity, respectively. Thus, the amount of hazardous waste that may be generated by the proposed project is relatively small, would not be considered to create a significant demand on existing landfill capacity, and would not likely require new RCRA landfills to be built.

Finally, all new enclosures and air pollution control equipment are expected to be installed within the currently developed footprint at already existing facilities. Because the newly installed control equipment has a finite lifetime (approximately 20 years), it will ultimately have to be replaced at the end of its useful life. Affected equipment may be refurbished and used elsewhere or the scrap metal or other materials from replaced units has economic value and is expected to be recycled, so any solid or hazardous waste impacts specifically associated with the proposed project are expected to be minor. As a result, no substantial change in the amount or character of solid or hazardous waste streams is expected to occur.

Because the waste disposal needs that will occur from implementing PR 1430 are expected to be served by landfills with sufficient permitted capacity to accommodate the project's solid waste disposal needs, potential solid and hazardous waste impacts from implementing PR 1430 would not be significant.

XVI. b) No Impact. It is assumed that facility operators at the facilities currently comply with all applicable local, state, or federal waste disposal regulations and PR 1430 does not contain any provisions that would alter current practices. Thus, implementation of PR 1430 is not expected to interfere with any affected facility's ability to comply with applicable local, state, or federal waste disposal regulations in a manner that would cause a significant adverse solid and hazardous waste impact.

Conclusion

Based upon these considerations, significant adverse solid and hazardous waste impacts are not expected from implementing PR 1430. Since no significant solid and hazardous waste impacts were identified, no mitigation measures are necessary or required.

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

Significance Criteria

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

- Peak period levels on major arterials are disrupted to a point where level of service (LOS) is reduced to D, E or F for more than one month.
- An intersection's volume to capacity ratio increase by 0.02 (two percent) or more when the LOS is already D, E or F.
- A major roadway is closed to all through traffic, and no alternate route is available.
- The project conflicts with applicable policies, plans or programs establishing measures of effectiveness, thereby decreasing the performance or safety of any mode of transportation.
- There is an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system.
- The demand for parking facilities is substantially increased.
- Water borne, rail car or air traffic is substantially altered.
- Traffic hazards to motor vehicles, bicyclists or pedestrians are substantially increased.
- The need for more than 350 employees.
- An increase in heavy-duty transport truck traffic to and/or from the facility by more than 350 truck round trips per day.
- Increase customer traffic by more than 700 visits per day.

Discussion

PR 1430 will reduce toxic emissions, PM emissions, and odors from metal grinding and metal cutting operations at metal forging facilities by implementing PM air pollution control. Facilities affected by PR 1430 are located in existing industrial, commercial or mixed land use areas. PR 1430 would require the construction of total enclosures, the replacement of existing or the installation of new air pollution control devices, the installation of a BLDS (as applicable), and the implementation of housekeeping and maintenance activity requirements, such as wet cleaning or vacuuming.

XVII. a) & b) Less Than Significant Impact

Construction

As previously discussed in Section III - Air Quality and Greenhouse Gas Emissions, compliance with PR 1430 may require construction activities associated with installing new buildings, total enclosures with or without ventilation to create negative air conditions, and air pollution control equipment. Approximately 36 delivery and/or disposal trucks plus 15 construction worker trips for a total of 51 construction round trips are assumed to be needed on a peak construction day for five facilities with overlapping construction schedules. Thus, construction is not expected to affect on-site traffic or parking for each affected facility. Further, since the additional 51 construction round trips that may occur on a peak day are well below the significant threshold of 350 round

trips, traffic and transportation impacts during construction are not expected to cause a significance adverse impact.

Operation

Air pollution control equipment used to comply with PR 1430 will collect toxic PM waste products from metal grinding and metal cutting activities, as well as dry solids from spent filters and torn bags. These wastes will need to be transported off-site from each facility to either disposal or recycling facilities. In addition, fresh filters will be needed to replace the spent filters and these will need to be delivered to each facility. Similarly, fresh bags will be needed to replace torn bags and these will also need to be delivered to each facility as needed. Finally, since all of the affected facilities will be required to conduct source tests to comply with PR 1430, workers needed to conduct the source tests will also generate trips. All of the trips need to haul wastes and deliver supplies as well as conduct source tests will contribute to operational traffic and transportation impacts.

For a "worst case" analysis, SCAQMD staff assumed that for the 22 facilities on a peak day would generate a maximum of 44 new truck trips (round trips) during operation to haul away collected waste, to account for worker trips needed to conduct source testing, and to inspect, replace and dispose of filters. While these truck trips are assumed to overlap on a given day, the 44 round trips that may occur are not expected to significantly adversely affect circulation patterns on local roadways or the level of service at intersections near each of the affected facilities. In fact, this low volume of additional daily truck traffic is negligible over the entire District. Further, as previously explained in Section XII – Population and Housing, the installation of new or the modification of existing buildings and air pollution control equipment would not be expected to require new, additional permanent employees to operate and maintain the equipment because several of the facilities already have existing air pollution control equipment in place with personnel trained to maintain the equipment. In the event that new employees are hired, it is expected that the number of new employees hired at any one facility would be relatively small, perhaps no more than one or two per facility. Thus, even for the trips that would be associated with employing a small amount of new workers at each affected facility, implementation of PR 1430 is not expected to cause a significant increase in the number of worker trips during operation at any of the affected facilities. The estimated vehicles from all activities is summarized in Table 2-13.

Table 2-13
Estimation of Vehicle Trips

Phase	Worker Vehicles	Delivery/Disposal Trucks
Construction [a]	15 per day	36 per day
Operation	Up to 4 additional vehicles per facility for a maximum of 44 vehicles per day[b]	

[a] The worst case analysis for construction is based on a maximum of 15 worker vehicles plus 36 delivery/disposal trucks per day at five facilities during a peak day to account for overlapping construction.

[b] The worst case analysis during operation is based on a maximum of 44 truck trips (round-trips) for the additional source testing, worker vehicles, filter/bag replacement or inspection, and disposal at 11 facilities overlapping during operation.

XVII. c) No Impact. As explained previously in Section XII – Noise, only one of the affected facilities, Continental Forge, is located within two miles of an airport (Compton Airport) but it is not located within the airport runway safety areas, airport runway protection zones, or within a transitional surface area which is required to be free of all obstructions[16]. Thus, compliance with PR 1430 would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risk

XVII. d) & e) No Impact. PR 1430 does not involve or require the construction of new roadways because the focus of PR 1430 is on controlling toxic and PM emissions from existing metal forging facilities that conduct metal grinding and metal cutting operations. Thus, there will no change to current public roadway designs that could increase traffic hazards. Further, PR 1430 is not expected to substantially increase traffic hazards or create incompatible uses at or adjacent to the facilities. Emergency access at each of the affected facilities is not expected to be impacted because PR 1430 does not contain any requirements specific to emergency access points and each affected facility is expected to continue to maintain their existing emergency access. Further, the total enclosure requirements in PR 1430 do not contain any specifications relative to any facility's emergency access. Since PR 1430 is expected to involve short-term construction activities that would create new, minor delivery/haul truck trips that would be expected to cease after construction is completed, the proposed project is not expected to alter the existing long-term circulation patterns within the areas of each affected facility during construction. Similarly, during operation, the projected increase of additional vehicle trips that may be needed at each affected facility would be at less than significant levels individually and cumulatively such that implementation of the proposed project is not expected to require a modification to circulation. Thus, no long-term impacts on the traffic circulation system are expected to occur during construction or operation.

XVII. f) No Impact. PR 1430 does not contain any requirements that would affect or alter adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. Further, the facilities would still be expected to comply with, and not interfere with adopted policies, plans, or programs supporting alternative transportation (e.g., bicycles or buses) that exist in their respective cities. Since all of the requirements and compliance activities associated with implementing PR 1430 would be expected to occur on-site, PR 1430 would have no impact on each facility's ability to comply with any applicable alternative transportation plans or policies.

Conclusion

Based upon these considerations, significant adverse transportation and traffic impacts are not expected from implementing PR 1430. Since no significant transportation and traffic impacts were identified, no mitigation measures are necessary or required.

[16] Compton Airport Master Plan Report, County of Los Angeles, Compton, California, August 1991.

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant Impact	No Impact
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE.				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☑
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)	☐	☐	☑	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☑	☐

Discussion

XVIII. a) No Impact. As explained in Section IV - Biological Resources, PR 1430 is not expected to significantly adversely affect plant or animal species or the habitat on which they rely because any construction and operational activities associated with the facilities are expected to occur entirely within the boundaries of existing developed facilities in areas that have been greatly disturbed and that currently do not support any species of concern or the habitat on which they rely. For these reasons, PR 1430 is not expected to reduce or eliminate any plant or animal species or destroy prehistoric records of the past.

XVIII. b) Less Than Significant Impact. Based on the foregoing analyses, PR 1430 would not result in significant adverse project-specific environmental impacts. Potential adverse impacts from implementing PR 1430 would not be "cumulatively considerable" as defined by CEQA Guidelines §15064(h)(1) for any environmental topic because there are no, or only minor incremental project-specific impacts that were concluded to be less than significant. Per CEQA

Guidelines §15064(h)(4), the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the proposed project's incremental effects are cumulative considerable. SCAQMD cumulative significant thresholds are the same as project-specific significance thresholds.

This approach was upheld by the Court in *Citizens for Responsible Equitable Environmental Development v. City of Chula Vista* (2011) 197 Cal. App. 4th 327, 334. The Court determined that where it can be found that a project did not exceed the SCAQMD's established air quality significance thresholds, the City of Chula Vista properly concluded that the project would not cause a significant environmental effect, nor result in a cumulatively considerable increase in these pollutants. The court found this determination to be consistent with CEQA Guidelines §15064.7, stating, "The lead agency may rely on a threshold of significance standard to determine whether a project will cause a significant environmental effect." The court found that, "Although the project will contribute additional air pollutants to an existing nonattainment area, these increases are below the significance criteria…" "Thus, we conclude that no fair argument exists that the Project will cause a significant unavoidable cumulative contribution to an air quality impact." As in *Chula Vista*, here the SCAQMD has demonstrated, when using accurate and appropriate data and assumptions, that the project will not exceed the established SCAQMD significance thresholds. See also, *Rialto Citizens for Responsible Growth v. City of Rialto* (2012) 208 Cal. App. 4th 899. Here again the court upheld the SCAQMD's approach to utilizing the established air quality significance thresholds to determine whether the impacts of a project would be cumulatively considerable. Thus, the implementation of PR 1430 will not cause a significant unavoidable cumulative impact.

Therefore, there is no potential for significant adverse cumulative or cumulatively considerable impacts to be generated by PR 1430 for any environmental topic.

XVIII. c) Less Than Significant Impact. Based on the foregoing analyses, PR 1430 is not expected to cause adverse effects on human beings for any environmental topic, either directly or indirectly because: 1) the air quality and GHG impacts were determined to be less than the significance thresholds as analyzed in Section III – Air Quality and Greenhouse Gases; 2) the increased demand for energy, water, and solid waste disposal, can be met by utilizing existing services as analyzed in Section VI - Energy, Section IX - Hydrology and Water Quality, and Section XVI – Solid and Hazardous Waste; 3) the hazards and hazardous materials impacts were determined to be less than significant as analyzed in Section VIII – Hazards and Hazardous Materials; 4) the noise impacts were determined to be less than significant as analyzed in Section XII – Noise; and, 5) the transportation and traffic impacts were determined to be less than the significance thresholds as analyzed in Section XVI – Transportation and Traffic. In addition, the analysis concluded that there would be no significant environmental impacts for the remaining environmental impact topic areas: aesthetics, agriculture and forestry resources, biological resources, cultural resources, geology and soils, land use and planning, mineral resources, population and housing, public services, and recreation.

Conclusion

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

APPENDICES

APPENDIX A

PROPOSED RULE 1430 – CONTROL OF EMISSIONS FROM METAL GRINDING OPERATIONS AT METAL FORGING FACILITIES

In order to save space and avoid repetition, please refer to the latest version of Proposed Rule 1430 located elsewhere in the Governing Board Package. The version of Proposed Rule 1430 that was circulated with the Draft EA and released on January 11, 2017 for a 30-day public review and comment period ending on February 10, 2017 was identified as "PR 1430 December 16, 2016."

Original hard copies of the Draft EA, which include the draft version of the proposed rule listed above, can be obtained through the SCAQMD Public Information Center at the Diamond Bar headquarters or by contacting Fabian Wesson, Public Advisor at the SCAQMD's Public Information Center by phone at (909) 396-2432 or by email at PICrequests@aqmd.gov.

APPENDIX B

ASSUMPTIONS AND CALCULATIONS

APPENDIX B-1

CalEEMod Files and Assumptions

CalEEMod Files and Assumptions

Scenario 1 - New Building Construction (Summer)

R1430_Press Forge_20161220

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	5.74	1000sqft	0.13	5,736.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

R1430_Press Forge_20161220 - South Coast AQMD Air District, Summer

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 5736 sq ft

Construction Phase - assumptions: 5 days grading (including soil and demolition material hauling), 52 days of building construction, 10 day for each baghouse demo/construction phase

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. Double the unit amount since two baghouses will be installed at the same time (worst case)

Off-road Equipment - default equipment, hp, LF. assume two equipment for each for paving. Each operate 4 hrs

Off-road Equipment - default

Off-road Equipment - default

Off-road Equipment - default

Off-road Equipment - defalut

Off-road Equipment - assumption

Off-road Equipment - assumption

Off-road Equipment - assumptions based on the equipment data (unit amount and hr/day) used in previous EA for R1155, use default hp and LF, assume 8 hr operation time

Trips and VMT - assumptions

Demolition - assume 5000 sq ft of building demo, 4000 sq ft for 4 baghouses and 4000 sq ft for 4 baghouse foundation

Grading - assume 600 cu yard soil import and export

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	52.00
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	5.00	10.00
tblGrading	MaterialExported	0.00	600.00
tblGrading	MaterialImported	0.00	600.00
tblLandUse	BuildingSpaceSquareFeet	5,740.00	5,736.00
tblLandUse	LandUseSquareFeet	5,740.00	5,736.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets

tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	18.00	8.00
tblTripsAndVMT	HaulingTripNumber	18.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4139	12.1369	8.7939	0.0152	0.6442	0.8169	1.4611	0.1152	0.7796	0.8948	0.0000	1,518.0742	1,518.0742	0.2570	0.0000	1,524.4995
2017	1.9692	20.5310	10.3240	0.0373	1.4159	0.9321	2.2025	0.5912	0.8919	1.3414	0.0000	3,895.6656	3,895.6656	0.4172	0.0000	3,906.0956
Maximum	**1.9692**	**20.5310**	**10.3240**	**0.0373**	**1.4159**	**0.9321**	**2.2025**	**0.5912**	**0.8919**	**1.3414**	**0.0000**	**3,895.6656**	**3,895.6656**	**0.4172**	**0.0000**	**3,906.0956**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4139	12.1369	8.7939	0.0152	0.6442	0.8169	1.4611	0.1152	0.7796	0.8948	0.0000	1,518.0742	1,518.0742	0.2570	0.0000	1,524.4995
2017	1.9692	20.5310	10.3240	0.0373	1.4159	0.9321	2.2025	0.5912	0.8919	1.3414	0.0000	3,895.6656	3,895.6656	0.4172	0.0000	3,906.0956
Maximum	**1.9692**	**20.5310**	**10.3240**	**0.0373**	**1.4159**	**0.9321**	**2.2025**	**0.5912**	**0.8919**	**1.3414**	**0.0000**	**3,895.6656**	**3,895.6656**	**0.4172**	**0.0000**	**3,906.0956**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Energy	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Mobile	0.0291	0.1419	0.4299	1.2000e-003	0.0879	1.5600e-003	0.0895	0.0235	1.4800e-003	0.0250		121.7004	121.7004	6.8600e-003		121.8718
Total	**0.1574**	**0.1433**	**0.4316**	**1.2100e-003**	**0.0879**	**1.6600e-003**	**0.0896**	**0.0235**	**1.5800e-003**	**0.0251**		**123.3101**	**123.3101**	**6.8900e-003**	**3.0000e-005**	**123.4912**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Energy	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Mobile	0.0291	0.1419	0.4299	1.2000e-003	0.0879	1.5600e-003	0.0895	0.0235	1.4800e-003	0.0250		121.7004	121.7004	6.8600e-003		121.8718
Total	**0.1574**	**0.1433**	**0.4316**	**1.2100e-003**	**0.0879**	**1.6600e-003**	**0.0896**	**0.0235**	**1.5800e-003**	**0.0251**		**123.3101**	**123.3101**	**6.8900e-003**	**3.0000e-005**	**123.4912**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2016	12/14/2016	5	10	
2	old baghouse demo	Demolition	12/15/2016	12/28/2016	5	10	
3	old baghouse foundation demo	Demolition	12/29/2016	1/11/2017	5	10	
4	Grading	Grading	1/12/2017	1/18/2017	5	5	
5	Building Construction	Building Construction	1/19/2017	3/31/2017	5	52	
6	building paving	Paving	4/1/2017	4/7/2017	5	5	
7	baghouse pad paving	Paving	4/8/2017	4/21/2017	5	10	
8	baghouse installation	Building Construction	4/22/2017	5/5/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
building paving	Cement and Mortar Mixers	4	6.00	9	0.56
building paving	Pavers	1	7.00	130	0.42

building paving	Rollers	1	7.00	80	0.38
building paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse foundation demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse foundation demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse foundation demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
baghouse pad paving	Cement and Mortar Mixers	2	4.00	9	0.56
baghouse pad paving	Pavers	2	4.00	130	0.42
baghouse pad paving	Rollers	2	4.00	80	0.38
baghouse pad paving	Tractors/Loaders/Backhoes	2	4.00	97	0.37
baghouse installation	Cranes	2	4.00	231	0.29
baghouse installation	Forklifts	2	4.00	89	0.20
baghouse installation	Tractors/Loaders/Backhoes	0	4.00	97	0.37
baghouse installation	Generator Sets	2	4.00	84	0.74
baghouse installation	Welders	2	4.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
building paving	7	18.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	23.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse demo	4	10.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse foundation demo	4	10.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse pad paving	8	20.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse installation	8	2.00	1.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4922	0.0000	0.4922	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.4922**	**0.8093**	**1.3015**	**0.0745**	**0.7723**	**0.8469**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0279	0.8400	0.1580	1.8600e-003	0.0402	6.6700e-003	0.0469	0.0110	6.3800e-003	0.0174		200.1954	200.1954	0.0144		200.5543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0962**	**0.8909**	**0.8052**	**3.1600e-003**	**0.1520**	**7.6300e-003**	**0.1596**	**0.0407**	**7.2700e-003**	**0.0479**		**328.9234**	**328.9234**	**0.0197**		**329.4167**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4922	0.0000	0.4922	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.4922**	**0.8093**	**1.3015**	**0.0745**	**0.7723**	**0.8469**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0279	0.8400	0.1580	1.8600e-003	0.0402	6.6700e-003	0.0469	0.0110	6.3800e-003	0.0174		200.1954	200.1954	0.0144		200.5543
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0962**	**0.8909**	**0.8052**	**3.1600e-003**	**0.1520**	**7.6300e-003**	**0.1596**	**0.0407**	**7.2700e-003**	**0.0479**		**328.9234**	**328.9234**	**0.0197**		**329.4167**

3.3 old baghouse demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.3 old baghouse demo - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.7100e-003	0.2922	0.0550	6.5000e-004	0.0140	2.3200e-003	0.0163	3.8300e-003	2.2200e-003	6.0500e-003		69.6332	69.6332	4.9900e-003		69.7580
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0780**	**0.3430**	**0.7022**	**1.9500e-003**	**0.1258**	**3.2800e-003**	**0.1290**	**0.0335**	**3.1100e-003**	**0.0366**		**198.3612**	**198.3612**	**0.0104**		**198.6203**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.3 old baghouse demo - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.7100e-003	0.2922	0.0550	6.5000e-004	0.0140	2.3200e-003	0.0163	3.8300e-003	2.2200e-003	6.0500e-003		69.6332	69.6332	4.9900e-003		69.7580
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0780**	**0.3430**	**0.7022**	**1.9500e-003**	**0.1258**	**3.2800e-003**	**0.1290**	**0.0335**	**3.1100e-003**	**0.0366**		**198.3612**	**198.3612**	**0.0104**		**198.6203**

3.4 old baghouse foundation demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.4 old baghouse foundation demo - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.7100e-003	0.2922	0.0550	6.5000e-004	0.0563	2.3200e-003	0.0586	0.0142	2.2200e-003	0.0164		69.6332	69.6332	4.9900e-003		69.7580
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0780**	**0.3430**	**0.7022**	**1.9500e-003**	**0.1681**	**3.2800e-003**	**0.1714**	**0.0439**	**3.1100e-003**	**0.0470**		**198.3612**	**198.3612**	**0.0104**		**198.6203**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.4 old baghouse foundation demo - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.7100e-003	0.2922	0.0550	6.5000e-004	0.0563	2.3200e-003	0.0586	0.0142	2.2200e-003	0.0164		69.6332	69.6332	4.9900e-003		69.7580
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0780**	**0.3430**	**0.7022**	**1.9500e-003**	**0.1681**	**3.2800e-003**	**0.1714**	**0.0439**	**3.1100e-003**	**0.0470**		**198.3612**	**198.3612**	**0.0104**		**198.6203**

