APPENDIX F AIR QUALITY TECHNICAL REPORT

El Monte Sand Mining Project

Draft Air Quality Technical Report

Project # PDS2015-MUP-98-014W2/PDS2015-RP-15-001;
Record ID #: PDS2015-MUP-98-014W2; PDS2014-RP-15-001;
Environmental Log #: PDS2015-ER-98-14-016B

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TABLE OF CONTENTS

El Monte Sand Mining Project
Draft Air Quality Technical Report

Page

Executive Summary.....ES-1

1. Introduction.....1
- 1.1 Purpose of the Report.....1
- 1.2 Project Location and Description.....1

2. Existing Conditions.....11
- 2.1 Existing Setting.....11
- 2.2 Climate and Meteorology.....12
- 2.3 Regulatory Setting.....13
- 2.4 Background Air Quality.....21
- 2.5 Sensitive Receptors.....24

3. Significance Criteria & Analysis Methodologies.....25
- 3.1 Significance Criteria.....25
- 3.2 Analysis Methodology.....27

4. Project Impact Analysis.....28
- 4.1 Conformance to the Regional Air Quality Strategy.....28
- 4.2 Conformance to Federal and State Ambient Air Quality Standards.....29
- 4.3 Cumulatively Considerable Net Increase of Criteria Pollutants.....33
- 4.4 Impacts to Sensitive Receptors.....34
- 4.5 Odor Impacts.....38

5. Summary of Recommended Project Design Features, Impacts & Mitigation.....39
- 5.1 Design Considerations.....40
- 5.2 Mitigation Measures.....41

6. References.....41

7. List of Preparers and Persons and Organizations Contacted.....42

Appendices

A San Diego Significance Determination Guidance
B Air Quality Assumptions & Emissions Calculations
C CalEEMod Output
D Health Risk Calculations

Figures

1 Regional Location....2
2 El Monte Sand Mining Area Affected by the Project....3
3 Phasing Plan....5

Tables

1 Mining And Reclamation Phasing and Acreage....7
2 Project Mobile Equipment....8
3 Process Plant Equipment....9
4 Estimated Daily Traffic Counts....11
5 Ambient Air Quality Standards for Criteria Pollutants....14
6 Air Quality Data Summary (2012 – 2014) For Project Area....23
7 San Diego Air Basin Attainment Status....24
8 San Diego Screening Level Thresholds....26
9 Unmitigated Operational Emissions....31
10 Mitigated Operational Emissions....32
11 Level of Service and Peak Hourly Traffic Volumes....35
12 Impact Summary....39

Glossary of Terms and Acronyms

A	AB	Assembly Bill
	AMSL	Above mean sea level
B	bgs	Below ground surface
C	CAAQS	California Ambient Air Quality Standards
	CAA	Clean Air Act
	CAAA	Clean Air Act Amendment
	Cal/EPA	California Environmental Protection Agency
	CARB	California Air Resources Board
	CALGreen	California Green Building Standards Code
	CO	Carbon monoxide
	County	County of San Diego
G	Guidelines	County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements
H	HAP	Hazardous air pollutants
	hrs	Hours
K	KWh	Kilowatt hours
L	lbs	Pounds
N	NAAQS	National Ambient Air Quality Standards
	NH_3	Ammonia
	NO	Nitric oxide
	NO_2	Nitrogen dioxide
	NO_X	Oxides of Nitrogen
O	0_3	Ozone
P	Pb	Lead
	PM_{10}	Particulate matter of 10 microns or less
	$PM_{2.5}$	Particulate matter of 2.5 microns or less
	ppm	Parts per million
	Proponent	El Monte Nature Preserve
R	RAQS	Regional Air Quality Standards
	ROGs	Reactive organic gases
	RTIP	Regional Transportation Improvement Plan
	RTP	Regional Transportation Plan
S	SANDAG	San Diego Association of Governments
	SDAB	San Diego Air Basin
	SDAPCD	San Diego County Air Pollution Control District
	SIP	State Implementation Plan
	SO_2	Sulfur dioxide
	SO_3	Sulfur trioxide
	SO_X	Oxides of sulfur
	STL	Screening level thresholds
T	TAC	Toxic Air Contaminants
V	VMT	Vehicle miles traveled
	VOCs	Volatile Organic Compounds
U	USEPA	U.S. Environmental Protection Agency

El Monte Sand Mining Project

Draft Air Quality Technical Report

Executive Summary

The purpose of this Air Quality Technical Report is to evaluate the potential short- and long-term air quality impacts resulting from implementation of the proposed El Monte Sand Mining Project (project). The project would extract 12.5 million tons of Portland cement concrete (PCC)-quality construction aggregate, then reclaim and restore the site for undeveloped open space/recreational use.

The construction and operation of the project would result in emissions of criteria pollutants and toxic air contaminants (TACs). Construction and operational activities would emit criteria pollutants and TACs as a result of equipment exhaust from haul and vendor vehicles and off-road construction equipment. Additionally, the disturbance of soils within the project site during the construction activities would result in the emission of fugitive dust, which is a form of particulate matter and a criteria pollutant. Because of the nature of the operational activities and the overlap between the initial construction and project operations, all emissions are analyzed as if they were operational emissions.

Based on the air quality assessment conducted in this report, it was determined that the project would not conflict with or obstruct the implementation of the Regional Air Quality Strategy (RAQS), nor would it exceed the screening thresholds levels (STLs) established for operational emissions of ROG, NO_X, CO, SO_X, PM_{10} or $PM_{2.5}$ on either the project or cumulative level. Implementation of DC-AQ-1 through DC-AQ-4 would contribute to the reduction of impacts associated with fugitive dust (PM_{10} and $PM_{2.5}$) emissions. Therefore, with implementation of the design considerations, the project would result in less than significant impacts with respect to conformance to the RAQS, and to conformance to federal and state ambient air quality standards.

It was determined that the project would not expose sensitive receptors to objectionable odors or localized significant pollutant concentrations of mobile CO emissions during construction and operation of the project. Therefore, the project would result in less than significant impacts, and no mitigation measures are required.

TAC emissions would be generated from off-road diesel equipment used during the project's construction and operation activities. Implementation of MM-AQ-1 would reduce diesel particulate matter (DPM) exhaust emissions by requiring that all off-road diesel-powered mining equipment be equipped with USEPA Tier 4 or cleaner engines. Since most of the DPM exhaust emissions are generated by off-road mining equipment, MM-AQ-1 would reduce cancer risk levels at the nearest residence to below the threshold of 10 in one million.

Design Considerations

DC -AQ-1: As required by the SDAPCD Rule 55, the following measures shall be incorporated to reduce emissions of fugitive dust:

- All haul trucks leaving the site with aggregate shall maintain at least 2 feet of freeboard or securely cover the loads.
- Grading ordinance dust control measures shall be enhanced and watering shall be conducted 3x per day for all active construction areas and on unpaved roads. Water shall be applied using water trucks and shall be sufficient to confine dust plumes to the immediate work area.
- Mining activities shall be suspended when winds exceed 25 mph.
- Sweepers and water trucks shall be used to control dust at public street access points. Paved streets shall be swept at least once per day when evidence of track- out is present.
- Vehicle speeds on unpaved roadways shall not exceed 15 mph.
- Inactive disturbed areas where mining activities have been completed shall be revegetated as soon as possible to prevent soil erosion.
- Chemical stabilizers, or other methods of soil stabilization/fugitive dust prevention, shall be applied to all disturbed surfaces left inactive for four or more days.

DC-AQ-2: All construction equipment and trucks shall be maintained and tuned according to manufacturer's specifications.

DC-AQ-3: Diesel trucks shall be prohibited from idling for more than 5 minutes. Idling restrictions shall be posted at truck entrances and at loading areas.

DC-AQ-4: Water sprayers shall be used at transfer points as necessary to control dust from aggregate washing/separation activities.

Mitigation Measures

MM-AQ-1: Engine Standards for Off-Road Equipment. To reduce the impact of mining equipment DPM emissions, the project applicant shall ensure that all off-road diesel-powered equipment used will be equipped with USEPA Tier 4 or cleaner engines. This condition pertains to all excavators, graders, loaders, draglines, and dozers operated in Phases 1 through 4 of mining activities. In lieu of Tier 4 engines, project equipment can incorporate retrofits such that emissions reductions achieved can be verified to equal that of the Tier 4 engines. The project applicant shall submit a detailed list of the equipment fleet that demonstrates achievement of this mitigation measure to the County prior to receiving a permit to construct and/or beginning operations. The modeling states that Tier 4 Equipment for onsite operations includes: Excavators, Graders, Loaders, Dragline and Dozers.

El Monte Sand Mining Project

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1. Introduction

The El Monte Sand Mining Project (project) is proposed by the El Monte Nature Preserve, L.L.C. (Proponent) to extract 12.5-million tons of PCC-quality construction aggregate within the El Monte Valley. The 16-year project would include mineral extraction and reclamation, staging areas, trails, and fuel modification areas over approximately 262 acres (243 acres within the mining footprint) of an approximately 479.5-acre project site which is zoned for extractive use. After the completion of mining, the project site would be reclaimed and restored for an end use of open space and recreational trail easements.

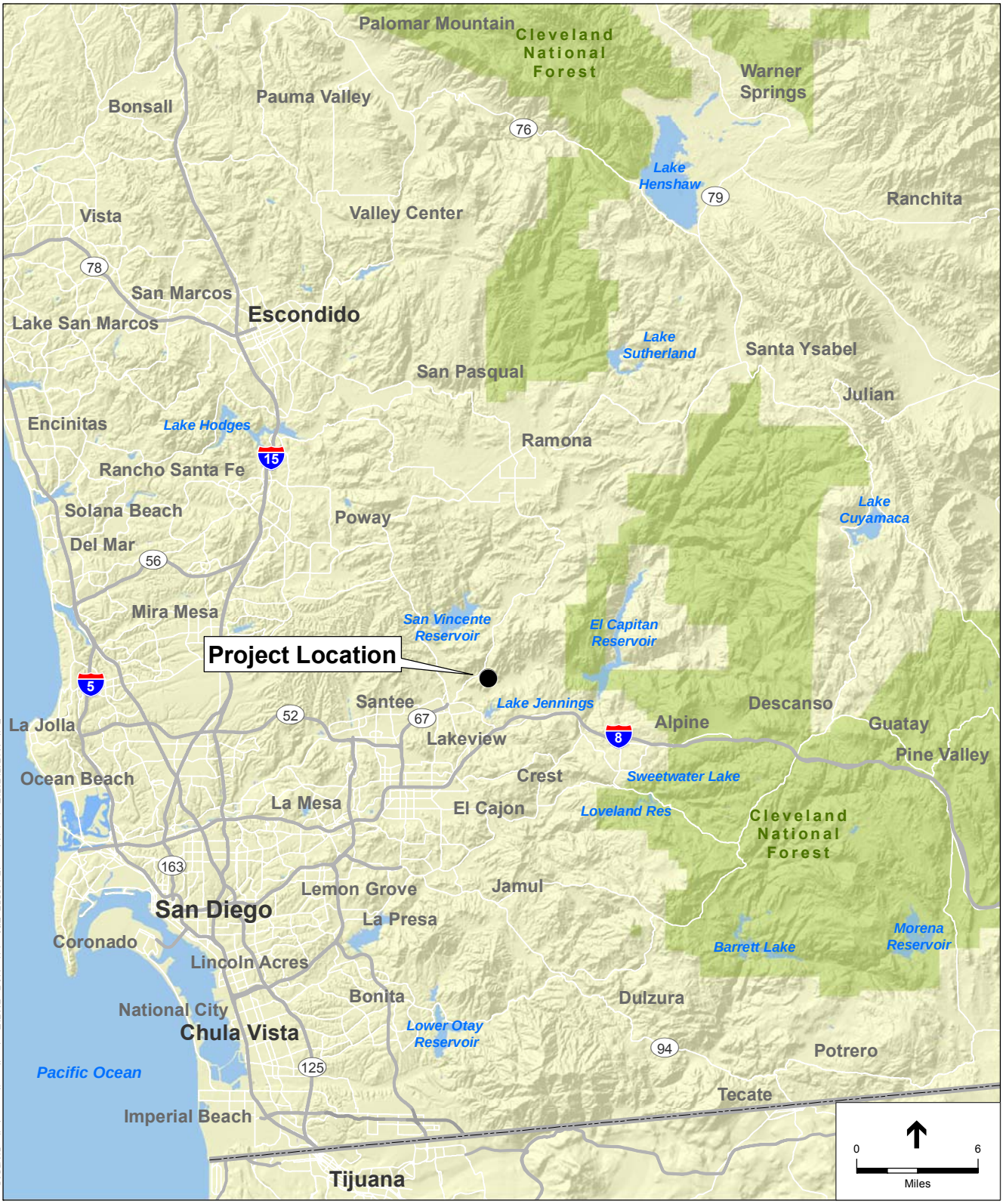
1.1 Purpose of the Report

This technical report has been prepared to support the County of San Diego's (County) environmental review process and provide information regarding potential impacts to air quality associated project approval. This report describes the existing air quality in the project area, identifies applicable rules and regulations, and evaluates potential short- and long-term air quality impacts associated with life of the project. Methodology for the analysis is consistent with those recommended by the County for the determination of short-term construction impacts, long-term operational impacts, local mobile source, odor and toxic air contaminant (TAC) emissions. Where applicable, measures to mitigate or minimize air pollutant emissions associated with the project are included.

1.2 Project Location and Description

The site is situated within the San Diego River watershed and in the floodplain of the San Diego River. The San Diego River flows through the central part of the properties. The project is parallel to both El Monte and Willow Roads in Lakeside, CA. The project site is located approximately 1.5 miles east of where the San Diego River is crossed by Highway 67 and is 4.8 miles west of the El Capitan Reservoir dam. **Figure 1** and **Figure 2** show the regional location and the area affected by the project, respectively.

Access to the project site is located 0.5 miles northeast of the intersection of El Monte Road and Lake Jennings Project Road. Project traffic would use El Monte Road which is also the primary route to the Van Ommering Dairy Farm, El Monte County Park, and El Capitan Reservoir. Residential properties located within the project vicinity use both El Monte and Willow Roads to access their properties.



SOURCE: ESRI; SanGIS 2015

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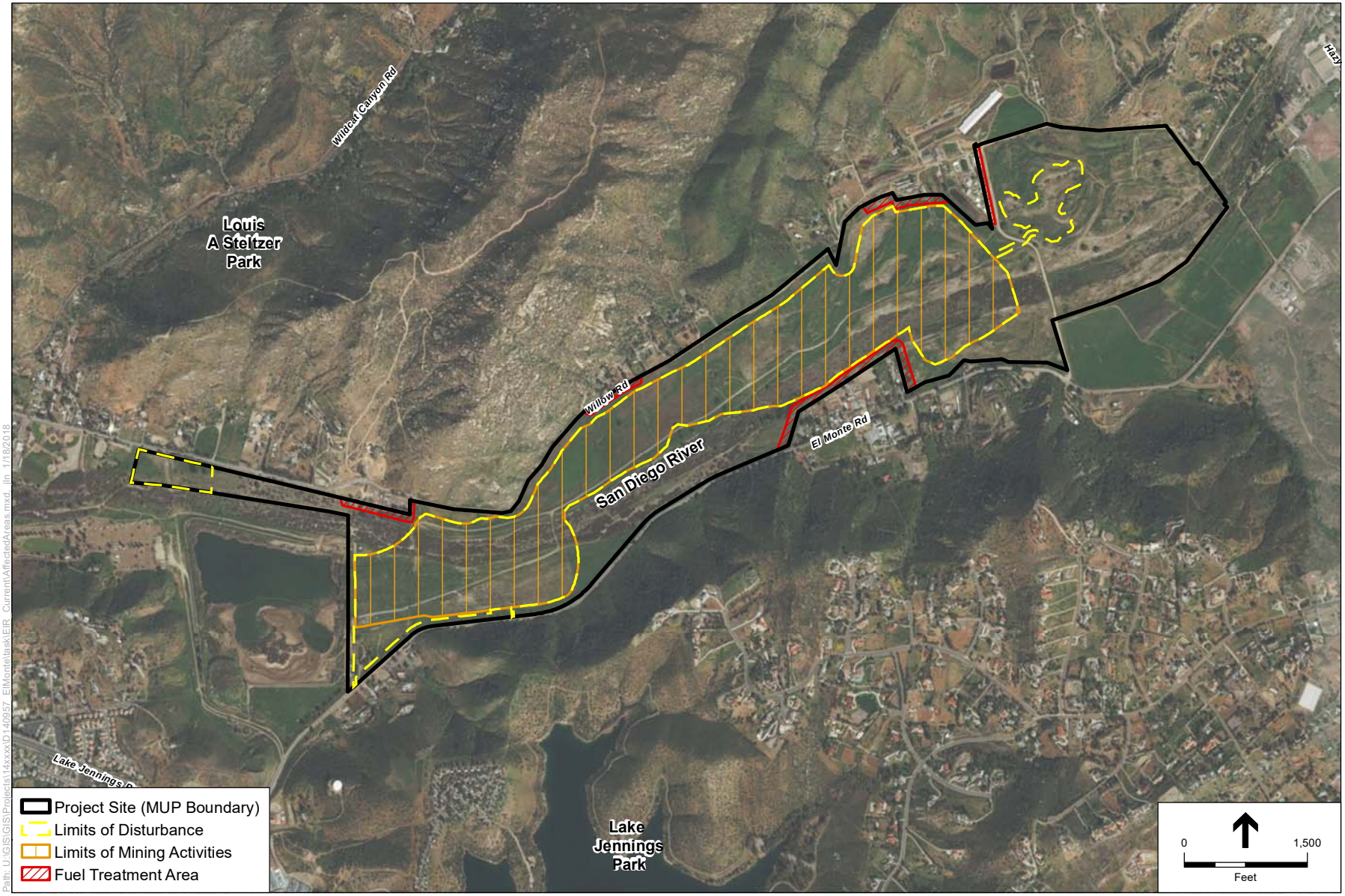
Figure 1

Regional Location



SOURCE: ESRI

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Figure 2

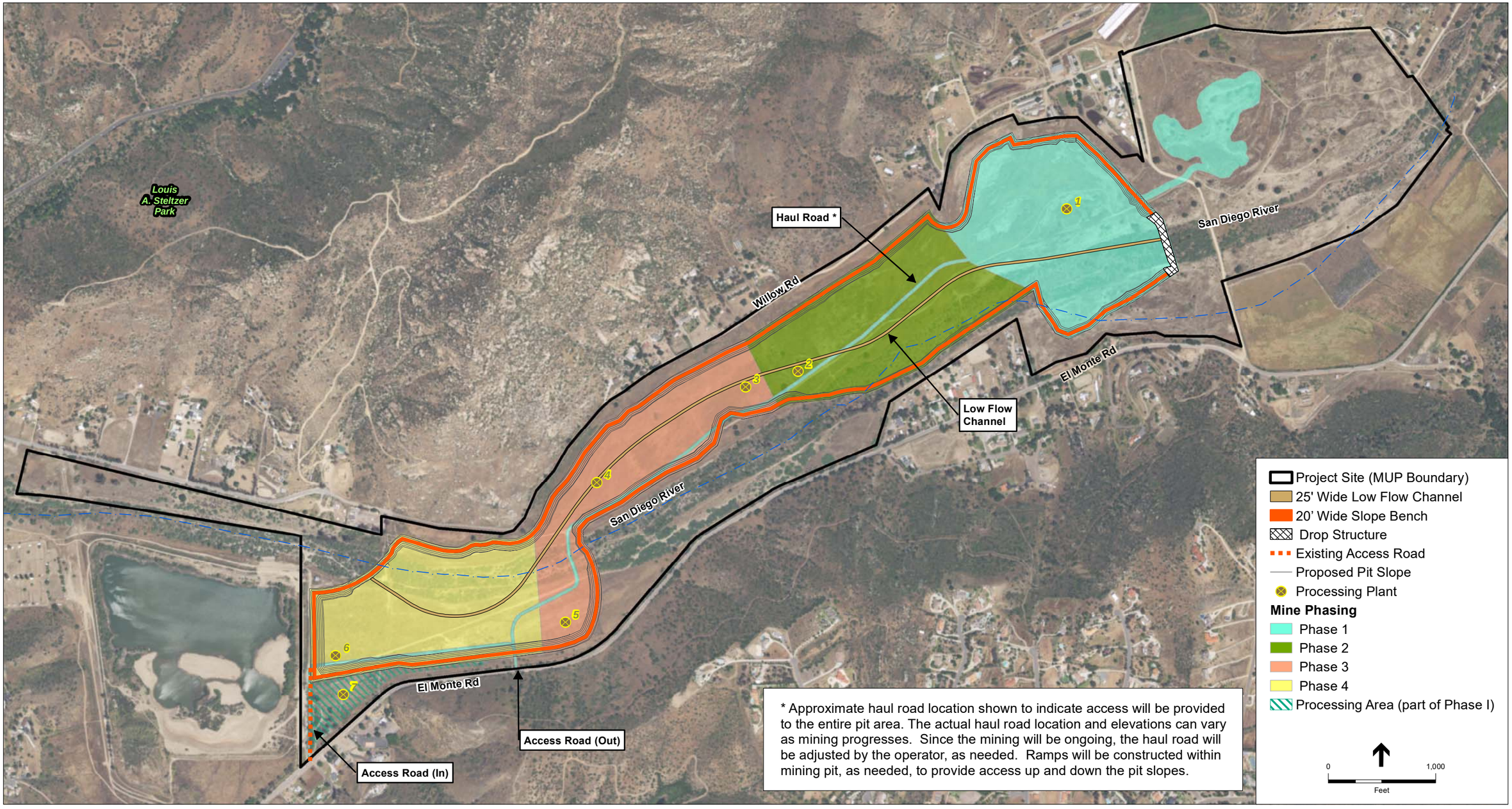
El Monte Sand Mining Area Affected by the Project

As stated previously, the project would extract 12.5 million tons of mineral resources, then reclaim and restore/revegetate the site for undeveloped open space/recreational use. The mining process would be completed in four phases over a 12-year period. As mining is completed in phases, the disturbed areas previously mined would be progressively reclaimed starting in year four of the project. Reclaimed areas would be restored to an end use of undeveloped open space and recreational trail easements. Reclamation is anticipated to extend four years past the end of mining, giving the project a total lifetime of 16 years.

Activities associated with the project include an aggregate processing facility, a portable processing wash plant, storage container, weight scales, and modular scale house. There are currently no plans to have need of or operate a batch plant or rock crushing facilities and the mining operations would not require blasting activities. The project would have a Reclamation Plan boundary of 479.5 acres which includes the disturbed areas, the golf course ponds, setbacks from El Monte Road and Willow Road and a setback from the eastern parcel line of APN 391-071-04 and Dairy Road. The project would eliminate the approved golf course use and would include the backfill of the onsite pond. The footprint of the project and areas of disturbance are shown in Figure 2. **Figure 3** shows the site plan and phasing.