3.4 old baghouse foundation demo - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.3937**	**0.7318**	**1.1255**	**0.0596**	**0.6978**	**0.7574**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 old baghouse foundation demo - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0166	1.4400e-003	0.0181	4.4800e-003	1.3700e-003	5.8600e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0605	0.0443	0.5699	1.2600e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		125.4351	125.4351	4.7300e-003		125.5533
Total	**0.0685**	**0.3107**	**0.6189**	**1.9000e-003**	**0.1284**	**2.3600e-003**	**0.1308**	**0.0341**	**2.2200e-003**	**0.0364**		**194.5264**	**194.5264**	**9.5500e-003**		**194.7649**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.3937**	**0.7318**	**1.1255**	**0.0596**	**0.6978**	**0.7574**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 old baghouse foundation demo - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0166	1.4400e-003	0.0181	4.4800e-003	1.3700e-003	5.8600e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0605	0.0443	0.5699	1.2600e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		125.4351	125.4351	4.7300e-003		125.5533
Total	**0.0685**	**0.3107**	**0.6189**	**1.9000e-003**	**0.1284**	**2.3600e-003**	**0.1308**	**0.0341**	**2.2200e-003**	**0.0364**		**194.5264**	**194.5264**	**9.5500e-003**		**194.7649**

3.5 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7799	0.0000	0.7799	0.4179	0.0000	0.4179			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7799**	**0.7318**	**1.5117**	**0.4179**	**0.6978**	**1.1156**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.5 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2989	9.9888	1.8358	0.0241	0.5243	0.0539	0.5782	0.1437	0.0516	0.1952		2,590.9230	2,590.9230	0.1806		2,595.4377
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0605	0.0443	0.5699	1.2600e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		125.4351	125.4351	4.7300e-003		125.5533
Total	**0.3594**	**10.0331**	**2.4058**	**0.0253**	**0.6360**	**0.0548**	**0.6909**	**0.1733**	**0.0524**	**0.2257**		**2,716.3581**	**2,716.3581**	**0.1853**		**2,720.9909**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7799	0.0000	0.7799	0.4179	0.0000	0.4179			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7799**	**0.7318**	**1.5117**	**0.4179**	**0.6978**	**1.1156**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.5 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.2989	9.9888	1.8358	0.0241	0.5243	0.0539	0.5782	0.1437	0.0516	0.1952		2,590.9230	2,590.9230	0.1806		2,595.4377
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0605	0.0443	0.5699	1.2600e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		125.4351	125.4351	4.7300e-003		125.5533
Total	**0.3594**	**10.0331**	**2.4058**	**0.0253**	**0.6360**	**0.0548**	**0.6909**	**0.1733**	**0.0524**	**0.2257**		**2,716.3581**	**2,716.3581**	**0.1853**		**2,720.9909**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**		**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.6 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9200e-003	0.0640	0.0118	1.5000e-004	3.3600e-003	3.5000e-004	3.7100e-003	9.2000e-004	3.3000e-004	1.2500e-003		16.6085	16.6085	1.1600e-003		16.6374
Vendor	4.8400e-003	0.1291	0.0336	2.6000e-004	6.4000e-003	1.1200e-003	7.5200e-003	1.8400e-003	1.0700e-003	2.9100e-003		27.9446	27.9446	2.0000e-003		27.9946
Worker	0.0121	8.8700e-003	0.1140	2.5000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		25.0870	25.0870	9.5000e-004		25.1107
Total	**0.0189**	**0.2020**	**0.1593**	**6.6000e-004**	**0.0321**	**1.6500e-003**	**0.0338**	**8.6900e-003**	**1.5700e-003**	**0.0103**		**69.6401**	**69.6401**	**4.1100e-003**		**69.7427**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**	**0.0000**	**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.6 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9200e-003	0.0640	0.0118	1.5000e-004	3.3600e-003	3.5000e-004	3.7100e-003	9.2000e-004	3.3000e-004	1.2500e-003		16.6085	16.6085	1.1600e-003		16.6374
Vendor	4.8400e-003	0.1291	0.0336	2.6000e-004	6.4000e-003	1.1200e-003	7.5200e-003	1.8400e-003	1.0700e-003	2.9100e-003		27.9446	27.9446	2.0000e-003		27.9946
Worker	0.0121	8.8700e-003	0.1140	2.5000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		25.0870	25.0870	9.5000e-004		25.1107
Total	**0.0189**	**0.2020**	**0.1593**	**6.6000e-004**	**0.0321**	**1.6500e-003**	**0.0338**	**8.6900e-003**	**1.5700e-003**	**0.0103**		**69.6401**	**69.6401**	**4.1100e-003**		**69.7427**

3.7 building paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636		1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**		**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 building paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0140	1.4400e-003	0.0154	3.8300e-003	1.3700e-003	5.2100e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1090	0.0798	1.0259	2.2700e-003	0.2012	1.6600e-003	0.2029	0.0534	1.5300e-003	0.0549		225.7832	225.7832	8.5100e-003		225.9959
Total	**0.1169**	**0.3462**	**1.0748**	**2.9100e-003**	**0.2152**	**3.1000e-003**	**0.2183**	**0.0572**	**2.9000e-003**	**0.0601**		**294.8745**	**294.8745**	**0.0133**		**295.2075**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636	0.0000	1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**	**0.0000**	**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 building paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0140	1.4400e-003	0.0154	3.8300e-003	1.3700e-003	5.2100e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1090	0.0798	1.0259	2.2700e-003	0.2012	1.6600e-003	0.2029	0.0534	1.5300e-003	0.0549		225.7832	225.7832	8.5100e-003		225.9959
Total	**0.1169**	**0.3462**	**1.0748**	**2.9100e-003**	**0.2152**	**3.1000e-003**	**0.2183**	**0.0572**	**2.9000e-003**	**0.0601**		**294.8745**	**294.8745**	**0.0133**		**295.2075**

3.8 baghouse pad paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0610	10.5057	7.6425	0.0111		0.6601	0.6601		0.6084	0.6084		1,117.4400	1,117.4400	0.3322		1,125.7437
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0610**	**10.5057**	**7.6425**	**0.0111**		**0.6601**	**0.6601**		**0.6084**	**0.6084**		**1,117.4400**	**1,117.4400**	**0.3322**		**1,125.7437**

3.8 baghouse pad paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0140	1.4400e-003	0.0154	3.8300e-003	1.3700e-003	5.2100e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1211	0.0887	1.1399	2.5200e-003	0.2236	1.8400e-003	0.2254	0.0593	1.7000e-003	0.0610		250.8703	250.8703	9.4500e-003		251.1065
Total	**0.1291**	**0.3550**	**1.1888**	**3.1600e-003**	**0.2375**	**3.2800e-003**	**0.2408**	**0.0631**	**3.0700e-003**	**0.0662**		**319.9615**	**319.9615**	**0.0143**		**320.3182**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0610	10.5057	7.6425	0.0111		0.6601	0.6601		0.6084	0.6084	0.0000	1,117.4400	1,117.4400	0.3322		1,125.7437
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0610**	**10.5057**	**7.6425**	**0.0111**		**0.6601**	**0.6601**		**0.6084**	**0.6084**	**0.0000**	**1,117.4400**	**1,117.4400**	**0.3322**		**1,125.7437**

3.8 baghouse pad paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0140	1.4400e-003	0.0154	3.8300e-003	1.3700e-003	5.2100e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1211	0.0887	1.1399	2.5200e-003	0.2236	1.8400e-003	0.2254	0.0593	1.7000e-003	0.0610		250.8703	250.8703	9.4500e-003		251.1065
Total	**0.1291**	**0.3550**	**1.1888**	**3.1600e-003**	**0.2375**	**3.2800e-003**	**0.2408**	**0.0631**	**3.0700e-003**	**0.0662**		**319.9615**	**319.9615**	**0.0143**		**320.3182**

3.9 baghouse installation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9443	15.8945	9.7526	0.0164		0.9294	0.9294		0.8893	0.8893		1,576.7758	1,576.7758	0.3240		1,584.8756
Total	**1.9443**	**15.8945**	**9.7526**	**0.0164**		**0.9294**	**0.9294**		**0.8893**	**0.8893**		**1,576.7758**	**1,576.7758**	**0.3240**		**1,584.8756**

3.9 baghouse installation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0140	1.4400e-003	0.0154	3.8300e-003	1.3700e-003	5.2100e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	4.8400e-003	0.1291	0.0336	2.6000e-004	6.4000e-003	1.1200e-003	7.5200e-003	1.8400e-003	1.0700e-003	2.9100e-003		27.9446	27.9446	2.0000e-003		27.9946
Worker	0.0121	8.8700e-003	0.1140	2.5000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		25.0870	25.0870	9.5000e-004		25.1107
Total	**0.0249**	**0.4043**	**0.1965**	**1.1500e-003**	**0.0427**	**2.7400e-003**	**0.0455**	**0.0116**	**2.6100e-003**	**0.0142**		**122.1229**	**122.1229**	**7.7700e-003**		**122.3170**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9443	15.8945	9.7526	0.0164		0.9294	0.9294		0.8893	0.8893	0.0000	1,576.7758	1,576.7758	0.3240		1,584.8756
Total	**1.9443**	**15.8945**	**9.7526**	**0.0164**		**0.9294**	**0.9294**		**0.8893**	**0.8893**	**0.0000**	**1,576.7758**	**1,576.7758**	**0.3240**		**1,584.8756**

3.9 baghouse installation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.9700e-003	0.2664	0.0490	6.4000e-004	0.0140	1.4400e-003	0.0154	3.8300e-003	1.3700e-003	5.2100e-003		69.0913	69.0913	4.8200e-003		69.2117
Vendor	4.8400e-003	0.1291	0.0336	2.6000e-004	6.4000e-003	1.1200e-003	7.5200e-003	1.8400e-003	1.0700e-003	2.9100e-003		27.9446	27.9446	2.0000e-003		27.9946
Worker	0.0121	8.8700e-003	0.1140	2.5000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		25.0870	25.0870	9.5000e-004		25.1107
Total	**0.0249**	**0.4043**	**0.1965**	**1.1500e-003**	**0.0427**	**2.7400e-003**	**0.0455**	**0.0116**	**2.6100e-003**	**0.0142**		**122.1229**	**122.1229**	**7.7700e-003**		**122.3170**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0291	0.1419	0.4299	1.2000e-003	0.0879	1.5600e-003	0.0895	0.0235	1.4800e-003	0.0250		121.7004	121.7004	6.8600e-003		121.8718
Unmitigated	0.0291	0.1419	0.4299	1.2000e-003	0.0879	1.5600e-003	0.0895	0.0235	1.4800e-003	0.0250		121.7004	121.7004	6.8600e-003		121.8718

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	9.64	9.64	9.64	41,328	41,328
Total	9.64	9.64	9.64	41,328	41,328

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
NaturalGas Unmitigated	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	13.6721	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Total		**1.5000e-004**	**1.3400e-003**	**1.1300e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**1.6085**	**1.6085**	**3.0000e-005**	**3.0000e-005**	**1.6180**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.0136721	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Total		**1.5000e-004**	**1.3400e-003**	**1.1300e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**1.6085**	**1.6085**	**3.0000e-005**	**3.0000e-005**	**1.6180**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Unmitigated	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Total	**0.1282**	**1.0000e-005**	**6.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2600e-003**	**1.2600e-003**	**0.0000**		**1.3400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Total	**0.1282**	**1.0000e-005**	**6.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2600e-003**	**1.2600e-003**	**0.0000**		**1.3400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 1 - New Building Construction (Winter)

R1430_Press Forge_20161220

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	5.74	1000sqft	0.13	5,736.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 5736 sq ft

Construction Phase - assumptions: 5 days grading (including soil and demolition material hauling), 52 days of building construction, 10 day for each baghouse demo/construction phase

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. Double the unit amount since two baghouses will be installed at the same time (worst case)

Off-road Equipment - default equipment, hp, LF. assume two equipment for each for paving. Each operate 4 hrs

Off-road Equipment - default

Off-road Equipment - default

Off-road Equipment - default

Off-road Equipment - defalut

Off-road Equipment - assumption

Off-road Equipment - assumption

Off-road Equipment - assumptions based on the equipment data (unit amount and hr/day) used in previous EA for R1155, use default hp and LF, assume 8 hr operation time

Trips and VMT - assumptions

Demolition - assume 5000 sq ft of building demo, 4000 sq ft for 4 baghouses and 4000 sq ft for 4 baghouse foundation

Grading - assume 600 cu yard soil import and export

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	52.00
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	5.00	10.00
tblGrading	MaterialExported	0.00	600.00
tblGrading	MaterialImported	0.00	600.00
tblLandUse	BuildingSpaceSquareFeet	5,740.00	5,736.00
tblLandUse	LandUseSquareFeet	5,740.00	5,736.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets

tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	18.00	8.00
tblTripsAndVMT	HaulingTripNumber	18.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4205	12.1563	8.7503	0.0150	0.6442	0.8170	1.4612	0.1152	0.7797	0.8949	0.0000	1,506.5296	1,506.5296	0.2574	0.0000	1,512.9636
2017	1.9706	20.6875	10.4264	0.0368	1.4159	0.9322	2.2034	0.5912	0.8920	1.3422	0.0000	3,842.5890	3,842.5890	0.4254	0.0000	3,853.2226
Maximum	**1.9706**	**20.6875**	**10.4264**	**0.0368**	**1.4159**	**0.9322**	**2.2034**	**0.5912**	**0.8920**	**1.3422**	**0.0000**	**3,842.5890**	**3,842.5890**	**0.4254**	**0.0000**	**3,853.2226**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.4205	12.1563	8.7503	0.0150	0.6442	0.8170	1.4612	0.1152	0.7797	0.8949	0.0000	1,506.5296	1,506.5296	0.2574	0.0000	1,512.9636
2017	1.9706	20.6875	10.4264	0.0368	1.4159	0.9322	2.2034	0.5912	0.8920	1.3422	0.0000	3,842.5890	3,842.5890	0.4254	0.0000	3,853.2226
Maximum	**1.9706**	**20.6875**	**10.4264**	**0.0368**	**1.4159**	**0.9322**	**2.2034**	**0.5912**	**0.8920**	**1.3422**	**0.0000**	**3,842.5890**	**3,842.5890**	**0.4254**	**0.0000**	**3,853.2226**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Energy	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Mobile	0.0280	0.1467	0.4006	1.1400e-003	0.0879	1.5700e-003	0.0895	0.0235	1.4800e-003	0.0250		115.2127	115.2127	6.7700e-003		115.3820
Total	**0.1563**	**0.1481**	**0.4023**	**1.1500e-003**	**0.0879**	**1.6700e-003**	**0.0896**	**0.0235**	**1.5800e-003**	**0.0251**		**116.8224**	**116.8224**	**6.8000e-003**	**3.0000e-005**	**117.0014**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Energy	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Mobile	0.0280	0.1467	0.4006	1.1400e-003	0.0879	1.5700e-003	0.0895	0.0235	1.4800e-003	0.0250		115.2127	115.2127	6.7700e-003		115.3820
Total	**0.1563**	**0.1481**	**0.4023**	**1.1500e-003**	**0.0879**	**1.6700e-003**	**0.0896**	**0.0235**	**1.5800e-003**	**0.0251**		**116.8224**	**116.8224**	**6.8000e-003**	**3.0000e-005**	**117.0014**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2016	12/14/2016	5	10	
2	old baghouse demo	Demolition	12/15/2016	12/28/2016	5	10	
3	old baghouse foundation demo	Demolition	12/29/2016	1/11/2017	5	10	
4	Grading	Grading	1/12/2017	1/18/2017	5	5	
5	Building Construction	Building Construction	1/19/2017	3/31/2017	5	52	
6	building paving	Paving	4/1/2017	4/7/2017	5	5	
7	baghouse pad paving	Paving	4/8/2017	4/21/2017	5	10	
8	baghouse installation	Building Construction	4/22/2017	5/5/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
building paving	Cement and Mortar Mixers	4	6.00	9	0.56
building paving	Pavers	1	7.00	130	0.42

building paving	Rollers	1	7.00	80	0.38
building paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse foundation demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse foundation demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse foundation demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
baghouse pad paving	Cement and Mortar Mixers	2	4.00	9	0.56
baghouse pad paving	Pavers	2	4.00	130	0.42
baghouse pad paving	Rollers	2	4.00	80	0.38
baghouse pad paving	Tractors/Loaders/Backhoes	2	4.00	97	0.37
baghouse installation	Cranes	2	4.00	231	0.29
baghouse installation	Forklifts	2	4.00	89	0.20
baghouse installation	Tractors/Loaders/Backhoes	0	4.00	97	0.37
baghouse installation	Generator Sets	2	4.00	84	0.74
baghouse installation	Welders	2	4.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
building paving	7	18.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	23.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse demo	4	10.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse foundation demo	4	10.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse pad paving	8	20.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse installation	8	2.00	1.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4922	0.0000	0.4922	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.4922**	**0.8093**	**1.3015**	**0.0745**	**0.7723**	**0.8469**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0286	0.8545	0.1706	1.8300e-003	0.0402	6.7500e-003	0.0470	0.0110	6.4600e-003	0.0175		196.9042	196.9042	0.0150		197.2798
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.1028**	**0.9102**	**0.7616**	**3.0400e-003**	**0.1520**	**7.7100e-003**	**0.1597**	**0.0407**	**7.3500e-003**	**0.0480**		**317.3788**	**317.3788**	**0.0201**		**317.8808**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4922	0.0000	0.4922	0.0745	0.0000	0.0745			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.4922**	**0.8093**	**1.3015**	**0.0745**	**0.7723**	**0.8469**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0286	0.8545	0.1706	1.8300e-003	0.0402	6.7500e-003	0.0470	0.0110	6.4600e-003	0.0175		196.9042	196.9042	0.0150		197.2798
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.1028**	**0.9102**	**0.7616**	**3.0400e-003**	**0.1520**	**7.7100e-003**	**0.1597**	**0.0407**	**7.3500e-003**	**0.0480**		**317.3788**	**317.3788**	**0.0201**		**317.8808**

3.3 old baghouse demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.3 old baghouse demo - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.9500e-003	0.2972	0.0593	6.4000e-004	0.0140	2.3500e-003	0.0163	3.8300e-003	2.2500e-003	6.0800e-003		68.4884	68.4884	5.2300e-003		68.6191
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0842**	**0.3529**	**0.6504**	**1.8500e-003**	**0.1258**	**3.3100e-003**	**0.1291**	**0.0335**	**3.1400e-003**	**0.0366**		**188.9630**	**188.9630**	**0.0103**		**189.2201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.3 old baghouse demo - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.9500e-003	0.2972	0.0593	6.4000e-004	0.0140	2.3500e-003	0.0163	3.8300e-003	2.2500e-003	6.0800e-003		68.4884	68.4884	5.2300e-003		68.6191
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0842**	**0.3529**	**0.6504**	**1.8500e-003**	**0.1258**	**3.3100e-003**	**0.1291**	**0.0335**	**3.1400e-003**	**0.0366**		**188.9630**	**188.9630**	**0.0103**		**189.2201**

3.4 old baghouse foundation demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.4 old baghouse foundation demo - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.9500e-003	0.2972	0.0593	6.4000e-004	0.0563	2.3500e-003	0.0586	0.0142	2.2500e-003	0.0165		68.4884	68.4884	5.2300e-003		68.6191
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0842**	**0.3529**	**0.6504**	**1.8500e-003**	**0.1681**	**3.3100e-003**	**0.1714**	**0.0439**	**3.1400e-003**	**0.0470**		**188.9630**	**188.9630**	**0.0103**		**189.2201**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.3937**	**0.8093**	**1.2030**	**0.0596**	**0.7723**	**0.8320**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

3.4 old baghouse foundation demo - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.9500e-003	0.2972	0.0593	6.4000e-004	0.0563	2.3500e-003	0.0586	0.0142	2.2500e-003	0.0165		68.4884	68.4884	5.2300e-003		68.6191
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0842**	**0.3529**	**0.6504**	**1.8500e-003**	**0.1681**	**3.3100e-003**	**0.1714**	**0.0439**	**3.1400e-003**	**0.0470**		**188.9630**	**188.9630**	**0.0103**		**189.2201**

3.4 old baghouse foundation demo - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.3937**	**0.7318**	**1.1255**	**0.0596**	**0.6978**	**0.7574**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 old baghouse foundation demo - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0166	1.4600e-003	0.0181	4.4800e-003	1.4000e-003	5.8800e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5183	1.1800e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		117.3648	117.3648	4.4400e-003		117.4757
Total	**0.0740**	**0.3190**	**0.5714**	**1.8100e-003**	**0.1284**	**2.3800e-003**	**0.1308**	**0.0341**	**2.2500e-003**	**0.0364**		**185.2559**	**185.2559**	**9.4800e-003**		**185.4928**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3937	0.0000	0.3937	0.0596	0.0000	0.0596			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.3937**	**0.7318**	**1.1255**	**0.0596**	**0.6978**	**0.7574**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.4 old baghouse foundation demo - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0166	1.4600e-003	0.0181	4.4800e-003	1.4000e-003	5.8800e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5183	1.1800e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		117.3648	117.3648	4.4400e-003		117.4757
Total	**0.0740**	**0.3190**	**0.5714**	**1.8100e-003**	**0.1284**	**2.3800e-003**	**0.1308**	**0.0341**	**2.2500e-003**	**0.0364**		**185.2559**	**185.2559**	**9.4800e-003**		**185.4928**

3.5 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7799	0.0000	0.7799	0.4179	0.0000	0.4179			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978		1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7799**	**0.7318**	**1.5117**	**0.4179**	**0.6978**	**1.1156**		**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.5 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3072	10.1411	1.9898	0.0237	0.5243	0.0547	0.5790	0.1437	0.0524	0.1961		2,545.9168	2,545.9168	0.1890		2,550.6422
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5183	1.1800e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		117.3648	117.3648	4.4400e-003		117.4757
Total	**0.3729**	**10.1897**	**2.5081**	**0.0248**	**0.6360**	**0.0557**	**0.6917**	**0.1733**	**0.0532**	**0.2265**		**2,663.2816**	**2,663.2816**	**0.1935**		**2,668.1179**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7799	0.0000	0.7799	0.4179	0.0000	0.4179			0.0000			0.0000
Off-Road	1.2100	10.4978	7.9182	0.0120		0.7318	0.7318		0.6978	0.6978	0.0000	1,179.3075	1,179.3075	0.2319		1,185.1047
Total	**1.2100**	**10.4978**	**7.9182**	**0.0120**	**0.7799**	**0.7318**	**1.5117**	**0.4179**	**0.6978**	**1.1156**	**0.0000**	**1,179.3075**	**1,179.3075**	**0.2319**		**1,185.1047**

3.5 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.3072	10.1411	1.9898	0.0237	0.5243	0.0547	0.5790	0.1437	0.0524	0.1961		2,545.9168	2,545.9168	0.1890		2,550.6422
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0658	0.0486	0.5183	1.1800e-003	0.1118	9.2000e-004	0.1127	0.0296	8.5000e-004	0.0305		117.3648	117.3648	4.4400e-003		117.4757
Total	**0.3729**	**10.1897**	**2.5081**	**0.0248**	**0.6360**	**0.0557**	**0.6917**	**0.1733**	**0.0532**	**0.2265**		**2,663.2816**	**2,663.2816**	**0.1935**		**2,668.1179**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904		1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**		**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.6 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9700e-003	0.0650	0.0128	1.5000e-004	3.3600e-003	3.5000e-004	3.7100e-003	9.2000e-004	3.4000e-004	1.2600e-003		16.3200	16.3200	1.2100e-003		16.3503
Vendor	5.0400e-003	0.1295	0.0371	2.6000e-004	6.4000e-003	1.1300e-003	7.5300e-003	1.8400e-003	1.0800e-003	2.9300e-003		27.1731	27.1731	2.1500e-003		27.2268
Worker	0.0132	9.7200e-003	0.1037	2.4000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		23.4730	23.4730	8.9000e-004		23.4951
Total	**0.0202**	**0.2042**	**0.1535**	**6.5000e-004**	**0.0321**	**1.6600e-003**	**0.0338**	**8.6900e-003**	**1.5900e-003**	**0.0103**		**66.9660**	**66.9660**	**4.2500e-003**		**67.0722**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2812	12.7589	8.0700	0.0114		0.8591	0.8591		0.7904	0.7904	0.0000	1,165.9164	1,165.9164	0.3572		1,174.8473
Total	**1.2812**	**12.7589**	**8.0700**	**0.0114**		**0.8591**	**0.8591**		**0.7904**	**0.7904**	**0.0000**	**1,165.9164**	**1,165.9164**	**0.3572**		**1,174.8473**

3.6 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.9700e-003	0.0650	0.0128	1.5000e-004	3.3600e-003	3.5000e-004	3.7100e-003	9.2000e-004	3.4000e-004	1.2600e-003		16.3200	16.3200	1.2100e-003		16.3503
Vendor	5.0400e-003	0.1295	0.0371	2.6000e-004	6.4000e-003	1.1300e-003	7.5300e-003	1.8400e-003	1.0800e-003	2.9300e-003		27.1731	27.1731	2.1500e-003		27.2268
Worker	0.0132	9.7200e-003	0.1037	2.4000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		23.4730	23.4730	8.9000e-004		23.4951
Total	**0.0202**	**0.2042**	**0.1535**	**6.5000e-004**	**0.0321**	**1.6600e-003**	**0.0338**	**8.6900e-003**	**1.5900e-003**	**0.0103**		**66.9660**	**66.9660**	**4.2500e-003**		**67.0722**

3.7 building paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636		1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**		**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 building paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0140	1.4600e-003	0.0154	3.8300e-003	1.4000e-003	5.2300e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1184	0.0875	0.9330	2.1200e-003	0.2012	1.6600e-003	0.2029	0.0534	1.5300e-003	0.0549		211.2566	211.2566	7.9900e-003		211.4563
Total	**0.1266**	**0.3579**	**0.9860**	**2.7500e-003**	**0.2152**	**3.1200e-003**	**0.2183**	**0.0572**	**2.9300e-003**	**0.0601**		**279.1477**	**279.1477**	**0.0130**		**279.4734**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0532	9.9754	7.3425	0.0113		0.6087	0.6087		0.5636	0.5636	0.0000	1,085.1071	1,085.1071	0.3018		1,092.6515
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0532**	**9.9754**	**7.3425**	**0.0113**		**0.6087**	**0.6087**		**0.5636**	**0.5636**	**0.0000**	**1,085.1071**	**1,085.1071**	**0.3018**		**1,092.6515**

3.7 building paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0140	1.4600e-003	0.0154	3.8300e-003	1.4000e-003	5.2300e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1184	0.0875	0.9330	2.1200e-003	0.2012	1.6600e-003	0.2029	0.0534	1.5300e-003	0.0549		211.2566	211.2566	7.9900e-003		211.4563
Total	**0.1266**	**0.3579**	**0.9860**	**2.7500e-003**	**0.2152**	**3.1200e-003**	**0.2183**	**0.0572**	**2.9300e-003**	**0.0601**		**279.1477**	**279.1477**	**0.0130**		**279.4734**

3.8 baghouse pad paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0610	10.5057	7.6425	0.0111		0.6601	0.6601		0.6084	0.6084		1,117.4400	1,117.4400	0.3322		1,125.7437
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0610**	**10.5057**	**7.6425**	**0.0111**		**0.6601**	**0.6601**		**0.6084**	**0.6084**		**1,117.4400**	**1,117.4400**	**0.3322**		**1,125.7437**

3.8 baghouse pad paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0140	1.4600e-003	0.0154	3.8300e-003	1.4000e-003	5.2300e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1316	0.0972	1.0367	2.3600e-003	0.2236	1.8400e-003	0.2254	0.0593	1.7000e-003	0.0610		234.7296	234.7296	8.8800e-003		234.9514
Total	**0.1398**	**0.3676**	**1.0897**	**2.9900e-003**	**0.2375**	**3.3000e-003**	**0.2408**	**0.0631**	**3.1000e-003**	**0.0662**		**302.6207**	**302.6207**	**0.0139**		**302.9686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0610	10.5057	7.6425	0.0111		0.6601	0.6601		0.6084	0.6084	0.0000	1,117.4400	1,117.4400	0.3322		1,125.7437
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0610**	**10.5057**	**7.6425**	**0.0111**		**0.6601**	**0.6601**		**0.6084**	**0.6084**	**0.0000**	**1,117.4400**	**1,117.4400**	**0.3322**		**1,125.7437**

3.8 baghouse pad paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0140	1.4600e-003	0.0154	3.8300e-003	1.4000e-003	5.2300e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1316	0.0972	1.0367	2.3600e-003	0.2236	1.8400e-003	0.2254	0.0593	1.7000e-003	0.0610		234.7296	234.7296	8.8800e-003		234.9514
Total	**0.1398**	**0.3676**	**1.0897**	**2.9900e-003**	**0.2375**	**3.3000e-003**	**0.2408**	**0.0631**	**3.1000e-003**	**0.0662**		**302.6207**	**302.6207**	**0.0139**		**302.9686**

3.9 baghouse installation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9443	15.8945	9.7526	0.0164		0.9294	0.9294		0.8893	0.8893		1,576.7758	1,576.7758	0.3240		1,584.8756
Total	**1.9443**	**15.8945**	**9.7526**	**0.0164**		**0.9294**	**0.9294**		**0.8893**	**0.8893**		**1,576.7758**	**1,576.7758**	**0.3240**		**1,584.8756**

3.9 baghouse installation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0140	1.4600e-003	0.0154	3.8300e-003	1.4000e-003	5.2300e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	5.0400e-003	0.1295	0.0371	2.6000e-004	6.4000e-003	1.1300e-003	7.5300e-003	1.8400e-003	1.0800e-003	2.9300e-003		27.1731	27.1731	2.1500e-003		27.2268
Worker	0.0132	9.7200e-003	0.1037	2.4000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		23.4730	23.4730	8.9000e-004		23.4951
Total	**0.0264**	**0.4096**	**0.1938**	**1.1300e-003**	**0.0427**	**2.7700e-003**	**0.0455**	**0.0116**	**2.6500e-003**	**0.0143**		**118.5371**	**118.5371**	**8.0800e-003**		**118.7390**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9443	15.8945	9.7526	0.0164		0.9294	0.9294		0.8893	0.8893	0.0000	1,576.7758	1,576.7758	0.3240		1,584.8756
Total	**1.9443**	**15.8945**	**9.7526**	**0.0164**		**0.9294**	**0.9294**		**0.8893**	**0.8893**	**0.0000**	**1,576.7758**	**1,576.7758**	**0.3240**		**1,584.8756**

3.9 baghouse installation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	8.1900e-003	0.2704	0.0531	6.3000e-004	0.0140	1.4600e-003	0.0154	3.8300e-003	1.4000e-003	5.2300e-003		67.8911	67.8911	5.0400e-003		68.0171
Vendor	5.0400e-003	0.1295	0.0371	2.6000e-004	6.4000e-003	1.1300e-003	7.5300e-003	1.8400e-003	1.0800e-003	2.9300e-003		27.1731	27.1731	2.1500e-003		27.2268
Worker	0.0132	9.7200e-003	0.1037	2.4000e-004	0.0224	1.8000e-004	0.0225	5.9300e-003	1.7000e-004	6.1000e-003		23.4730	23.4730	8.9000e-004		23.4951
Total	**0.0264**	**0.4096**	**0.1938**	**1.1300e-003**	**0.0427**	**2.7700e-003**	**0.0455**	**0.0116**	**2.6500e-003**	**0.0143**		**118.5371**	**118.5371**	**8.0800e-003**		**118.7390**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0280	0.1467	0.4006	1.1400e-003	0.0879	1.5700e-003	0.0895	0.0235	1.4800e-003	0.0250		115.2127	115.2127	6.7700e-003		115.3820
Unmitigated	0.0280	0.1467	0.4006	1.1400e-003	0.0879	1.5700e-003	0.0895	0.0235	1.4800e-003	0.0250		115.2127	115.2127	6.7700e-003		115.3820

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	9.64	9.64	9.64	41,328	41,328
Total	9.64	9.64	9.64	41,328	41,328

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
NaturalGas Unmitigated	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	13.6721	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Total		**1.5000e-004**	**1.3400e-003**	**1.1300e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**1.6085**	**1.6085**	**3.0000e-005**	**3.0000e-005**	**1.6180**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.0136721	1.5000e-004	1.3400e-003	1.1300e-003	1.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004		1.6085	1.6085	3.0000e-005	3.0000e-005	1.6180
Total		**1.5000e-004**	**1.3400e-003**	**1.1300e-003**	**1.0000e-005**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**		**1.6085**	**1.6085**	**3.0000e-005**	**3.0000e-005**	**1.6180**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Unmitigated	0.1282	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Total	**0.1282**	**1.0000e-005**	**6.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2600e-003**	**1.2600e-003**	**0.0000**		**1.3400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0146					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.1136					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	6.0000e-005	1.0000e-005	6.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.2600e-003	1.2600e-003	0.0000		1.3400e-003
Total	**0.1282**	**1.0000e-005**	**6.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.2600e-003**	**1.2600e-003**	**0.0000**		**1.3400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 1 - New Building Construction (Annual)

R1430_Press Forge_20161220

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	5.74	1000sqft	0.13	5,736.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 5736 sq ft

Construction Phase - assumptions: 5 days grading (including soil and demolition material hauling), 52 days of building construction, 10 day for each baghouse demo/construction phase

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. Double the unit amount since two baghouses will be installed at the same time (worst case)

Off-road Equipment - default equipment, hp, LF. assume two equipment for each for paving. Each operate 4 hrs

Off-road Equipment - default

Off-road Equipment - default

Off-road Equipment - default

Off-road Equipment - defalut

Off-road Equipment - assumption

Off-road Equipment - assumption

Off-road Equipment - assumptions based on the equipment data (unit amount and hr/day) used in previous EA for R1155, use default hp and LF, assume 8 hr operation time

Trips and VMT - assumptions

Demolition - assume 5000 sq ft of building demo, 4000 sq ft for 4 baghouses and 4000 sq ft for 4 baghouse foundation

Grading - assume 600 cu yard soil import and export

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	52.00
tblConstructionPhase	NumDays	100.00	10.00
tblConstructionPhase	NumDays	2.00	5.00
tblConstructionPhase	NumDays	5.00	10.00
tblGrading	MaterialExported	0.00	600.00
tblGrading	MaterialImported	0.00	600.00
tblLandUse	BuildingSpaceSquareFeet	5,740.00	5,736.00
tblLandUse	LandUseSquareFeet	5,740.00	5,736.00
tblOffRoadEquipment	OffRoadEquipmentType		Generator Sets

tblOffRoadEquipment	OffRoadEquipmentType		Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	18.00	8.00
tblTripsAndVMT	HaulingTripNumber	18.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	10.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0154	0.1305	0.0957	1.6000e-004	6.3500e-003	8.9600e-003	0.0153	1.1400e-003	8.5500e-003	9.6900e-003	0.0000	14.3674	14.3674	2.5100e-003	0.0000	14.4303
2017	0.0616	0.5944	0.3881	6.5000e-004	8.3200e-003	0.0368	0.0451	2.5700e-003	0.0342	0.0368	0.0000	60.1070	60.1070	0.0141	0.0000	60.4605
Maximum	**0.0616**	**0.5944**	**0.3881**	**6.5000e-004**	**8.3200e-003**	**0.0368**	**0.0451**	**2.5700e-003**	**0.0342**	**0.0368**	**0.0000**	**60.1070**	**60.1070**	**0.0141**	**0.0000**	**60.4605**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0154	0.1305	0.0957	1.6000e-004	6.3500e-003	8.9600e-003	0.0153	1.1400e-003	8.5500e-003	9.6900e-003	0.0000	14.3674	14.3674	2.5100e-003	0.0000	14.4303
2017	0.0616	0.5944	0.3881	6.5000e-004	8.3200e-003	0.0368	0.0451	2.5700e-003	0.0342	0.0368	0.0000	60.1069	60.1069	0.0141	0.0000	60.4605
Maximum	**0.0616**	**0.5944**	**0.3881**	**6.5000e-004**	**8.3200e-003**	**0.0368**	**0.0451**	**2.5700e-003**	**0.0342**	**0.0368**	**0.0000**	**60.1069**	**60.1069**	**0.0141**	**0.0000**	**60.4605**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	12-1-2016	2-28-2017	0.3324	0.3324
2	3-1-2017	5-31-2017	0.2469	0.2469
		Highest	0.3324	0.3324

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0234	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	3.0000e-005	2.4000e-004	2.1000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	7.5402	7.5402	3.1000e-004	7.0000e-005	7.5678
Mobile	4.9900e-003	0.0272	0.0742	2.1000e-004	0.0157	2.8000e-004	0.0160	4.2100e-003	2.7000e-004	4.4800e-003	0.0000	19.2889	19.2889	1.1200e-003	0.0000	19.3168
Waste						0.0000	0.0000		0.0000	0.0000	1.0962	0.0000	1.0962	0.0648	0.0000	2.7157
Water						0.0000	0.0000		0.0000	0.0000	0.4211	5.5070	5.9281	0.0435	1.0700e-003	7.3335
Total	**0.0284**	**0.0274**	**0.0745**	**2.1000e-004**	**0.0157**	**3.0000e-004**	**0.0160**	**4.2100e-003**	**2.9000e-004**	**4.5000e-003**	**1.5173**	**32.3362**	**33.8535**	**0.1097**	**1.1400e-003**	**36.9339**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0234	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Energy	3.0000e-005	2.4000e-004	2.1000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	7.5402	7.5402	3.1000e-004	7.0000e-005	7.5678
Mobile	4.9900e-003	0.0272	0.0742	2.1000e-004	0.0157	2.8000e-004	0.0160	4.2100e-003	2.7000e-004	4.4800e-003	0.0000	19.2889	19.2889	1.1200e-003	0.0000	19.3168
Waste						0.0000	0.0000		0.0000	0.0000	1.0962	0.0000	1.0962	0.0648	0.0000	2.7157
Water						0.0000	0.0000		0.0000	0.0000	0.4211	5.5070	5.9281	0.0435	1.0700e-003	7.3335
Total	**0.0284**	**0.0274**	**0.0745**	**2.1000e-004**	**0.0157**	**3.0000e-004**	**0.0160**	**4.2100e-003**	**2.9000e-004**	**4.5000e-003**	**1.5173**	**32.3362**	**33.8535**	**0.1097**	**1.1400e-003**	**36.9339**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	12/1/2016	12/14/2016	5	10	
2	old baghouse demo	Demolition	12/15/2016	12/28/2016	5	10	
3	old baghouse foundation demo	Demolition	12/29/2016	1/11/2017	5	10	
4	Grading	Grading	1/12/2017	1/18/2017	5	5	
5	Building Construction	Building Construction	1/19/2017	3/31/2017	5	52	
6	building paving	Paving	4/1/2017	4/7/2017	5	5	
7	baghouse pad paving	Paving	4/8/2017	4/21/2017	5	10	
8	baghouse installation	Building Construction	4/22/2017	5/5/2017	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
building paving	Cement and Mortar Mixers	4	6.00	9	0.56
building paving	Pavers	1	7.00	130	0.42
building paving	Rollers	1	7.00	80	0.38
building paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse demo	Concrete/Industrial Saws	1	8.00	81	0.73

old baghouse demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse foundation demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse foundation demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse foundation demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
baghouse pad paving	Cement and Mortar Mixers	2	4.00	9	0.56
baghouse pad paving	Pavers	2	4.00	130	0.42
baghouse pad paving	Rollers	2	4.00	80	0.38
baghouse pad paving	Tractors/Loaders/Backhoes	2	4.00	97	0.37
baghouse installation	Cranes	2	4.00	231	0.29
baghouse installation	Forklifts	2	4.00	89	0.20
baghouse installation	Tractors/Loaders/Backhoes	0	4.00	97	0.37
baghouse installation	Generator Sets	2	4.00	84	0.74
baghouse installation	Welders	2	4.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
building paving	7	18.00	0.00	4.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Demolition	4	10.00	0.00	23.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse demo	4	10.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse foundation demo	4	10.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	150.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	2.00	1.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse pad paving	8	20.00	0.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse installation	8	2.00	1.00	8.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4600e-003	0.0000	2.4600e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5900e-003	0.0562	0.0399	6.0000e-005		4.0500e-003	4.0500e-003		3.8600e-003	3.8600e-003	0.0000	5.3939	5.3939	1.0800e-003	0.0000	5.4208
Total	**6.5900e-003**	**0.0562**	**0.0399**	**6.0000e-005**	**2.4600e-003**	**4.0500e-003**	**6.5100e-003**	**3.7000e-004**	**3.8600e-003**	**4.2300e-003**	**0.0000**	**5.3939**	**5.3939**	**1.0800e-003**	**0.0000**	**5.4208**