1.2.1 Mining Operations

Onsite mining and plant operations would occur between 7:00 am and 5:00 pm Monday through Friday. Aggregate transport would be conducted between 7:00 am and 5:00 pm Monday through Friday as well as 7:00 am to 1:00 pm on Saturdays. The site would remain closed on Sundays and holidays. During maximum production, the site would generate 157 one-way truck trips. Maximum excavation would extend to a depth of 36 to 41 feet. Excavation activities would result in a pad approximately 10 feet below ground surface (bgs) to set up the processing wash plant. Earthen berms would be placed along the top of the plant area to screen it from the surrounding land uses. A two lane access road, which connects to the haul road, would also be established at 10 - 12 feet bgs to accommodate the loading of haul trucks from the processing plant area. The roads would also be screened from offsite land uses by earthen berms. A grade control or drop structure would be constructed across the floodway at the east end of the project site to prevent channel erosion during times of water flow. The following sections outline the anticipated activities during each project phase. **Table 1** gives an overview of the project timeline.



SOURCE: NAIP 2014; EnviroMine March 11, 2016; SanGIS 2016

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Figure 3
Phasing Plan

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TABLE 1
MINING AND RECLAMATION PHASING AND ACREAGE

Phase	Area of Disturbance (acres)*	Mining Duration (Years)	Initiation Year	Completion Year
Mining 1	93	4	2019	2023
Reclamation 1	93	4	2023	2027
Mining 2	52	3	2023	2026
Reclamation 2	52	4	2026	2030
Mining 3	48	3	2026	2029
Reclamation 3	48	4	2029	2033
Mining 4	50	2	2029	2031
Reclamation 4	50	4	2031	2035
Total	243	16		

* Rounded to the nearest acre, including mining area, trails, and staging areas.

SOURCE: EnviroMine, Inc., 2016.

Site Preparation

Site preparation would include the construction of the drop structure, access road, processing area pad, and screening berms.

Phase 1

The first phase would continue for four years on an area of approximately 93 acres. Mining operations would begin at the far eastern end of the project site. Wheeled front-end loaders would be used to remove material to approximately 36 to 41 feet bgs.

A portion of the wash fines produced from the processing plant would be used to refill a large depressing created by the abandoned golf course project. This depression is located east of the extraction area and east of Dairy Road. It is anticipated that 450,000 tons of wash fines would be needed to backfill this depression. Once the depression is filled, wash fines would be directed through a series of settling basins near the processing plant area. The settling basins would be used to collect wash fines which would be sold as a soil amendment or incorporated into the surface of areas to be reclaimed. When used onsite, the fines would be spread evenly and incorporated into the surface in preparation for planting. A haul truck or loaders would be used to transport wash fines in the pit area.

Phase 2

Phase 2 mining would continue for three years. Phase 2 would mine an estimated 52 acres and would mimic the extraction process from Phase 1. The maximum depth of this phase is also anticipated to be 36 to 41 feet bgs.

Reclamation of the Phase 1 area is estimated to last approximately four years. Reclamation would include establishing final slopes, incorporation of any accumulated wash fines and topsoil, revegetation using native species, weed control and monitoring of established vegetation.

Phase 3

Phase 3 would continue for three years. Phase 3 would mine an estimated 48 acres and would mimic the extraction processes from Phases 1 and 2. During Phase 3 the processing plant would be moved to the south of the channel, closer to the current operations. Reclamation of Phase 2 would continue for four years. Reclamation of Phase 2 would be similar to that of Phase 1. Monitoring of Phase 1 would continue throughout Phase 3 activities.

Phase 4

Phase 4 would continue for two years. Phase 4 would mine an estimated 50 acres and would mimic the extraction processes from the previous phases. Once the extraction operations have finished, all equipment and temporary structures would be removed from the project site. The remaining access roads and operational areas of disturbance would be graded to final reclamation contours and then revegetated. Reclamation of Phase 3 would continue for four years. Reclamation of Phase 3 would be similar to that of Phase 1 and 2. Monitoring of Phases 1 and 2 would continue throughout Phase 4 activities.

1.2.2 Reclamation

By the end of mining operations, it is estimated that 75 to 80 percent of the disturbed lands would be reclaimed resulting in approximately 20 acres of disturbed lands that would still need to be graded and revegetated. Reclamation of Phase 4 would continue for four years. Monitoring of the reclaimed areas in phases 1 through 3 would continue through reclamation of Phase 4. Monitoring would continue annually until the performance standards for the vegetative cover are achieved.

Table 2 presents the mobile equipment that would be used during the mining and reclamation phases.

TABLE 2
PROJECT MOBILE EQUIPMENT

Type/Model	Make	No.	Purpose	Daily usage
Loader – 988	CAT	1	Mineral excavation above water table	10 hrs
Loader – 980	CAT	2	Mineral excavation above water table, plant and truck loading	10 hrs
Dragline – 190D	Northwest	1	Mineral excavation below water table	10 hrs
Water Truck	Peterbilt	1	General dust suppression	10 hrs
Grader – 12	CAT	1	On-site road maintenance, finish grading	5 hrs
Dozer – D9	CAT	1	Reclamation – rough grading	5 hrs
Haul Truck 769	CAT	1	Onsite transportation of fill	7.5 hrs
420 Excavator	Doosan	1	Mineral extraction	5 hrs
Fuel Tank	Trailer	1	3,500 gallon mobile fuel trailer	10 hrs
Pick-up truck	Ford	1	Transportation for site supervisor, QC	10 miles/day

SOURCE: EnviroMine Inc., 2015a.

1.2.3 Plant Operations

The permanent processing wash plant and onsite roadways would be established to an approximate depth of 10 to 12 feet bgs to reduce visual and noise impacts to the surrounding land uses. Initial site development would involve the establishment of a sub-grade processing plant in the southwestern portion of the project site that would remain in this area for the duration of the mining phases (Phases 1 through 4). Additionally, the proposed project would include a portable processing plant that would be moved westward as mining proceeds to the west. For the purpose of this analysis, it is assumed that the permanent processing plant and mobile processing plant would include similar equipment, for a conservative analysis. The plants would consist of an aggregate processing and washing facility, a portable water tank, and all support structures.

1.2.4 Aggregate Processing Plant

The plant can process 577 tons per hour and would operate 10 hours per day, five days per week. Front-end-loaders would be used to load excavated materials into the washing and screening plant. The plant would wash and screen material into construction grade aggregate material, primarily sand and some gravel. Processed aggregate would be separated and stockpiled near the plant. Finished product would be loaded onto customer trucks using a front-end-loader for transport offsite. All processed materials would be sold or used in reclamation and restoration activities, no waste materials would be generated by the mining process. **Table 3** lists the equipment to be used in the processing plants. All equipment would be permitted, as appropriate through the San Diego County Air Pollution Control District (SDAPCD).

TABLE 3
PROCESS PLANT EQUIPMENT

Type/Model	No.	Purpose	Daily usage
Wash Plant			
Double Deck Dry Screen	1	Aggregate sizing	10 hrs
Triple Deck Wet Screen	1	Sand Washing	10 hrs
Conveyor Stackers	4	Aggregate Movement	10 hrs
Radial Stacker	1	Aggregate Stacking into Stockpiles	10 hrs
Water Pump	3	Aggregate washing & Dust control	10 hrs
Feeder	1	Aggregate feeder	10 hrs
Twin Screw	1	Sand washer	10 hrs
Scales	1	Truck weighing	10 hrs
Ancillary Structures			
70-ft Truck Scale	1	Truck weighing	10 hrs
30 Ft. Mobile Modular	1	Scale Office	10 hrs
30 Ft. Storage Container	2	Small equipment storage	N/A

SOURCE: EnviroMine Inc., 2015a.

1.2.5 Office, Equipment Maintenance, and Utilities

An office and scale booths would be constructed from mobile, modular units to serve the site. No permanent structures would be constructed as part of the project. Equipment maintenance would be conducted in the plant area following all environmental regulation. Storage of small equipment and tools would be in metal cargo containers located at the plant site.

There would be eight full-time employees for the operation of the mobile equipment (mining and reclamation) as well as the plant operations. Onsite operations would generate solid waste and would also result in water and electrical consumption.

There would be no processing waste generated as part of the operation. Therefore, all generated waste would be domestic refuse generated from employee lunches and some general office type waste. Solid waste shall be collected in onsite trash bins and removed by a refuse disposal company. It is estimated that waste generation would be between 50 to 75 pounds (lbs) per week, or between approximately 1.25 and 2 tons per year. This would result in between 19 and 30 tons over the lifetime of the project (EnviroMine Inc., 2015b).

Dust suppression would be conducted for all operating areas including material stockpiles, unpaved areas within the mining areas, the processing plant and access roads. Other watering needs include the surface watering of outgoing loads and water for the processing plant. Restrooms would be portable units that would not require water use or a sewer connection.

Water for processing, dust control, and any irrigation would be supplied by Lakeside Water District through an existing water pipeline and meter on the project site. Water usage is dependent on production volume, however, at full production it is estimated that 68 acre-feet of water would be used annually for processing. Water for dust suppression is estimated to require an additional 20 acre-feet of water annually. If irrigation is needed, sprinkles would be used. Irrigation would only be used during periods of extended dryness. Irrigation of the landscaped earthen berm near the entrance and as supplemental water on revegetated areas is also estimated to utilize approximately 12 acre-feet per year. Total water consumption on the project is estimated at 100 acre-feet per year.

Electricity would be used for the operation of the processing plant equipment as well as the operation of the scale and onsite office. Electricity would be provided by San Diego Gas & Electric through overhead transmission lines. These lines would connect to temporary power poles which would connect to the plant location. Project activities are estimated to require approximately 4,801 kilowatt hours (KWh) per day or 1,504,102 KWh annually (EnviroMine Inc., 2015b).

1.2.6 Traffic

Project traffic is divided into categories; light and heavy vehicle traffic. Light vehicle traffic includes vehicles that would be used for employee commutes and visitors and include cars, light duty trucks (i.e. two axel trucks, such as pick-up trucks), and small service vehicles. On site heavy vehicle traffic would include an off-road haul truck, front-end-loaders, dozers and other earth-moving equipment, and on-highway trucks carrying loads of construction aggregate, fuel, parts, etc. on public roads. Heavy-duty trucks have three or more axles. **Table 4** provides the estimated traffic counts for the project based on 157 one-way truck trips during a maximum construction day.

TABLE 4
ESTIMATED DAILY TRAFFIC COUNTS

Type	Purpose	Tons/load	One Way Trips	Round Trips
Heavy Traffic	Aggregate Transport	27	157	314
Heavy Traffic	Vendor Trips[1]	N/A[2]	2	4
Light Traffic	Employee commute & Visitors	N/A	12	2

[1] Vendor trips include fuel delivery, service visits and supply delivery.
[2] N/A = Not Applicable

SOURCE: EnviroMine Inc., 2015a, 2016.

2. Existing Conditions

2.1 Existing Setting

The project is set within the EI Monte Valley, approximately 2 miles east of Lakeside. The project site is set in a fairly flat alluvial valley with mountains to the north and south. A river channel of the San Diego River flows down the center portion of the site. The western portion is relatively flat while the eastern portion was previously graded with a rolling topography and excavations for ponds. Across the site elevation ranges from 408 feet above mean sea level (AMSL) to 505 feet AMSL. The project site is currently vacant with existing vegetation composed of primarily exotic species and some native vegetation.

Previous uses of the property were predominately agricultural. In years past, commercial farms leased some of the land within the project area to produce hay crops and bamboo for animal feed. Thirty-five years ago sand mining operations also occurred on-site. Most recently a Major Use Permit P98-014 was approved by the Planning Commission for the El Capitan Golf Course on approximately 465 acres in February of 2000. Site grading was started however it was discontinued due to existing market demand. Initial site grading included the establishment of a number of surface depressions intended as water hazards/storage ponds.

A project was proposed subsequent to the discontinuation of the golf course development that would have imported treated waste water for percolation into the groundwater for domestic use, however due to cost and lack of demand the project was discontinued.

Within the project vicinity there is a variety of existing land uses. These include rural residential, dairy farming, extractive, field and orchard crops and open space. Land use in the project vicinity is limited by the presence of the San Diego River floodway which passes through the site. Immediately north and south of the project site are existing rural residences. These sensitive land uses have the potential to be affected by emissions generated during construction and operation of the project.

2.2 Climate and Meteorology

The project is located within unincorporated San Diego County, which is in the San Diego Air Basin (SDAB). The topography in the San Diego region varies greatly, from beaches on the west to mountains and desert on the east, defined by mesa tops intersected by canyon areas. The topography in the San Diego region, along with local meteorology, influences the dispersal and movement of pollutants in the basin. The mountains to the east prohibit dispersal of pollutants beyond them and help trap the pollutants in inversion layers.

The weather of the San Diego region is influenced by the Pacific Ocean and its semi-permanent high-pressure systems that result in dry, warm summers and mild, occasionally wet winters. The average temperature ranges from the mid-40s to the high 90s. Most of the county's precipitation falls from November to April, with infrequent (approximately ten percent) precipitation during the summer. The average seasonal precipitation along the coast is approximately ten inches; the amount increases with elevation as moist air is lifted over the mountains.

The interaction of ocean, land, and the Pacific High Pressure Zone maintains clear skies for much of the year and drives the prevailing winds. Local terrain is often the dominant factor inland, and winds in inland mountainous areas tend to blow through the valleys during the day and down the hills and valleys at night.

In conjunction with the two characteristic onshore/offshore wind patterns, there are two types of temperature inversions (reversals of the normal decrease of temperature with height) which occur within the region that affect atmospheric dispersive capability and that act to degrade local air quality. In the summer, an inversion at about 1,100 to 2,500 feet is formed over the entire coastal plain when the warm air mass over land is undercut by a shallow layer of cool marine air flowing offshore. The prevailing sunny days in this region further exacerbate the smog problem by inducing additional adverse photochemical reactions. During the winter, a nightly shallow inversion layer (usually at about 800 feet) forms between the cooled air at the ground and the warmer air above, which can trap vehicular pollutants. The days of highest CO concentrations occur during the winter months.

The predominant onshore/offshore wind pattern is sometimes interrupted by so-called Santa Ana conditions, when high pressure over the Nevada-Utah area overcomes the prevailing westerly winds, sending strong, steady, hot and dry winds from the east over the mountains and out to sea. Strong Santa Ana winds tend to blow pollutants out over the ocean, producing clear days. However, at the onset or breakdown of these conditions or if the Santa Ana is weak, prevailing northwesterly winds reassert themselves and send a cloud of contamination from the Los Angeles Basin ashore in the SDAB.

Based on past climate records from the Western Regional Climate Center (WRCC) monitoring stations located in Lakeside (Lakeside 2E, California 044710 and 044711), the average precipitation in the area ranges from 12.84 to 15.58 inches annually, occurring primarily from December through March (WRCC, 2015).

2.3 Regulatory Setting

2.3.1 Federal and State Ambient Air Quality Standards

Ambient Air Quality Standards

Regulation of air pollution is achieved through both federal and state ambient air quality standards and emission limits for individual sources of air pollutants. As required by the federal Clean Air Act (CAA), the U.S. Environmental Protection Agency (USEPA) has identified criteria pollutants and has established National Ambient Air Quality Standards (NAAQS) to protect public health and welfare. NAAQS have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter (PM_{10} and $PM_{2.5}$), and lead (Pb). These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare criteria.

To protect human health and the environment, the USEPA has set "primary" and "secondary" maximum ambient limits for each of the criteria pollutants. Primary standards were set to protect human health, particularly sensitive receptors such as children, the elderly, and individuals suffering from chronic lung conditions such as asthma and emphysema. Secondary standards were set to protect the natural environment and prevent damage to animals, crops, vegetation, and buildings.

Regional and Local

The NAAQS establish the level for an air pollutant above which detrimental effects to public health or welfare may result. The NAAQS are defined as the maximum acceptable concentrations that, depending on the pollutant, may not be equaled or exceeded more than once per year or in some cases as a percentile of observations. California has generally adopted more stringent ambient air quality standards for the criteria air pollutants (i.e., California Ambient Air Quality Standards [CAAQS]) and has adopted air quality standards for some pollutants for which there is no corresponding national standard, such as sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Both the national and State ambient air quality standards for pollutants along with their associated health effects and sources are presented in **Table 5**.

TABLE 5
AMBIENT AIR QUALITY STANDARDS FOR CRITERIA POLLUTANTS

Pollutant	Averaging Time	State Standard	National Standard	Pollutant Health and Atmospheric Effects	Major Pollutant Sources
Ozone	1 hour	0.09 ppm	No National Standard	High concentrations can directly affect lungs, causing irritation. Long-term exposure may cause damage to lung tissue.	Formed when ROG and NO_X react in the presence of sunlight. Major sources include on-road motor vehicles, solvent evaporation, and commercial / industrial mobile equipment.
	8 hours	0.07 ppm	0.070 ppm		
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Classified as a chemical asphyxiant, carbon monoxide interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm		
Nitrogen Dioxide (NO_2)	1 hour	0.18 ppm	0.100 ppm	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, and railroads.
	Annual Arithmetic Mean	0.030 ppm	0.053 ppm		
Sulfur Dioxide (SO_2)	1 hour	0.25 ppm	0.075 ppm	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron, and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	3 hours	No State Standard	0.50 ppm (secondary)		
	24 hours	0.04 ppm	0.14 ppm		
	Annual Arithmetic Mean	No State Standard	0.03 ppm		
Respirable Particulate Matter (PM10)	24 hours	50 µg/m^3	150 µg/m^3	May irritate eyes and respiratory tract, decreases in lung capacity, cancer and increased mortality. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	Annual Arithmetic Mean	20 µg/m^3	No National Standard		
Fine Particulate Matter (PM2.5)	24 hours	No State Standard	35 µg/m^3	Increases respiratory disease, lung damage, cancer, and premature death. Reduces visibility and results in surface soiling.	Fuel combustion in motor vehicles, equipment, and industrial sources; residential and agricultural burning; Also, formed from photochemical reactions of other pollutants, including NO_X, sulfur oxides, and organics.
	Annual Arithmetic Mean	12 µg/m^3	12.0 µg/m^3		
Lead (Pb)	30 Day Average	1.5 µg/m^3	No National Standard	Disturbs gastrointestinal system, and causes anemia, kidney disease, and neuromuscular and neurological dysfunction (in severe cases).	*Present source:* lead smelters, battery manufacturing and recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	No State Standard	1.5 µg/m^3		
	Rolling 3-Month Average	No State Standard	0.15 µg/m^3		
Hydrogen Sulfide	1 hour	0.03 ppm	No National Standard	Nuisance odor (rotten egg smell), headache and breathing difficulties (higher concentrations)	Geothermal power plants, petroleum production and refining
Sulfates (SO_4)	24 hour	25 µg/m^3	No National Standard	Decrease in ventilatory functions; aggravation of asthmatic symptoms; aggravation of cardio-pulmonary disease; vegetation damage; degradation of visibility; property damage.	Industrial processes.
Visibility Reducing Particles	8 hour	Extinction of 0.23/km; visibility of 10 miles or more	No National Standard	Reduces visibility, reduced airport safety, lower real estate value, and discourages tourism.	See $PM_{2.5}$.

NOTE: ppm = parts per million; ppb = parts per billion; µg/m^3 = micrograms per cubic meter.

SOURCE: CARB, 2016.

2.3.2 Criteria Air Pollutants

The California Air Resources Board (CARB) and USEPA currently focus on criteria air pollutants because they are the most prevalent air pollutants known to be injurious to human health and extensive health-effects criteria documents are available about their effects on human health and welfare. A general description of these pollutants is provided below.

Ozone

Ozone, the main component of photochemical smog, is primarily a summer and fall pollution problem. Ozone is not emitted directly into the air, but is formed through a complex series of chemical reactions involving other compounds that are directly emitted. These directly emitted pollutants (also known as ozone precursors) include reactive organic gases (ROGs) or volatile organic compounds (VOCs), and oxides of nitrogen (NO_X). While both ROGs and VOCs refer to compounds of carbon, ROG is a term used by CARB and is identified based on a list of carbon compounds that exempts carbon compounds determined by CARB to be nonreactive. VOC is a term used by the USEPA and is identified based on USEPA's separate list of exempted compounds it identifies as having negligible photochemical reactivity. The time period required for ozone formation allows the reacting compounds to spread over a large area, producing regional pollution problems. Ozone concentrations are the cumulative result of regional development patterns rather than the result of a few significant emission sources.

Once ozone is formed it remains in the atmosphere for one or two days. Ozone is then eliminated through reaction with chemicals on the leaves of plants, attachment to water droplets as they fall to earth (rainout), or absorption by water molecules in clouds that later fall to earth with rain (washout).

On-road motor vehicle emissions account for approximately 45 percent of smog (ROG + NO_X) in the San Diego region as of 2010 (CARB, 2013). The NO_X and ROG emissions have been decreasing overall since 2000, mostly due to decreased emissions from motor vehicles, brought about by stricter motor vehicle emission standards. Over the last 35 years, stationary and area-wide source emissions of ROG have remained mostly unchanged due to stricter standards offsetting emissions from industry and population growth (CARB, 2013).

Short-term exposure to ozone can irritate the eyes and cause constriction of the airways. In addition to causing shortness of breath, ozone can aggravate existing respiratory diseases such as asthma, bronchitis, and emphysema.

Carbon Monoxide

CO, a colorless and odorless gas, is a relatively non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicles. When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces the oxygen-carrying capacity of the blood. This results in reduced oxygen reaching the brain, heart and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s when CO levels were regularly exceeded throughout California. In more recent years, CO measurements

and modeling have not been a priority in most California air districts due to the retirement of older polluting vehicles, lower emissions from new vehicles, and improvements in fuels.

Improvements from the transportation sector, primarily resulting from advances in technology such as emissions control systems, have resulted in major reductions in CO emissions in the SDAB, following the statewide trend, of declining from 3,338 tons per day in 1975 to 953 tons per day in 2005 and an estimated 558 tons per day in 2020 (CARB, 2009). The U.S. EPA approved the CO Maintenance Plan in 1998.

Nitrogen Dioxide

NO_2 is a reddish-brown gas that is a by-product of combustion processes. Automobiles and industrial operations are the main sources of NO_2. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2. The combined emissions of NO and NO_2 are referred to as NO_X, which are reported as equivalent NO_2. Aside from its contribution to ozone formation, NO_2 can increase the risk of acute and chronic respiratory disease and reduce visibility. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Sulfur Dioxide

SO_2 is a colorless, extremely irritating gas or liquid that enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal, and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfur trioxide (SO_3). Collectively, these pollutants are referred to as sulfur oxides (SO_X).

Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of SO_2 aggravate lung diseases, especially bronchitis. This compound also constricts the breathing passages, especially in people with asthma and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. Long-term SO_2 exposure has been associated with increased risk of mortality from respiratory or cardiovascular disease.

Particulate Matter

PM_{10} and $PM_{2.5}$ consist of particulate matter that is 10 microns or less in diameter and 2.5 microns or less in diameter, respectively (a micron is one-millionth of a meter). PM_{10} and $PM_{2.5}$ represent fractions of particulate matter that can be inhaled into the air passages and the lungs and can cause adverse health effects. Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, and coughing, bronchitis and respiratory illnesses in children. Recent mortality studies have shown an association between morbidity and mortality and daily concentrations of particulate matter in the air. Particulate matter can also damage materials and reduce visibility. One common source of $PM_{2.5}$ is diesel exhaust emissions.