3.2 Demolition - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.3500e-003	8.2000e-004	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	5.0000e-005	3.0000e-005	9.0000e-005	0.0000	0.9018	0.9018	7.0000e-005	0.0000	0.9035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.9000e-004	3.0300e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5558	0.5558	2.0000e-005	0.0000	0.5563
Total	**4.8000e-004**	**4.6400e-003**	**3.8500e-003**	**2.0000e-005**	**7.5000e-004**	**3.0000e-005**	**7.8000e-004**	**2.0000e-004**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**1.4576**	**1.4576**	**9.0000e-005**	**0.0000**	**1.4598**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.4600e-003	0.0000	2.4600e-003	3.7000e-004	0.0000	3.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5900e-003	0.0562	0.0399	6.0000e-005		4.0500e-003	4.0500e-003		3.8600e-003	3.8600e-003	0.0000	5.3939	5.3939	1.0800e-003	0.0000	5.4208
Total	**6.5900e-003**	**0.0562**	**0.0399**	**6.0000e-005**	**2.4600e-003**	**4.0500e-003**	**6.5100e-003**	**3.7000e-004**	**3.8600e-003**	**4.2300e-003**	**0.0000**	**5.3939**	**5.3939**	**1.0800e-003**	**0.0000**	**5.4208**

3.2 Demolition - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.4000e-004	4.3500e-003	8.2000e-004	1.0000e-005	2.0000e-004	3.0000e-005	2.3000e-004	5.0000e-005	3.0000e-005	9.0000e-005	0.0000	0.9018	0.9018	7.0000e-005	0.0000	0.9035
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.9000e-004	3.0300e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5558	0.5558	2.0000e-005	0.0000	0.5563
Total	**4.8000e-004**	**4.6400e-003**	**3.8500e-003**	**2.0000e-005**	**7.5000e-004**	**3.0000e-005**	**7.8000e-004**	**2.0000e-004**	**3.0000e-005**	**2.4000e-004**	**0.0000**	**1.4576**	**1.4576**	**9.0000e-005**	**0.0000**	**1.4598**

3.3 old baghouse demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9700e-003	0.0000	1.9700e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5900e-003	0.0562	0.0399	6.0000e-005		4.0500e-003	4.0500e-003		3.8600e-003	3.8600e-003	0.0000	5.3939	5.3939	1.0800e-003	0.0000	5.4208
Total	**6.5900e-003**	**0.0562**	**0.0399**	**6.0000e-005**	**1.9700e-003**	**4.0500e-003**	**6.0200e-003**	**3.0000e-004**	**3.8600e-003**	**4.1600e-003**	**0.0000**	**5.3939**	**5.3939**	**1.0800e-003**	**0.0000**	**5.4208**

3.3 old baghouse demo - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.5100e-003	2.8000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3137	0.3137	2.0000e-005	0.0000	0.3143
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.9000e-004	3.0300e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5558	0.5558	2.0000e-005	0.0000	0.5563
Total	**3.9000e-004**	**1.8000e-003**	**3.3100e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.8694**	**0.8694**	**4.0000e-005**	**0.0000**	**0.8706**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9700e-003	0.0000	1.9700e-003	3.0000e-004	0.0000	3.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5900e-003	0.0562	0.0399	6.0000e-005		4.0500e-003	4.0500e-003		3.8600e-003	3.8600e-003	0.0000	5.3939	5.3939	1.0800e-003	0.0000	5.4208
Total	**6.5900e-003**	**0.0562**	**0.0399**	**6.0000e-005**	**1.9700e-003**	**4.0500e-003**	**6.0200e-003**	**3.0000e-004**	**3.8600e-003**	**4.1600e-003**	**0.0000**	**5.3939**	**5.3939**	**1.0800e-003**	**0.0000**	**5.4208**

3.3 old baghouse demo - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.5100e-003	2.8000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3137	0.3137	2.0000e-005	0.0000	0.3143
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.9000e-004	3.0300e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5558	0.5558	2.0000e-005	0.0000	0.5563
Total	**3.9000e-004**	**1.8000e-003**	**3.3100e-003**	**1.0000e-005**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**1.7000e-004**	**1.0000e-005**	**1.8000e-004**	**0.0000**	**0.8694**	**0.8694**	**4.0000e-005**	**0.0000**	**0.8706**

3.4 old baghouse foundation demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.9000e-004	0.0000	3.9000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3200e-003	0.0113	7.9900e-003	1.0000e-005		8.1000e-004	8.1000e-004		7.7000e-004	7.7000e-004	0.0000	1.0788	1.0788	2.2000e-004	0.0000	1.0842
Total	**1.3200e-003**	**0.0113**	**7.9900e-003**	**1.0000e-005**	**3.9000e-004**	**8.1000e-004**	**1.2000e-003**	**6.0000e-005**	**7.7000e-004**	**8.3000e-004**	**0.0000**	**1.0788**	**1.0788**	**2.2000e-004**	**0.0000**	**1.0842**

3.4 old baghouse foundation demo - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.0000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0627	0.0627	0.0000	0.0000	0.0629
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	6.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1112	0.1112	0.0000	0.0000	0.1113
Total	**8.0000e-005**	**3.6000e-004**	**6.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1739**	**0.1739**	**0.0000**	**0.0000**	**0.1741**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.9000e-004	0.0000	3.9000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3200e-003	0.0113	7.9900e-003	1.0000e-005		8.1000e-004	8.1000e-004		7.7000e-004	7.7000e-004	0.0000	1.0788	1.0788	2.2000e-004	0.0000	1.0842
Total	**1.3200e-003**	**0.0113**	**7.9900e-003**	**1.0000e-005**	**3.9000e-004**	**8.1000e-004**	**1.2000e-003**	**6.0000e-005**	**7.7000e-004**	**8.3000e-004**	**0.0000**	**1.0788**	**1.0788**	**2.2000e-004**	**0.0000**	**1.0842**

3.4 old baghouse foundation demo - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.0000e-004	6.0000e-005	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0627	0.0627	0.0000	0.0000	0.0629
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.0000e-005	6.0000e-005	6.1000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1112	0.1112	0.0000	0.0000	0.1113
Total	**8.0000e-005**	**3.6000e-004**	**6.7000e-004**	**0.0000**	**1.7000e-004**	**0.0000**	**1.7000e-004**	**4.0000e-005**	**0.0000**	**5.0000e-005**	**0.0000**	**0.1739**	**0.1739**	**0.0000**	**0.0000**	**0.1741**

3.4 old baghouse foundation demo - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5700e-003	0.0000	1.5700e-003	2.4000e-004	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8400e-003	0.0420	0.0317	5.0000e-005		2.9300e-003	2.9300e-003		2.7900e-003	2.7900e-003	0.0000	4.2794	4.2794	8.4000e-004	0.0000	4.3004
Total	**4.8400e-003**	**0.0420**	**0.0317**	**5.0000e-005**	**1.5700e-003**	**2.9300e-003**	**4.5000e-003**	**2.4000e-004**	**2.7900e-003**	**3.0300e-003**	**0.0000**	**4.2794**	**4.2794**	**8.4000e-004**	**0.0000**	**4.3004**

3.4 old baghouse foundation demo - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.1000e-003	2.0000e-004	0.0000	7.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2489	0.2489	2.0000e-005	0.0000	0.2493
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	2.0000e-004	2.1300e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4332	0.4332	2.0000e-005	0.0000	0.4336
Total	**2.7000e-004**	**1.3000e-003**	**2.3300e-003**	**0.0000**	**5.1000e-004**	**1.0000e-005**	**5.1000e-004**	**1.4000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**0.6820**	**0.6820**	**4.0000e-005**	**0.0000**	**0.6829**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.5700e-003	0.0000	1.5700e-003	2.4000e-004	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.8400e-003	0.0420	0.0317	5.0000e-005		2.9300e-003	2.9300e-003		2.7900e-003	2.7900e-003	0.0000	4.2794	4.2794	8.4000e-004	0.0000	4.3004
Total	**4.8400e-003**	**0.0420**	**0.0317**	**5.0000e-005**	**1.5700e-003**	**2.9300e-003**	**4.5000e-003**	**2.4000e-004**	**2.7900e-003**	**3.0300e-003**	**0.0000**	**4.2794**	**4.2794**	**8.4000e-004**	**0.0000**	**4.3004**

3.4 old baghouse foundation demo - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.1000e-003	2.0000e-004	0.0000	7.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.2489	0.2489	2.0000e-005	0.0000	0.2493
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4000e-004	2.0000e-004	2.1300e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.4332	0.4332	2.0000e-005	0.0000	0.4336
Total	**2.7000e-004**	**1.3000e-003**	**2.3300e-003**	**0.0000**	**5.1000e-004**	**1.0000e-005**	**5.1000e-004**	**1.4000e-004**	**1.0000e-005**	**1.4000e-004**	**0.0000**	**0.6820**	**0.6820**	**4.0000e-005**	**0.0000**	**0.6829**

3.5 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9500e-003	0.0000	1.9500e-003	1.0400e-003	0.0000	1.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0200e-003	0.0262	0.0198	3.0000e-005		1.8300e-003	1.8300e-003		1.7400e-003	1.7400e-003	0.0000	2.6746	2.6746	5.3000e-004	0.0000	2.6878
Total	**3.0200e-003**	**0.0262**	**0.0198**	**3.0000e-005**	**1.9500e-003**	**1.8300e-003**	**3.7800e-003**	**1.0400e-003**	**1.7400e-003**	**2.7800e-003**	**0.0000**	**2.6746**	**2.6746**	**5.3000e-004**	**0.0000**	**2.6878**

3.5 Grading - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.6000e-004	0.0258	4.7600e-003	6.0000e-005	1.2900e-003	1.4000e-004	1.4300e-003	3.5000e-004	1.3000e-004	4.8000e-004	0.0000	5.8332	5.8332	4.2000e-004	0.0000	5.8437
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.2000e-004	1.3300e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2707	0.2707	1.0000e-005	0.0000	0.2710
Total	**9.1000e-004**	**0.0259**	**6.0900e-003**	**6.0000e-005**	**1.5600e-003**	**1.4000e-004**	**1.7100e-003**	**4.2000e-004**	**1.3000e-004**	**5.5000e-004**	**0.0000**	**6.1040**	**6.1040**	**4.3000e-004**	**0.0000**	**6.1147**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.9500e-003	0.0000	1.9500e-003	1.0400e-003	0.0000	1.0400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.0200e-003	0.0262	0.0198	3.0000e-005		1.8300e-003	1.8300e-003		1.7400e-003	1.7400e-003	0.0000	2.6746	2.6746	5.3000e-004	0.0000	2.6878
Total	**3.0200e-003**	**0.0262**	**0.0198**	**3.0000e-005**	**1.9500e-003**	**1.8300e-003**	**3.7800e-003**	**1.0400e-003**	**1.7400e-003**	**2.7800e-003**	**0.0000**	**2.6746**	**2.6746**	**5.3000e-004**	**0.0000**	**2.6878**

3.5 Grading - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.6000e-004	0.0258	4.7600e-003	6.0000e-005	1.2900e-003	1.4000e-004	1.4300e-003	3.5000e-004	1.3000e-004	4.8000e-004	0.0000	5.8332	5.8332	4.2000e-004	0.0000	5.8437
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.5000e-004	1.2000e-004	1.3300e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2707	0.2707	1.0000e-005	0.0000	0.2710
Total	**9.1000e-004**	**0.0259**	**6.0900e-003**	**6.0000e-005**	**1.5600e-003**	**1.4000e-004**	**1.7100e-003**	**4.2000e-004**	**1.3000e-004**	**5.5000e-004**	**0.0000**	**6.1040**	**6.1040**	**4.3000e-004**	**0.0000**	**6.1147**

3.6 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0333	0.3317	0.2098	3.0000e-004		0.0223	0.0223		0.0206	0.0206	0.0000	27.5002	27.5002	8.4300e-003	0.0000	27.7109
Total	**0.0333**	**0.3317**	**0.2098**	**3.0000e-004**		**0.0223**	**0.0223**		**0.0206**	**0.0206**	**0.0000**	**27.5002**	**27.5002**	**8.4300e-003**	**0.0000**	**27.7109**

3.6 Building Construction - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.7200e-003	3.2000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3889	0.3889	3.0000e-005	0.0000	0.3896
Vendor	1.3000e-004	3.4300e-003	9.2000e-004	1.0000e-005	1.6000e-004	3.0000e-005	1.9000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.6515	0.6515	5.0000e-005	0.0000	0.6527
Worker	3.1000e-004	2.6000e-004	2.7700e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.5631	0.5631	2.0000e-005	0.0000	0.5636
Total	**4.9000e-004**	**5.4100e-003**	**4.0100e-003**	**2.0000e-005**	**8.2000e-004**	**4.0000e-005**	**8.7000e-004**	**2.2000e-004**	**4.0000e-005**	**2.7000e-004**	**0.0000**	**1.6035**	**1.6035**	**1.0000e-004**	**0.0000**	**1.6059**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0333	0.3317	0.2098	3.0000e-004		0.0223	0.0223		0.0206	0.0206	0.0000	27.5002	27.5002	8.4300e-003	0.0000	27.7109
Total	**0.0333**	**0.3317**	**0.2098**	**3.0000e-004**		**0.0223**	**0.0223**		**0.0206**	**0.0206**	**0.0000**	**27.5002**	**27.5002**	**8.4300e-003**	**0.0000**	**27.7109**

3.6 Building Construction - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	5.0000e-005	1.7200e-003	3.2000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3889	0.3889	3.0000e-005	0.0000	0.3896
Vendor	1.3000e-004	3.4300e-003	9.2000e-004	1.0000e-005	1.6000e-004	3.0000e-005	1.9000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.6515	0.6515	5.0000e-005	0.0000	0.6527
Worker	3.1000e-004	2.6000e-004	2.7700e-003	1.0000e-005	5.7000e-004	0.0000	5.8000e-004	1.5000e-004	0.0000	1.6000e-004	0.0000	0.5631	0.5631	2.0000e-005	0.0000	0.5636
Total	**4.9000e-004**	**5.4100e-003**	**4.0100e-003**	**2.0000e-005**	**8.2000e-004**	**4.0000e-005**	**8.7000e-004**	**2.2000e-004**	**4.0000e-005**	**2.7000e-004**	**0.0000**	**1.6035**	**1.6035**	**1.0000e-004**	**0.0000**	**1.6059**

3.7 building paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6300e-003**	**0.0249**	**0.0184**	**3.0000e-005**		**1.5200e-003**	**1.5200e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**2.4610**	**2.4610**	**6.8000e-004**	**0.0000**	**2.4781**

3.7 building paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.9000e-004	1.3000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1556	0.1556	1.0000e-005	0.0000	0.1558
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.2000e-004	2.3900e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4873	0.4873	2.0000e-005	0.0000	0.4878
Total	**2.9000e-004**	**9.1000e-004**	**2.5200e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.4000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.6428**	**0.6428**	**3.0000e-005**	**0.0000**	**0.6436**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6300e-003	0.0249	0.0184	3.0000e-005		1.5200e-003	1.5200e-003		1.4100e-003	1.4100e-003	0.0000	2.4610	2.4610	6.8000e-004	0.0000	2.4781
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.6300e-003**	**0.0249**	**0.0184**	**3.0000e-005**		**1.5200e-003**	**1.5200e-003**		**1.4100e-003**	**1.4100e-003**	**0.0000**	**2.4610**	**2.4610**	**6.8000e-004**	**0.0000**	**2.4781**

3.7 building paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.9000e-004	1.3000e-004	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1556	0.1556	1.0000e-005	0.0000	0.1558
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7000e-004	2.2000e-004	2.3900e-003	1.0000e-005	4.9000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.4873	0.4873	2.0000e-005	0.0000	0.4878
Total	**2.9000e-004**	**9.1000e-004**	**2.5200e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.4000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.6428**	**0.6428**	**3.0000e-005**	**0.0000**	**0.6436**

3.8 baghouse pad paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3000e-003	0.0525	0.0382	6.0000e-005		3.3000e-003	3.3000e-003		3.0400e-003	3.0400e-003	0.0000	5.0686	5.0686	1.5100e-003	0.0000	5.1063
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3000e-003**	**0.0525**	**0.0382**	**6.0000e-005**		**3.3000e-003**	**3.3000e-003**		**3.0400e-003**	**3.0400e-003**	**0.0000**	**5.0686**	**5.0686**	**1.5100e-003**	**0.0000**	**5.1063**

3.8 baghouse pad paving - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.3800e-003	2.5000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3111	0.3111	2.0000e-005	0.0000	0.3117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	5.0000e-004	5.3200e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0829	1.0829	4.0000e-005	0.0000	1.0839
Total	**6.4000e-004**	**1.8800e-003**	**5.5700e-003**	**1.0000e-005**	**1.1700e-003**	**2.0000e-005**	**1.1900e-003**	**3.1000e-004**	**2.0000e-005**	**3.3000e-004**	**0.0000**	**1.3940**	**1.3940**	**6.0000e-005**	**0.0000**	**1.3956**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.3000e-003	0.0525	0.0382	6.0000e-005		3.3000e-003	3.3000e-003		3.0400e-003	3.0400e-003	0.0000	5.0686	5.0686	1.5100e-003	0.0000	5.1063
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**5.3000e-003**	**0.0525**	**0.0382**	**6.0000e-005**		**3.3000e-003**	**3.3000e-003**		**3.0400e-003**	**3.0400e-003**	**0.0000**	**5.0686**	**5.0686**	**1.5100e-003**	**0.0000**	**5.1063**

3.8 baghouse pad paving - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.3800e-003	2.5000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3111	0.3111	2.0000e-005	0.0000	0.3117
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-004	5.0000e-004	5.3200e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0829	1.0829	4.0000e-005	0.0000	1.0839
Total	**6.4000e-004**	**1.8800e-003**	**5.5700e-003**	**1.0000e-005**	**1.1700e-003**	**2.0000e-005**	**1.1900e-003**	**3.1000e-004**	**2.0000e-005**	**3.3000e-004**	**0.0000**	**1.3940**	**1.3940**	**6.0000e-005**	**0.0000**	**1.3956**

3.9 baghouse installation - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.7200e-003	0.0795	0.0488	8.0000e-005		4.6500e-003	4.6500e-003		4.4500e-003	4.4500e-003	0.0000	7.1521	7.1521	1.4700e-003	0.0000	7.1889
Total	**9.7200e-003**	**0.0795**	**0.0488**	**8.0000e-005**		**4.6500e-003**	**4.6500e-003**		**4.4500e-003**	**4.4500e-003**	**0.0000**	**7.1521**	**7.1521**	**1.4700e-003**	**0.0000**	**7.1889**

3.9 baghouse installation - 2017

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.3800e-003	2.5000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3111	0.3111	2.0000e-005	0.0000	0.3117
Vendor	2.0000e-005	6.6000e-004	1.8000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.1253	0.1253	1.0000e-005	0.0000	0.1255
Worker	6.0000e-005	5.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1083	0.1083	0.0000	0.0000	0.1084
Total	**1.2000e-004**	**2.0900e-003**	**9.6000e-004**	**0.0000**	**2.1000e-004**	**2.0000e-005**	**2.3000e-004**	**6.0000e-005**	**2.0000e-005**	**7.0000e-005**	**0.0000**	**0.5447**	**0.5447**	**3.0000e-005**	**0.0000**	**0.5456**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.7200e-003	0.0795	0.0488	8.0000e-005		4.6500e-003	4.6500e-003		4.4500e-003	4.4500e-003	0.0000	7.1521	7.1521	1.4700e-003	0.0000	7.1889
Total	**9.7200e-003**	**0.0795**	**0.0488**	**8.0000e-005**		**4.6500e-003**	**4.6500e-003**		**4.4500e-003**	**4.4500e-003**	**0.0000**	**7.1521**	**7.1521**	**1.4700e-003**	**0.0000**	**7.1889**

3.9 baghouse installation - 2017

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.0000e-005	1.3800e-003	2.5000e-004	0.0000	7.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.3111	0.3111	2.0000e-005	0.0000	0.3117
Vendor	2.0000e-005	6.6000e-004	1.8000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.1253	0.1253	1.0000e-005	0.0000	0.1255
Worker	6.0000e-005	5.0000e-005	5.3000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.1083	0.1083	0.0000	0.0000	0.1084
Total	**1.2000e-004**	**2.0900e-003**	**9.6000e-004**	**0.0000**	**2.1000e-004**	**2.0000e-005**	**2.3000e-004**	**6.0000e-005**	**2.0000e-005**	**7.0000e-005**	**0.0000**	**0.5447**	**0.5447**	**3.0000e-005**	**0.0000**	**0.5456**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.9900e-003	0.0272	0.0742	2.1000e-004	0.0157	2.8000e-004	0.0160	4.2100e-003	2.7000e-004	4.4800e-003	0.0000	19.2889	19.2889	1.1200e-003	0.0000	19.3168
Unmitigated	4.9900e-003	0.0272	0.0742	2.1000e-004	0.0157	2.8000e-004	0.0160	4.2100e-003	2.7000e-004	4.4800e-003	0.0000	19.2889	19.2889	1.1200e-003	0.0000	19.3168

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	9.64	9.64	9.64	41,328	41,328
Total	9.64	9.64	9.64	41,328	41,328