PM_{10} consists of particulate matter emitted directly into the air (e.g., fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires, and natural windblown dust) and particulate matter formed in the atmosphere by condensation and/or transformation of

SO_2 and ROG. Traffic generates particulate matter emissions through entrainment of dust and dirt particles that settle onto roadways and parking lots. PM_{10} and $PM_{2.5}$ are also emitted by burning wood in residential wood stoves and fireplaces and open agricultural burning. $PM_{2.5}$ can also be formed through secondary processes such as airborne reactions with certain pollutant precursors, including ROGs, ammonia (NH_3), NO_X, and SO_X.

Lead

Lead is a metal found naturally in the environment and present in some manufactured products. There are a variety of activities that can contribute to lead emissions, which are grouped into two general categories, stationary and mobile sources. On-road mobile sources include light-duty automobiles; light-, medium-, and heavy-duty trucks; and motorcycles.

Emissions of lead have dropped substantially over the past 40 years. The reduction before 1990 is largely due to the phase-out of lead as an anti-knock agent in gasoline for on-road automobiles. Substantial emission reductions have also been achieved due to enhanced controls in the metals processing industry. In the SDAB, atmospheric lead is generated almost entirely by the combustion of leaded gasoline. As lead has been well below regulatory thresholds for decades and the project is not a source of lead, lead is not discussed further in this analysis.

2.3.3 Non-Criteria Air Pollutants

Toxic Air Contaminants

Concentrations of toxic air contaminants (TACs), or in federal parlance, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

According to The California Almanac of Emissions and Air Quality (CARB, 2009), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (diesel PM or DPM) and crystalline silica, which are discussed below.

Diesel Particulate Matter

Diesel Particulate Matter (DPM) differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present.

Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, CARB has made preliminary concentration estimates based on a particulate matter exposure method. This method uses the CARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from

several studies to estimate concentrations of diesel PM. In addition to diesel PM, the TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1, 3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Mobile sources such as trucks and buses are among the primary sources of diesel emissions, and concentrations of DPM are higher near heavily traveled highways and rail lines with diesel locomotive operations. The cancer risk from diesel particulate matter as determined by the CARB declined from 900 persons in one million in 1990 to 540 persons in one million in 2000 (CARB, 2009). This calculated cancer risk value from ambient air exposure can be compared against the lifetime probability of being diagnosed with cancer in the United States, from all causes, which is approximately 40 percent, or greater than 400,000 in one million, according to the National Cancer Institute (National Cancer Institute, 2014).

Crystalline Silica

Crystalline silica is a basic component of soil, sand, granite, and many other minerals. Quartz, cristobalite and tridymite are the most common form of crystalline silica. In 2005, the California Office of Environmental Health Hazard Assessment (OEHHA) added a chronic reference exposure level (REL) for crystalline silica. Silica is a hazardous substance when it is inhaled, and the airborne dust particles that are formed when the material containing the silica is broken, crushed, or sawn pose potential risks. Breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. The respirable silica dust enters the lungs and causes the formation of scar tissue, thus reducing the lungs' ability to take in oxygen.

Sources of ambient respirable crystalline silica in California include mines, quarries, diatomaceous earth calcining plants, sand blasting, and entrained fines (e.g., PM10) from surface soil. The annual statewide industrial emissions from facilities reporting under the Air Toxics Hot Spots Act in California based on the most recent inventory were estimated to be 1,007 tons of crystalline silica (CARB, 2008).

Odorous Emissions

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Offensive odors are unpleasant and can lead to public distress generating citizen complaints to local governments. Although unpleasant, offensive odors rarely cause physical harm. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source, wind speed, direction, and the sensitivity of receptors. Generally, increasing the distance between the receptor and the odor source will mitigate odor impacts. However, because offensive odors rarely cause any physical harm and no requirements for their control are included in state or national air quality regulations, the San Diego APCD has no rules or standards related to odor emissions, other than its nuisance rule (Rule 51).

2.3.4 Federal Regulations

The principal air quality regulatory mechanism at the federal level is the CAA and in particular, the 1990 amendments to the CAA and the NAAQS that it establishes. These standards identify the maximum ambient (background) concentration levels of criteria pollutants that are considered to be safe, with an adequate margin of safety, to protect public health and welfare. As discussed previously, the criteria pollutants include ozone, CO, NO_2 (which is a form of NO_X), SO_2 (which is a form of SO_X), PM_{10}, $PM_{2.5}$, and lead.

The CAA also requires each state to prepare an air quality control plan, referred to as a state implementation plan (SIP). The CAA Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins, as reported by their jurisdictional agencies. USEPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and to determine whether implementing the SIPs will achieve air quality goals.

The USEPA also has regulatory and enforcement jurisdiction over emission sources beyond state waters (outer continental shelf), and those that are under the exclusive authority of the Federal government, such as aircraft, locomotives, and interstate trucking. USEPA's primary role at the state level is to oversee the state air quality programs. USEPA sets federal vehicle and stationary source emissions standards and provides research and guidance in air pollution programs.

2.3.5 State Regulations

California Air Resources Board (CARB)

CARB, a department of the California Environmental Protection Agency (Cal/EPA), oversees air quality planning and control throughout California by administering the SIP. Its primary responsibility lies in ensuring implementation of the 1989 amendments to the CCAA, responding to the federal CAA requirements, and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish CAAQS, and a legal mandate to achieve these standards by the earliest practical date. These standards apply to the same criteria pollutants as the federal CAA, and also include sulfates, visibility reducing particulates, hydrogen sulfide and vinyl chloride. They are also generally more stringent than the federal standards.

CARB is also responsible for regulations pertaining to TACs. The Air Toxics "Hot Spots" Information and Assessment Act was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. Assembly Bill (AB) 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release.

2.3.6 Local Regulations

San Diego Air Pollution Control District

San Diego APCD is the agency responsible for protecting the public health and welfare through the administration of federal and state air quality laws and policies. Included in APCD's tasks are the monitoring of air pollution, the preparation of San Diego County's portion of the SIP, and the promulgation of rules and regulations. The SIP includes strategies and tactics to be used to attain and maintain acceptable air quality in the County; this list of strategies is called the San Diego Regional Air Quality Strategy (RAQS) (SDAPCD, 2016). The rules and regulations include procedures and requirements to control the emission of pollutants and prevent significant adverse impacts.

The following APCD rules and regulations apply to new construction:

- **Regulation IV: Prohibitions; Rule 51: Nuisance.** Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property.

- **Regulation IV: Prohibitions; Rule 55: Fugitive Dust**. Regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project site.

- **Regulation IV: Prohibitions; Rule 67.0: Architectural Coatings.** Requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce volatile organic compound (VOC) emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.

- **Regulation XII: Prohibitions, Rule 1200: Toxic Air Contaminants.** Requires stationary sources to be equipped with Toxic Best Available Control Technology (BACT) if the maximum incremental Cancer Risk is found to be greater than 1 in one million. With implementation of applicable BACT's, SDAPCD allows an incremental Cancer Risk less than 10 in one million. According to SDAPCD's *New Source review Requirements for Best Available Control Technology (BACT) Guidance Document (SDAPCD, 2011)*, the following applicable BACT's would apply to the project in respect to off-road construction equipment:

- California use Clean Diesel fuel and Turbocharger, Low Temperature Aftercooler, and Retardation of Fuel Injection Timing 4 Degrees from manufacturer's specification, EPA or ARB certified engine and PCV filter.

The RAQS contains six Transportation Control Measures that are consistent with program commitments made in the Regional Transportation Plan (RTP) and the Regional Transportation Improvement Program (RTIP) adopted and implemented by San Diego Association of Governments (SANDAG). The six RAQS Transportation Control Measures relate to: (1) Transit Improvements; (2) Vanpools; (3) High-Occupancy Vehicle (HOV) Lanes; (4) Park-and-Ride Facilities; (5) Bicycle Facilities; and (6) Traffic Signal Improvements. San Diego APCD's Indirect Source Program, adopted by the District Board in December 1997, consists of ongoing

outreach and assistance to local governments, land developers, and neighborhood groups to reduce vehicle trips and associated emissions through voluntary land use and street design improvements (i.e., "smart growth") (SDAPCD, 2016).

San Diego APCD provides ongoing technical assistance to SANDAG on programs to encourage smart growth. SDAPCD has also conducted public workshops and other forms of public outreach focused on improving the conditions for pedestrians, bicyclists, and transit.

2.4 Background Air Quality

2.4.1 Regional Air Quality

The San Diego Air Basin (SDAB) lies in the southwest corner of California and comprises the entire San Diego region. However, population and emissions are concentrated mainly in the western portion of the county. The air basin covers 4,200 square miles, includes about eight percent of the state's population, and produces about five percent of the state's criteria pollutant emissions (CARB, 2013). The City of San Diego covers approximately 330 square miles, or eight percent, of the SDAB.

Air quality in the SDAB is impacted not only by local emissions, but also by pollutants transported from other areas, in particular, ozone and ozone precursor emissions transported from the South Coast Air Basin and the Republic of Mexico. Although the impact of transport is particularly important on days with high ozone concentrations, transported pollutants and emissions cannot be blamed entirely for the ozone problem in the San Diego area. Studies show that emissions from the SDAB are sufficient, on their own, to cause ozone violations (SDAPCD, 2007)

As in other parts of California, overall air quality in the SDAB has improved, despite high growth rates, in part due to the benefits of cleaner technologies. In 2002, motor vehicles and other mobile sources were determined to emit 76 percent of the harmful pollutants that degrade the air quality of the San Diego region, and industrial sources emitted 14 percent (SDAQMD, 2002). As of 2013 San Diego County's air quality is the best it has been since the mid 1950's when air pollutant measuring began. Even so, pollutants from mobile sources still make up approximately 75 percent of the total pollutant emissions within the region (SDAQMD, 2013).

Significant progress has been realized in the region's air quality since the early 1970s when SANDAG and the San Diego APCD began working together to reduce regional emissions. SANDAG is responsible for developing a "Transportation Control Measures (TCM) Plan" to help achieve air quality objectives for the region, which is developed with input from the City of San Diego. The APCD adopts the TCM Plan as part of the RAQS, which is updated on a triennial basis and outlines measures for achieving state and national air quality standards. The APCD is also responsible for stationary source tactics to reduce air pollution resulting from industry.

CARB and the San Diego APCD collect ambient air quality data locally through a network of air monitoring stations. These data are summarized annually and are published in the CARB's California Air Quality Data Summaries. Air quality monitoring data for the two El Cajon stations

is shown in **Table 6**, which identifies the most recent available data for federal and state ambient air quality standards for the relevant air pollutants between 2012 and 2014.

While the data gathered at these monitoring stations may not necessarily reflect the unique air quality environment of all areas of the county, nor the proximity of site-specific stationary and street sources, they do present the nearest available benchmark and provide the reader with a reference point as to the pollutants of greatest concern in the region.

Both CARB and USEPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of nonattainment-transitional, which is given to nonattainment areas that are progressing and nearing attainment. In summary, the SDAB is non-attainment for the ozone (state and federal), PM_{10} (state), and $PM_{2.5}$ (state and federal) standards. The current attainment status for the SDAB is provided in **Table 7**.

Emissions of NO_X and ROG in the SDAB have been following statewide trends for each pollutant since 2000. These trends are largely due to motor vehicle controls and reductions in evaporative emissions. Mobile sources (both on-road and other) are by far the largest contributors to NO_X, and ROG in the SDAB. Although the maximum one-hour concentrations occasionally exceeded the ambient air quality standards in the 1980s, ambient concentrations are now well below the levels of both the state and national standards and the SDAB is considered in attainment (SDAPCD, 2013a).

The SDAB was reclassified as an attainment area for CO in 2004 and currently maintains its attainment status (SDAPCD, 2013). As of 2011, the national CO standard had been attained statewide.

The majority of the PM_{10} emissions are from area-wide sources (CARB, 2013). The concentration of PM_{10} recorded at the El Cajon station did not exceed national or state 24-hour standard between 2012 and 2014.

SDAB has been in attainment for SO_2 for several years (SDAPCD, 2013a). The low level of SO_2 in the basin could be attributed to use of low-sulfur fuels in the region's electrical generators, a primary source of this pollutant in other areas of the country (SDAPCD, 2007).

The SDAB is presently in attainment for lead, and the region no longer monitors for it (SDAPCD, 2013).

TABLE 6
AIR QUALITY DATA SUMMARY (2014 – 2016) FOR PROJECT AREA

		Monitoring Data by Year		
Pollutant	**Standard**	**2014**	**2015**	**2016**
Ozone – El Cajon[1] Monitoring Station				
Highest 1 Hour Average (ppm)		0.083	0.082	0.096
Days over State Standard	0.09 ppm	0	0	1
Highest 8 Hour Average (ppm)		0.075	0.067	0.077
Days over National Standard	0.075 ppm	2	0	3
Days over State Standard	0.070 ppm	2	0	3
Carbon Monoxide – El Cajon[2] Monitoring Station				
Highest 8 Hour Average (ppm)		*	*	*
Days over National Standard	9.0 ppm	*	*	*
Days over State Standard	9.0 ppm	*	*	*
Nitrogen Dioxide – El Cajon[1] Monitoring Station				
Highest 1 Hour Average (ppm)		0.057	0.059	0.057
Days over National Standard	0.100 ppm	0	0	0
Days over State Standard	0.18 ppm	0	0	0
Annual Average (ppm)		*	*	*
Days over National Standard	0.053 ppm	*	*	*
Days over State Standard	0.030 ppm	*	*	*
Sulfur Dioxide – El Cajon[3] Monitoring Station				
Highest 24 Hour Average (ppm)		*	*	*
Days of National Standard	0.14 ppm	*	*	*
Days over State Standard	0.04 ppm	*	*	*
Particulate Matter (PM_{10}) – El Cajon[1] Monitoring Station				
Highest 24 Hour Average ($\mu g/m_3$)		35.3	50.3	39.5
Days over National Standard (measured)	150 μg/m3	0	0	0
Days over State Standard (measured)	50 μg/m3	0	0	0
Annual Average ($\mu g/m_3$)[b]	20 μg/m3	18.3	22.3	20.0
Particulate Matter ($PM_{2.5}$) – El Cajon[1] Monitoring Station				
Highest 24 Hour Average ($\mu g/m_3$)		13.9	24.7	19.3
Days over National Standard (measured)	35 μg/m3	0	0	0
Annual Average ($\mu g/m^3$)	12 μg/m3	*	*	*

ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter.

* = Insufficient data available to determine the value.

[1] There are 2 stations associated with El Cajon. All data is listed for the Floyd Smith Drive monitoring Station (closest to the project) for O_3, NO_2, PM_{10} and $PM_{2.5}$..

[2] The El Cajon Floyd Smith Drive station does not monitor for CO. CO was not reported in the SDAB for 2014, 2015, or 2016.

[3] The El Cajon Floyd Smith Drive station does not monitor for SO_2. The Redwood Avenue location only has data for 2013. SO_2 was not reported in the SDAB for 2014, 2015 or 2016.

SOURCE: CARB 2018.

TABLE 7
SAN DIEGO AIR BASIN ATTAINMENT STATUS

	Attainment Status	
Pollutant	**California Standards**	**Federal Standards**
Ozone – one hour	Non-attainment	No Federal Standard
Ozone – eight hour	Non-attainment	Non-attainment (moderate)
CO	Attainment	Unclassified/Attainment
NO_2	Attainment	Unclassified/Attainment
SO_2	Attainment	Attainment
PM_{10}	Non-attainment	Unclassified/Attainment
$PM_{2.5}$	Non-attainment	Unclassified/Attainment
Lead	ttainment	Unclassified/Attainment

SOURCE: CARB, 2015, 2017; USEPA, 2018.

2.5 Sensitive Receptors

Sensitive receptors are individuals who are considered more sensitive to air pollutants than others. The reasons for greater than average sensitivity may include pre-existing health problems, proximity to emissions sources, or duration of exposure to air pollutants. Schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because children, elderly people, and the infirm are more susceptible to respiratory distress and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people usually stay home for extended periods of time, with associated greater exposure to ambient air quality. Recreational uses are also considered sensitive due to the greater exposure to ambient air quality conditions because vigorous exercise associated with recreation places a high demand on the human respiratory system.

Currently, sensitive uses located in the project site vicinity include single-family residential uses. Specifically, the nearest residential developments are the single-family residential buildings located directly adjacent to the project site border on the north, directly across Willow Road from where the mining activities would occur. Additionally, residential land uses intermittently surround the project site on all sides. The nearest schools to the proposed project are El Capitan High School for grades 9–12 (10410 Ashwood Street, Lakeside, California 92040), located approximately 0.5 mile southwest (approximately 1.1 miles west of the closest area of disturbance); Tierra Del Sol Middle School for grades 6–8 (9611 Petite Lane, Lakeside, California 92040), located approximately 1.1 miles southwest (approximately 1.1 miles southwest of the closest area of disturbance); Blossom Valley Elementary School for grades K–5 (9863 Oakmont Terrace, El Cajon, California 92021), located approximately 1.5 miles southeast (approximately 1.7 miles southeast of the closest area of disturbance); and ABC Wonder Years preschool and kindergarten (10815 Dollar Court, Lakeside California 92040), located approximately 0.6 mile west of the project area (approximately 1.2 miles west of the closest area of disturbance).

3. Significance Criteria & Analysis Methodologies

This section describes the impact analysis relating to air quality for the project. It describes the methods and applicable thresholds used to determine the impacts of the project.

3.1 Significance Criteria

Based on the state *CEQA Guidelines*, a project would have a significant adverse effect on air quality resources if it would:

1. Conflict with or obstruct implementation of the San Diego RAQS and/or applicable portions of the SIP;
2. Result in emissions that would exceed NAAQS or CAAQS or contribute substantially to an existing or projected air quality violation;
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under applicable NAAQS or CAAQS;
4. Expose sensitive receptors to substantial pollutant concentrations; or
5. Propose a use which would expose a considerable number of persons to objectionable odors (for projects that are not agricultural, commercial, or industrial activities subject to SDAPCD standards).

As stated in Appendix G of the *CEQA Guidelines*, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the above determinations. The SDAPCD does not have quantitative thresholds for determining significance of construction or operational impacts. However, the County of San Diego provides guidance and thresholds for air quality analysis in their *County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Air Quality* (Guidelines) (County, 2007). As such, the significance thresholds and analysis methodologies in this guidance are used in evaluating project impacts. Significance determination is summarized below and the entire significance flow chart is provided in Appendix A to this report.

For Guideline 1 a project is determined to be less than significant if it conforms to the general plan and is consistent with subregional growth projections.

For Guidelines 2, 3, and 4 a project is determined to be less than significant if it does not exceed the screening level thresholds (STLs) identified in **Table 8**, does not result in a CO hotspot, and does not have any significant non-vehicular toxic emissions sources.

For Guideline 5 a project is determined to be less than significant if it does not place new odor sources adjacent to existing sensitive receptors and would not place any sensitive receptors adjacent to or near odor producing sources, including animal facilities and other agricultural uses with the potential to produce strong odors.

TABLE 8
SAN DIEGO SCREENING LEVEL THRESHOLDS

Pollutant	Mass Daily Thresholds (lbs/day)
Oxides of Nitrogen (NO_X)	250
Reactive Organic Gases (ROG)	75
Respirable Particulate Matter (PM_{10})	100
Fine Particulate Matter ($PM_{2.5}$)	55
Oxides of Sulfur (SO_X)	250
Carbon Monoxide (CO)	550

SOURCE: County, 2007.

3.1.1 CO Hotspot

The County Guidelines state that areas where CO concentrations exceed the NAAQS and/or CAAQS have been found to occur at signalized intersections operating at or below a level of service (LOS) E and where peak-hour trips exceed 3,000 trips. Therefore, as a screening level analysis, a project that would cause an intersection to be degraded from a LOS of D to E or an LOS of E to F and would have peak-hour trips greater than 3,000 trips would be required to conduct a further hotspot analysis.

3.1.2 Health Risk

The latest 2015 guidance from the Office of Environmental Health Hazard Assessment (OEHHA, 2015) was used to evaluate if future mining operations at the El Monte Mine would expose residents and workers to significance health risk. Health risks associated with TAC exposure fall into three categories: acute, chronic, and carcinogenic. Acute and chronic health risks consist of non-cancer health effects. Acute health risks are associated with exposures ranging from one to eight hours. Chronic health risks are associated with exposures of one year or more. Carcinogenic health risks are associated with long-term exposures ranging from 25 to 70 years.

DPM and crystalline silica represents the primary TAC of concern associated with aggregate mining projects. Both off-road mining equipment and on-road haul trucks produce DPM exhaust. Onsite workers and nearby residents could be exposed to this exhaust, resulting in potential cancer risks and chronic health impacts. Fugitive dust emission generated by onsite operations may expose onsite workers and nearby residences to crystalline silica. DPM and crystalline silica exposure does not pose any known acute health risks (OEHHA, 2015).
According to SDAPCD's Regulation XII: Prohibitions, Rule 1200: Air Contaminants, an incremental cancer risk greater than 1 in one million without implementation of BACT, or greater than 10 in one million with the application of BACTs as a significant impact (SDAPCD, 2015). Also, SDAPCD considers a health hazard index greater than one as significant. The health risk analysis described below uses these thresholds to determine significance.

3.2 Analysis Methodology

3.2.1 Criteria Pollutants

This technical analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the project. Air pollutant emissions associated with the proposed project would result from operations of the future commercial and recreational developments at the project site and from traffic volumes generated by these new uses. Mining activities would also generate air pollutant emissions at the project site and on roadways resulting from mining-related traffic. The net increase in emissions generated by these activities and other secondary sources have been estimated and compared to the applicable STLs recommended by the County.

Construction Impacts

Site preparation and mining activities would include the construction of the drop structure, access road, processing area pad, and screening berms. The drop structure, would be constructed across the San Diego River channel at the east end of the extractive area to prevent headward erosion during periods of water flow in the channel. The drop structure would be located approximately 300 feet west of Dairy Road, and would consist of grouted rip rap approximately 2.7 feet thick. Cut slopes would be mined at a constant 3H:1V (horizontal:vertical) slope. Site preparation activity would also include the establishment of a sub-grade processing plant pad 10 feet below the existing ground surface (bgs) and a sub-grade haul road approximately 10 to12 feet bgs. Earthen berms would be constructed around the top sides of the plant pad area and along both sides and parallel to the road to screen the equipment and operation from public view. This construction activity would occur at the same time as the initial mining operations would begin. Because the construction activities would not require additional equipment than the emissions and would occur simultaneously with the operational emissions, construction emissions are embedded within the operational emissions analysis and are not considered as a separate distinct phase in this analysis.

Operational Impacts

Long-term (i.e., operational) regional emissions of criteria air pollutants and precursors associated with the proposed project, including mobile- and area-source emissions, were also quantified using the CalEEMod computer model where appropriate. Mining equipment emissions were calculated using EPA's AP-42 emission rates because CalEEMod does not allow the user to estimate mining equipment emissions. Area source emissions, which are widely distributed and made of many small emissions sources (e.g., building heating and cooling units, landscaping equipment, consumer products, painting operations, etc.), are not anticipated for this project as the onsite buildings are modular and heating/cooling as appropriate would be electric. The project would have minimal landscaping of the earthen berm near the entrance and as such, routine use of fossil-fueled landscaping equipment is not expected. There would be no painting operations associated with the operation of the project. Consumer product use would be minimal and negligible based on the one onsite modular building. Mass mobile-source emissions were modeled based on the daily vehicle trips that would result from the project. Vehicle trip distances for workers and venders were based on the CalEEMod default values. Haul truck trip lengths were based on an estimated

trucking length within the County for aggregate delivery. Estimated haul truck trip distance is 30 miles. The processing plant would be placed near each phase of the project, starting in the east and would be re-located multiple times as the project proceeds west in order to minimize the onsite distance between the plant and the active mining area. The long-term operational emissions were then compared with the applicable County STLs to determine significance. Modeling assumptions and output files are provided in Appendices B and C of this report.