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.2739	7.2739	3.0000e-004	6.0000e-005	7.2999
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	7.2739	7.2739	3.0000e-004	6.0000e-005	7.2999
NaturalGas Mitigated	3.0000e-005	2.4000e-004	2.1000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2663	0.2663	1.0000e-005	0.0000	0.2679
NaturalGas Unmitigated	3.0000e-005	2.4000e-004	2.1000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2663	0.2663	1.0000e-005	0.0000	0.2679

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	4990.32	3.0000e-005	2.4000e-004	2.1000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2663	0.2663	1.0000e-005	0.0000	0.2679
Total		**3.0000e-005**	**2.4000e-004**	**2.1000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.2663**	**0.2663**	**1.0000e-005**	**0.0000**	**0.2679**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	4990.32	3.0000e-005	2.4000e-004	2.1000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.2663	0.2663	1.0000e-005	0.0000	0.2679
Total		**3.0000e-005**	**2.4000e-004**	**2.1000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.2663**	**0.2663**	**1.0000e-005**	**0.0000**	**0.2679**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	22829.3	7.2739	3.0000e-004	6.0000e-005	7.2999
Total		**7.2739**	**3.0000e-004**	**6.0000e-005**	**7.2999**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	22829.3	7.2739	3.0000e-004	6.0000e-005	7.2999
Total		**7.2739**	**3.0000e-004**	**6.0000e-005**	**7.2999**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0234	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Unmitigated	0.0234	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0234**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.6600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0207					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.4000e-004	1.4000e-004	0.0000	0.0000	1.5000e-004
Total	**0.0234**	**0.0000**	**7.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.4000e-004**	**1.4000e-004**	**0.0000**	**0.0000**	**1.5000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	5.9281	0.0435	1.0700e-003	7.3335
Unmitigated	5.9281	0.0435	1.0700e-003	7.3335

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	1.32738 / 0	5.9281	0.0435	1.0700e-003	7.3335
Total		**5.9281**	**0.0435**	**1.0700e-003**	**7.3335**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	1.32738 / 0	5.9281	0.0435	1.0700e-003	7.3335
Total		**5.9281**	**0.0435**	**1.0700e-003**	**7.3335**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1.0962	0.0648	0.0000	2.7157
Unmitigated	1.0962	0.0648	0.0000	2.7157

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	5.4	1.0962	0.0648	0.0000	2.7157
Total		**1.0962**	**0.0648**	**0.0000**	**2.7157**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	5.4	1.0962	0.0648	0.0000	2.7157
Total		**1.0962**	**0.0648**	**0.0000**	**2.7157**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 2 - New Baghouse/HEPA Installation (Summer)

R1430_one baghouse_20161220

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	2.00	1000sqft	0.05	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 2000 sq ft

Construction Phase - assumptions: 5 days for each baghouse demo/construction phase

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. one baghouse installation

Off-road Equipment - assumptions: default paving equipment, hp, and LF. Hr/d is from the R1155 EA. one baghouse installation

Off-road Equipment - default

Off-road Equipment - assumption

Off-road Equipment - assumption

Trips and VMT - assumptions

Demolition - assume 1000 sq ft for one baghouse and 1000 sq ft for one baghouse foundation

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	5.00	2.00
tblTripsAndVMT	HaulingTripNumber	5.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3908	11.4430	8.6634	0.0136	0.3156	0.8114	1.1271	0.0614	0.7743	0.8357	0.0000	1,352.6954	1,352.6954	0.2452	0.0000	1,358.8241
Maximum	**1.3908**	**11.4430**	**8.6634**	**0.0136**	**0.3156**	**0.8114**	**1.1271**	**0.0614**	**0.7743**	**0.8357**	**0.0000**	**1,352.6954**	**1,352.6954**	**0.2452**	**0.0000**	**1,358.8241**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3908	11.4430	8.6634	0.0136	0.3156	0.8114	1.1271	0.0614	0.7743	0.8357	0.0000	1,352.6954	1,352.6954	0.2452	0.0000	1,358.8241
Maximum	**1.3908**	**11.4430**	**8.6634**	**0.0136**	**0.3156**	**0.8114**	**1.1271**	**0.0614**	**0.7743**	**0.8357**	**0.0000**	**1,352.6954**	**1,352.6954**	**0.2452**	**0.0000**	**1,358.8241**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Energy	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Mobile	0.0101	0.0495	0.1498	4.2000e-004	0.0306	5.4000e-004	0.0312	8.2000e-003	5.1000e-004	8.7100e-003		42.4043	42.4043	2.3900e-003		42.4641
Total	**0.0549**	**0.0499**	**0.1504**	**4.2000e-004**	**0.0306**	**5.8000e-004**	**0.0312**	**8.2000e-003**	**5.5000e-004**	**8.7500e-003**		**42.9656**	**42.9656**	**2.4000e-003**	**1.0000e-005**	**43.0287**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Energy	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Mobile	0.0101	0.0495	0.1498	4.2000e-004	0.0306	5.4000e-004	0.0312	8.2000e-003	5.1000e-004	8.7100e-003		42.4043	42.4043	2.3900e-003		42.4641
Total	**0.0549**	**0.0499**	**0.1504**	**4.2000e-004**	**0.0306**	**5.8000e-004**	**0.0312**	**8.2000e-003**	**5.5000e-004**	**8.7500e-003**		**42.9656**	**42.9656**	**2.4000e-003**	**1.0000e-005**	**43.0287**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	old baghouse demo	Demolition	12/1/2016	12/7/2016	5	5	
2	old baghouse foundation demo	Demolition	12/8/2016	12/14/2016	5	5	
3	baghouse pad paving	Paving	12/15/2016	12/21/2016	5	5	
4	baghouse installation	Building Construction	12/22/2016	12/28/2016	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
old baghouse demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse foundation demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse foundation demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse foundation demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
baghouse installation	Cranes	1	4.00	231	0.29
baghouse installation	Forklifts	1	4.00	89	0.20
baghouse installation	Generator Sets	1	4.00	84	0.74
baghouse installation	Tractors/Loaders/Backhoes	0	4.00	97	0.37
baghouse installation	Welders	1	4.00	46	0.45
baghouse pad paving	Cement and Mortar Mixers	1	4.00	9	0.56
baghouse pad paving	Pavers	1	4.00	130	0.42
baghouse pad paving	Rollers	1	4.00	80	0.38
baghouse pad paving	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
old baghouse demo	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse foundation demo	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse installation	4	1.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse pad paving	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 old baghouse demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0731**	**0.1969**	**0.6747**	**1.6200e-003**	**0.1188**	**2.1200e-003**	**0.1209**	**0.0316**	**2.0000e-003**	**0.0336**		**163.5446**	**163.5446**	**7.8700e-003**		**163.7413**

3.2 old baghouse demo - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0731**	**0.1969**	**0.6747**	**1.6200e-003**	**0.1188**	**2.1200e-003**	**0.1209**	**0.0316**	**2.0000e-003**	**0.0336**		**163.5446**	**163.5446**	**7.8700e-003**		**163.7413**

3.3 old baghouse foundation demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0731**	**0.1969**	**0.6747**	**1.6200e-003**	**0.1188**	**2.1200e-003**	**0.1209**	**0.0316**	**2.0000e-003**	**0.0336**		**163.5446**	**163.5446**	**7.8700e-003**		**163.7413**

3.3 old baghouse foundation demo - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0731**	**0.1969**	**0.6747**	**1.6200e-003**	**0.1188**	**2.1200e-003**	**0.1209**	**0.0316**	**2.0000e-003**	**0.0336**		**163.5446**	**163.5446**	**7.8700e-003**		**163.7413**

3.4 baghouse pad paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5767	5.7153	3.8503	5.5700e-003		0.3640	0.3640		0.3354	0.3354		567.2296	567.2296	0.1661		571.3821
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5767**	**5.7153**	**3.8503**	**5.5700e-003**		**0.3640**	**0.3640**		**0.3354**	**0.3354**		**567.2296**	**567.2296**	**0.1661**		**571.3821**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0731**	**0.1969**	**0.6747**	**1.6200e-003**	**0.1188**	**2.1200e-003**	**0.1209**	**0.0316**	**2.0000e-003**	**0.0336**		**163.5446**	**163.5446**	**7.8700e-003**		**163.7413**

3.4 baghouse pad paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5767	5.7153	3.8503	5.5700e-003		0.3640	0.3640		0.3354	0.3354	0.0000	567.2296	567.2296	0.1661		571.3821
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5767**	**5.7153**	**3.8503**	**5.5700e-003**		**0.3640**	**0.3640**		**0.3354**	**0.3354**	**0.0000**	**567.2296**	**567.2296**	**0.1661**		**571.3821**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0683	0.0508	0.6472	1.3000e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		128.7280	128.7280	5.3700e-003		128.8623
Total	**0.0731**	**0.1969**	**0.6747**	**1.6200e-003**	**0.1188**	**2.1200e-003**	**0.1209**	**0.0316**	**2.0000e-003**	**0.0336**		**163.5446**	**163.5446**	**7.8700e-003**		**163.7413**

3.5 baghouse installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0821	8.6552	5.0433	8.2100e-003		0.5199	0.5199		0.4975	0.4975		794.2194	794.2194	0.1680		798.4195
Total	**1.0821**	**8.6552**	**5.0433**	**8.2100e-003**		**0.5199**	**0.5199**		**0.4975**	**0.4975**		**794.2194**	**794.2194**	**0.1680**		**798.4195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.8300e-003	5.0800e-003	0.0647	1.3000e-004	0.0112	1.0000e-004	0.0113	2.9600e-003	9.0000e-005	3.0500e-003		12.8728	12.8728	5.4000e-004		12.8862
Total	**0.0117**	**0.1512**	**0.0922**	**4.5000e-004**	**0.0182**	**1.2600e-003**	**0.0194**	**4.8800e-003**	**1.2000e-003**	**6.0800e-003**		**47.6894**	**47.6894**	**3.0400e-003**		**47.7653**

3.5 baghouse installation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0821	8.6552	5.0433	8.2100e-003		0.5199	0.5199		0.4975	0.4975	0.0000	794.2194	794.2194	0.1680		798.4195
Total	**1.0821**	**8.6552**	**5.0433**	**8.2100e-003**		**0.5199**	**0.5199**		**0.4975**	**0.4975**	**0.0000**	**794.2194**	**794.2194**	**0.1680**		**798.4195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.8600e-003	0.1461	0.0275	3.2000e-004	6.9900e-003	1.1600e-003	8.1500e-003	1.9200e-003	1.1100e-003	3.0300e-003		34.8166	34.8166	2.5000e-003		34.8790
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	6.8300e-003	5.0800e-003	0.0647	1.3000e-004	0.0112	1.0000e-004	0.0113	2.9600e-003	9.0000e-005	3.0500e-003		12.8728	12.8728	5.4000e-004		12.8862
Total	**0.0117**	**0.1512**	**0.0922**	**4.5000e-004**	**0.0182**	**1.2600e-003**	**0.0194**	**4.8800e-003**	**1.2000e-003**	**6.0800e-003**		**47.6894**	**47.6894**	**3.0400e-003**		**47.7653**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0101	0.0495	0.1498	4.2000e-004	0.0306	5.4000e-004	0.0312	8.2000e-003	5.1000e-004	8.7100e-003		42.4043	42.4043	2.3900e-003		42.4641
Unmitigated	0.0101	0.0495	0.1498	4.2000e-004	0.0306	5.4000e-004	0.0312	8.2000e-003	5.1000e-004	8.7100e-003		42.4043	42.4043	2.3900e-003		42.4641

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	3.36	3.36	3.36	14,400	14,400
Total	3.36	3.36	3.36	14,400	14,400

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
NaturalGas Unmitigated	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	4.76712	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Total		**5.0000e-005**	**4.7000e-004**	**3.9000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.5608**	**0.5608**	**1.0000e-005**	**1.0000e-005**	**0.5642**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.00476712	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Total		**5.0000e-005**	**4.7000e-004**	**3.9000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.5608**	**0.5608**	**1.0000e-005**	**1.0000e-005**	**0.5642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Unmitigated	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Total	**0.0447**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.4000e-004**	**4.4000e-004**	**0.0000**		**4.7000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Total	**0.0447**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.4000e-004**	**4.4000e-004**	**0.0000**		**4.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 2 - New Baghouse/HEPA Installation (Winter)

R1430_one baghouse_20161220

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	2.00	1000sqft	0.05	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 2000 sq ft

Construction Phase - assumptions: 5 days for each baghouse demo/construction phase

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. one baghouse installation

Off-road Equipment - assumptions: default paving equipment, hp, and LF. Hr/d is from the R1155 EA. one baghouse installation

Off-road Equipment - default

Off-road Equipment - assumption

Off-road Equipment - assumption

Trips and VMT - assumptions

Demolition - assume 1000 sq ft for one baghouse and 1000 sq ft for one baghouse foundation

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	5.00	2.00
tblTripsAndVMT	HaulingTripNumber	5.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3969	11.4504	8.6094	0.0135	0.3156	0.8114	1.1271	0.0614	0.7744	0.8357	0.0000	1,343.8696	1,343.8696	0.2450	0.0000	1,349.9934
Maximum	**1.3969**	**11.4504**	**8.6094**	**0.0135**	**0.3156**	**0.8114**	**1.1271**	**0.0614**	**0.7744**	**0.8357**	**0.0000**	**1,343.8696**	**1,343.8696**	**0.2450**	**0.0000**	**1,349.9934**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	1.3969	11.4504	8.6094	0.0135	0.3156	0.8114	1.1271	0.0614	0.7744	0.8357	0.0000	1,343.8696	1,343.8696	0.2450	0.0000	1,349.9934
Maximum	**1.3969**	**11.4504**	**8.6094**	**0.0135**	**0.3156**	**0.8114**	**1.1271**	**0.0614**	**0.7744**	**0.8357**	**0.0000**	**1,343.8696**	**1,343.8696**	**0.2450**	**0.0000**	**1,349.9934**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Energy	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Mobile	9.7500e-003	0.0511	0.1396	4.0000e-004	0.0306	5.5000e-004	0.0312	8.2000e-003	5.2000e-004	8.7100e-003		40.1438	40.1438	2.3600e-003		40.2028
Total	**0.0545**	**0.0516**	**0.1402**	**4.0000e-004**	**0.0306**	**5.9000e-004**	**0.0312**	**8.2000e-003**	**5.6000e-004**	**8.7500e-003**		**40.7051**	**40.7051**	**2.3700e-003**	**1.0000e-005**	**40.7674**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Energy	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Mobile	9.7500e-003	0.0511	0.1396	4.0000e-004	0.0306	5.5000e-004	0.0312	8.2000e-003	5.2000e-004	8.7100e-003		40.1438	40.1438	2.3600e-003		40.2028
Total	**0.0545**	**0.0516**	**0.1402**	**4.0000e-004**	**0.0306**	**5.9000e-004**	**0.0312**	**8.2000e-003**	**5.6000e-004**	**8.7500e-003**		**40.7051**	**40.7051**	**2.3700e-003**	**1.0000e-005**	**40.7674**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	old baghouse demo	Demolition	12/1/2016	12/7/2016	5	5	
2	old baghouse foundation demo	Demolition	12/8/2016	12/14/2016	5	5	
3	baghouse pad paving	Paving	12/15/2016	12/21/2016	5	5	
4	baghouse installation	Building Construction	12/22/2016	12/28/2016	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
old baghouse demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse foundation demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse foundation demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse foundation demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
baghouse installation	Cranes	1	4.00	231	0.29
baghouse installation	Forklifts	1	4.00	89	0.20
baghouse installation	Generator Sets	1	4.00	84	0.74
baghouse installation	Tractors/Loaders/Backhoes	0	4.00	97	0.37
baghouse installation	Welders	1	4.00	46	0.45
baghouse pad paving	Cement and Mortar Mixers	1	4.00	9	0.56
baghouse pad paving	Pavers	1	4.00	130	0.42
baghouse pad paving	Rollers	1	4.00	80	0.38
baghouse pad paving	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
old baghouse demo	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse foundation demo	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse installation	4	1.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse pad paving	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 old baghouse demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0792**	**0.2043**	**0.6207**	**1.5300e-003**	**0.1188**	**2.1300e-003**	**0.1209**	**0.0316**	**2.0100e-003**	**0.0336**		**154.7187**	**154.7187**	**7.6700e-003**		**154.9106**

3.2 old baghouse demo - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0792**	**0.2043**	**0.6207**	**1.5300e-003**	**0.1188**	**2.1300e-003**	**0.1209**	**0.0316**	**2.0100e-003**	**0.0336**		**154.7187**	**154.7187**	**7.6700e-003**		**154.9106**

3.3 old baghouse foundation demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723		1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**		**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0792**	**0.2043**	**0.6207**	**1.5300e-003**	**0.1188**	**2.1300e-003**	**0.1209**	**0.0316**	**2.0100e-003**	**0.0336**		**154.7187**	**154.7187**	**7.6700e-003**		**154.9106**

3.3 old baghouse foundation demo - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1969	0.0000	0.1969	0.0298	0.0000	0.0298			0.0000			0.0000
Off-Road	1.3177	11.2461	7.9887	0.0120		0.8093	0.8093		0.7723	0.7723	0.0000	1,189.1508	1,189.1508	0.2373		1,195.0828
Total	**1.3177**	**11.2461**	**7.9887**	**0.0120**	**0.1969**	**0.8093**	**1.0062**	**0.0298**	**0.7723**	**0.8022**	**0.0000**	**1,189.1508**	**1,189.1508**	**0.2373**		**1,195.0828**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0792**	**0.2043**	**0.6207**	**1.5300e-003**	**0.1188**	**2.1300e-003**	**0.1209**	**0.0316**	**2.0100e-003**	**0.0336**		**154.7187**	**154.7187**	**7.6700e-003**		**154.9106**

3.4 baghouse pad paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5767	5.7153	3.8503	5.5700e-003		0.3640	0.3640		0.3354	0.3354		567.2296	567.2296	0.1661		571.3821
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5767**	**5.7153**	**3.8503**	**5.5700e-003**		**0.3640**	**0.3640**		**0.3354**	**0.3354**		**567.2296**	**567.2296**	**0.1661**		**571.3821**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0792**	**0.2043**	**0.6207**	**1.5300e-003**	**0.1188**	**2.1300e-003**	**0.1209**	**0.0316**	**2.0100e-003**	**0.0336**		**154.7187**	**154.7187**	**7.6700e-003**		**154.9106**

3.4 baghouse pad paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5767	5.7153	3.8503	5.5700e-003		0.3640	0.3640		0.3354	0.3354	0.0000	567.2296	567.2296	0.1661		571.3821
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.5767**	**5.7153**	**3.8503**	**5.5700e-003**		**0.3640**	**0.3640**		**0.3354**	**0.3354**	**0.0000**	**567.2296**	**567.2296**	**0.1661**		**571.3821**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0742	0.0557	0.5911	1.2100e-003	0.1118	9.6000e-004	0.1127	0.0296	8.9000e-004	0.0305		120.4745	120.4745	5.0600e-003		120.6010
Total	**0.0792**	**0.2043**	**0.6207**	**1.5300e-003**	**0.1188**	**2.1300e-003**	**0.1209**	**0.0316**	**2.0100e-003**	**0.0336**		**154.7187**	**154.7187**	**7.6700e-003**		**154.9106**

3.5 baghouse installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0821	8.6552	5.0433	8.2100e-003		0.5199	0.5199		0.4975	0.4975		794.2194	794.2194	0.1680		798.4195
Total	**1.0821**	**8.6552**	**5.0433**	**8.2100e-003**		**0.5199**	**0.5199**		**0.4975**	**0.4975**		**794.2194**	**794.2194**	**0.1680**		**798.4195**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.4200e-003	5.5700e-003	0.0591	1.2000e-004	0.0112	1.0000e-004	0.0113	2.9600e-003	9.0000e-005	3.0500e-003		12.0475	12.0475	5.1000e-004		12.0601
Total	**0.0124**	**0.1542**	**0.0888**	**4.4000e-004**	**0.0182**	**1.2700e-003**	**0.0194**	**4.8800e-003**	**1.2100e-003**	**6.0900e-003**		**46.2917**	**46.2917**	**3.1200e-003**		**46.3696**

3.5 baghouse installation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0821	8.6552	5.0433	8.2100e-003		0.5199	0.5199		0.4975	0.4975	0.0000	794.2194	794.2194	0.1680		798.4195
Total	**1.0821**	**8.6552**	**5.0433**	**8.2100e-003**		**0.5199**	**0.5199**		**0.4975**	**0.4975**	**0.0000**	**794.2194**	**794.2194**	**0.1680**		**798.4195**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.9800e-003	0.1486	0.0297	3.2000e-004	6.9900e-003	1.1700e-003	8.1700e-003	1.9200e-003	1.1200e-003	3.0400e-003		34.2442	34.2442	2.6100e-003		34.3095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.4200e-003	5.5700e-003	0.0591	1.2000e-004	0.0112	1.0000e-004	0.0113	2.9600e-003	9.0000e-005	3.0500e-003		12.0475	12.0475	5.1000e-004		12.0601
Total	**0.0124**	**0.1542**	**0.0888**	**4.4000e-004**	**0.0182**	**1.2700e-003**	**0.0194**	**4.8800e-003**	**1.2100e-003**	**6.0900e-003**		**46.2917**	**46.2917**	**3.1200e-003**		**46.3696**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.7500e-003	0.0511	0.1396	4.0000e-004	0.0306	5.5000e-004	0.0312	8.2000e-003	5.2000e-004	8.7100e-003		40.1438	40.1438	2.3600e-003		40.2028
Unmitigated	9.7500e-003	0.0511	0.1396	4.0000e-004	0.0306	5.5000e-004	0.0312	8.2000e-003	5.2000e-004	8.7100e-003		40.1438	40.1438	2.3600e-003		40.2028

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	3.36	3.36	3.36	14,400	14,400
Total	3.36	3.36	3.36	14,400	14,400

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
NaturalGas Unmitigated	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	4.76712	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Total		**5.0000e-005**	**4.7000e-004**	**3.9000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.5608**	**0.5608**	**1.0000e-005**	**1.0000e-005**	**0.5642**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.00476712	5.0000e-005	4.7000e-004	3.9000e-004	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.5608	0.5608	1.0000e-005	1.0000e-005	0.5642
Total		**5.0000e-005**	**4.7000e-004**	**3.9000e-004**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.5608**	**0.5608**	**1.0000e-005**	**1.0000e-005**	**0.5642**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Unmitigated	0.0447	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Total	**0.0447**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.4000e-004**	**4.4000e-004**	**0.0000**		**4.7000e-004**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	5.0800e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0396					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.0000e-005	0.0000	2.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		4.4000e-004	4.4000e-004	0.0000		4.7000e-004
Total	**0.0447**	**0.0000**	**2.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**4.4000e-004**	**4.4000e-004**	**0.0000**		**4.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 2 - New Baghouse/HEPA Installation (Annual)

R1430_one baghouse_20161220

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	2.00	1000sqft	0.05	2,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 2000 sq ft

Construction Phase - assumptions: 5 days for each baghouse demo/construction phase

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. one baghouse installation

Off-road Equipment - assumptions: default paving equipment, hp, and LF. Hr/d is from the R1155 EA. one baghouse installation

Off-road Equipment - default

Off-road Equipment - assumption

Off-road Equipment - assumption

Trips and VMT - assumptions

Demolition - assume 1000 sq ft for one baghouse and 1000 sq ft for one baghouse foundation

Grading -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblConstructionPhase	NumDays	10.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	7.00	4.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	5.00	2.00
tblTripsAndVMT	HaulingTripNumber	5.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0113	0.0941	0.0672	1.1000e-004	1.9000e-003	6.2800e-003	8.1800e-003	3.9000e-004	5.9600e-003	6.3600e-003	0.0000	9.6567	9.6567	1.8900e-003	0.0000	9.7040
Maximum	**0.0113**	**0.0941**	**0.0672**	**1.1000e-004**	**1.9000e-003**	**6.2800e-003**	**8.1800e-003**	**3.9000e-004**	**5.9600e-003**	**6.3600e-003**	**0.0000**	**9.6567**	**9.6567**	**1.8900e-003**	**0.0000**	**9.7040**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	0.0113	0.0941	0.0672	1.1000e-004	1.9000e-003	6.2800e-003	8.1800e-003	3.9000e-004	5.9600e-003	6.3600e-003	0.0000	9.6567	9.6567	1.8900e-003	0.0000	9.7040
Maximum	**0.0113**	**0.0941**	**0.0672**	**1.1000e-004**	**1.9000e-003**	**6.2800e-003**	**8.1800e-003**	**3.9000e-004**	**5.9600e-003**	**6.3600e-003**	**0.0000**	**9.6567**	**9.6567**	**1.8900e-003**	**0.0000**	**9.7040**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.1600e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Energy	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6291	2.6291	1.1000e-004	2.0000e-005	2.6387
Mobile	1.7400e-003	9.4800e-003	0.0259	7.0000e-005	5.4700e-003	1.0000e-004	5.5700e-003	1.4700e-003	9.0000e-005	1.5600e-003	0.0000	6.7209	6.7209	3.9000e-004	0.0000	6.7306
Waste						0.0000	0.0000		0.0000	0.0000	0.3816	0.0000	0.3816	0.0226	0.0000	0.9455
Water						0.0000	0.0000		0.0000	0.0000	0.1467	1.9188	2.0655	0.0152	3.7000e-004	2.5552
Total	**9.9100e-003**	**9.5700e-003**	**0.0260**	**7.0000e-005**	**5.4700e-003**	**1.1000e-004**	**5.5800e-003**	**1.4700e-003**	**1.0000e-004**	**1.5700e-003**	**0.5284**	**11.2688**	**11.7972**	**0.0382**	**3.9000e-004**	**12.8700**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.1600e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Energy	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.6291	2.6291	1.1000e-004	2.0000e-005	2.6387
Mobile	1.7400e-003	9.4800e-003	0.0259	7.0000e-005	5.4700e-003	1.0000e-004	5.5700e-003	1.4700e-003	9.0000e-005	1.5600e-003	0.0000	6.7209	6.7209	3.9000e-004	0.0000	6.7306
Waste						0.0000	0.0000		0.0000	0.0000	0.3816	0.0000	0.3816	0.0226	0.0000	0.9455
Water						0.0000	0.0000		0.0000	0.0000	0.1467	1.9188	2.0655	0.0152	3.7000e-004	2.5552
Total	**9.9100e-003**	**9.5700e-003**	**0.0260**	**7.0000e-005**	**5.4700e-003**	**1.1000e-004**	**5.5800e-003**	**1.4700e-003**	**1.0000e-004**	**1.5700e-003**	**0.5284**	**11.2688**	**11.7972**	**0.0382**	**3.9000e-004**	**12.8700**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	old baghouse demo	Demolition	12/1/2016	12/7/2016	5	5	
2	old baghouse foundation demo	Demolition	12/8/2016	12/14/2016	5	5	
3	baghouse pad paving	Paving	12/15/2016	12/21/2016	5	5	
4	baghouse installation	Building Construction	12/22/2016	12/28/2016	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
old baghouse demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
old baghouse foundation demo	Concrete/Industrial Saws	1	8.00	81	0.73
old baghouse foundation demo	Rubber Tired Dozers	1	1.00	247	0.40
old baghouse foundation demo	Tractors/Loaders/Backhoes	2	6.00	97	0.37
baghouse installation	Cranes	1	4.00	231	0.29
baghouse installation	Forklifts	1	4.00	89	0.20
baghouse installation	Generator Sets	1	4.00	84	0.74
baghouse installation	Tractors/Loaders/Backhoes	0	4.00	97	0.37
baghouse installation	Welders	1	4.00	46	0.45
baghouse pad paving	Cement and Mortar Mixers	1	4.00	9	0.56
baghouse pad paving	Pavers	1	4.00	130	0.42
baghouse pad paving	Rollers	1	4.00	80	0.38
baghouse pad paving	Tractors/Loaders/Backhoes	1	4.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
old baghouse demo	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
old baghouse foundation demo	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse installation	4	1.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
baghouse pad paving	4	10.00	0.00	2.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 old baghouse demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9000e-004	0.0000	4.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2900e-003	0.0281	0.0200	3.0000e-005		2.0200e-003	2.0200e-003		1.9300e-003	1.9300e-003	0.0000	2.6970	2.6970	5.4000e-004	0.0000	2.7104
Total	**3.2900e-003**	**0.0281**	**0.0200**	**3.0000e-005**	**4.9000e-004**	**2.0200e-003**	**2.5100e-003**	**7.0000e-005**	**1.9300e-003**	**2.0000e-003**	**0.0000**	**2.6970**	**2.6970**	**5.4000e-004**	**0.0000**	**2.7104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.5200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2779	0.2779	1.0000e-005	0.0000	0.2782
Total	**1.8000e-004**	**5.2000e-004**	**1.5900e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3563**	**0.3563**	**2.0000e-005**	**0.0000**	**0.3567**

3.2 old baghouse demo - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9000e-004	0.0000	4.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2900e-003	0.0281	0.0200	3.0000e-005		2.0200e-003	2.0200e-003		1.9300e-003	1.9300e-003	0.0000	2.6970	2.6970	5.4000e-004	0.0000	2.7104
Total	**3.2900e-003**	**0.0281**	**0.0200**	**3.0000e-005**	**4.9000e-004**	**2.0200e-003**	**2.5100e-003**	**7.0000e-005**	**1.9300e-003**	**2.0000e-003**	**0.0000**	**2.6970**	**2.6970**	**5.4000e-004**	**0.0000**	**2.7104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.5200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2779	0.2779	1.0000e-005	0.0000	0.2782
Total	**1.8000e-004**	**5.2000e-004**	**1.5900e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3563**	**0.3563**	**2.0000e-005**	**0.0000**	**0.3567**

3.3 old baghouse foundation demo - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9000e-004	0.0000	4.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2900e-003	0.0281	0.0200	3.0000e-005		2.0200e-003	2.0200e-003		1.9300e-003	1.9300e-003	0.0000	2.6970	2.6970	5.4000e-004	0.0000	2.7104
Total	**3.2900e-003**	**0.0281**	**0.0200**	**3.0000e-005**	**4.9000e-004**	**2.0200e-003**	**2.5100e-003**	**7.0000e-005**	**1.9300e-003**	**2.0000e-003**	**0.0000**	**2.6970**	**2.6970**	**5.4000e-004**	**0.0000**	**2.7104**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.5200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2779	0.2779	1.0000e-005	0.0000	0.2782
Total	**1.8000e-004**	**5.2000e-004**	**1.5900e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3563**	**0.3563**	**2.0000e-005**	**0.0000**	**0.3567**

3.3 old baghouse foundation demo - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.9000e-004	0.0000	4.9000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.2900e-003	0.0281	0.0200	3.0000e-005		2.0200e-003	2.0200e-003		1.9300e-003	1.9300e-003	0.0000	2.6970	2.6970	5.4000e-004	0.0000	2.7104
Total	**3.2900e-003**	**0.0281**	**0.0200**	**3.0000e-005**	**4.9000e-004**	**2.0200e-003**	**2.5100e-003**	**7.0000e-005**	**1.9300e-003**	**2.0000e-003**	**0.0000**	**2.6970**	**2.6970**	**5.4000e-004**	**0.0000**	**2.7104**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.5200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2779	0.2779	1.0000e-005	0.0000	0.2782
Total	**1.8000e-004**	**5.2000e-004**	**1.5900e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3563**	**0.3563**	**2.0000e-005**	**0.0000**	**0.3567**

3.4 baghouse pad paving - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4400e-003	0.0143	9.6300e-003	1.0000e-005		9.1000e-004	9.1000e-004		8.4000e-004	8.4000e-004	0.0000	1.2865	1.2865	3.8000e-004	0.0000	1.2959
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4400e-003**	**0.0143**	**9.6300e-003**	**1.0000e-005**		**9.1000e-004**	**9.1000e-004**		**8.4000e-004**	**8.4000e-004**	**0.0000**	**1.2865**	**1.2865**	**3.8000e-004**	**0.0000**	**1.2959**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.5200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2779	0.2779	1.0000e-005	0.0000	0.2782
Total	**1.8000e-004**	**5.2000e-004**	**1.5900e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3563**	**0.3563**	**2.0000e-005**	**0.0000**	**0.3567**

3.4 baghouse pad paving - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4400e-003	0.0143	9.6300e-003	1.0000e-005		9.1000e-004	9.1000e-004		8.4000e-004	8.4000e-004	0.0000	1.2865	1.2865	3.8000e-004	0.0000	1.2959
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.4400e-003**	**0.0143**	**9.6300e-003**	**1.0000e-005**		**9.1000e-004**	**9.1000e-004**		**8.4000e-004**	**8.4000e-004**	**0.0000**	**1.2865**	**1.2865**	**3.8000e-004**	**0.0000**	**1.2959**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7000e-004	1.4000e-004	1.5200e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	8.0000e-005	0.0000	0.2779	0.2779	1.0000e-005	0.0000	0.2782
Total	**1.8000e-004**	**5.2000e-004**	**1.5900e-003**	**0.0000**	**2.9000e-004**	**0.0000**	**3.0000e-004**	**7.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.3563**	**0.3563**	**2.0000e-005**	**0.0000**	**0.3567**

3.5 baghouse installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7100e-003	0.0216	0.0126	2.0000e-005		1.3000e-003	1.3000e-003		1.2400e-003	1.2400e-003	0.0000	1.8013	1.8013	3.8000e-004	0.0000	1.8108
Total	**2.7100e-003**	**0.0216**	**0.0126**	**2.0000e-005**		**1.3000e-003**	**1.3000e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**1.8013**	**1.8013**	**3.8000e-004**	**0.0000**	**1.8108**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0278	0.0278	0.0000	0.0000	0.0278
Total	**3.0000e-005**	**3.9000e-004**	**2.2000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.1062**	**0.1062**	**1.0000e-005**	**0.0000**	**0.1064**

3.5 baghouse installation - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7100e-003	0.0216	0.0126	2.0000e-005		1.3000e-003	1.3000e-003		1.2400e-003	1.2400e-003	0.0000	1.8013	1.8013	3.8000e-004	0.0000	1.8108
Total	**2.7100e-003**	**0.0216**	**0.0126**	**2.0000e-005**		**1.3000e-003**	**1.3000e-003**		**1.2400e-003**	**1.2400e-003**	**0.0000**	**1.8013**	**1.8013**	**3.8000e-004**	**0.0000**	**1.8108**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	3.8000e-004	7.0000e-005	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0784	0.0784	1.0000e-005	0.0000	0.0786
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-005	1.0000e-005	1.5000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0278	0.0278	0.0000	0.0000	0.0278
Total	**3.0000e-005**	**3.9000e-004**	**2.2000e-004**	**0.0000**	**5.0000e-005**	**0.0000**	**5.0000e-005**	**1.0000e-005**	**0.0000**	**2.0000e-005**	**0.0000**	**0.1062**	**0.1062**	**1.0000e-005**	**0.0000**	**0.1064**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.7400e-003	9.4800e-003	0.0259	7.0000e-005	5.4700e-003	1.0000e-004	5.5700e-003	1.4700e-003	9.0000e-005	1.5600e-003	0.0000	6.7209	6.7209	3.9000e-004	0.0000	6.7306
Unmitigated	1.7400e-003	9.4800e-003	0.0259	7.0000e-005	5.4700e-003	1.0000e-004	5.5700e-003	1.4700e-003	9.0000e-005	1.5600e-003	0.0000	6.7209	6.7209	3.9000e-004	0.0000	6.7306

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	3.36	3.36	3.36	14,400	14,400
Total	3.36	3.36	3.36	14,400	14,400

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.5362	2.5362	1.0000e-004	2.0000e-005	2.5453
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2.5362	2.5362	1.0000e-004	2.0000e-005	2.5453
NaturalGas Mitigated	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0929	0.0929	0.0000	0.0000	0.0934
NaturalGas Unmitigated	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0929	0.0929	0.0000	0.0000	0.0934

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	1740	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0929	0.0929	0.0000	0.0000	0.0934
Total		**1.0000e-005**	**9.0000e-005**	**7.0000e-005**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0929**	**0.0929**	**0.0000**	**0.0000**	**0.0934**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	1740	1.0000e-005	9.0000e-005	7.0000e-005	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.0929	0.0929	0.0000	0.0000	0.0934
Total		**1.0000e-005**	**9.0000e-005**	**7.0000e-005**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**0.0929**	**0.0929**	**0.0000**	**0.0000**	**0.0934**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	7960	2.5362	1.0000e-004	2.0000e-005	2.5453
Total		**2.5362**	**1.0000e-004**	**2.0000e-005**	**2.5453**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	7960	2.5362	1.0000e-004	2.0000e-005	2.5453
Total		**2.5362**	**1.0000e-004**	**2.0000e-005**	**2.5453**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.1600e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Unmitigated	8.1600e-003	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Total	**8.1600e-003**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.3000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	7.2300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	3.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	5.0000e-005	5.0000e-005	0.0000	0.0000	5.0000e-005
Total	**8.1600e-003**	**0.0000**	**3.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**5.0000e-005**	**5.0000e-005**	**0.0000**	**0.0000**	**5.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	2.0655	0.0152	3.7000e-004	2.5552
Unmitigated	2.0655	0.0152	3.7000e-004	2.5552

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0.4625 / 0	2.0655	0.0152	3.7000e-004	2.5552
Total		**2.0655**	**0.0152**	**3.7000e-004**	**2.5552**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0.4625 / 0	2.0655	0.0152	3.7000e-004	2.5552
Total		**2.0655**	**0.0152**	**3.7000e-004**	**2.5552**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.3816	0.0226	0.0000	0.9455
Unmitigated	0.3816	0.0226	0.0000	0.9455

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	1.88	0.3816	0.0226	0.0000	0.9455
Total		**0.3816**	**0.0226**	**0.0000**	**0.9455**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	1.88	0.3816	0.0226	0.0000	0.9455
Total		**0.3816**	**0.0226**	**0.0000**	**0.9455**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 3 - Building Improvement For Total Enclosure (Summer)

R1430_Total Enclosure Improvement_20161220

South Coast AQMD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 1000 sq ft

Construction Phase - assumptions: 5 days construction

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. Double the unit amount since two baghouses will be installed at the same time (worst case)

Trips and VMT - assumptions 10 hauling trips

Demolition -

Grading -

Off-road Equipment - assumption

R1430_Total Enclosure Improvement_20161220 - South Coast AQMD Air District, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	5.00
tblConstructionPhase	PhaseEndDate	4/19/2017	12/7/2016
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.7868	6.9683	3.2792	6.5400e-003	0.0350	0.3563	0.3913	9.5800e-003	0.3337	0.3433	0.0000	656.7851	656.7851	0.1520	0.0000	660.5847
Maximum	**0.7868**	**6.9683**	**3.2792**	**6.5400e-003**	**0.0350**	**0.3563**	**0.3913**	**9.5800e-003**	**0.3337**	**0.3433**	**0.0000**	**656.7851**	**656.7851**	**0.1520**	**0.0000**	**660.5847**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.7868	6.9683	3.2792	6.5400e-003	0.0350	0.3563	0.3913	9.5800e-003	0.3337	0.3433	0.0000	656.7851	656.7851	0.1520	0.0000	660.5847
Maximum	**0.7868**	**6.9683**	**3.2792**	**6.5400e-003**	**0.0350**	**0.3563**	**0.3913**	**9.5800e-003**	**0.3337**	**0.3433**	**0.0000**	**656.7851**	**656.7851**	**0.1520**	**0.0000**	**660.5847**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Mobile	5.0700e-003	0.0247	0.0749	2.1000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		21.2022	21.2022	1.1900e-003		21.2320
Total	**0.0275**	**0.0250**	**0.0752**	**2.1000e-004**	**0.0153**	**2.9000e-004**	**0.0156**	**4.1000e-003**	**2.8000e-004**	**4.3800e-003**		**21.4828**	**21.4828**	**1.2000e-003**	**1.0000e-005**	**21.5144**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Mobile	5.0700e-003	0.0247	0.0749	2.1000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		21.2022	21.2022	1.1900e-003		21.2320
Total	**0.0275**	**0.0250**	**0.0752**	**2.1000e-004**	**0.0153**	**2.9000e-004**	**0.0156**	**4.1000e-003**	**2.8000e-004**	**4.3800e-003**		**21.4828**	**21.4828**	**1.2000e-003**	**1.0000e-005**	**21.5144**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction/improvement	Building Construction	12/1/2016	12/7/2016	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction/improvement	Cranes	1	4.00	231	0.29
Building Construction/improvement	Forklifts	1	4.00	89	0.20
Building Construction/improvement	Welders	1	4.00	46	0.45
Building Construction/improvement	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction/improve	3	0.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction/improvement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7626	6.2378	3.1418	4.9200e-003		0.3505	0.3505		0.3282	0.3282		482.7021	482.7021	0.1395		486.1896
Total	**0.7626**	**6.2378**	**3.1418**	**4.9200e-003**		**0.3505**	**0.3505**		**0.3282**	**0.3282**		**482.7021**	**482.7021**	**0.1395**		**486.1896**

3.2 Building Construction/improvement - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0243	0.7305	0.1374	1.6200e-003	0.0350	5.8000e-003	0.0408	9.5800e-003	5.5500e-003	0.0151		174.0830	174.0830	0.0125		174.3951
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0243**	**0.7305**	**0.1374**	**1.6200e-003**	**0.0350**	**5.8000e-003**	**0.0408**	**9.5800e-003**	**5.5500e-003**	**0.0151**		**174.0830**	**174.0830**	**0.0125**		**174.3951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7626	6.2378	3.1418	4.9200e-003		0.3505	0.3505		0.3282	0.3282	0.0000	482.7021	482.7021	0.1395		486.1896
Total	**0.7626**	**6.2378**	**3.1418**	**4.9200e-003**		**0.3505**	**0.3505**		**0.3282**	**0.3282**	**0.0000**	**482.7021**	**482.7021**	**0.1395**		**486.1896**