CO Hotspots

For the purposes of this analysis, the change in LOS of project intersections combined with the peak hourly vehicle volumes through studied intersections will be reviewed to evaluate the potential impacts associated with CO hotspots. Intersections where the project causes the intersection to operate at a LOS of E or worse, and exceeds 3,000 vehicles in the peak hour would be required to conduct dispersion modeling to determine the potential impact from the impacted intersections.

Toxic Air Contaminants

This assessment uses recent regulatory guidance to determine if the Project would expose residents and workers to significant health risks (OEHHA, 2015; SDAPCD, 2015). First, the AERMOD model was used to convert DPM and crystalline silica emissions to annual concentrations at nearby residences and businesses. Then, CARB's HARP 2 computer model was used to convert the DPM and crystalline silica concentrations to cancer risks and chronic health hazards. Cancer risks were estimated using a residential 30-year exposure and an occupational 25-year exposure.[1] Appendix D contains additional details on the modeling assumptions and results.

4. Project Impact Analysis

4.1 Conformance to the Regional Air Quality Strategy

Would the Project conflict with or obstruct implementation of the San Diego RAQS and/or applicable portions of the SIP?

Guidelines for Determination of Significance

The San Diego APCD RAQS is the regional air quality plan that is applicable to the County of San Diego, including the project area. The RAQS contains rules and regulations that are implemented by the APCD to help the region meet the clean air standards required by federal and state law. The RAQS relies on projected growth in the County as well as mobile, area, and other sources of emissions, as obtained from CARB and SANDAG to project future emissions within the County. Based on these emissions, reduction strategies are determined to reduce emissions in order to achieve or maintain attainment with State and Federal standards. CARB mobile source emissions projections and SANDAG growth projections are based on information provided by the County general plan. Therefore, projects that propose development consistent with the applicable

[1] The project lifetime would be 16 years including reclamation activities; however the OEHHA methodology indicates a minimum exposure period of 30 years for residential and 25 years for employees are analyzed. While the exposure period is 30 years, 11 years (year 20 through year 30) would result in 0 emissions exposure because the project is no longer operating. Therefore, even though a 30 years exposure period is used, risk is estimated based on the 16 years of pollutant emissions.

general plan would be consistent with the RAQS and the SIP. If the project's growth exceeds the projections anticipated in the general plan, then the project would conflict with the RAQS and the SIP.

Significance of Impacts Prior to Mitigation

Based on the current County General Plan, the project area is identified as Public Agency Lands. The project is the construction and operation of a temporary (16-year) mining and reclamation project which would not result in population growth within the County. The project does not include residential developments, and has a temporary increase in County jobs of eight full time positions.

The goals of the project include recovery of construction aggregate to address the needs for this resource within the County to help meet current and projected market demand. This would reduce the County's dependence on imported resources, which would reduce vehicle miles traveled (VMT) and vehicle emissions within the County. The end result of the project is to provide an easement for trails along the San Diego River Basin for recreational use.

Neither of these uses would result in growth within the County and the use of local aggregates would reduce VMT and emissions from vehicles within the County associated with aggregate transport to meet County market demand. The project is consistent with the designated land use identified in the General Plan and therefore would not exceed the growth projections anticipated in the General Plan. Therefore, the project would not conflict with or obstruct implementation of the RAQS or the SIP.

Mitigation Measures and Design Considerations

No mitigation measures are required as the project would be consistent with the County's General Plan and the growth projections identified in the RAQS and SIP.

Conclusions

The project conforms to the RAQS and the SIP and therefore would result in a less than significant impact.

4.2 Conformance to Federal and State Ambient Air Quality Standards

4.2.1 Construction Emissions

Would Project construction result in emissions that would exceed NAAQS or CAAQS or contribute substantially to an existing or projected air quality violation?

Phase 1 would include the construction of the drop structure, access road, processing area pad, and screening berms. However, this construction activity would occur at the same time as the initial mining operations would begin. Because the construction activities would not require additional equipment than the operational emissions and would occur simultaneously with the operational emissions, construction emissions are conservatively embedded in the operational emissions and are not considered separately in this analysis.

4.2.2 Operational Emissions

Would Project operation result in emissions that would exceed NAAQS or CAAQS or contribute substantially to an existing or projected air quality violation?

Guidelines for the Determination of Significance

The County Guidelines establish the levels of significance for operational activities. Based on the Guidelines the project would be considered significant if project emissions exceed the following levels for criteria pollutants:

- 250 lbs/day NO_X,
- 75 lbs/day VOCs,
- 550 lbs/day CO,
- 55 lbs/day $PM_{2.5}$, and/or
- 100 lbs/day PM_{10}.

Where thresholds are exceeded, all feasible mitigation would be incorporated to reduce impacts.

Significance of Impacts Prior to Mitigation

Implementation of the project would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas consumption, landscaping, applications of architectural coatings, and consumer products, in addition to operational mobile emissions as taken from the El Monte Sand Mining Project Traffic Impact Analysis (Linscott, Law & Greenspan, Engineers, 2016) prepared for the project.

Operations emissions associated with the project were modeled using CalEEMod. Model defaults were adjusted to reflect project-specific data, where available, including the size and type of the proposed land use and project specific trip rates.

Table 9 shows that the project would generate ROG, NO_X, CO, SO_X, $PM_{10,}$ and $PM_{2.5}$ emissions. ROG, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ would not exceed the CEQA thresholds and, therefore, would not result in or substantially contribute to emissions concentrations that would exceed the NAAQS and CAAQS for these criteria pollutants.

TABLE 9
UNMITIGATED OPERATIONAL EMISSIONS

Emissions Source	Estimated Emissions (lbs/day)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Phase 1 – Mining Activities	13.80	196.97	121.34	0.43	91.50	22.63
Phase 2 – Mining & Phase 1 Reclamation Activities	17.59	244.20	145.68	0.48	95.21	25.09
Phase 3 – Mining Activities & Phase 1 & 2 Reclamation Activities	17.59	244.20	145.68	0.48	95.21	25.09
Phase 4 – Mining Activities & Phase 1, 2 & 3 Reclamation Activities	17.59	244.20	145.68	0.48	95.21	25.09
Reclamation Activities	2.90	32.76	20.17	0.03	42.72	10.44
Total Net Project Emissions	**17.59**	**244.20**	**145.68**	**0.48**	**95.21**	**25.09**
Regional Significance Threshold	*55*	*250*	*550*	*250*	*100*	*55*
Significant Impact?	No	No	No	No	No	No

Source: ESA 2018

Mitigation Measures and Design Considerations

Design Considerations

DC -AQ-1: As required by the SDAPCD Rule 55, the following measures shall be incorporated to reduce emissions of fugitive dust:

- All haul trucks leaving the site with aggregate shall maintain at least 2 feet of freeboard or securely cover the loads.
- Grading ordinance dust control measures shall be enhanced and watering shall be conducted 3x per day for all active construction areas and on unpaved roads. Water shall be applied using water trucks and shall be sufficient to confine dust plumes to the immediate work area.
- Mining activities shall be suspended when winds exceed 25 mph.
- Sweepers and water trucks shall be used to control dust at public street access points. Paved streets shall be swept at least once per day when evidence of track- out is present.
- Vehicle speeds on unpaved roadways shall not exceed 15 mph.
- Inactive disturbed areas where mining activities have been completed shall be revegetated as soon as possible to prevent soil erosion.
- Chemical stabilizers, or other methods of soil stabilization/fugitive dust prevention, shall be applied to all disturbed surfaces left inactive for four or more days.

DC-AQ-2: All construction equipment and trucks shall be maintained and tuned according to manufacturer's specifications.

DC-AQ-3: Diesel trucks shall be prohibited from idling for more than 5 minutes. Idling restrictions shall be posted at truck entrances and at loading areas.

DC-AQ-4: Water sprayers shall be used at transfer points as necessary to control dust from aggregate washing/separation activities.

Conclusions

With the implementation of DC-AQ-1 through DC-AQ-4, the emissions of criteria pollutants from the mining activities would be further reduced to below regulatory thresholds. In addition to the above measures, implementation of mitigation measure MM-AQ-1 (discussed below under Section 4.4.2) would be required to reduce construction-related health risks. Mitigation measure MM-AQ-1 would also reduce combustion-related pollutants from off-road diesel-powered mining equipment. **Table 10** shows the mitigated project emissions with implementation of MM-AQ1. The emissions would be further reduced to below the significance thresholds; therefore, project impacts would be less than significant.

TABLE 10
MITIGATED OPERATIONAL EMISSIONS

	Estimated Emissions (lbs/day)					
Emissions Source	**ROG**	**NO_X**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Phase 1 – Mining Activities	11.61	169.81	131.18	0.43	90.11	21.35
Phase 2 – Mining & Phase 1 Reclamation Activities	12.39	182.34	156.42	0.48	91.93	22.07
Phase 3 – Mining Activities & Phase 1 & 2 Reclamation Activities	12.39	182.34	156.42	0.48	91.93	22.07
Phase 4 – Mining Activities & Phase 1, 2 & 3 Reclamation Activities	12.39	182.34	156.42	0.48	91.93	22.07
Reclamation Activities	2.90	32.76	20.17	0.03	42.72	10.44
Total Net Project Emissions	**12.39**	**182.34**	**156.42**	**0.48**	**91.93**	**22.07**
Regional Significance Threshold	*55*	*250*	*550*	*250*	*100*	*55*
Significant Impact?	No	No	No	No	No	No

SOURCE: ESA 2018

4.3 Cumulatively Considerable Net Increase of Criteria Pollutants

Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under applicable NAAQS or CAAQS?

Guidelines for the Determination of Significance

The County Guidelines establish the levels of significance for operational activities. Based on the Guidelines the project would be considered significant if the project:

- Does not conform to the RAQS;
- Exceeds the following criteria pollutant emissions thresholds:
  - 250 lbs/day NO_X,
  - 75 lbs/day VOCs,
  - 550 lbs/day CO,
  - 55 lbs/day $PM_{2.5}$, and/or
  - 100 lbs/day PM_{10}; or
- Creates a CO Hotspot.

Where thresholds are exceeded all feasible mitigation would be incorporated to reduce impacts.

Significance of Impacts Prior to Mitigation

As discussed in Section 4.1, the project would be consistent with the designated land use identified in the County's general plan and zoning and would not exceed the anticipated growth projections. As a result, the project would conform with the RAQS and the SIP and therefore is not anticipated to result in cumulatively considerable operational impacts.

As discussed under Section 4.2.1, construction activities would not require additional equipment than the construction emissions and would occur simultaneously with the operational emissions, therefore construction emissions are not considered separately in this analysis.

As discussed under Section 4.2.2, with implementation of the project specific design considerations, operational emissions from the project would not exceed any of the County's applicable SLTs. Therefore, the project would not lead to a cumulatively considerable net increase in criteria pollutants.

CO emissions result from the combustion of fuels and hotspots are associated with excessive idling at area intersections. These hotspots are areas where CO concentrations would exceed the NAAQS or CAAQS for CO emissions. Presently CO hotspots are determined based on LOS and vehicle volumes at intersections. A detailed CO hotspot analysis for project and cumulative impacts is presented in Section 4.4.1. As detailed, the project would not result in cumulatively considerable CO hotspots.

Based on the analysis provided herein, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the San Diego Air Basin is non-attainment under applicable NAAQS or CAAQS. The project impact is less than significant and no mitigation is required.

Mitigation Measures and Design Considerations

Design Considerations

See DC-AQ-1 through DC-AQ-4 under Section 4.2.2.

Mitigation Measures

Implementation of DC-AQ-1 through DC-AQ-4 would reduce impacts to below regulatory thresholds. Therefore, no additional mitigation is required.

Conclusions

With the implementation of DC-AQ-1 through DC-AQ-4, the emissions of criteria pollutants from the mining activities would not exceed regulatory thresholds. Therefore, project impacts would be less than significant and no mitigation is required.

4.4 Impacts to Sensitive Receptors

For the purposes of CEQA analysis in the County Guidance, the definition of a sensitive receptor includes schools (Preschool-12th Grade), hospitals, resident care facilities, day-care centers and residents. The two primary emissions of concern regarding health effects for land development projects are diesel-fired particulates and carbon monoxide. Separate discussions are provided below analyzing the potential for sensitive receptors to be exposed to CO hotspots and TACs from on-site sources during project construction and operations.

4.4.1 CO Hotspots

Would the Project expose sensitive receptors to substantial pollutant concentrations of CO?

Guidelines for the Determination of Significance

According to the County Guidelines, a project would expose sensitive receptors to substantial pollutant concentrations if it places sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors. The project would be significant if it results in carbon monoxide emissions that when added to the ambient concentrations would exceed a 1-hour concentration of 20 parts per million (ppm) or an 8-hour average of 9 ppm. As detailed under Sections 3.1 and 3.2 above, for the purposes of this analysis the project would be compared to a screening level. If the screening level would be exceeded, then further analysis would be conducted. If the project does not exceed the screening levels then the intersection would be assumed to not exceed the 1- or 8-hour standards. Additional analysis would be required if a project intersection degraded the LOS below E (change from LOS D to E or E to F) and has peak hourly traffic flow of greater than 3,000 vehicles.

Significance of Impacts Prior to Mitigation

A total of 10 local intersections were analyzed as part of the project's traffic analysis. The existing plus project and near-term plus project[2]peak hour conditions were evaluated against the screening level thresholds. LOS and Peak hourly traffic volumes for each of the study area intersections are shown in **Table 11**. As shown, only the intersection of Lake Jennings Park Rd and Julian Ave/El Monte Rd would result in a degradation in LOS to E or worse under the existing plus project scenario. However, peak hour volumes for this scenario would be 1,369 for the AM peak and 1,465 for the PM peak. Therefore, this intersection would not exceed the screening levels. Additionally, while the intersection of Mapleview St and SR 67 would exceed 3,000 vehicles in the peak hour existing plus project scenario, the project itself would add a maximum of 64 vehicles to that intersection during the peak hour and does not cause the degradation of LOS. Therefore, none of the intersections would exceed the screening level threshold and no further analysis or mitigation is needed.

TABLE 11
LEVEL OF SERVICE AND PEAK HOURLY TRAFFIC VOLUMES

	Existing Plus Project				Near-term Plus Project			
	AM		PM		AM		PM	
Level of Service								
Intersection	**E**	**E+P**	**E**	**E+P**	**C**	**C+P**	**C**	**C+P**
Mapleview St & SR 67	D	D	F	F	E	E	F	F
Mapleview St & Maine Ave	D	D	F	F	D	D	F	F
Mapleview St & Vine St	B	B	C	C	B	B	C	C
Mapleview St & Ashwood St	F	F	D	D	F	F	E	E
Lake Jennings Park Rd & Julian Ave/El Monte Rd	***D***	***E***	***C***	***D***	E	E	E	E
El Monte Rd & Project Driveway 1	-	B	-	B	-	B	-	B
El Mote Rd & Project Driveway 2	-	B	-	B	-	B	-	B
Lake Jennings Park Rd & Blossom Valley Rd	D	D	C	C	E	E	C	D
Lake Jennings Park Rd & I-8 WB Ramps	C	C	D	D	C	C	F	F
Lake Jennings Park Rd & I-8 EB Ramps/ Olde Hwy 80	D	D	F	F	F	F	F	F
Volumes								
Intersection	**E + P AM**		**E+P PM**		**C + P AM**		**C + P AM**	
Mapleview St & SR 67	2,851		***4,628***		***3,190***		***5,042***	
Mapleview St & Maine Ave	1,602		2,097		1,692		2,206	
Mapleview St & Vine St	1,610		1,852		1,685		1,944	
Mapleview St & Ashwood St	2,703		2,347		2,793		2,459	
Lake Jennings Park Rd & Julian Ave/El Monte Rd	1,369		1,465		1,519		1,650	
El Monte Rd & Project Driveway 1	309		315		309		316	
El Mote Rd & Project Driveway 2	240		254		240		255	

[2] Near-term plus project is the sum of the existing traffic, project traffic, and anticipated cumulative traffic for the intersections analyzed.

	Existing Plus Project				Near-term Plus Project			
	AM		PM		AM		PM	
Level of Service								
Intersection	**E**	**E+P**	**E**	**E+P**	**C**	**C+P**	**C**	**C+P**
Lake Jennings Park Rd & Blossom Valley Rd	2,022		2,139		2,356		2,566	
Lake Jennings Park Rd & I-8 WB Ramps	1,692		2,193		2,482		2,823	
Lake Jennings Park Rd & I-8 EB Ramps/ Olde Hwy 80	1,397		1,938		1,863		2,766	
Maximum Peak Hour	2,851		**4,628**		**3,190**		**5,042**	
Screening Threshold	3,000		3,000		3,000		3,000	

SOURCE: .LLG, 2016

Mitigation Measures and Design Considerations

The project would not result in a potential to create a CO hotspot. Therefore, impacts would be less than significant and no mitigation is required.

Conclusions

Peak hour traffic at each intersection would not exceed the screening level threshold. Therefore, CO emissions would be less than significant and no mitigation is required.

4.4.2 TAC Exposure

Would the Project expose sensitive receptors to substantial pollutant concentrations of TACs from construction and operation?

Guidelines for the Determination of Significance

According to SDAPCD's Regulation XII: Prohibitions, Rule 1200: Air Contaminants, an incremental cancer risk greater than 1 in one million without implementation of BACT, or greater than 10 in one million with the application of BACTs is considered to be a significant impact. The project would also result in a significant impact if residents or workers are exposed to chronic health hazards greater than one.

Significance of Impacts Prior to Mitigation

DPM and crystalline silica concentrations from construction and operation were estimated using the project specific emissions produced by CalEEMod. Those emissions were inputted into the AERMOD dispersion model to estimate DPM and crystalline silica concentrations. Modeling details and assumptions can be found in Appendix D.

Dispersion modeling found that the project's emissions would result in an annual crystalline silica concentration of 0.00728 µg/m^3 onsite and 0.00362 µg/m^3 at the nearest residential dwelling during operation of the aggregate mine. The health hazard index was found to equal 0.002 onsite and 0.001 at the nearest residential dwelling, which is well below the threshold of one (calculated as the maximum annual crystalline silica concentration of 0.00728 µg/m^3 onsite and 0.00362

$\mu g/m^3$ at the nearest residential dwelling divided by the OEHHA inhalation REL for crystalline silica of 3 $\mu g/m^3$, respectively). The nearest residential dwelling and employees working within the project site would not be exposed to crystalline silica concentrations that would result in a chronic hazard.

Dispersion modeling found that the project's emissions would result in an annual DPM concentration of 0.05 $\mu g/m^3$ onsite and 0.03 $\mu g/m^3$ at the nearest residential dwelling. These DPM concentrations would result in a 25-year occupational exposure cancer risk of 3.1 in one million and a 30-year residential exposure cancer risk of 26.5 in one million. The health hazard index was found to equal 0.01, which is well below the threshold of one (calculated as the maximum annual DPM concentration of 0.05 $\mu g/m^3$ divided by the OEHHA inhalation REL for DPM of 5 $\mu g/m^3$). The employees working within the project site and the nearest residential dwelling to the project site would be exposed to a cancer risk that would exceed SDAPCD's cancer risk significance threshold of an incremental increase of 1 in one million without implementation of BACT. This is a significant impact.[3]

Additional modeling was conducted to determine the effects of MM-AQ-1. This mitigation measure represents BACT because it requires all off-road equipment to be retrofitted with Tier 4 engines, which are the lowest emitting engines available. The dispersion modeling found that the use of an all Tier 4 or greater fleet would result in a DPM concentration level of 0.01 $\mu g/m^3$ onsite and at the nearest residence. At these concentration levels, onsite workers would be exposed to a 25-year occupational exposure cancer risk of 1.1 in one million and the nearest residence would be exposed to a cancer risk of 8.8 in one million, which is below the allowed 10 in one million permitted under SDAPCD's Rule 1200 with implementation of BACT.[4] With implementation of MM-AQ-1, health risks would be reduced to a less than significant level.

APPENDIX D STATES: Mitigation includes the implementation of MM-AQ-1, which would require all off-road equipment to be retrofitted with EPA certified Tier 4 or greater engines. The County of San Diego does not have specific Toxic – Best Available Control Technologies (T-BACT) for non-stationary sources; however, implementation of MM-AQ-1 would achieve a reduction in diesel particulate matter (DPM) by require the use the cleaner EPA certified Tier 4 engines for all off-road construction equipment.

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3 Risk estimates for residential and occupational exposures are calculated based on the duration of the exposure as well as different breathing rates. Residential exposure takes into account children that could be living at the residence from in-utero until the end of the project. Due to their developing lungs their breathing rates differ from that of an adult and therefore the potential risk from exposure is greater for a resident than that of an adult worker exposed to the same pollutant concentrations.

4 While the revisions to the PD reduces haul truck trips (see Appendix B, Revisions to Project Assumptions), the emissions associated with the Health Risk analysis are minor compared to the total overall DPM emissions from the total haul truck trips and therefore represent a small fraction of the health risk. While decreasing the haul truck emissions would further reduce the health risk, the reduction would be minimal and would not reduce unmitigated emissions to a less than significant level. As the mitigate emissions from the original analysis are below the significance thresholds with mitigation and the reductions would be minimal, a revised health risk was not conducted. Therefore, the risk presented in the analysis is a conservative risk.

Mitigation Measures and Design Considerations

Design Considerations

There are no proposed design considerations.

Mitigation Measures

Implementation of MM-AQ-1 would achieve all required BACT under SCAPCD's Rule 1200 by reducing DPM exhaust emissions by requiring that all off-road diesel-powered mining equipment be equipped with USEPA Tier 4 or cleaner engines. Since most of the DPM exhaust emissions are generated by off-road mining equipment, MMAQ-1 would reduce cancer risk levels onsite and at the nearest residence to below the threshold of 10 in one million.

Conclusions

With the implementation of MM-AQ-1, mining activities would not expose workers and residences to significant health risks. Therefore, project impacts would be less than significant.

4.5 Odor Impacts

Would the project propose a use which would expose a considerable number of persons to objectionable odors (for projects that are not agricultural, commercial, or industrial activities subject to SDAPCD standards)?

Guidelines for the Determination of Significance

The Guidelines state that a project that is not subject to SDAPCD standards would have a significant impact with respect to odors if it generates objectionable odors or places sensitive receptors next to existing objectionable odors. Odor issues are very subjective by the nature of odors themselves and their measurements are difficult to quantify. As a result, this impact is discussed qualitatively and each project will be reviewed on an individual basis. The analysis focuses on the existing and potential surrounding uses and location of sensitive receptors.

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section §41700 prohibit the emission of any material which causes nuisance to a considerable number of persons or endangers the comfort, health or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance and conditions may be applied (or control equipment required) where necessary to prevent occurrence of public nuisance.