3.2 Building Construction/improvement - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0243	0.7305	0.1374	1.6200e-003	0.0350	5.8000e-003	0.0408	9.5800e-003	5.5500e-003	0.0151		174.0830	174.0830	0.0125		174.3951
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0243**	**0.7305**	**0.1374**	**1.6200e-003**	**0.0350**	**5.8000e-003**	**0.0408**	**9.5800e-003**	**5.5500e-003**	**0.0151**		**174.0830**	**174.0830**	**0.0125**		**174.3951**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.0700e-003	0.0247	0.0749	2.1000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		21.2022	21.2022	1.1900e-003		21.2320
Unmitigated	5.0700e-003	0.0247	0.0749	2.1000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		21.2022	21.2022	1.1900e-003		21.2320

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	1.68	1.68	1.68	7,200	7,200
Total	1.68	1.68	1.68	7,200	7,200

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
NaturalGas Unmitigated	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	2.38356	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Total		**3.0000e-005**	**2.3000e-004**	**2.0000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.2804**	**0.2804**	**1.0000e-005**	**1.0000e-005**	**0.2821**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.00238356	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Total		**3.0000e-005**	**2.3000e-004**	**2.0000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.2804**	**0.2804**	**1.0000e-005**	**1.0000e-005**	**0.2821**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0224**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0224**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 3 - Building Improvement For Total Enclosure (Winter)

R1430_Total Enclosure Improvement_20161220

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 1000 sq ft

Construction Phase - assumptions: 5 days construction

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. Double the unit amount since two baghouses will be installed at the same time (worst case)

Trips and VMT - assumptions 10 hauling trips

Demolition -

Grading -

Off-road Equipment - assumption

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	5.00
tblConstructionPhase	PhaseEndDate	4/19/2017	12/7/2016
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.7874	6.9809	3.2901	6.5100e-003	0.0350	0.3564	0.3914	9.5800e-003	0.3338	0.3434	0.0000	653.9232	653.9232	0.1526	0.0000	657.7372
Maximum	**0.7874**	**6.9809**	**3.2901**	**6.5100e-003**	**0.0350**	**0.3564**	**0.3914**	**9.5800e-003**	**0.3338**	**0.3434**	**0.0000**	**653.9232**	**653.9232**	**0.1526**	**0.0000**	**657.7372**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2016	0.7874	6.9809	3.2901	6.5100e-003	0.0350	0.3564	0.3914	9.5800e-003	0.3338	0.3434	0.0000	653.9232	653.9232	0.1526	0.0000	657.7372
Maximum	**0.7874**	**6.9809**	**3.2901**	**6.5100e-003**	**0.0350**	**0.3564**	**0.3914**	**9.5800e-003**	**0.3338**	**0.3434**	**0.0000**	**653.9232**	**653.9232**	**0.1526**	**0.0000**	**657.7372**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Mobile	4.8800e-003	0.0256	0.0698	2.0000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		20.0719	20.0719	1.1800e-003		20.1014
Total	**0.0273**	**0.0258**	**0.0701**	**2.0000e-004**	**0.0153**	**2.9000e-004**	**0.0156**	**4.1000e-003**	**2.8000e-004**	**4.3800e-003**		**20.3525**	**20.3525**	**1.1900e-003**	**1.0000e-005**	**20.3837**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Energy	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Mobile	4.8800e-003	0.0256	0.0698	2.0000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		20.0719	20.0719	1.1800e-003		20.1014
Total	**0.0273**	**0.0258**	**0.0701**	**2.0000e-004**	**0.0153**	**2.9000e-004**	**0.0156**	**4.1000e-003**	**2.8000e-004**	**4.3800e-003**		**20.3525**	**20.3525**	**1.1900e-003**	**1.0000e-005**	**20.3837**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction/improvement	Building Construction	12/1/2016	12/7/2016	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction/improvement	Cranes	1	4.00	231	0.29
Building Construction/improvement	Forklifts	1	4.00	89	0.20
Building Construction/improvement	Welders	1	4.00	46	0.45
Building Construction/improvement	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction/improve	3	0.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction/improvement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7626	6.2378	3.1418	4.9200e-003		0.3505	0.3505		0.3282	0.3282		482.7021	482.7021	0.1395		486.1896
Total	**0.7626**	**6.2378**	**3.1418**	**4.9200e-003**		**0.3505**	**0.3505**		**0.3282**	**0.3282**		**482.7021**	**482.7021**	**0.1395**		**486.1896**

3.2 Building Construction/improvement - 2016

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0249	0.7430	0.1483	1.5900e-003	0.0350	5.8700e-003	0.0408	9.5800e-003	5.6200e-003	0.0152		171.2211	171.2211	0.0131		171.5476
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0249**	**0.7430**	**0.1483**	**1.5900e-003**	**0.0350**	**5.8700e-003**	**0.0408**	**9.5800e-003**	**5.6200e-003**	**0.0152**		**171.2211**	**171.2211**	**0.0131**		**171.5476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7626	6.2378	3.1418	4.9200e-003		0.3505	0.3505		0.3282	0.3282	0.0000	482.7021	482.7021	0.1395		486.1896
Total	**0.7626**	**6.2378**	**3.1418**	**4.9200e-003**		**0.3505**	**0.3505**		**0.3282**	**0.3282**	**0.0000**	**482.7021**	**482.7021**	**0.1395**		**486.1896**

3.2 Building Construction/improvement - 2016

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0249	0.7430	0.1483	1.5900e-003	0.0350	5.8700e-003	0.0408	9.5800e-003	5.6200e-003	0.0152		171.2211	171.2211	0.0131		171.5476
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0249**	**0.7430**	**0.1483**	**1.5900e-003**	**0.0350**	**5.8700e-003**	**0.0408**	**9.5800e-003**	**5.6200e-003**	**0.0152**		**171.2211**	**171.2211**	**0.0131**		**171.5476**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.8800e-003	0.0256	0.0698	2.0000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		20.0719	20.0719	1.1800e-003		20.1014
Unmitigated	4.8800e-003	0.0256	0.0698	2.0000e-004	0.0153	2.7000e-004	0.0156	4.1000e-003	2.6000e-004	4.3600e-003		20.0719	20.0719	1.1800e-003		20.1014

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	1.68	1.68	1.68	7,200	7,200
Total	1.68	1.68	1.68	7,200	7,200

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
NaturalGas Unmitigated	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	2.38356	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Total		**3.0000e-005**	**2.3000e-004**	**2.0000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.2804**	**0.2804**	**1.0000e-005**	**1.0000e-005**	**0.2821**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Unrefrigerated Warehouse-No Rail	0.00238356	3.0000e-005	2.3000e-004	2.0000e-004	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.2804	0.2804	1.0000e-005	1.0000e-005	0.2821
Total		**3.0000e-005**	**2.3000e-004**	**2.0000e-004**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.2804**	**0.2804**	**1.0000e-005**	**1.0000e-005**	**0.2821**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Unmitigated	0.0224	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0224**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5400e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0198					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.0000e-005	0.0000	1.0000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		2.2000e-004	2.2000e-004	0.0000		2.3000e-004
Total	**0.0224**	**0.0000**	**1.0000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**		**2.3000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Files and Assumptions

Scenario 3 - Building Improvement For Total Enclosure (Annual)

R1430_Total Enclosure Improvement_20161220

South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	1.00	1000sqft	0.02	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	31
Climate Zone	9			**Operational Year**	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - assume 2016/12/1 to start the construction and 2017 is the operational year

Land Use - assumption: 1000 sq ft

Construction Phase - assumptions: 5 days construction

Off-road Equipment - default hp, and LF. Equipment type and hr/day are from the previous EA for R1155 assumptions. Double the unit amount since two baghouses will be installed at the same time (worst case)

Trips and VMT - assumptions 10 hauling trips

Demolition -

Grading -

Off-road Equipment - assumption

R1430_Total Enclosure Improvement_20161220 - South Coast AQMD Air District, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	100.00	5.00
tblConstructionPhase	PhaseEndDate	4/19/2017	12/7/2016
tblOffRoadEquipment	OffRoadEquipmentType	Tractors/Loaders/Backhoes	Welders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	UsageHours	6.00	4.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2017
tblTripsAndVMT	HaulingTripNumber	0.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	1.9700e-003	0.0175	8.2100e-003	2.0000e-005	9.0000e-005	8.9000e-004	9.8000e-004	2.0000e-005	8.3000e-004	8.6000e-004	0.0000	1.4868	1.4868	3.5000e-004	0.0000	1.4955
Maximum	**1.9700e-003**	**0.0175**	**8.2100e-003**	**2.0000e-005**	**9.0000e-005**	**8.9000e-004**	**9.8000e-004**	**2.0000e-005**	**8.3000e-004**	**8.6000e-004**	**0.0000**	**1.4868**	**1.4868**	**3.5000e-004**	**0.0000**	**1.4955**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2016	1.9700e-003	0.0175	8.2100e-003	2.0000e-005	9.0000e-005	8.9000e-004	9.8000e-004	2.0000e-005	8.3000e-004	8.6000e-004	0.0000	1.4868	1.4868	3.5000e-004	0.0000	1.4955
Maximum	**1.9700e-003**	**0.0175**	**8.2100e-003**	**2.0000e-005**	**9.0000e-005**	**8.9000e-004**	**9.8000e-004**	**2.0000e-005**	**8.3000e-004**	**8.6000e-004**	**0.0000**	**1.4868**	**1.4868**	**3.5000e-004**	**0.0000**	**1.4955**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

R1430_Total Enclosure Improvement_20161220 - South Coast AQMD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.0800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	4.0000e-005	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3145	1.3145	5.0000e-005	1.0000e-005	1.3194
Mobile	8.7000e-004	4.7400e-003	0.0129	4.0000e-005	2.7400e-003	5.0000e-005	2.7900e-003	7.3000e-004	5.0000e-005	7.8000e-004	0.0000	3.3604	3.3604	1.9000e-004	0.0000	3.3653
Waste						0.0000	0.0000		0.0000	0.0000	0.1908	0.0000	0.1908	0.0113	0.0000	0.4727
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.9594	1.0328	7.5700e-003	1.9000e-004	1.2776
Total	**4.9500e-003**	**4.7800e-003**	**0.0130**	**4.0000e-005**	**2.7400e-003**	**5.0000e-005**	**2.7900e-003**	**7.3000e-004**	**5.0000e-005**	**7.8000e-004**	**0.2642**	**5.6344**	**5.8986**	**0.0191**	**2.0000e-004**	**6.4350**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	4.0800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Energy	0.0000	4.0000e-005	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3145	1.3145	5.0000e-005	1.0000e-005	1.3194
Mobile	8.7000e-004	4.7400e-003	0.0129	4.0000e-005	2.7400e-003	5.0000e-005	2.7900e-003	7.3000e-004	5.0000e-005	7.8000e-004	0.0000	3.3604	3.3604	1.9000e-004	0.0000	3.3653
Waste						0.0000	0.0000		0.0000	0.0000	0.1908	0.0000	0.1908	0.0113	0.0000	0.4727
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.9594	1.0328	7.5700e-003	1.9000e-004	1.2776
Total	**4.9500e-003**	**4.7800e-003**	**0.0130**	**4.0000e-005**	**2.7400e-003**	**5.0000e-005**	**2.7900e-003**	**7.3000e-004**	**5.0000e-005**	**7.8000e-004**	**0.2642**	**5.6344**	**5.8986**	**0.0191**	**2.0000e-004**	**6.4350**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Building Construction/improvement	Building Construction	12/1/2016	12/7/2016	5	5	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Building Construction/improvement	Cranes	1	4.00	231	0.29
Building Construction/improvement	Forklifts	1	4.00	89	0.20
Building Construction/improvement	Welders	1	4.00	46	0.45
Building Construction/improvement	Tractors/Loaders/Backhoes	0	0.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Building Construction/improve	3	0.00	0.00	10.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Building Construction/improvement - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0156	7.8500e-003	1.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	1.0948	1.0948	3.2000e-004	0.0000	1.1027
Total	**1.9100e-003**	**0.0156**	**7.8500e-003**	**1.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**1.0948**	**1.0948**	**3.2000e-004**	**0.0000**	**1.1027**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	1.8900e-003	3.6000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3921	0.3921	3.0000e-005	0.0000	0.3928
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0000e-005**	**1.8900e-003**	**3.6000e-004**	**0.0000**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**2.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.3921**	**0.3921**	**3.0000e-005**	**0.0000**	**0.3928**

3.2 Building Construction/improvement - 2016

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.9100e-003	0.0156	7.8500e-003	1.0000e-005		8.8000e-004	8.8000e-004		8.2000e-004	8.2000e-004	0.0000	1.0948	1.0948	3.2000e-004	0.0000	1.1027
Total	**1.9100e-003**	**0.0156**	**7.8500e-003**	**1.0000e-005**		**8.8000e-004**	**8.8000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**1.0948**	**1.0948**	**3.2000e-004**	**0.0000**	**1.1027**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.0000e-005	1.8900e-003	3.6000e-004	0.0000	9.0000e-005	1.0000e-005	1.0000e-004	2.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.3921	0.3921	3.0000e-005	0.0000	0.3928
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.0000e-005**	**1.8900e-003**	**3.6000e-004**	**0.0000**	**9.0000e-005**	**1.0000e-005**	**1.0000e-004**	**2.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.3921**	**0.3921**	**3.0000e-005**	**0.0000**	**0.3928**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.7000e-004	4.7400e-003	0.0129	4.0000e-005	2.7400e-003	5.0000e-005	2.7900e-003	7.3000e-004	5.0000e-005	7.8000e-004	0.0000	3.3604	3.3604	1.9000e-004	0.0000	3.3653
Unmitigated	8.7000e-004	4.7400e-003	0.0129	4.0000e-005	2.7400e-003	5.0000e-005	2.7900e-003	7.3000e-004	5.0000e-005	7.8000e-004	0.0000	3.3604	3.3604	1.9000e-004	0.0000	3.3653

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Unrefrigerated Warehouse-No Rail	1.68	1.68	1.68	7,200	7,200
Total	1.68	1.68	1.68	7,200	7,200

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Unrefrigerated Warehouse-No	16.60	8.40	6.90	59.00	0.00	41.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Unrefrigerated Warehouse-No Rail	0.542123	0.045435	0.198009	0.129481	0.019131	0.005886	0.019249	0.030178	0.001920	0.002234	0.004581	0.000701	0.001073

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.2681	1.2681	5.0000e-005	1.0000e-005	1.2727
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1.2681	1.2681	5.0000e-005	1.0000e-005	1.2727
NaturalGas Mitigated	0.0000	4.0000e-005	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0464	0.0464	0.0000	0.0000	0.0467
NaturalGas Unmitigated	0.0000	4.0000e-005	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0464	0.0464	0.0000	0.0000	0.0467

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	870	0.0000	4.0000e-005	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0464	0.0464	0.0000	0.0000	0.0467
Total		**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0464**	**0.0464**	**0.0000**	**0.0000**	**0.0467**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Unrefrigerated Warehouse-No Rail	870	0.0000	4.0000e-005	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0464	0.0464	0.0000	0.0000	0.0467
Total		**0.0000**	**4.0000e-005**	**4.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0464**	**0.0464**	**0.0000**	**0.0000**	**0.0467**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	3980	1.2681	5.0000e-005	1.0000e-005	1.2727
Total		**1.2681**	**5.0000e-005**	**1.0000e-005**	**1.2727**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Unrefrigerated Warehouse-No Rail	3980	1.2681	5.0000e-005	1.0000e-005	1.2727
Total		**1.2681**	**5.0000e-005**	**1.0000e-005**	**1.2727**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.0800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Unmitigated	4.0800e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**4.0700e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.6000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.6100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	3.0000e-005
Total	**4.0700e-003**	**0.0000**	**1.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0000**	**3.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.0328	7.5700e-003	1.9000e-004	1.2776
Unmitigated	1.0328	7.5700e-003	1.9000e-004	1.2776

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0.23125 / 0	1.0328	7.5700e-003	1.9000e-004	1.2776
Total		**1.0328**	**7.5700e-003**	**1.9000e-004**	**1.2776**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Unrefrigerated Warehouse-No Rail	0.23125 / 0	1.0328	7.5700e-003	1.9000e-004	1.2776
Total		**1.0328**	**7.5700e-003**	**1.9000e-004**	**1.2776**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.1908	0.0113	0.0000	0.4727
Unmitigated	0.1908	0.0113	0.0000	0.4727

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	0.94	0.1908	0.0113	0.0000	0.4727
Total		**0.1908**	**0.0113**	**0.0000**	**0.4727**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Unrefrigerated Warehouse-No Rail	0.94	0.1908	0.0113	0.0000	0.4727
Total		**0.1908**	**0.0113**	**0.0000**	**0.4727**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX B-2

Construction Emissions Summary and Calculations

PR 1430 Construction Emissions Summary

(2017/1/8 rev.)

Estimated Maximum Construction Emissions by Pollutants (lbs/day)

Activity	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
Scenario 1 - New Building Construction						
A. Demolition of building	1.42	12.16	8.75	0.02	1.46	0.89
B. Demolition of baghouse foundation	1.40	11.60	8.64	0.01	1.37	0.88
C. Demolition of baghouse	1.40	11.60	8.64	0.01	1.33	0.87
D. Grading	1.58	20.69	10.43	0.04	2.20	1.34
E. Building construction	1.30	12.96	8.22	0.01	0.89	0.80
F. Building paving	1.18	10.33	8.33	0.01	0.83	0.62
G. Baghouse pad paving	1.20	10.87	8.73	0.01	0.90	0.67
H. Baghouse installation	1.97	16.30	9.95	0.02	0.97	0.90
Scenario 2 - New Baghouse/HEPA Installation						
E. Building construction	0.79	6.98	3.29	0.01	0.39	0.34
B. Demolition of baghouse foundation	1.40	11.45	8.61	0.01	1.13	0.84
C. Demolition of baghouse	1.40	11.45	8.61	0.01	1.13	0.84
G. Baghouse pad paving	0.66	5.92	4.47	0.01	0.48	0.37
H. Baghouse installation	1.09	8.81	5.13	0.01	0.54	0.50
Scenario 3 - Building Improvement for Total Enclosure						
E. Building construction	0.79	6.98	3.29	0.01	0.39	0.34
Maximum Emissions	**6.00**	**64.00**	**40.00**	**0.08**	**5.60**	**4.10**

Reference: emissions are from CalEEMod 2016

PR1430 Construction GHG Emissions

22 total facilities

	MT	# of facility	Total MT
construction of 1 new building (with baghouse construction)	75.0	5	375.0
construction of 1 baghouse w/ or w/o HEPA	9.7	12	116.4
building improvement for total enclosure (only)	1.5	5	7.5
Total construction and amortized			16.63

PR 1430 Solid Waste Calculations

	cu. Yd	#	Total cu. Yd
Demolition of existing old baghouses and foundation (one)	640	26	16640
Demolition of existing building - Press Forge	600	1	600
Demolition of existing building - one of other 4 facilities	300	4	1200
			18440

PR 1430 Traffic Calculations

	cu yd per truck	total soil I/O	Total trucks required	Total trips	round trips /day
grading	16	1200	75	150	30

		One baghouse construction				**New building and baghouse construction**								
from CalEEMod	**Building Improvement**	old baghouse demo	old foundation demo	new foundation	new baghouse	old building demo	old 2 baghouse demo	old 2 foundation demo	grading	building construction	paving	2 new foundation	2 new baghouses	**Max**
Worker vehicle	-	2	2	1	1	2	2	2	2	5	4	4	1	**15**
Hauling trucks	2	1	1	1	1	5	2	2	30	2	1	2	2	**36**

APPENDIX B-3

Operational Emissions and Calculations

The information presented on pages 1 and 2 of this appendix are calculations that were relied upon in the analysis for the Draft EA. Subsequent to the release of the Draft EA for public review and comment, minor revisions were made to the project that required adjustments to the calculations. These adjusted calculations can be found on pages 3 and 4 and they supersede the calculations on pages 1 and 2. Finally, no changes were necessary to the calculations on page 5.

PR 1430 Operation Emissions **For the Draft EA**

(2017/01/08 rev.)