Significance of Impacts Prior to Mitigation

Land uses that are associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The proposed mining and reclamation project does not include any of these uses that have been identified as being associated with odors.

During construction and operation of the project, exhaust from equipment and on-road haul trucks may produce discernible odors typical of most construction sites. Such odors could be a temporary source of nuisance to adjacent uses, but would not affect a substantial number of

people. As odors associated with project construction and operation would be intermittent over the 16-year project lifetime, the odors would not be considered a significant environmental impact.

The project does not include the development of receptors (residential, schools, etc.) that would be sensitive to offsite odor generation. Therefore, impacts associated with objectionable odors would be less than significant.

Mitigation Measures and Design Considerations

Design Considerations

There are no proposed design considerations.

Mitigation Measures

The project does not include odor sensitive receptors, nor does it include any sources of offensive odors. Therefore, impacts would be less than significant and no mitigation is required.

Conclusions

Impacts associated with objectionable odors would be less than significant and no mitigation is required.

5. Summary of Recommended Project Design Features, Impacts & Mitigation

The project would result in emissions of pollutants from both construction and operational activities. However, as the project is designed, construction and operational emissions are similar in nature and would occur at the same time. Therefore, they are evaluated together as operational emissions. Construction and operational emissions would result from fugitive dust from mining, processing and reclamation activities, as well as operation of heavy-duty construction equipment, vendor trips, haul trucks, and commuter trips. As summarized in **Table 12**, with the implementation of design considerations and mitigation measures, all project impacts would be reduced to less than significant levels.

TABLE 12
IMPACT SUMMARY

Impact		Impact Level	Type of Impact	Design Considerations	Mitigation Measures	Significance after Mitigation
4.1	Conformance to the Regional Air Quality Strategy	LTS	N/A	N/A	N/A	N/A
4.2.1	Conformance To Federal and State Ambient Air Quality Standards (Construction)	N/A	N/A	N/A	N/A	N/A
4.2.2	Conformance To Federal and State Ambient Air Quality Standards (Operation)	LTS	N/A	DC-AQ-1 DC-AQ-2 DC-AQ-3 DC-AQ-4	N/A	LTS

4.3	Cumulatively Considerable Net Increase of Criteria Pollutants	LTS	N/A	DC-AQ-1 DC-AQ-2 DC-AQ-3 DC-AQ-4	N/A	N/A
4.4.1	Impact to Sensitive Receptors (CO Hotspots)	LTS	N/A	N/A	N/A	N/A
4.4.2	Impact to Sensitive Receptors (TACs)	Potentially Significant	Direct	N/A	MM-AQ-1	LTS
4.5	Odors	LTS	N/A	N/A	N/A	N/A

SOURCE: ESA 2018

5.1 Design Considerations

DC -AQ-1: As required by the SDAPCD Rule 55, the following measures shall be incorporated into the project design to reduce emissions of fugitive dust:

- All haul trucks leaving the site with aggregate shall maintain at least 2 feet of freeboard or securely cover the loads.
- Grading ordinance dust control measures shall be enhanced and watering shall be conducted 3x per day for all active construction areas and on unpaved roads. Water shall be applied using water trucks and shall be sufficient to confine dust plumes to the immediate work area.
- Mining activities shall be suspended when winds exceed 25 mph.
- Sweepers and water trucks shall be used to control dust at public street access points. Paved streets shall be swept at least once per day when evidence of track- out is present.
- Vehicle speeds on unpaved roadways shall not exceed 15 mph.
- Inactive disturbed areas shall be revegetated as soon as possible to prevent soil erosion.
- Chemical stabilizers shall be applied to all disturbed surfaces left inactive for four or more days.

DC-AQ-2: All construction equipment and trucks shall be maintained and tuned according to manufacturer's specifications.

DC-AQ-3: Diesel trucks shall be prohibited from idling for more than 5 minutes. Idling restrictions shall be posted at truck entrances and at loading areas.

DC-AQ-4: Water sprayers shall be used at transfer points as necessary to control dust from aggregate washing/separation activities.

5.2 Mitigation Measures

Implementation of the following mitigation measures would further reduce worker exposure:

> **MM-AQ-1:** Engine Standards for Off-Road Equipment. To reduce the impact of mining equipment DPM emissions, the project applicant shall ensure that all off-road diesel-powered equipment used will be equipped with USEPA Tier 4 or cleaner engines. This condition pertains to all excavators, graders, loaders, draglines, and dozers operated in Phases 1 through 4 of mining activities. In lieu of Tier 4 engines, project equipment can incorporate retrofits such that emissions reductions achieved can be verified to equal that of the Tier 4 engines. The project applicant shall submit a detailed list of the equipment fleet that demonstrates achievement of this mitigation measure to the County prior to receiving a permit to construct and/or beginning operations. The modeling states that Tier 4 Equipment for onsite operations. Includes: Excavators, Graders, Loaders, Dragline and Dozers.

Appendix D (HRA) also required Tier 4 per the modeling.

6. References

California Air Resources Board (CARB. 2018). *iADAM: Air Quality Data Statistics. Top 4 Measurements and Days above Standard.* Available: http://www.arb.ca.gov/adam/topfour/topfour1.php. Accessed: April 2018.

CARB. 2017, 2015. Area Designation Maps/State and National. Available: <www.arb.ca.gov/desig/adm/adm.htm/>. Accessed June, 2015.

CARB 2016. *Ambient Air Quality Standards*. Last revised: May, 4, 2016. Available: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed: July 11, 2016.

CARB. 2013. The California Almanac of Emissions and Air Quality – 2013 Edition, Chapter 4. Accessed: http://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm, June 16, 2015.

CARB. 2009. *The California Almanac of Emissions and Air Quality – 2009 Edition*. Available: http://www.arb.ca.gov/aqd/almanac/almanac09/almanac09.htm.

CARB 2008. *2008 California Toxic Inventory (Based on the Almanac 2009 – tons/year)*. Available: http://www.arb.ca.gov/toxics/cti/cti.htm. Accessed October 6, 2015.

EnviroMINE, 2016. Project Description for the El Monte Sand Mining Project. January, 2016.

EnviroMine Inc. 2015a. *Project Description for the El Monte Sand Mining Project, Lakeside, CA.* May.

EnviroMine Inc. 2015b. *Personal Communication Dennis Fransway*. June 19.

Linscott Law & Greenspan Engineers (LLG). 2016. *Traffic Impact Analysis El Monte Sand Mining and Reclamation Project County of San Diego, CA.* May 4.

National Cancer Institute. 2014. SEER Cancer Statistics Factsheets: All Cancer Sites. National Cancer Institute. Bethesda, MD, Accessed: http://seer.cancer.gov/statfacts/html/all.html., June 16, 2015.

Office of Environmental Health Hazard Assessment, 2015. *Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments*. February, http://www.oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf

San Diego, County of (County). 2007. *Guidelines for Determining Significance and Report Format and Content Requirements Air Quality.* March 19.

San Diego County Air Pollution Control District (SDAPCD). 2002. Air Quality in 2002.

SDAPCD. 2007. Air Quality in San Diego County 2007 Annual Report.

SDAPCD. 2011. New Source Review Requirements for Best Available Control Technology (BACT) Guidance Document. June 2011.

SDAPCD. 2013. Air Quality in San Diego 2013 Annual Report

SDAPCD. 2015. Supplemental Guidelines for Submission of Rule 1200 Health Risk Assessments (HRAs). June 2015.

SDAPCD. 2016. Regional Air Quality Strategy Revision. December.

USEPA. 2018. *The Greenbook Nonattainment Areas for Criteria Pollutants.* Available at https://www.epa.gov/green-book. Accessed April 2018.

WeatherCurrents.com (WC), 2015. *Lakeside 2E California (044710 and 044711) Period of Monthly Climate Summary*. Available: http://www.wrcc.dri.edu/summary/Climsmsca.html. Accessed June 2015.

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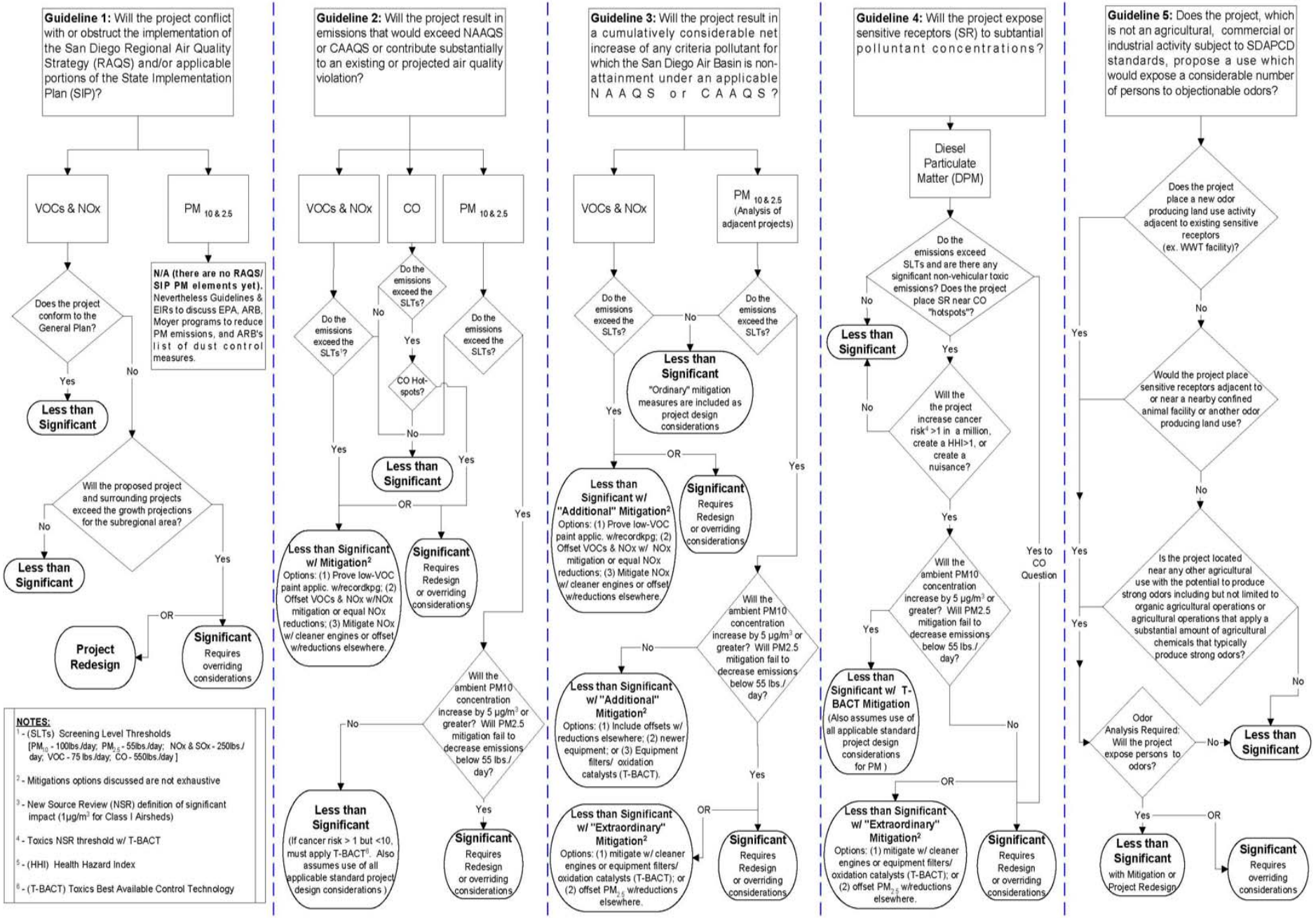
Appendix A

San Diego Significance Determination Guidance

Figure 1 - County of San Diego LUEG Air Quality CEQA Significance Flow for Privately Initiated Projects



Appendix B

Air Quality Assumptions & Emissions Calculations

El Monte Sand Mining Project
Assumptions

CalEEMod Inputs that are not modeling defaults:

Project Location:	County	
	San Diego	
Climate Zone:	13	
Operational Year:	2016-2019	Phase 1
	2019-2024	Phase 2
	2024-2028	Phase 3
	2028-2031	Phase 4
	2013-2035	Phase 5 (Reclamation)
	2020	Operational Emissions for Electric/Water/Solid Waste
Utility Company:	San Diego Gas and Electric	

Land Use Type:

Phase 1 - Mining Only			
Industrial	59	acres	General Light Industrial*
Phase 2 - Mining and Reclamation			
Parking	115	acres	Other non-asphalt surfaces
Phase 3 - Mining and Reclamation			
Parking	104	acres	Other non-asphalt surfaces
Phase 4 - Mining and Reclamation			
Parking	84	acres	Other non-asphalt surfaces
Phase 5 - Reclamation Only			
Parking	36	acres	Other non-asphalt surfaces

Note: General light industrial is used (assuming 1,000 sqft building) in order to allow for CalEEMod to accurately calculate emissions from electric use. Using other non-building type land uses result in no emissions estimates for electrical use. Parking is used when there are no operational/building type emissions to be modeled.

Mining Operations Schedule:

Phase	Area (acres)	Duration (Years)	Initiation Year	Completion Year
Mining 1	48	3	2016	2019
Mining 2	56	5	2019	2024
Reclamation 1	48	4	2019	2023
Mining 3	48	4	2024	2028
Reclamation 2	56	4	2024	2028
Mining 4	36	3	2028	2031
Reclamation 3	48	4	2028	2032
Reclamation 4	36	4	2031	2035

CONSTRUCTION INFORMATION

While there is temporary construction to develop the pad, berms and channel barrier, these operations would occur at the same time as the initial mining and would not require the operation of additional equipment. Therefore, construction emissions are modeled as part of operational activities.

El Monte Sand Mining Project
Assumptions

Overall Construction/Operation Mobile Equipment List

Purpose	Type/Model	#	Daily usage
Mineral excavation above water table	Loader – 988	1	10 hrs
Mineral excavation above water table, plant and truck loading	Loader – 980	2	10 hrs
Mineral excavation below water table	Dragline – 190D	1	10 hrs
General dust suppression	Water Truck	1	10 hrs
On-site road maintenance, finish grading	Grader – 12	1	5 hrs
Reclamation – rough grading	Dozer – D9	1	5 hrs
Onsite transportation of fill	Haul Truck 769	1	7.5 hrs
Mineral extraction	420 Excavator	1	5 hrs
3,500 gallon mobile fuel trailer	Fuel Tank	1	10 hrs
Transportation for site supervisor, QC	Pick-up truck	1	10 miles/day

PROJECT OPERATIONAL INFORMATION

Operational Equipment (Modeled under "Construction Phasing")

*All operations are modeled as 2016 year in order to maintain consistent fleet mix throughout operational activities. It is anticipated that unless equipment needs to be replaced the same equipment will be used onsite throughout the entier 19 year project life. Therefore the emissions factors for a typical 2016 (year operations will start) construction fleet is used to estimate worst-case emissions.

Aggregate Export

1,000,000 cubic yards per year
1,500,000 tons per year

Phase 1 Equipment List

Type/Model	#	HP	Daily usage	CalEEMod Designation
420 Excavator	1	293	5 hrs	Excavator
Grader – 12	1	179	5 hrs	Grader
Water Truck	1	330	10 hrs	Offhighway Truck
Haul Truck 769	1	450	7.5 hrs	Offhighway Truck
Pick-up truck	1	440	1 hr	Other construction Equipment
Loader – 980	2	260	10 hrs	Tractor/loader/backhoe
Loader – 988	1	501	10 hrs	Tractor/loader/backhoe
Fuel Tank	1	N/A	10 hrs	(not self moving no emissions)

*Dragline is not used because when water table is reached 2 of the loaders would not be operational.

*Dozer is not used because no reclamation is occurring at this time.

Phase 2,3, and 4 - Mining and Reclamation Equipment List

Type/Model	#	HP	Daily usage	CalEEMod Designation
420 Excavator	1	293	5 hrs	Excavator
Grader – 12	1	179	5 hrs	Grader
Water Truck	1	330	10 hrs	Offhighway Truck
Haul Truck 769	1	450	7.5 hrs	Offhighway Truck
Pick-up truck	1	440	10 miles/day	Other construction Equipment
Dragline – 190D	1	328	10 hrs	Other material handling Equipment
Dozer – D9	1	436	5 hrs	Dozer
Loader – 988	1	501	10 hrs	Tractor/loader/backhoe
Loader – 980	2	260	10 hrs	Tractor/loader/backhoe
Fuel Tank	1	N/A	10 hrs	(not self moving no emissions)

El Monte Sand Mining Project
Assumptions

Phase 5 - Final Reclamation Equipment List

Type/Model	#	HP	Daily usage	CalEEMod Designation
Grader – 12	1	179	5 hrs	Grader
Water Truck	1	330	10 hrs	Offhighway Truck
Pick-up truck	1	440	10 miles/day	Other construction Equipment
Dozer – D9	1	436	5 hrs	Dozer
Fuel Tank	1	N/A	10 hrs	(not self moving no emissions)

Operational Mobile Sources

Trip Rate: *(Included in the construction phasing information in CalEEMod)*

Estimated Daily Traffic Counts

Type	Purpose	Tons/load	One way trips	Round Trips
Heavy Traffic	Aggregate Transport	25	231	462
Heavy Traffic	Vendor Trips[1]	N/A[2]	2	4
Light Traffic	Employee commute & Visitors	N/A	12	24

[1.] Vendor trips include fuel delivery, service visits and supply delivery.

[2.] N/A = Not Applicable

Source: EnviroMine Inc., 2015a.

1,500,000	tons per year	
60,000	loads per year	120,000 trips per year
180,000	loads in phase 1 (3 years)	360,000 trips per phase
300,000	loads in phase 2 (5 years)	600,000 trips per phase
240,000	Loads in phase 3 (4 years)	480,000 trips per phase
180,000	loads in phase 4 (3 years)	360,000 trips per phase

Trip length 30 miles Assumes majority of the development occurs in the western portion of the County, and aggregate would be acquired from closest operating mine.

Location	*Miles* [1]	*Miles* [2]
Northwest (Lake Elsinore)	71	35.5
North (Lake Elsinore)	71	35.5
North East (Thermal)	125	62.5
Southeast (Ocotillo)	69	34.5
South (Campo)	39	19.5
Southwest (Imperial Beach)	28	28
West (San Diego)	21	21
Central (Default trip)	20	20

[1] Distance between Lakeside and eixisting aggregate area/City to the west. Existing Aggregate locations taken from CalCIMA San Diego Chapter. http://calcimasandiego.org/

[2] 1/2 way point between existing aggregate mine and Lakeside. Assumes use of closest mine. Or distance to City.

El Monte Sand Mining Project
Assumptions

Energy Use:

Natural Gas:	None	
Electric:	All Process Plant Equipment is electric	
	4,801	KWh daily
	1,504,102	KWh annually
	25493.25424	KWh annually per acre
	1504.102	KWh/ ksf

Water/Wastewater:

Process Water	126	acre-feet	annually
Dust Suppression	30	acre feet	annually
Waste water	None	No sewer connection	
gallons/year	50,832,823.37		

Solid Waste Generation:

Tons per week	75
Tons per year	2

El Monte Sand Mining Project
Revisions to Project Assumptions

Subsequent to the original analysis the project description has changed to include the following revisions. The amount of material extraction as well as the lengh of the extraction activities have been reduced as well as the number of daily haul trips (as detailed in the table below). In addition, a permanent processing plant has been added to the project and will operate in conjunction with the mobile onsite processing plant.

The analysis has been modified to reduce the emissions estimates by percentages associated with the reduction in sand and haul truck usage and to double emissions associated with the processing plant to include the addition of a similar sized permanent plant.

The health risk assumptions are not recalculated because the reduction in material production and haul trips would not be sufficient to reduce unmitigated emissions to a less than significant level. With the mitigation implemented the original analysis was reduced to below risk thresholds. Therefore, revisions to health risk are qualitatively addressed.

PROJECT DESCRIPTION, ORIGINAL VERSUS REVISED

	Original	Revised	Proportion change
Acreage affected			
Sand extraction (M cu yds)	12	6.9	43%
Sand extraction (M sh tons)	18	12.5	43%
Extraction time period (yrs)	15	12	
Total time period	19	16	
Max annual production (M sh tons)		1.1	
Max daily production (cu yds)	1,000,000	733,000	27%
Average truck trip, RT (mi)	30	21	30%
Vol material per truck load (sh tons)		27	
Truck trips/day One way	231	157	32%
Truck trips/day RT	462	314	32%
Truck miles/day		3297	
working days/yr	260	260	
Truck miles/yr		857220	

CORRECTIONS PER CLIENT TO - Table 4, AQ

Estimated Daily Traffic Counts -	one way	RT
Vendor trips	2	4
Employee trips	12	24

REVISIONS TO PROJECT EMISSIONS -operating

consider vendor/employees trips

[1]vendor and employee trips are less than 1% of the total trips. Emissions are considerably less from LD vehicles than from HD trucks.

Onsite Production

[2] An permenant processing plant is being added to the site operations in addition to the mobile plant. Because the plant is electric the only emissions are fugitive dust emissions.

Deduction for fewer haul trips

[3] HD Truck haul trips at the mine and associated off road emissions comprise the predominant volume of emissions.

[4] New Proj Descr is based on a 32% reduction in aggreg truck haul trips (due to less total aggreg mining) and no impact upon reclamation equipment use, other onsite vehicles or worker commute and vendor trips.

[5] Total volume of minerals to be extracted was reduced overall by 42% and avg daily production by 27%. Trucks hauling more aggreg per load due to use of lighter weight trailers; however overall load is the same.

[6] Therefore as a conservative estimate the following reductions were made:

a: Haul truck emissions were reduced by 32%

b: Non-processing plant fugitive dust emisisons were reduced by 27%

c: Fugitive dust emissions for processing plant were doubled.

d: Energy emissions from the operation of the processing plant are doubled.

e: Water consumption from the operation of the processing plant are doubled.

El Monte Sand Mining Project
Revised Regional Operational Emissions

Unmitigated Operational Emissions

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
			lbs/day			
Phase 1	13.80	196.97	121.34	0.43	91.50	22.63
Phase 2	17.59	244.20	145.68	0.48	95.21	25.09
Phase 3	17.59	244.20	145.68	0.48	95.21	25.09
Phase 4	17.59	244.20	145.68	0.48	95.21	25.09
Phase 5	2.90	32.76	20.17	0.03	42.72	10.44
Max Daily Emissions	**17.59**	**244.20**	**145.68**	**0.48**	**95.21**	**25.09**
Threshold	75	250	550	250	100	55
Significant?	No	No	No	No	No	No

Source: ESA CalEEMod modeling 2015

Phase 1 Mining activities in Phase 1 only
Phase 2 Mining activities in Phase 2, Reclamation activities in Phase 1
Phase 3 Mining activities in Phase 3, Reclamation activities in Phase 1 & 2
Phase 4 Mining activities in Phase 4, Reclamation activities in Phases 1, 2 & 3
Phase 5 Final reclamation activties

Mitigation: Tier 4 Equipment for onsite operations. Includes: Excavators, Graders, Loaders, Dragline and Dozers.

Mitigated Operational Emissions

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
			lbs/day			
Phase 1	11.61	169.81	131.18	0.43	90.11	21.35
Phase 2	12.39	182.34	156.42	0.48	91.93	22.07
Phase 3	12.39	182.34	156.42	0.48	91.93	22.07
Phase 4	12.39	182.34	156.42	0.48	91.93	22.07
Phase 5	2.90	32.76	20.17	0.03	42.72	10.44
Max Daily Emissions	**12.39**	**182.34**	**156.42**	**0.48**	**91.93**	**22.07**
Threshold	75	250	550	250	100	55
Significant?	No	No	No	No	No	No

Source: ESA CalEEMod modeling 2015

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Unmitigated Construction 2016 to 2017

Phase		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
		lbs/day					
1	Total	*13.80*	*196.97*	*121.34*	*0.43*	*91.50*	*22.63*
	Onsite	5.13	64.83	28.59	0.08	81.31	18.68
	Offsite	8.67	132.14	92.75	0.35	10.19	3.95
2	Total	*17.59*	***244.20***	*145.68*	*0.48*	*95.21*	*25.09*
	Onsite	8.92	112.06	52.92	0.13	85.02	21.14
	Offsite	8.67	132.14	92.75	0.35	10.19	3.95
3	Total	*17.59*	***244.20***	*145.68*	*0.48*	*95.21*	*25.09*
	Onsite	8.92	112.06	52.92	0.13	85.02	21.14
	Offsite	8.67	132.14	92.75	0.35	10.19	3.95
4	Total	*17.59*	***244.20***	*145.68*	*0.48*	*95.21*	*25.09*
	onsite	8.92	112.06	52.92	0.13	85.02	21.14
	offsite	8.67	132.14	92.75	0.35	10.19	3.95
5	Total	*2.90*	*32.76*	*20.17*	*0.03*	*42.72*	*10.44*
	onsite	2.76	32.26	18.53	0.03	42.49	10.38
	offsite	0.14	0.50	1.64	0.00	0.23	0.07
SD	Thresholds	75	250	550	250	100	55
	Significant	**No**	**No**	**No**	**No**	**No**	**No**

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Note: The origional CalEEMod Modeling was not updated to address the revisions to the project description after the original modeling was completed. However, the CalEEMod output was adjusted as follows to account for the changes to the emissions that occur due to the revisions to the project description.

1: Emissions from CalEEMod for haul trucks were reduced by 32% for Phases 1 through 4.
2: Fugitive dust emissions from CalEEMod for mining activities were reduced by 27% for Phases 1 through 4.
3: Fugitive dust emissions from the Processing Plant were doubled in the "Max" emissions calculations for Phases 1 through 4.

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Unmitigated Construction 2016 to 2017

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
		lbs/day Winter					
		Winter MAX					
1	Total	13.798184	196.9728	121.3413	0.430376	91.50021	22.62814
	onsite	5.1261	64.8347	28.5871	0.0798	81.31	18.68
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
2	total	17.593184	244.1988	145.6753	0.479276	95.21235	25.0936
	onsite	8.9211	112.0607	52.9211	0.1287	85.02	21.14
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
3	total	17.593184	244.1988	145.6753	0.479276	95.21235	25.0936
	onsite	8.9211	112.0607	52.9211	0.1287	85.02	21.14
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
4	Total	17.593184	244.1988	145.6753	0.479276	95.21235	25.0936
	onsite	8.9211	112.0607	52.9211	0.1287	85.02	21.14
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
5	Total	2.9007	32.7597	20.1698	0.0323	42.7228	10.44206
	onsite	2.7635	32.261	18.5278	0.029	42.49	10.38
	offsite	0.1372	0.4987	1.642	0.0033	0.231	0.0666

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Onsite Mining/Reclamation Operations

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 - Mining Only							
	Fugitive	-	-	-	-	0.516694	0.063072
	Onsite	5.1047	64.8347	28.587	7.98E-02	2.3214	2.1356
	Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
	Vendor	0.0483	0.3883	0.5989	9.50E-04	0.0323	0.0129
	Worker	0.0889	0.1105	1.0431	2.35E-03	0.1986	0.0537
Phase 2 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	8.8997	112.0607	52.921	0.1287	4.2249	3.8869
	Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
	Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
	Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 3 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	8.8997	112.0607	52.921	0.1287	4.2249	3.8869
	Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
	Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
	Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 4 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	8.8997	112.0607	52.921	0.1287	4.2249	3.8869
	Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
	Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
	Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 5 - Reclamation Only							
	Fugitive	-	-	-	-	1.9347	0.9196
	Onsite	2.7421	32.261	18.5277	0.029	1.3211	1.2163
	Offsite	0.1372	0.4987	1.642	3.30E-03	0.231	0.0666

Fugitive Dust Emissions from Processing Plant

*Processing plant equipment is all electric. There are no exhaust emissions from this equipment

		Processing	PM_{10} EF	PM_{10}	$PM_{2.5}$
	quantity	tons/day	lbs/ton	lbs/day	lbs/day
Screen	2	5,770	0.0022	25.39	5.33
Conveyer	4	5,770	0.00004	0.92	0.19
Stacker	1	5,770	0.00004	0.23	0.05
Feeder	1	5,770	0.0022	12.69	2.67
Total				**39.24**	**8.24**

***Source AP42 - Section 11.19.2:** **Used "Controlled" factors as aggregate will be wet and water will be used to control fugitive dust emissions.**

Based on ARB speciation, it was estimated that 21 percent of fugitive dust PM_{10} is $PM_{2.5}$

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Onsite emissions from non-process operations

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
			lbs/day			
			Winter			
Area	0.0214	0	1.00E-04	0.00E+00	0	0
Energy	0	0	0	0.00E+00	0	0
Mobile	0	0	0	0	0	0
Total	0.0214	0	0.0001	0	0	0

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Unmitigated Construction 2016 to 2017

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
		lbs/day Summer					
		Summer Max					
2016	Total	13.09652	193.1923	103.0543	0.430832	91.49681	22.62502
	onsite	5.1261	64.8347	28.5871	0.0798	81.31	18.68
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2017	total	16.89152	240.4183	127.3883	0.477732	95.20895	25.09048
	onsite	8.9211	112.0607	52.9211	0.1267	85.02	21.14
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2018	total	16.89152	240.4183	127.3883	0.477732	95.20895	25.09048
	onsite	8.9211	112.0607	52.9211	0.1267	85.02	21.14
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2019	Total	16.89152	240.4183	127.3883	0.477732	95.20895	25.09048
	onsite	8.9211	112.0607	52.9211	0.1267	85.02	21.14
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2020	Total	2.8891	32.7385	20.0465	0.03245	42.7227	10.44196
	onsite	2.7635	32.261	18.5278	0.029	42.49	10.38
	offsite	0.1256	0.4775	1.5187	0.00345	0.2309	0.0665

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Onsite Mining/Reclamation Operations

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 - Mining Only							
	Fugitive	-	-	-	-	0.516694	0.063072
	Onsite	5.1047	64.8347	28.587	0.0798	2.3214	2.1356
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	9.50E-04	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	2.50E-03	0.1986	0.0537
Phase 2 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	8.8997	112.0607	52.921	0.1267	4.2249	3.8869
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 3 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	8.8997	112.0607	52.921	0.1267	4.2249	3.8869
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 4 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	8.8997	112.0607	52.921	0.1267	4.2249	3.8869
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 5 - Reclamation Only							
	Fugitive	-	-	-	-	1.9347	0.9196
	Onsite	2.7421	32.261	18.5277	0.029	1.3211	1.2163
	Offsite	0.1256	0.4775	1.5187	3.45E-03	0.2309	0.0665

Fugitive Dust Emissions from Processing Plant

*Processing plant equipment is all electric. There are no exhaust emissions from this equipment

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Onsite emissions from non-process operations

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
			lbs/day			
			Summer			
Area	0.0214	0	13-4	0.00E+00	0	0
Energy	0	0	0	0.00E+00	0	0
Mobile	0	0	0	0	0	0
Total	0.0214	0	0	0	0	0

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Mitigation:

1 Tier 4 or equivalent equipment

Mitigated Construction

Phase		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
		lbs/day					
1	Total	*11.61*	*169.81*	*131.18*	*0.43*	*90.11*	*21.35*
	Onsite	2.94	37.67	38.42	0.08	79.92	17.40
	Offsite	8.67	132.14	92.75	0.35	10.19	3.95
2	Total	*12.39*	*182.34*	*156.42*	*0.48*	*91.93*	*22.07*
	Onsite	3.72	50.20	63.67	0.13	81.74	18.12
	Offsite	8.67	132.14	92.75	0.35	10.19	3.95
3	Total	*12.39*	*182.34*	*156.42*	*0.48*	*91.93*	*22.07*
	Onsite	3.72	50.20	63.67	0.13	81.74	18.12
	Offsite	8.67	132.14	92.75	0.35	10.19	3.95
4	Total	*12.39*	*182.34*	*156.42*	*0.48*	*91.93*	*22.07*
	onsite	3.72	50.20	63.67	0.13	81.74	18.12
	offsite	8.67	132.14	92.75	0.35	10.19	3.95
5	Total	*2.90*	*32.76*	*20.17*	*0.03*	*42.72*	*10.44*
	onsite	2.76	32.26	18.53	0.03	42.49	10.38
	offsite	0.14	0.50	1.64	0.00	0.23	0.07
SD	Thresholds	75	250	550	250	100	55
	Significant	**No**	**No**	**No**	**No**	**No**	**No**

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Mitigated Construction

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
		lbs/day Winter					
		Winter MAX					
1	Total	11.612784	169.8112	131.1757	0.430376	90.10661	21.34714
	onsite	2.9407	37.6731	38.4215	0.0798	79.92	17.40
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
2	total	12.389484	182.336	156.4195	0.477276	91.92705	22.0729
	onsite	3.7174	50.1979	63.6653	0.1267	81.74	18.12
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
3	total	12.389484	182.336	156.4195	0.477276	91.92705	22.0729
	onsite	3.7174	50.1979	63.6653	0.1267	81.74	18.12
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
4	Total	12.389484	182.336	156.4195	0.477276	91.92705	22.0729
	onsite	3.7174	50.1979	63.6653	0.1267	81.74	18.12
	offsite	8.672084	132.1381	92.75425	0.350576	10.19011	3.950352
5	Total	2.9007	32.7597	20.1698	0.0323	42.7228	10.44206
	onsite	2.7635	32.261	18.5278	0.029	42.49	10.38
	offsite	0.1372	0.4987	1.642	0.0033	0.231	0.0666

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Mitigated Onsite Mining/Reclamation Operations

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 - Mining Only						
Fugitive	-	-	-	-	0.516694	0.063072
Onsite	2.9193	37.6731	38.4214	7.98E-02	0.9278	0.8546
Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 2 - Mining and Reclamation						
Fugitive	-	-	-	-	2.325342	0.777231
Onsite	3.696	50.1979	63.6652	0.1267	0.9396	0.8662
Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 3 - Mining and Reclamation						
Fugitive	-	-	-	-	2.325342	0.777231
Onsite	3.696	50.1979	63.6652	0.1267	0.9396	0.8662
Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 4 - Mining and Reclamation						
Fugitive	-	-	-	-	2.325342	0.777231
Onsite	3.696	50.1979	63.6652	0.1267	0.9396	0.8662
Haul	8.534884	131.6393	91.11225	0.347276	9.959212	3.883752
Vendor	0.0483	0.3883	0.5989	0.00095	0.0323	0.0129
Worker	0.0889	0.1105	1.0431	0.00235	0.1986	0.0537
Phase 5 - Reclamation Only						
Fugitive	-	-	-	-	1.9347	0.9196
Onsite	2.7421	32.261	18.5277	0.029	1.3211	1.2163
Offsite	0.1372	0.4987	1.642	0.0033	0.231	0.0666

Fugitive Dust Emissions from Processing Plant

*Processing plant equipment is all electric. There are no emissions from this equipment

		Processing	PM10 EF	PM10	PM2.5
	quantity	tons/day	lbs/ton	lbs/day	lbs/day
Screen	2	5,770	0.0022	25.39	5.33
Conveyer	4	5,770	0.00004	0.92	0.19
Stacker	1	5,770	0.00004	0.23	0.05
Feeder	1	5,770	0.0022	12.69	2.67
Total				**39.24**	**8.24**

***Source AP42 - Section 11.19.2**

Based on ARB speciation, it was estimated that 21 percent of fugitive dust PM10 is PM2.5

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Onsite emissions from non-process operations

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
			lbs/day			
			Winter			
Area	0.0214	0	1.00E-04	0.00E+00	0	0
Energy	0	0	0	0.00E+00	0	0
Mobile	0	0	0	0	0	0
Total	0.0214	0	0.0001	0	0	0

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Mitigated Construction

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
		lbs/day Summer					
		Summer Max					
2016	Total	10.91112	166.0307	112.8887	0.430832	90.10321	21.34402
	onsite	2.9407	37.6731	38.4215	0.0798	79.92	17.40
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2017	total	11.68782	178.5555	138.1325	0.477732	91.92365	22.06978
	onsite	3.7174	50.1979	63.6653	0.1267	81.74	18.12
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2018	total	11.68782	178.5555	138.1325	0.477732	91.92365	22.06978
	onsite	3.7174	50.1979	63.6653	0.1267	81.74	18.12
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2019	Total	11.68782	178.5555	138.1325	0.477732	91.92365	22.06978
	onsite	3.7174	50.1979	63.6653	0.1267	81.74	18.12
	offsite	7.97042	128.3576	74.4672	0.351032	10.18671	3.947224
2020	Total	2.8891	32.7385	20.0465	0.03245	42.7227	10.44196
	onsite	2.7635	32.261	18.5278	0.029	42.49	10.38
	offsite	0.1256	0.4775	1.5187	0.00345	0.2309	0.0665

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Mitigated Onsite Mining/Reclamation Operations

		ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1 - Mining Only							
	Fugitive	-	-	-	-	0.516694	0.063072
	Onsite	2.9193	37.6731	38.4214	0.0798	0.9278	0.8546
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 2 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	3.696	50.1979	63.6652	0.1267	0.9396	0.8662
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 3 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	3.696	50.1979	63.6652	0.1267	0.9396	0.8662
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 4 - Mining and Reclamation							
	Fugitive	-	-	-	-	2.325342	0.777231
	Onsite	3.696	50.1979	63.6652	0.1267	0.9396	0.8662
	Haul	7.84482	127.88	72.9485	0.347582	9.955812	3.880624
	Vendor	0.0417	0.3791	0.445	0.00095	0.0323	0.0129
	Worker	0.0839	0.0985	1.0737	0.0025	0.1986	0.0537
Phase 5 - Reclamation Only							
	Fugitive	-	-	-	-	1.9347	0.9196
	Onsite	2.7421	32.261	18.5277	0.029	1.3211	1.2163
	Offsite	0.1256	0.4775	1.5187	3.45E-03	0.2309	0.0665

Fugitive Dust Emissions from Processing Plant

*Processing plant equipment is all electric. There are no emissions from this equipment

El Monte Sand Mining Project

Operational Emissions Inputs - Revised based on updated PD

Onsite emissions from non-process operations

	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
			lbs/day			
			Summer			
Area	0.0214	0	13-4	0.00E+00	0	0
Energy	0	0	0	0.00E+00	0	0
Mobile	0	0	0	0	0	0
Total	0.0214	0	0	0	0	0

El Monte Mining and Reclamation Project

CO Hotspot Summary

		Existing + Project		Near Term + Project	
Intersection	**Int ID**	**AM**	**PM**	**AM**	**PM**
Mapleview St & SR 67	**1**	2,880	4,656	3,218	5,070
Mapleview St & Maine Ave	**2**	1,630	2,125	1,720	2,233
Mapleview St & Vine St	**3**	1,638	1,880	1,713	1,972
Mapleview St & Ashwood St	**4**	2,731	2,275	2,821	2,487
Lake Jennings Park Rd & Julian Ave/El Monte Rd	**5**	1,424	1,520	1,574	1,705
El Monte Rd & Project Driveway 1	**6**	364	370	364	371
El Mote Rd & Project Driveway 2	**7**	265	281	267	282
Lake Jennings Park Rd & Blossom Valley Rd	**8**	2,049	2,166	2,365	2,593
Lake Jennings Park Rd & I-8 WB Ramps	**9**	2,079	2,220	2,509	2,850
Lake Jennings Park Rd & I-8 EB Ramps/ Olde Hwy 80	**10**	1,411	1,952	1,877	2,780
Max		2,880	4,656	3,218	5,070

*CO Hotspot emissions are not adjusted based on the revised analysis. Still consistent with the original traffic study.

Appendix C
CalEEMod Output

Appendix C - Unmitigated CalEEMod Output

El Monte Mining and Reclamation - Operations of Phase 1

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	48.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - *General Light industrial is used to calculate emissions from electrical/water/solid waste.

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	110.00	261.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	NT24E	4.27	1,504.20
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	4.54	0.00
tblGrading	AcresOfGrading	81.56	275.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblLandUse	LotAcreage	0.02	48.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00

tblOffRoadEquipment	HorsePower	97.00	260.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	1.24	2.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	231,250.00	0.00
tblWater	OutdoorWaterUseRate	0.00	50,832,823.37

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	17.7932	259.6407	164.2176	0.5938	13.8915	4.9624	18.8539	3.5507	4.5651	8.1158	0.0000	60,050.6722	60,050.6722	2.8709	0.0000	60,110.9611
Total	**17.7932**	**259.6407**	**164.2176**	**0.5938**	**13.8915**	**4.9624**	**18.8539**	**3.5507**	**4.5651**	**8.1158**	**0.0000**	**60,050.6722**	**60,050.6722**	**2.8709**	**0.0000**	**60,110.9611**

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	17.7932	259.6407	164.2176	0.5938	12.9436	4.9624	17.9060	3.4350	4.5651	8.0001	0.0000	60,050.6722	60,050.6722	2.8709	0.0000	60,110.9611
Total	**17.7932**	**259.6407**	**164.2176**	**0.5938**	**12.9436**	**4.9624**	**17.9060**	**3.4350**	**4.5651**	**8.0001**	**0.0000**	**60,050.6722**	**60,050.6722**	**2.8709**	**0.0000**	**60,110.9611**

	ROG	NOx	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**	**6.82**	**0.00**	**5.03**	**3.26**	**0.00**	**1.43**	**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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Tractors/Loaders/Backhoes	2	10.00	260	0.37
Grading	Tractors/Loaders/Backhoes	1	10.00	501	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
Grading	8	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					1.6558	0.0000	1.6558	0.2022	0.0000	0.2022			0.0000			0.0000
Off-Road	5.1047	64.8347	28.5870	0.0798		2.3214	2.3214		2.1356	2.1356		8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**5.1047**	**64.8347**	**28.5870**	**0.0798**	**1.6558**	**2.3214**	**3.9771**	**0.2022**	**2.1356**	**2.3378**		**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

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					0.7078	0.0000	0.7078	0.0864	0.0000	0.0864			0.0000			0.0000
Off-Road	5.1047	64.8347	28.5870	0.0798		2.3214	2.3214		2.1356	2.1356	0.0000	8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**5.1047**	**64.8347**	**28.5870**	**0.0798**	**0.7078**	**2.3214**	**3.0292**	**0.0864**	**2.1356**	**2.2221**	**0.0000**	**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0214	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	0.0214	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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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 Vegetation

El Monte Mining and Reclamation - Operations of Phase 1

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	48.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - *General Light industrial is used to calculate emissions from electrical/water/solid waste.

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	110.00	261.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	NT24E	4.27	1,504.20
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	4.54	0.00
tblGrading	AcresOfGrading	81.56	275.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblLandUse	LotAcreage	0.02	48.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00

tblOffRoadEquipment	HorsePower	97.00	260.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	1.24	2.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	231,250.00	0.00
tblWater	OutdoorWaterUseRate	0.00	50,832,823.37

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	16.7668	253.3711	137.3829	0.5943	13.8915	4.9574	18.8489	3.5507	4.5605	8.1112	0.0000	60,145.3590	60,145.3590	2.8677	0.0000	60,205.5800
Total	**16.7668**	**253.3711**	**137.3829**	**0.5943**	**13.8915**	**4.9574**	**18.8489**	**3.5507**	**4.5605**	**8.1112**	**0.0000**	**60,145.3590**	**60,145.3590**	**2.8677**	**0.0000**	**60,205.5800**

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	16.7668	253.3711	137.3829	0.5943	12.9436	4.9574	17.9010	3.4350	4.5605	7.9955	0.0000	60,145.3590	60,145.3590	2.8677	0.0000	60,205.5800
Total	**16.7668**	**253.3711**	**137.3829**	**0.5943**	**12.9436**	**4.9574**	**17.9010**	**3.4350**	**4.5605**	**7.9955**	**0.0000**	**60,145.3590**	**60,145.3590**	**2.8677**	**0.0000**	**60,205.5800**

	ROG	NOx	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**	**6.82**	**0.00**	**5.03**	**3.26**	**0.00**	**1.43**	**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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Tractors/Loaders/Backhoes	2	10.00	260	0.37
Grading	Tractors/Loaders/Backhoes	1	10.00	501	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
Grading	8	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					1.6558	0.0000	1.6558	0.2022	0.0000	0.2022			0.0000			0.0000
Off-Road	5.1047	64.8347	28.5870	0.0798		2.3214	2.3214		2.1356	2.1356		8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**5.1047**	**64.8347**	**28.5870**	**0.0798**	**1.6558**	**2.3214**	**3.9771**	**0.2022**	**2.1356**	**2.3378**		**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

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					0.7078	0.0000	0.7078	0.0864	0.0000	0.0864			0.0000			0.0000
Off-Road	5.1047	64.8347	28.5870	0.0798		2.3214	2.3214		2.1356	2.1356	0.0000	8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**5.1047**	**64.8347**	**28.5870**	**0.0798**	**0.7078**	**2.3214**	**3.0292**	**0.0864**	**2.1356**	**2.2221**	**0.0000**	**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0214	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	0.0214	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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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 Vegetation

El Monte Mining and Reclamation - Operations of Phase 1

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	48.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - *General Light industrial is used to calculate emissions from electrical/water/solid waste.