Summary

Key Requirements: Operation Phase	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOX, lb/day
Total Enclosurer, Baghouse, HEPA	-	-	-	-	-	-
Point Source Emission Controls	1.41	1.21	0.70	0.30	0.22	0.01
Housekeeping	9.47	15.92	1.44	1.11	2.97	0.02
Source Testing	1.14	1.13	0.34	0.20	0.20	0.00
Total	**12.02**	**18.26**	**2.49**	**1.61**	**3.39**	**0.03**

By Vehicle Class	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOX, lb/day	CO2, MT/yr	CH4, MT/yr	N2O, MT/yr	CO2e, MT/yr	All facilities Max. # used/day	All facilities Max. # used/yr
Total Enclosurer, Baghouse, HEPA	-	-	-	-	-	-	18.23	0.00	0.00	18.30	32	32
Mobile Source - Diesel Trucks (MDT)	0.53	0.15	0.71	0.20	0.04	0.01	0.89	-	-	0.89	22	44
Roof top cleaning (aerial lift)	9.21	15.84	1.09	1.00	2.95	0.02	2.77	0.00	0.00	2.82	11	44
Source Testing (LDT)	2.29	2.27	0.69	0.40	0.40	0.01	0.72	-	-	0.72	22	44
Total	**12.02**	**18.26**	**2.49**	**1.61**	**3.39**	**0.03**	**22.62**	**0.00**	**0.00**	**22.73**		

Note:

1. 7 total enclosurer facilities will have 6 new negative air system operation (using 6 blowers or similar devices)
2. It is conservatively assumed that each facility will utilize 1 waste/wastewater disposal truck (MDT), 1 filter replacement truck(MDT), 1 source testing truck (LDT), 1 filter inspection truck (LDT), and 1 aerial lift.
3. Assumed every year 2 MDT round trips, 2 LDT round trips, and 2 times of aerial lift use will occur in every facility.
4. Assume in the worst day, there will be 22 MDT, 22 LDT and 11 aerial lifts used in 11 overlapping facilities

Aerial Lift

	CO	NOx	PM10	PM2.5	VOC	SOX	CO2	CH4	N2O	CO2e	Usage, hr/day
lb/hr	0.21	0.36	0.02	0.02	0.07	0.00	34.72	0.01	0.01	36.57	4
lb/day, MT/day for GHG	0.84	1.44	0.10	0.09	0.27	0.00	0.06	0.00	0.00	0.06	

EF: from OFFROAD2012

Light-Duty Truck (LDT) - each

	CO	NOx	PM10	PM2.5	VOC	SOX	CO2	CH4	N2O	CO2e
g/mile (RUNEX, PMBW, PMTW, Fugitive)	1.14	1.15	0.35	0.20	0.20	0.00	406.56			406.56
g/vehicle/day (IDLEX)	1.42	0.75	0.16	0.16	0.19	0.00	112.36			112.36
lb/day, MT/day for GHG	0.10	0.10	0.03	0.02	0.02	0.00	0.02	-	-	0.02

VMT, mile/day
40.0

EF: from EMFAC2014, EPA AP-42

Medium-Duty Truck (MDT) - each

	CO	NOx	PM10	PM2.5	VOC	SOX	CO2	CH4	N2O	CO2e
g/mile (RUNEX, PMBW, PMTW, Fugitive)	0.26	0.08	0.37	0.10	0.02	0.00	505.00			505.00
g/vehicle (IDLEX)	0.33	0.05	0.01	0.01	0.02	0.00	139.57			139.57
lb/day, MT/day for GHG	0.02	0.01	0.03	0.01	0.00	0.00	0.02	-	-	0.02

VMT, mile/day
40.0

EF: from EMFAC2014, EPA AP-42

PR 1430 Operation- Energy and GHG

Baghouse blower and negative air system/blower

	Consumption (GW-h/yr)	Consumption in MWh/yr
Blower (100 bhp)	0.001788	1.788

Ref: R1420.2 EA

	CO2	CH4	N2O	CO2e
Intensity (lb/MWhr)	702.44	0.03	0.01	704.95
MT/yr for GHG	0.57	0.00	0.00	0.57

Max. # of blowers (baghouse+negative air)	Max. Total Energy Consumption (MWh/yr)
32	57.216

PR 1430 Operation Emissions **For the Final EA**

(2017/02/08 rev.)

Summary

Key Requirements: Operation Phase	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOX, lb/day
Total Enclosurer, Baghouse, HEPA	-	-	-	-	-	-
Point Source Emission Controls	1.41	1.21	0.70	0.30	0.22	0.01
Housekeeping	9.47	15.92	1.44	1.11	2.97	0.02
Source Testing	1.14	1.13	0.34	0.20	0.20	0.00
Total	**12.02**	**18.26**	**2.49**	**1.61**	**3.39**	**0.03**

By Vehicle Class	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOX, lb/day	CO2, MT/yr	CH4, MT/yr	N2O, MT/yr	CO2e, MT/yr	All facilities Max. # used/day	All facilities Max. # used/yr
Total Enclosurer, Baghouse, HEPA	-	-	-	-	-	-	20.51	0.00	0.00	20.58	36	36
Mobile Source - Diesel Trucks (MDT)	0.53	0.15	0.71	0.20	0.04	0.01	0.89	-	-	0.89	22	44
Roof top cleaning (aerial lift)	9.21	15.84	1.09	1.00	2.95	0.02	2.77	0.00	0.00	2.82	11	44
Source Testing (LDT)	2.29	2.27	0.69	0.40	0.40	0.01	0.72	-	-	0.72	22	44
Total	**12.02**	**18.26**	**2.49**	**1.61**	**3.39**	**0.03**	**24.89**	**0.00**	**0.00**	**25.02**		

Note:

1. 11 total enclosurer facilities will have 10 new negative air system operation (using 6 blowers or similar devices)
2. It is conservatively assumed that each facility will utilize 1 waste/wastewater disposal truck (MDT), 1 filter replacement truck(MDT), 1 source testing truck (LDT), 1 filter inspection truck (LDT), and 1 aerial lift.
3. Assumed every year 2 MDT round trips, 2 LDT round trips, and 2 times of aerial lift use will occur in every facility.
4. Assume in the worst day, there will be 22 MDT, 22 LDT and 11 aerial lifts used in 11 overlapping facilities

Aerial Lift

	CO	NOx	PM10	PM2.5	VOC	SOX	CO2	CH4	N2O	CO2e	Usage, hr/day
lb/hr	0.21	0.36	0.02	0.02	0.07	0.00	34.72	0.01	0.01	36.57	4
lb/day, MT/day for GHG	0.84	1.44	0.10	0.09	0.27	0.00	0.06	0.00	0.00	0.06	

EF: from OFFROAD2012

Light-Duty Truck (LDT) - each

	CO	NOx	PM10	PM2.5	VOC	SOX	CO2	CH4	N2O	CO2e
g/mile (RUNEX, PMBW, PMTW, Fugitive)	1.14	1.15	0.35	0.20	0.20	0.00	406.56			406.56
g/vehicle/day (IDLEX)	1.42	0.75	0.16	0.16	0.19	0.00	112.36			112.36
lb/day, MT/day for GHG	0.10	0.10	0.03	0.02	0.02	0.00	0.02	-	-	0.02

VMT, mile/day
40.0

EF: from EMFAC2014, EPA AP-42

Medium-Duty Truck (MDT) - each

	CO	NOx	PM10	PM2.5	VOC	SOX	CO2	CH4	N2O	CO2e
g/mile (RUNEX, PMBW, PMTW, Fugitive)	0.26	0.08	0.37	0.10	0.02	0.00	505.00			505.00
g/vehicle (IDLEX)	0.33	0.05	0.01	0.01	0.02	0.00	139.57			139.57
lb/day, MT/day for GHG	0.02	0.01	0.03	0.01	0.00	0.00	0.02	-	-	0.02

VMT, mile/day
40.0

EF: from EMFAC2014, EPA AP-42

PR 1430 Operation- Energy and GHG

Baghouse blower and negative air system/blower

	Consumption (GW-h/yr)	Consumption in MWh/yr
Blower (100 bhp)	0.001788	1.788

Ref: R1420.2 EA

	CO2	CH4	N2O	CO2e
Intensity (lb/MWhr)	702.44	0.03	0.01	704.95
MT/yr for GHG	0.57	0.00	0.00	0.57

Max. # of blowers (baghouse+negative air)	Max. Total Energy Consumption (MWh/yr)
36	64.368

PR 1430 Operation and Construction Overlap Emissions (overlap phase)

(2017/01/08 rev.)

Summary

Operation and Construction Overlap	CO, lb/day	NOx, lb/day	PM10, lb/day	PM2.5, lb/day	VOC, lb/day	SOX, lb/day	Max. # used/day during overlap
Total Enclosurer, Baghouse, HEPA	-	-	-	-	-	-	
Mobile Source - Diesel Trucks (MDT)	0.10	0.03	0.13	0.04	0.01	0.00	4
Roof top cleaning (aerial lift)	1.67	2.88	0.20	0.18	0.54	0.00	2
Source Testing (LDT)	0.42	0.41	0.12	0.07	0.07	0.00	4
Operation Emissions	**2.19**	**3.32**	**0.45**	**0.29**	**0.62**	**0.01**	
Construction Emissions	**30.10**	**48.08**	**4.47**	**3.06**	**5.46**	**0.07**	
Total Operation and Construction Overlap Emissions	**32.29**	**51.40**	**4.92**	**3.35**	**6.08**	**0.07**	

Note:

1. The worst day during the construction and operation overlap phase has 4 MDT, 4 LDT and 2 aerial lifts used in 2 facilities overlapping.
2. The maximum emissions occur when 3 baghouses and 1 building are under construction in the operation and construction overlap phase

APPENDIX C

LIST OF AFFECTED FACILITIES

Facility Name	SIC	Facility ID	On Lists Per Government Code §65962.5 Per EnviroStor?	Address	City	Zip	Located Within Two Miles of Airport?	Nearest Sensitive Receptor	Approx. Distance to Nearest Sensitive Receptor (ft)	Nearest School	Approx. Distance to Nearest School (ft)
Aerocraft Heat Treating	3398	2372	No	15701 Minnesota Ave	Paramount	90723	No	Residential	70	West Gaines Elementary	1,800
Ajax Forge	3321	19515	No	1956-60 E 48TH ST	LOS ANGELES	90058	No	Residential	1,297	Vernon City School	1,437
Aluminum Precision Products	3365	36522	No	2621 S Susan St	Santa Ana	92704	No	Residential	1,200	Kenneth E- Mitchell School	2,000
American Hand Forge	N/A	171062	No	165 S SPRUCE AVE	RIALTO	92376	No	school	307	Rialto Community Day School	307
California Amforge Corp	3462	19051	No	750 N VERNON AVE	AZUSA	91702	No	Residential	450	Longfellow Elementary	1,750
California Drop Forge	3462	138568	Yes	1033 Alhambra Ave	LOS ANGELES	90012	No	Residential	~~660~~ 475	Ann Street Elementary	1,100
Carlton Forge Works	3462	22911	No	7743 E ADAMS ST	PARAMOUNT	90723	No	Residential	50	Lincoln Elementary	1,000
Chen Tech Industries	9999	110278	No	10 Autry	IRVINE	92618	No	school	2,500	Serrano Intermediate School	4,530
Continental Forge	3463	20600	No	512 CARLIN ST	COMPTON	90222	Yes[1]	Residential	400	~~Lindberg Elementary School~~ Sunshine Daycare Pre-School Center	~~1,400~~ 900
Firth Rixson	3312	144293	No	10685 Beech Ave	FONTANA	92337	No	Residential	360	Jurupa High Schoold	4,720
~~Foot Axle & Forge Co.~~	~~3714~~	~~4713~~	~~Yes~~	~~3954 WHITESIDE ST~~	~~LOS ANGELES~~	~~90063~~	~~No~~	~~Residential~~	~~370~~	~~Robert F Kenedy Elementary~~	~~1,650~~
Independent Forge	3599	1941	Yes	692 N Batavia	Orange	92868	No	Residential	910	Sycamore Elementary	2,330
Mattco Forge Inc.	N/A	181199	No	16443 Minnesota Ave	PARAMOUNT	90723	No	school	380	Wesley Gaines Elementary	380
MS Aerospace	3452	140513	No	13928 Balboa Blvd.	Sylmar	91342	No	Residential	240	Van Gogh Elementary School	7,392
Pacific Forge	3542	2946	No	10641 ETIWANDA AVE	FONTANA	92337	No	Residential	6,177	Henry J. Kaiser High School	9,134
Performance Forge	N/A	128708	No	7401 Telegraph Raod	Montebello	90640	No	Residential	850	Greenwood Elementary	6,178
Press Forge	3462	136	No	7700 JACKSON ST	PARAMOUNT	90723	No	Residential	165	Wesley Gaines Elemenatry	1,000
Quality Aluminum Forge	3542	144835	Yes	820 N CYPRESS ST	ORANGE	92867	No	Residential	100	Richland Continuation High	680
Schlosser Forge	3463	15504	No	11711 ARROW ROUTE	Rancho Cucamonga	91730	No	Residential	3,000	Upland Christian Academy	4,630
Shultz Steel	3462	16639	Yes	5321 FIRESTONE BLVD	SOUTH GATE	90280	No	Residential	790	Park Ave. Elementary School	1,960
Sierra Alloys	3325	181223	No	5467 Ayon Ave	Irwindale	91706	No	Residential	1,178	Valleydale Elementary School	3,760
Valley Forge Acquisition	3462	74086	No	444 MOTOR AVE	AZUSA	91702	No	Residential	1,900	Valleydale Elementary School	5,544
Weber Metals	3463	10966	No	16706 GARFIELD AVE	PARAMOUNT	90723	No	Residential	330	Wesley Gaines Elementary	422

Notes:

1. The facility is about 1.94 miles to Compton Airport.

APPENDIX D

REFERENCES

References

Organizations and Persons Consulted

REFERENCES

California Environmental Quality Act (CEQA) Guidelines, codified at Title 14 California Code of Regulations, §15000 et seq.

Compton Airport Master Plan Report, County of Los Angeles, Compton, California, August 1991.

Jacobsen, Mark Z. "Enhancement of Local Air Pollution by Urban CO2 Domes," Environmental Science and Technology, as describe in Stanford University press release on March 16, 2010 available at: http://news.stanford.edu/news/2010/march/urban-carbon-domes-031610.html.

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

SCAQMD, 2000. SCAQMD Air Toxics Control Plan, http://www.aqmd.gov/home/library/clean-air-plans/clean-communities-plan/air-toxics-control-plan

SCAQMD, 2003. SCAQMD Cumulative Impacts Working Group White Paper on Potential Control Strategies to Address Cumulative Impacts From Air Pollution, August 2003, Appendix D, Cumulative Impact Analysis Requirements Pursuant to CEQA, at D-3, http://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper-appendix.pdf.

SCAQMD, 2008. CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. Governing Board Letter, December 5, 2008. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-%28ghg%29-ceqa-significance-thresholds/ghgboardsynopsis.pdf.

SCAQMD, 2010. SCAQMD 2010 Clean Communities Plan. November 5, 2010.

SCAQMD, 2016. Draft Final 2016 Air Quality Management Plan. http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/draft-final-aqmp/clean/2016finaldraftaqmpdec2016(clean).pdf.

ORGANIZATIONS AND PERSONS CONSULTED

The CEQA statutes and Guidelines require that organizations and persons consulted be provided in the EA. A number of organizations, state and local agencies, and private industry have been consulted. The following organizations and persons have provided input into this document:

Re: Estimated baghouse sizing determination and cost
Greg Schlentz
Dust Collector Services
714.237.1690
gred@dustcollectorservices.co

Re: Estimated baghouse sizing determination and cost
EPA Air Pollution Control Cost Manual, Sixth Edition, January 2002
https://www3.epa.gov/ttncatc1/dir1/c_allchs.pdf

Re: Estimated baghouse Sizing Determination
Busch International Fugitive Emission Filtration Units
Bulletin No. FEF-802, PAR 1420.1, P. C-141, December 2013

Re: Construction Schedule
City of Azusa
Betty Gallardo
Development Services Assistant
Building Division
P: 626.812.5249
E: bgallardo@cit.azusa.ca.us
Phone Conversation on 12/14/2016
Building permit review requires 10-12 working days

Re: Construction Schedule
City of Paramount
John Carver
Assistant Community Development Director
P: 562.220.2048
E: jcarver@paramountcity.com
Personal Communication on 12/12/2016
Building permit review requires 10 working days

Re: Construction Schedule
City of Irwindale
Kyle Ingram
Building Permit Technician
P: 525.812.5249
E: kdingram@dpw.lacounty.gov
Phone conversation on 12/14/2016
Building permit review requires 10-20 working days

APPENDIX E

Comment Letters Received on the Draft EA and Responses to Comments

Comment Letter #1: Robert Komrij / Atlas Carpet Mills

Comment Letter #2: Dr. Shasta C. Gaughen Ph.D. / Pala Environmental

Comment Letter #3: Diana Watson / Department of Transportation

Sam Wang

From: Robert Komrij <rkomrij@atlascarpetmills.com>
Sent: Thursday, January 12, 2017 7:15 AM
To: Sam Wang
Subject: RULE 1430

Greetings Mr. Swang

With the proposed
Metal Grinding Operations requirements be applicable at manufacturing facilities?
Occasionally we weld, cut and grind metal in our maintenance departments.
Will these proposed restrictions apply to these type of operations?
Or do the proposed restrictions apply to ONLY Metal Forging Facilities.

Thanks
Robert Komrij / Atlas Carpet Mills / (323)724-9000 X2264

PALA ENVIRONMENTAL DEPARTMENT
PALA BAND OF MISSION INDIANS
PMB 50, 35008 Pala Temecula Road | Pala, CA 92059
Phone 760-891-3510 | Fax 760-742-3189

January 12, 2017

South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765-4178
Attention: Sam Wang

Re: Notice of Completion of a Draft Environmental Assessment – Proposed Rule 1430 – Control of Emissions from Metal Grinding Operations at Metal Forging Facilities

Dear Mr. Wang,

Thank you for the notice referenced above. This letter constitutes our response on behalf of Robert Smith, Chairman of the Pala Band of Mission Indians.

At this time, the Pala Band has no objection to the action outlined in the notice as proposed. We reserve the right to comment in the future should there be modifications or if new information becomes available.

If you have any questions or comments, please contact Darold Wallick, Air Technician for the Pala Environmental Department, at dwallick@palatribe.com or 760-891-3540.

Sincerely,

Shasta C. Gaughen, PhD
Environmental Director

DEPARTMENT OF TRANSPORTATION
DISTRICT 7-OFFICE OF TRANSPORTATION PLANNING
100 S. MAIN STREET, MS 16
LOS ANGELES, CA 90012
PHONE (213) 897-9446
FAX (213) 897-1337
www.dot.ca.gov

Comment Letter #3

Serious Drought.
Serious drought.
Help save water!

February 9, 2017

Barbara Radlein
South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, CA 91765

RE: Proposed Rule 1430-Control of Emissions From Metal Grinding Operations at Metal Forging Facilities
SCH # 2017011019
GTS# 07-ALL-2017-00014

Dear Ms. Radlein:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the Draft Environmental Assessment (DEA) of Proposed Rule 1430. The project involves South Coast Air Quality Management District's (SCAQMD) staff proposing new Rule 1430 to reduce toxic emissions, particulate matter emissions, and odors from metal grinding and metal cutting operations at metal forging facilities located in industrial, commercial, or mixed land use areas throughout the entire SCAQMD jurisdiction. Proposed rule 1430 does not apply to grinding or cutting operations that are conducted under a continuous flood of metal removal fluid. PR 1430 does not apply to grinding or cutting operations that are conducted under a continuous flood of metal removal fluid.

Please note that any work performed within State right of way will require an encroachment permit from Caltrans. In addition, please be reminded that transportation of heavy construction equipment materials, or other special equipment, which require the use of oversized-transport vehicles on State highways will require a Caltrans transportation permit. Caltrans recommends that large size truck trips be limited to off-peak commute hours.

If you have any questions please feel free to contact Melanie Bradford, the project coordinator at (213) 897-9446 and refer to GTS#07-ALL-2017-00014.

Sincerely,

DIANNA WATSON
LD-IGR Branch Chief

cc: Scott Morgan, State Clearinghouse

Responses to Comments

Response to Comment Letter #1: Proposed Rule 1430 only applies to metal grinding and metal cutting operations at metal forging facilities. The provisions of this rule do not extend to metal grinding and metal cutting operations at non-forging facilities.

Response to Comment Letter #2: Thank you for the comments. No responses are required.

Responses to Comment Letter #3: The comment is noted that any work performed within the State right of way will need an encroachment permit from the California Department of Transportation. However, the construction activities that may occur as a result of implementing the proposed project are expected to occur on private property at the affected facility sites and would not be expected to occur within the State right of way.

The comment is also noted that the transportation of construction equipment and materials on oversized-transport vehicles on State highways will require a Caltrans transportation permit. However, the nature of the construction activities that may occur as a result of implementing the proposed project is on a relatively small scale due to the compact size of the anticipated construction sites at the existing affected facilities. For this reason, the analysis anticipated that medium-duty trucks would be sufficient for supplying construction equipment and materials to the affected sites as well as hauling away waste and other materials as needed. Thus, medium-duty trucks would not be expected to qualify as oversized-transport vehicles that would require a Caltrans transportation permit or would need to operate only during off-peak hours.