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	110.00	261.00
tblEnergyUse	LightingElect	3.25	0.00
tblEnergyUse	NT24E	4.27	1,504.20
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	4.54	0.00
tblGrading	AcresOfGrading	81.56	275.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblLandUse	LotAcreage	0.02	48.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00

tblOffRoadEquipment	HorsePower	97.00	260.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	1.24	2.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	231,250.00	0.00
tblWater	OutdoorWaterUseRate	0.00	50,832,823.37

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	2.2682	33.9738	20.2766	0.0775	1.7796	0.6472	2.4268	0.4552	0.5954	1.0506	0.0000	7,115.1161	7,115.1161	0.3397	0.0000	7,122.2489
Total	**2.2682**	**33.9738**	**20.2766**	**0.0775**	**1.7796**	**0.6472**	**2.4268**	**0.4552**	**0.5954**	**1.0506**	**0.0000**	**7,115.1161**	**7,115.1161**	**0.3397**	**0.0000**	**7,122.2489**

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	2.2682	33.9738	20.2766	0.0775	1.6559	0.6472	2.3031	0.4401	0.5954	1.0355	0.0000	7,115.1149	7,115.1149	0.3397	0.0000	7,122.2477
Total	**2.2682**	**33.9738**	**20.2766**	**0.0775**	**1.6559**	**0.6472**	**2.3031**	**0.4401**	**0.5954**	**1.0355**	**0.0000**	**7,115.1149**	**7,115.1149**	**0.3397**	**0.0000**	**7,122.2477**

	ROG	NOx	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**	**6.95**	**0.00**	**5.10**	**3.32**	**0.00**	**1.44**	**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	tons/yr										MT/yr					
Area	3.9100e-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	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	491.5858	491.5858	0.0198	4.0900e-003	493.2703
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.4060	0.0000	0.4060	0.0240	0.0000	0.9098
Water						0.0000	0.0000		0.0000	0.0000	0.0000	184.5661	184.5661	7.4300e-003	1.5400e-003	185.1986
Total	**3.9100e-003**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4060**	**676.1519**	**676.5579**	**0.0512**	**5.6300e-003**	**679.3788**

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	3.9100e-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	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	491.5858	491.5858	0.0198	4.0900e-003	493.2703
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.4060	0.0000	0.4060	0.0240	0.0000	0.9098
Water						0.0000	0.0000		0.0000	0.0000	0.0000	184.5661	184.5661	7.4300e-003	1.5400e-003	185.1986
Total	**3.9100e-003**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4060**	**676.1519**	**676.5579**	**0.0512**	**5.6300e-003**	**679.3788**

	ROG	NOx	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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Tractors/Loaders/Backhoes	2	10.00	260	0.37
Grading	Tractors/Loaders/Backhoes	1	10.00	501	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
Grading	8	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					0.2161	0.0000	0.2161	0.0264	0.0000	0.0264	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6662	8.4609	3.7306	0.0104		0.3029	0.3029		0.2787	0.2787	0.0000	980.5037	980.5037	0.2958	0.0000	986.7145
Total	**0.6662**	**8.4609**	**3.7306**	**0.0104**	**0.2161**	**0.3029**	**0.5190**	**0.0264**	**0.2787**	**0.3051**	**0.0000**	**980.5037**	**980.5037**	**0.2958**	**0.0000**	**986.7145**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

3.2 Grading - 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					0.0924	0.0000	0.0924	0.0113	0.0000	0.0113	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6662	8.4609	3.7306	0.0104		0.3029	0.3029		0.2787	0.2787	0.0000	980.5025	980.5025	0.2958	0.0000	986.7133
Total	**0.6662**	**8.4609**	**3.7306**	**0.0104**	**0.0924**	**0.3029**	**0.3953**	**0.0113**	**0.2787**	**0.2900**	**0.0000**	**980.5025**	**980.5025**	**0.2958**	**0.0000**	**986.7133**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

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	491.5858	491.5858	0.0198	4.0900e-003	493.2703
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	491.5858	491.5858	0.0198	4.0900e-003	493.2703
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
General Light Industry	0	0.0000	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.5042e+006	491.5858	0.0198	4.0900e-003	493.2703
Total		**491.5858**	**0.0198**	**4.0900e-003**	**493.2703**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.5042e+006	491.5858	0.0198	4.0900e-003	493.2703
Total		**491.5858**	**0.0198**	**4.0900e-003**	**493.2703**

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	3.9100e-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	2.0000e-005
Unmitigated	3.9100e-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	2.0000e-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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-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	2.0000e-005
Total	**3.9100e-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**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-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	2.0000e-005
Total	**3.9100e-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**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	184.5661	7.4300e-003	1.5400e-003	185.1986
Unmitigated	184.5661	7.4300e-003	1.5400e-003	185.1986

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 50.8328	184.5661	7.4300e-003	1.5400e-003	185.1986
Total		**184.5661**	**7.4300e-003**	**1.5400e-003**	**185.1986**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 50.8328	184.5661	7.4300e-003	1.5400e-003	185.1986
Total		**184.5661**	**7.4300e-003**	**1.5400e-003**	**185.1986**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4060	0.0240	0.0000	0.9098
Unmitigated	0.4060	0.0240	0.0000	0.9098

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2	0.4060	0.0240	0.0000	0.9098
Total		**0.4060**	**0.0240**	**0.0000**	**0.9098**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2	0.4060	0.0240	0.0000	0.9098
Total		**0.4060**	**0.0240**	**0.0000**	**0.9098**

9.0 Operational Offroad

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

10.0 Vegetation

El Monte Mining and Reclamation - Operations of Phases 2,3 &4

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	115.00	Acre	115.00	5,009,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblGrading	AcresOfGrading	81.56	775.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	97.00	560.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	HorsePower	167.00	328.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	25.00	24.00

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	21.5882	306.8666	188.5516	0.6407	19.6869	6.8659	26.5528	5.8390	6.3164	12.1553	0.0000	64,929.5438	64,929.5438	4.3425	0.0000	65,020.7372
Total	**21.5882**	**306.8666**	**188.5516**	**0.6407**	**19.6869**	**6.8659**	**26.5528**	**5.8390**	**6.3164**	**12.1553**	**0.0000**	**64,929.5438**	**64,929.5438**	**4.3425**	**0.0000**	**65,020.7372**

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	21.5882	306.8666	188.5516	0.6407	15.4211	6.8659	22.2870	4.4132	6.3164	10.7296	0.0000	64,929.5438	64,929.5438	4.3425	0.0000	65,020.7372
Total	**21.5882**	**306.8666**	**188.5516**	**0.6407**	**15.4211**	**6.8659**	**22.2870**	**4.4132**	**6.3164**	**10.7296**	**0.0000**	**64,929.5438**	**64,929.5438**	**4.3425**	**0.0000**	**65,020.7372**

	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**	**21.67**	**0.00**	**16.07**	**24.42**	**0.00**	**11.73**	**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	Grading	Grading	1/1/2016	12/31/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Other Material Handling Equipment	1	10.00	328	0.40
Grading	Rubber Tired Dozers	1	5.00	436	0.40
Grading	Tractors/Loaders/Backhoes	1	10.00	501	0.37
Grading	Tractors/Loaders/Backhoes	2	10.00	560	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
Grading	10	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					7.4512	0.0000	7.4512	2.4904	0.0000	2.4904			0.0000			0.0000
Off-Road	8.8997	112.0607	52.9210	0.1267		4.2249	4.2249		3.8869	3.8869		13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**8.8997**	**112.0607**	**52.9210**	**0.1267**	**7.4512**	**4.2249**	**11.6761**	**2.4904**	**3.8869**	**6.3773**		**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

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					3.1854	0.0000	3.1854	1.0647	0.0000	1.0647			0.0000			0.0000
Off-Road	8.8997	112.0607	52.9210	0.1267		4.2249	4.2249		3.8869	3.8869	0.0000	13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**8.8997**	**112.0607**	**52.9210**	**0.1267**	**3.1854**	**4.2249**	**7.4103**	**1.0647**	**3.8869**	**4.9516**	**0.0000**	**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

El Monte Mining and Reclamation - Operations of Phases 2,3 &4

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	115.00	Acre	115.00	5,009,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblGrading	AcresOfGrading	81.56	775.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	97.00	560.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	HorsePower	167.00	328.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	25.00	24.00

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	20.5618	300.5970	161.7168	0.6413	19.6869	6.8609	26.5478	5.8390	6.3118	12.1507	0.0000	65,024.2307	65,024.2307	4.3393	0.0000	65,115.3561
Total	**20.5618**	**300.5970**	**161.7168**	**0.6413**	**19.6869**	**6.8609**	**26.5478**	**5.8390**	**6.3118**	**12.1507**	**0.0000**	**65,024.2307**	**65,024.2307**	**4.3393**	**0.0000**	**65,115.3561**

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	20.5618	300.5970	161.7168	0.6413	15.4211	6.8609	22.2820	4.4132	6.3118	10.7250	0.0000	65,024.2307	65,024.2307	4.3393	0.0000	65,115.3561
Total	**20.5618**	**300.5970**	**161.7168**	**0.6413**	**15.4211**	**6.8609**	**22.2820**	**4.4132**	**6.3118**	**10.7250**	**0.0000**	**65,024.2307**	**65,024.2307**	**4.3393**	**0.0000**	**65,115.3561**

	ROG	NOx	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**	**21.67**	**0.00**	**16.07**	**24.42**	**0.00**	**11.73**	**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	Grading	Grading	1/1/2016	12/31/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Other Material Handling Equipment	1	10.00	328	0.40
Grading	Rubber Tired Dozers	1	5.00	436	0.40
Grading	Tractors/Loaders/Backhoes	1	10.00	501	0.37
Grading	Tractors/Loaders/Backhoes	2	10.00	560	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
Grading	10	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					7.4512	0.0000	7.4512	2.4904	0.0000	2.4904			0.0000			0.0000
Off-Road	8.8997	112.0607	52.9210	0.1267		4.2249	4.2249		3.8869	3.8869		13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**8.8997**	**112.0607**	**52.9210**	**0.1267**	**7.4512**	**4.2249**	**11.6761**	**2.4904**	**3.8869**	**6.3773**		**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

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					3.1854	0.0000	3.1854	1.0647	0.0000	1.0647			0.0000			0.0000
Off-Road	8.8997	112.0607	52.9210	0.1267		4.2249	4.2249		3.8869	3.8869	0.0000	13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**8.8997**	**112.0607**	**52.9210**	**0.1267**	**3.1854**	**4.2249**	**7.4103**	**1.0647**	**3.8869**	**4.9516**	**0.0000**	**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

El Monte Mining and Reclamation - Operations of Phases 2,3 &4

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	115.00	Acre	115.00	5,009,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblGrading	AcresOfGrading	81.56	775.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	97.00	560.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	HorsePower	167.00	328.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	25.00	24.00

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	2.7635	40.1368	23.4522	0.0837	2.5359	0.8956	3.4315	0.7538	0.8239	1.5778	0.0000	7,692.7140	7,692.7140	0.5139	0.0000	7,703.5055
Total	**2.7635**	**40.1368**	**23.4522**	**0.0837**	**2.5359**	**0.8956**	**3.4315**	**0.7538**	**0.8239**	**1.5778**	**0.0000**	**7,692.7140**	**7,692.7140**	**0.5139**	**0.0000**	**7,703.5055**

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	2.7635	40.1368	23.4522	0.0837	1.9792	0.8956	2.8748	0.5678	0.8239	1.3917	0.0000	7,692.7122	7,692.7122	0.5139	0.0000	7,703.5037
Total	**2.7635**	**40.1368**	**23.4522**	**0.0837**	**1.9792**	**0.8956**	**2.8748**	**0.5678**	**0.8239**	**1.3917**	**0.0000**	**7,692.7122**	**7,692.7122**	**0.5139**	**0.0000**	**7,703.5037**

	ROG	NOx	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**	**21.95**	**0.00**	**16.22**	**24.68**	**0.00**	**11.79**	**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	Grading	Grading	1/1/2016	12/31/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Other Material Handling Equipment	1	10.00	328	0.40
Grading	Rubber Tired Dozers	1	5.00	436	0.40
Grading	Tractors/Loaders/Backhoes	1	10.00	501	0.37
Grading	Tractors/Loaders/Backhoes	2	10.00	560	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
Grading	10	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					0.9724	0.0000	0.9724	0.3250	0.0000	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1614	14.6239	6.9062	0.0165		0.5514	0.5514		0.5072	0.5072	0.0000	1,558.1016	1,558.1016	0.4700	0.0000	1,567.9712
Total	**1.1614**	**14.6239**	**6.9062**	**0.0165**	**0.9724**	**0.5514**	**1.5237**	**0.3250**	**0.5072**	**0.8322**	**0.0000**	**1,558.1016**	**1,558.1016**	**0.4700**	**0.0000**	**1,567.9712**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5342**

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					0.4157	0.0000	0.4157	0.1389	0.0000	0.1389	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.1614	14.6239	6.9062	0.0165		0.5514	0.5514		0.5072	0.5072	0.0000	1,558.0998	1,558.0998	0.4700	0.0000	1,567.9693
Total	**1.1614**	**14.6239**	**6.9062**	**0.0165**	**0.4157**	**0.5514**	**0.9670**	**0.1389**	**0.5072**	**0.6462**	**0.0000**	**1,558.0998**	**1,558.0998**	**0.4700**	**0.0000**	**1,567.9693**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

El Monte Mining and Reclamation - Operations of Phases 5 (Reclamation Only)

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	36.00	Acre	36.00	1,568,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Consumer Products - no area operations

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	2352240	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	75.00	261.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-06
tblGrading	AcresOfGrading	81.56	187.50
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00

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	2.8793	32.7597	20.1696	0.0323	4.7494	1.3294	6.0787	2.2110	1.2230	3.4340	0.0000	3,308.4446	3,308.4446	0.9215	0.0000	3,327.7967
Total	**2.8793**	**32.7597**	**20.1696**	**0.0323**	**4.7494**	**1.3294**	**6.0787**	**2.2110**	**1.2230**	**3.4340**	**0.0000**	**3,308.4446**	**3,308.4446**	**0.9215**	**0.0000**	**3,327.7967**

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	2.8793	32.7597	20.1696	0.0323	2.1584	1.3294	3.4878	0.9795	1.2230	2.2025	0.0000	3,308.4446	3,308.4446	0.9215	0.0000	3,327.7967
Total	**2.8793**	**32.7597**	**20.1696**	**0.0323**	**2.1584**	**1.3294**	**3.4878**	**0.9795**	**1.2230**	**2.2025**	**0.0000**	**3,308.4446**	**3,308.4446**	**0.9215**	**0.0000**	**3,327.7967**

	ROG	NOx	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**	**54.55**	**0.00**	**42.62**	**55.70**	**0.00**	**35.86**	**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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Rubber Tired Dozers	1	5.00	436	0.40

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
Grading	4	24.00	4.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					4.5257	0.0000	4.5257	2.1512	0.0000	2.1512			0.0000			0.0000

Off-Road	2.7421	32.2610	18.5277	0.0290		1.3221	1.3221		1.2163	1.2163		3,017.9798	3,017.9798	0.9103		3,037.0967
Total	**2.7421**	**32.2610**	**18.5277**	**0.0290**	**4.5257**	**1.3221**	**5.8478**	**2.1512**	**1.2163**	**3.3675**		**3,017.9798**	**3,017.9798**	**0.9103**		**3,037.0967**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**0.1372**	**0.4987**	**1.6420**	**3.3000e-003**	**0.2237**	**7.2700e-003**	**0.2310**	**0.0599**	**6.6900e-003**	**0.0666**		**290.4648**	**290.4648**	**0.0112**		**290.7000**

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					1.9347	0.0000	1.9347	0.9196	0.0000	0.9196			0.0000			0.0000
Off-Road	2.7421	32.2610	18.5277	0.0290		1.3221	1.3221		1.2163	1.2163	0.0000	3,017.9798	3,017.9798	0.9103		3,037.0967
Total	**2.7421**	**32.2610**	**18.5277**	**0.0290**	**1.9347**	**1.3221**	**3.2568**	**0.9196**	**1.2163**	**2.1360**	**0.0000**	**3,017.9798**	**3,017.9798**	**0.9103**		**3,037.0967**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**0.1372**	**0.4987**	**1.6420**	**3.3000e-003**	**0.2237**	**7.2700e-003**	**0.2310**	**0.0599**	**6.6900e-003**	**0.0666**		**290.4648**	**290.4648**	**0.0112**		**290.7000**

El Monte Mining and Reclamation - Operations of Phases 5 (Reclamation Only)

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	36.00	Acre	36.00	1,568,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Consumer Products - no area operations

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	2352240	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	75.00	261.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-06
tblGrading	AcresOfGrading	81.56	187.50
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00

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	2.8677	32.7385	20.0464	0.0325	4.7494	1.3293	6.0787	2.2110	1.2230	3.4340	0.0000	3,321.8628	3,321.8628	0.9215	0.0000	3,341.2145
Total	**2.8677**	**32.7385**	**20.0464**	**0.0325**	**4.7494**	**1.3293**	**6.0787**	**2.2110**	**1.2230**	**3.4340**	**0.0000**	**3,321.8628**	**3,321.8628**	**0.9215**	**0.0000**	**3,341.2145**

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	2.8677	32.7385	20.0464	0.0325	2.1584	1.3293	3.4877	0.9795	1.2230	2.2025	0.0000	3,321.8628	3,321.8628	0.9215	0.0000	3,341.2145
Total	**2.8677**	**32.7385**	**20.0464**	**0.0325**	**2.1584**	**1.3293**	**3.4877**	**0.9795**	**1.2230**	**2.2025**	**0.0000**	**3,321.8628**	**3,321.8628**	**0.9215**	**0.0000**	**3,341.2145**

	ROG	NOx	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**	**54.55**	**0.00**	**42.62**	**55.70**	**0.00**	**35.86**	**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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Rubber Tired Dozers	1	5.00	436	0.40

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
Grading	4	24.00	4.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					4.5257	0.0000	4.5257	2.1512	0.0000	2.1512			0.0000			0.0000

Off-Road	2.7421	32.2610	18.5277	0.0290		1.3221	1.3221		1.2163	1.2163		3,017.9798	3,017.9798	0.9103		3,037.0967
Total	**2.7421**	**32.2610**	**18.5277**	**0.0290**	**4.5257**	**1.3221**	**5.8478**	**2.1512**	**1.2163**	**3.3675**		**3,017.9798**	**3,017.9798**	**0.9103**		**3,037.0967**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**0.1256**	**0.4775**	**1.5187**	**3.4500e-003**	**0.2237**	**7.2100e-003**	**0.2309**	**0.0599**	**6.6300e-003**	**0.0665**		**303.8831**	**303.8831**	**0.0112**		**304.1179**

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					1.9347	0.0000	1.9347	0.9196	0.0000	0.9196			0.0000			0.0000
Off-Road	2.7421	32.2610	18.5277	0.0290		1.3221	1.3221		1.2163	1.2163	0.0000	3,017.9798	3,017.9798	0.9103		3,037.0967
Total	**2.7421**	**32.2610**	**18.5277**	**0.0290**	**1.9347**	**1.3221**	**3.2568**	**0.9196**	**1.2163**	**2.1360**	**0.0000**	**3,017.9798**	**3,017.9798**	**0.9103**		**3,037.0967**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**0.1256**	**0.4775**	**1.5187**	**3.4500e-003**	**0.2237**	**7.2100e-003**	**0.2309**	**0.0599**	**6.6300e-003**	**0.0665**		**303.8831**	**303.8831**	**0.0112**		**304.1179**

El Monte Mining and Reclamation - Operations of Phases 5 (Reclamation Only)

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	36.00	Acre	36.00	1,568,160.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Consumer Products - no area operations

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	2352240	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstructionPhase	NumDays	75.00	261.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-06
tblGrading	AcresOfGrading	81.56	187.50
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	10.00	24.00

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	0.3745	4.2753	2.6246	4.2200e-003	0.6191	0.1735	0.7926	0.2884	0.1596	0.4480	0.0000	391.9592	391.9592	0.1091	0.0000	394.2502
Total	**0.3745**	**4.2753**	**2.6246**	**4.2200e-003**	**0.6191**	**0.1735**	**0.7926**	**0.2884**	**0.1596**	**0.4480**	**0.0000**	**391.9592**	**391.9592**	**0.1091**	**0.0000**	**394.2502**

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	0.3745	4.2752	2.6246	4.2200e-003	0.2810	0.1735	0.4545	0.1277	0.1596	0.2873	0.0000	391.9587	391.9587	0.1091	0.0000	394.2498
Total	**0.3745**	**4.2752**	**2.6246**	**4.2200e-003**	**0.2810**	**0.1735**	**0.4545**	**0.1277**	**0.1596**	**0.2873**	**0.0000**	**391.9587**	**391.9587**	**0.1091**	**0.0000**	**394.2498**

	ROG	NOx	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**	**54.61**	**0.00**	**42.66**	**55.73**	**0.00**	**35.88**	**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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 187.5

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Rubber Tired Dozers	1	5.00	436	0.40

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
Grading	4	24.00	4.00	0.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					0.5906	0.0000	0.5906	0.2807	0.0000	0.2807	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	0.3578	4.2101	2.4179	3.7900e-003		0.1725	0.1725		0.1587	0.1587	0.0000	357.2914	357.2914	0.1078	0.0000	359.5546
Total	**0.3578**	**4.2101**	**2.4179**	**3.7900e-003**	**0.5906**	**0.1725**	**0.7631**	**0.2807**	**0.1587**	**0.4395**	**0.0000**	**357.2914**	**357.2914**	**0.1078**	**0.0000**	**359.5546**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**0.0167**	**0.0652**	**0.2067**	**4.3000e-004**	**0.0285**	**9.4000e-004**	**0.0295**	**7.6400e-003**	**8.7000e-004**	**8.5100e-003**	**0.0000**	**34.6677**	**34.6677**	**1.3300e-003**	**0.0000**	**34.6956**

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					0.2525	0.0000	0.2525	0.1200	0.0000	0.1200	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3578	4.2101	2.4179	3.7900e-003		0.1725	0.1725		0.1587	0.1587	0.0000	357.2910	357.2910	0.1078	0.0000	359.5542
Total	**0.3578**	**4.2101**	**2.4179**	**3.7900e-003**	**0.2525**	**0.1725**	**0.4250**	**0.1200**	**0.1587**	**0.2787**	**0.0000**	**357.2910**	**357.2910**	**0.1078**	**0.0000**	**359.5542**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**0.0167**	**0.0652**	**0.2067**	**4.3000e-004**	**0.0285**	**9.4000e-004**	**0.0295**	**7.6400e-003**	**8.7000e-004**	**8.5100e-003**	**0.0000**	**34.6677**	**34.6677**	**1.3300e-003**	**0.0000**	**34.6956**

Appendix C - Mitigated CalEEMod Output

El Monte Mining and Reclamation - Mitigated Operations of Phase 1

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	48.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - *General Light industrial is used to calculate emissions from electrical/water/solid waste.

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	110.00	261.00
tblEnergyUse	LightingElect	3.25	0.00

tblEnergyUse	NT24E	4.27	1,504.20
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	4.54	0.00
tblGrading	AcresOfGrading	81.56	275.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblLandUse	LotAcreage	0.02	48.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	97.00	260.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	1.24	2.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00

tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	231,250.00	0.00
tblWater	OutdoorWaterUseRate	0.00	50,832,823.37

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	17.7932	259.6407	164.2176	0.5938	13.8915	4.9624	18.8539	3.5507	4.5651	8.1158	0.0000	60,050.6722	60,050.6722	2.8709	0.0000	60,110.9611
Total	**17.7932**	**259.6407**	**164.2176**	**0.5938**	**13.8915**	**4.9624**	**18.8539**	**3.5507**	**4.5651**	**8.1158**	**0.0000**	**60,050.6722**	**60,050.6722**	**2.8709**	**0.0000**	**60,110.9611**

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	15.6078	232.4791	174.0520	0.5938	12.9436	3.5689	16.5124	3.4350	3.2841	6.7190	0.0000	60,050.6722	60,050.6722	2.8709	0.0000	60,110.9611
Total	**15.6078**	**232.4791**	**174.0520**	**0.5938**	**12.9436**	**3.5689**	**16.5124**	**3.4350**	**3.2841**	**6.7190**	**0.0000**	**60,050.6722**	**60,050.6722**	**2.8709**	**0.0000**	**60,110.9611**

	ROG	NOx	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	**12.28**	**10.46**	**-5.99**	**0.00**	**6.82**	**28.08**	**12.42**	**3.26**	**28.06**	**17.21**	**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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Tractors/Loaders/Backhoes	2	10.00	260	0.37
Grading	Tractors/Loaders/Backhoes	1	10.00	501	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
Grading	8	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					1.6558	0.0000	1.6558	0.2022	0.0000	0.2022			0.0000			0.0000
Off-Road	5.1047	64.8347	28.5870	0.0798		2.3214	2.3214		2.1356	2.1356		8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**5.1047**	**64.8347**	**28.5870**	**0.0798**	**1.6558**	**2.3214**	**3.9771**	**0.2022**	**2.1356**	**2.3378**		**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

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					0.7078	0.0000	0.7078	0.0864	0.0000	0.0864			0.0000			0.0000
Off-Road	2.9193	37.6731	38.4214	0.0798		0.9278	0.9278		0.8546	0.8546	0.0000	8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**2.9193**	**37.6731**	**38.4214**	**0.0798**	**0.7078**	**0.9278**	**1.6357**	**0.0864**	**0.8546**	**0.9410**	**0.0000**	**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0214	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	0.0214	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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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 Vegetation

El Monte Mining and Reclamation - Mitigated Operations of Phase 1

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	48.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - *General Light industrial is used to calculate emissions from electrical/water/solid waste.

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	110.00	261.00
tblEnergyUse	LightingElect	3.25	0.00

tblEnergyUse	NT24E	4.27	1,504.20
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	4.54	0.00
tblGrading	AcresOfGrading	81.56	275.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblLandUse	LotAcreage	0.02	48.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	97.00	260.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	1.24	2.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00

tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	231,250.00	0.00
tblWater	OutdoorWaterUseRate	0.00	50,832,823.37

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	16.7668	253.3711	137.3829	0.5943	13.8915	4.9574	18.8489	3.5507	4.5605	8.1112	0.0000	60,145.3590	60,145.3590	2.8677	0.0000	60,205.5800
Total	**16.7668**	**253.3711**	**137.3829**	**0.5943**	**13.8915**	**4.9574**	**18.8489**	**3.5507**	**4.5605**	**8.1112**	**0.0000**	**60,145.3590**	**60,145.3590**	**2.8677**	**0.0000**	**60,205.5800**

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	14.5814	226.2095	147.2173	0.5943	12.9436	3.5639	16.5074	3.4350	3.2795	6.7144	0.0000	60,145.3590	60,145.3590	2.8677	0.0000	60,205.5800
Total	**14.5814**	**226.2095**	**147.2173**	**0.5943**	**12.9436**	**3.5639**	**16.5074**	**3.4350**	**3.2795**	**6.7144**	**0.0000**	**60,145.3590**	**60,145.3590**	**2.8677**	**0.0000**	**60,205.5800**

	ROG	NOx	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	**13.03**	**10.72**	**-7.16**	**0.00**	**6.82**	**28.11**	**12.42**	**3.26**	**28.09**	**17.22**	**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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

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	0.0214	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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.0214**	**0.0000**	**1.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**2.2000e-004**	**2.2000e-004**	**0.0000**	**0.0000**	**2.3000e-004**

	ROG	NOx	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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Tractors/Loaders/Backhoes	2	10.00	260	0.37
Grading	Tractors/Loaders/Backhoes	1	10.00	501	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
Grading	8	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					1.6558	0.0000	1.6558	0.2022	0.0000	0.2022			0.0000			0.0000
Off-Road	5.1047	64.8347	28.5870	0.0798		2.3214	2.3214		2.1356	2.1356		8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**5.1047**	**64.8347**	**28.5870**	**0.0798**	**1.6558**	**2.3214**	**3.9771**	**0.2022**	**2.1356**	**2.3378**		**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

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					0.7078	0.0000	0.7078	0.0864	0.0000	0.0864			0.0000			0.0000
Off-Road	2.9193	37.6731	38.4214	0.0798		0.9278	0.9278		0.8546	0.8546	0.0000	8,282.1477	8,282.1477	2.4982		8,334.6096
Total	**2.9193**	**37.6731**	**38.4214**	**0.0798**	**0.7078**	**0.9278**	**1.6357**	**0.0864**	**0.8546**	**0.9410**	**0.0000**	**8,282.1477**	**8,282.1477**	**2.4982**		**8,334.6096**

3.2 Grading - 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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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					
General Light Industry	0	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.0214	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	0.0214	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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0214					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	**0.0214**	**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 Vegetation

El Monte Mining and Reclamation - Mitigated Operations of Phase 1

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	48.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - *General Light industrial is used to calculate emissions from electrical/water/solid waste.

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	110.00	261.00
tblEnergyUse	LightingElect	3.25	0.00

tblEnergyUse	NT24E	4.27	1,504.20
tblEnergyUse	NT24NG	7.25	0.00
tblEnergyUse	T24E	1.48	0.00
tblEnergyUse	T24NG	4.54	0.00
tblGrading	AcresOfGrading	81.56	275.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblLandUse	LotAcreage	0.02	48.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	97.00	260.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblSolidWaste	SolidWasteGenerationRate	1.24	2.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	20.00	24.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00

tblVehicleTrips	WD_TR	6.97	0.00
tblWater	IndoorWaterUseRate	231,250.00	0.00
tblWater	OutdoorWaterUseRate	0.00	50,832,823.37

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	2.2682	33.9738	20.2766	0.0775	1.7796	0.6472	2.4268	0.4552	0.5954	1.0506	0.0000	7,115.1161	7,115.1161	0.3397	0.0000	7,122.2489
Total	**2.2682**	**33.9738**	**20.2766**	**0.0775**	**1.7796**	**0.6472**	**2.4268**	**0.4552**	**0.5954**	**1.0506**	**0.0000**	**7,115.1161**	**7,115.1161**	**0.3397**	**0.0000**	**7,122.2489**

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	1.9830	30.4292	21.5600	0.0775	1.6559	0.4654	2.1212	0.4401	0.4282	0.8683	0.0000	7,115.1149	7,115.1149	0.3397	0.0000	7,122.2477
Total	**1.9830**	**30.4292**	**21.5600**	**0.0775**	**1.6559**	**0.4654**	**2.1212**	**0.4401**	**0.4282**	**0.8683**	**0.0000**	**7,115.1149**	**7,115.1149**	**0.3397**	**0.0000**	**7,122.2477**

	ROG	NOx	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	**12.57**	**10.43**	**-6.33**	**0.00**	**6.95**	**28.10**	**12.59**	**3.32**	**28.08**	**17.35**	**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	tons/yr										MT/yr					
Area	3.9100e-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	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	491.5858	491.5858	0.0198	4.0900e-003	493.2703
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.4060	0.0000	0.4060	0.0240	0.0000	0.9098
Water						0.0000	0.0000		0.0000	0.0000	0.0000	184.5661	184.5661	7.4300e-003	1.5400e-003	185.1986
Total	**3.9100e-003**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4060**	**676.1519**	**676.5579**	**0.0512**	**5.6300e-003**	**679.3788**

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	3.9100e-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	2.0000e-005
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	491.5858	491.5858	0.0198	4.0900e-003	493.2703
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.4060	0.0000	0.4060	0.0240	0.0000	0.9098
Water						0.0000	0.0000		0.0000	0.0000	0.0000	184.5661	184.5661	7.4300e-003	1.5400e-003	185.1986
Total	**3.9100e-003**	**0.0000**	**1.0000e-005**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4060**	**676.1519**	**676.5579**	**0.0512**	**5.6300e-003**	**679.3788**

	ROG	NOx	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	Grading	Grading	1/1/2016	12/30/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 275

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Tractors/Loaders/Backhoes	2	10.00	260	0.37
Grading	Tractors/Loaders/Backhoes	1	10.00	501	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
Grading	8	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Grading - 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					0.2161	0.0000	0.2161	0.0264	0.0000	0.0264	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6662	8.4609	3.7306	0.0104		0.3029	0.3029		0.2787	0.2787	0.0000	980.5037	980.5037	0.2958	0.0000	986.7145
Total	**0.6662**	**8.4609**	**3.7306**	**0.0104**	**0.2161**	**0.3029**	**0.5190**	**0.0264**	**0.2787**	**0.3051**	**0.0000**	**980.5037**	**980.5037**	**0.2958**	**0.0000**	**986.7145**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

3.2 Grading - 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					0.0924	0.0000	0.0924	0.0113	0.0000	0.0113	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3810	4.9163	5.0140	0.0104		0.1211	0.1211		0.1115	0.1115	0.0000	980.5025	980.5025	0.2958	0.0000	986.7133
Total	**0.3810**	**4.9163**	**5.0140**	**0.0104**	**0.0924**	**0.1211**	**0.2135**	**0.0113**	**0.1115**	**0.1228**	**0.0000**	**980.5025**	**980.5025**	**0.2958**	**0.0000**	**986.7133**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Light Industry	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513300	0.073549	0.191092	0.130830	0.036094	0.005140	0.012550	0.022916	0.001871	0.002062	0.006564	0.000586	0.003446

4.4 Fleet Mix

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	491.5858	491.5858	0.0198	4.0900e-003	493.2703
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	491.5858	491.5858	0.0198	4.0900e-003	493.2703
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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					
General Light Industry	0	0.0000	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	tons/yr										MT/yr					
General Light Industry	0	0.0000	0.0000	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.5042e+006	491.5858	0.0198	4.0900e-003	493.2703
Total		**491.5858**	**0.0198**	**4.0900e-003**	**493.2703**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	1.5042e+006	491.5858	0.0198	4.0900e-003	493.2703
Total		**491.5858**	**0.0198**	**4.0900e-003**	**493.2703**

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	3.9100e-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	2.0000e-005
Unmitigated	3.9100e-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	2.0000e-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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-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	2.0000e-005
Total	**3.9100e-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**	**2.0000e-005**

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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-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	2.0000e-005
Total	**3.9100e-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**	**2.0000e-005**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	184.5661	7.4300e-003	1.5400e-003	185.1986
Unmitigated	184.5661	7.4300e-003	1.5400e-003	185.1986

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 50.8328	184.5661	7.4300e-003	1.5400e-003	185.1986
Total		**184.5661**	**7.4300e-003**	**1.5400e-003**	**185.1986**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 50.8328	184.5661	7.4300e-003	1.5400e-003	185.1986
Total		**184.5661**	**7.4300e-003**	**1.5400e-003**	**185.1986**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.4060	0.0240	0.0000	0.9098
Unmitigated	0.4060	0.0240	0.0000	0.9098

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2	0.4060	0.0240	0.0000	0.9098
Total		**0.4060**	**0.0240**	**0.0000**	**0.9098**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	2	0.4060	0.0240	0.0000	0.9098
Total		**0.4060**	**0.0240**	**0.0000**	**0.9098**

9.0 Operational Offroad

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

10.0 Vegetation

El Monte Mining and Reclamation - Mitigated Operations of Phases 2,3 &4

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	115.00	Acre	115.00	5,009,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblGrading	AcresOfGrading	81.56	775.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	97.00	560.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00

tblOffRoadEquipment	HorsePower	167.00	328.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	25.00	24.00

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	21.5882	306.8666	188.5516	0.6407	19.6869	6.8659	26.5528	5.8390	6.3164	12.1553	0.0000	64,929.5438	64,929.5438	4.3425	0.0000	65,020.7372
Total	**21.5882**	**306.8666**	**188.5516**	**0.6407**	**19.6869**	**6.8659**	**26.5528**	**5.8390**	**6.3164**	**12.1553**	**0.0000**	**64,929.5438**	**64,929.5438**	**4.3425**	**0.0000**	**65,020.7372**

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	16.3845	245.0039	199.2958	0.6407	15.4211	3.5805	19.0016	4.4132	3.2957	7.7089	0.0000	64,929.5438	64,929.5438	4.3425	0.0000	65,020.7372
Total	**16.3845**	**245.0039**	**199.2958**	**0.6407**	**15.4211**	**3.5805**	**19.0016**	**4.4132**	**3.2957**	**7.7089**	**0.0000**	**64,929.5438**	**64,929.5438**	**4.3425**	**0.0000**	**65,020.7372**

	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	**24.10**	**20.16**	**-5.70**	**0.00**	**21.67**	**47.85**	**28.44**	**24.42**	**47.82**	**36.58**	**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	Grading	Grading	1/1/2016	12/31/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38

Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38
Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Other Material Handling Equipment	1	10.00	328	0.40
Grading	Rubber Tired Dozers	1	5.00	436	0.40
Grading	Tractors/Loaders/Backhoes	1	10.00	501	0.37
Grading	Tractors/Loaders/Backhoes	2	10.00	560	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
Grading	10	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					7.4512	0.0000	7.4512	2.4904	0.0000	2.4904			0.0000			0.0000
Off-Road	8.8997	112.0607	52.9210	0.1267		4.2249	4.2249		3.8869	3.8869		13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**8.8997**	**112.0607**	**52.9210**	**0.1267**	**7.4512**	**4.2249**	**11.6761**	**2.4904**	**3.8869**	**6.3773**		**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

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					3.1854	0.0000	3.1854	1.0647	0.0000	1.0647			0.0000			0.0000
Off-Road	3.6960	50.1979	63.6652	0.1267		0.9395	0.9395		0.8662	0.8662	0.0000	13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**3.6960**	**50.1979**	**63.6652**	**0.1267**	**3.1854**	**0.9395**	**4.1249**	**1.0647**	**0.8662**	**1.9309**	**0.0000**	**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	12.5513	194.3072	133.9887	0.5107	12.0120	2.6338	14.6458	3.2887	2.4228	5.7115		51,478.0597	51,478.0597	0.3615		51,485.6515
Vendor	0.0483	0.3883	0.5989	9.5000e-004	0.0266	5.7900e-003	0.0323	7.5700e-003	5.3300e-003	0.0129		94.7037	94.7037	7.6000e-004		94.7196
Worker	0.0889	0.1105	1.0431	2.3500e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		195.7611	195.7611	0.0104		195.9805
Total	**12.6885**	**194.8060**	**135.6306**	**0.5140**	**12.2357**	**2.6410**	**14.8768**	**3.3485**	**2.4295**	**5.7780**		**51,768.5245**	**51,768.5245**	**0.3727**		**51,776.3515**

El Monte Mining and Reclamation - Mitigated Operations of Phases 2,3 &4

San Diego County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	115.00	Acre	115.00	5,009,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

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tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblGrading	AcresOfGrading	81.56	775.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	97.00	560.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00

tblOffRoadEquipment	HorsePower	167.00	328.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	25.00	24.00

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	20.5618	300.5970	161.7168	0.6413	19.6869	6.8609	26.5478	5.8390	6.3118	12.1507	0.0000	65,024.2307	65,024.2307	4.3393	0.0000	65,115.3561
Total	**20.5618**	**300.5970**	**161.7168**	**0.6413**	**19.6869**	**6.8609**	**26.5478**	**5.8390**	**6.3118**	**12.1507**	**0.0000**	**65,024.2307**	**65,024.2307**	**4.3393**	**0.0000**	**65,115.3561**

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	15.3581	238.7343	172.4611	0.6413	15.4211	3.5755	18.9966	4.4132	3.2911	7.7043	0.0000	65,024.2307	65,024.2307	4.3393	0.0000	65,115.3561
Total	**15.3581**	**238.7343**	**172.4611**	**0.6413**	**15.4211**	**3.5755**	**18.9966**	**4.4132**	**3.2911**	**7.7043**	**0.0000**	**65,024.2307**	**65,024.2307**	**4.3393**	**0.0000**	**65,115.3561**

	ROG	NOx	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	**25.31**	**20.58**	**-6.64**	**0.00**	**21.67**	**47.89**	**28.44**	**24.42**	**47.86**	**36.59**	**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	Grading	Grading	1/1/2016	12/31/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38

Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Other Material Handling Equipment	1	10.00	328	0.40
Grading	Rubber Tired Dozers	1	5.00	436	0.40
Grading	Tractors/Loaders/Backhoes	1	10.00	501	0.37
Grading	Tractors/Loaders/Backhoes	2	10.00	560	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
Grading	10	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					7.4512	0.0000	7.4512	2.4904	0.0000	2.4904			0.0000			0.0000

Off-Road	8.8997	112.0607	52.9210	0.1267		4.2249	4.2249		3.8869	3.8869		13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**8.8997**	**112.0607**	**52.9210**	**0.1267**	**7.4512**	**4.2249**	**11.6761**	**2.4904**	**3.8869**	**6.3773**		**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

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					3.1854	0.0000	3.1854	1.0647	0.0000	1.0647			0.0000			0.0000
Off-Road	3.6960	50.1979	63.6652	0.1267		0.9395	0.9395		0.8662	0.8662	0.0000	13,161.0193	13,161.0193	3.9698		13,244.3857
Total	**3.6960**	**50.1979**	**63.6652**	**0.1267**	**3.1854**	**0.9395**	**4.1249**	**1.0647**	**0.8662**	**1.9309**	**0.0000**	**13,161.0193**	**13,161.0193**	**3.9698**		**13,244.3857**

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	11.5365	188.0588	107.2772	0.5111	12.0120	2.6288	14.6408	3.2887	2.4183	5.7069		51,559.3283	51,559.3283	0.3583		51,566.8525
Vendor	0.0417	0.3791	0.4450	9.5000e-004	0.0266	5.7300e-003	0.0323	7.5700e-003	5.2700e-003	0.0129		95.4354	95.4354	7.4000e-004		95.4509
Worker	0.0839	0.0985	1.0737	2.5000e-003	0.1972	1.4800e-003	0.1986	0.0523	1.3600e-003	0.0537		208.4477	208.4477	0.0104		208.6670
Total	**11.6621**	**188.5364**	**108.7959**	**0.5146**	**12.2357**	**2.6360**	**14.8718**	**3.3485**	**2.4249**	**5.7734**		**51,863.2114**	**51,863.2114**	**0.3695**		**51,870.9704**

El Monte Mining and Reclamation - Mitigated Operations of Phases 2,3 &4

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	115.00	Acre	115.00	5,009,400.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2020
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Operational activities only associated with "Construction" materials

Construction Phase - Based on project specific data

Off-road Equipment - Based on project specific information

Trips and VMT - based on project specific information

Grading - based on project specific excavation of 1 million cubic yards per year

Vehicle Trips - No operational vehicle trips not acounted for in "construction" phasing

Area Coating - No painting of modular building

Landscape Equipment - no landscaping

Energy Use - based on project information

Water And Wastewater - based on process and dust control water. No sewer usage

Solid Waste - based on project specific information

Construction Off-road Equipment Mitigation - Based on dust suppression requirements

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	DPF	No Change	Level 3
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	310.00	261.00
tblConstructionPhase	PhaseEndDate	12/30/2016	12/31/2016
tblGrading	AcresOfGrading	81.56	775.00
tblGrading	MaterialExported	0.00	1,000,000.00
tblOffRoadEquipment	HorsePower	162.00	293.00
tblOffRoadEquipment	HorsePower	174.00	179.00
tblOffRoadEquipment	HorsePower	255.00	436.00
tblOffRoadEquipment	HorsePower	97.00	501.00
tblOffRoadEquipment	HorsePower	97.00	560.00
tblOffRoadEquipment	HorsePower	400.00	330.00
tblOffRoadEquipment	HorsePower	400.00	450.00
tblOffRoadEquipment	HorsePower	171.00	440.00

tblOffRoadEquipment	HorsePower	167.00	328.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	5.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblProjectCharacteristics	OperationalYear	2014	2020
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	125,000.00	120,000.00
tblTripsAndVMT	VendorTripNumber	0.00	4.00
tblTripsAndVMT	WorkerTripNumber	25.00	24.00

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	2.7635	40.1368	23.4522	0.0837	2.5359	0.8956	3.4315	0.7538	0.8239	1.5778	0.0000	7,692.7140	7,692.7140	0.5139	0.0000	7,703.5055
Total	**2.7635**	**40.1368**	**23.4522**	**0.0837**	**2.5359**	**0.8956**	**3.4315**	**0.7538**	**0.8239**	**1.5778**	**0.0000**	**7,692.7140**	**7,692.7140**	**0.5139**	**0.0000**	**7,703.5055**

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	2.0844	32.0637	24.8543	0.0837	1.9792	0.4669	2.4461	0.5678	0.4297	0.9975	0.0000	7,692.7122	7,692.7122	0.5139	0.0000	7,703.5037
Total	**2.0844**	**32.0637**	**24.8543**	**0.0837**	**1.9792**	**0.4669**	**2.4461**	**0.5678**	**0.4297**	**0.9975**	**0.0000**	**7,692.7122**	**7,692.7122**	**0.5139**	**0.0000**	**7,703.5037**

	ROG	NOx	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	**24.57**	**20.11**	**-5.98**	**0.00**	**21.95**	**47.87**	**28.72**	**24.68**	**47.84**	**36.78**	**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	Grading	Grading	1/1/2016	12/31/2016	5	261	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 775

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	5.00	293	0.38
Grading	Graders	1	5.00	179	0.41
Grading	Off-Highway Trucks	1	10.00	330	0.38

Grading	Off-Highway Trucks	1	7.50	450	0.38
Grading	Other Construction Equipment	1	1.00	440	0.42
Grading	Other Material Handling Equipment	1	10.00	328	0.40
Grading	Rubber Tired Dozers	1	5.00	436	0.40
Grading	Tractors/Loaders/Backhoes	1	10.00	501	0.37
Grading	Tractors/Loaders/Backhoes	2	10.00	560	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
Grading	10	24.00	4.00	120,000.00	10.80	7.30	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use DPF for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					0.9724	0.0000	0.9724	0.3250	0.0000	0.3250	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Off-Road	1.1614	14.6239	6.9062	0.0165		0.5514	0.5514		0.5072	0.5072	0.0000	1,558.1016	1,558.1016	0.4700	0.0000	1,567.9712
Total	**1.1614**	**14.6239**	**6.9062**	**0.0165**	**0.9724**	**0.5514**	**1.5237**	**0.3250**	**0.5072**	**0.8322**	**0.0000**	**1,558.1016**	**1,558.1016**	**0.4700**	**0.0000**	**1,567.9712**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

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					0.4157	0.0000	0.4157	0.1389	0.0000	0.1389	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4823	6.5508	8.3083	0.0165		0.1226	0.1226		0.1130	0.1130	0.0000	1,558.0998	1,558.0998	0.4700	0.0000	1,567.9693
Total	**0.4823**	**6.5508**	**8.3083**	**0.0165**	**0.4157**	**0.1226**	**0.5383**	**0.1389**	**0.1130**	**0.2520**	**0.0000**	**1,558.0998**	**1,558.0998**	**0.4700**	**0.0000**	**1,567.9693**

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	1.5854	25.4477	16.3393	0.0667	1.5350	0.3433	1.8783	0.4212	0.3158	0.7370	0.0000	6,099.9447	6,099.9447	0.0426	0.0000	6,100.8388
Vendor	5.9400e-003	0.0510	0.0715	1.2000e-004	3.4000e-003	7.5000e-004	4.1500e-003	9.7000e-004	6.9000e-004	1.6600e-003	0.0000	11.2620	11.2620	9.0000e-005	0.0000	11.2638
Worker	0.0107	0.0142	0.1353	3.1000e-004	0.0251	1.9000e-004	0.0253	6.6700e-003	1.8000e-004	6.8500e-003	0.0000	23.4058	23.4058	1.2400e-003	0.0000	23.4317
Total	**1.6020**	**25.5129**	**16.5460**	**0.0671**	**1.5635**	**0.3443**	**1.9078**	**0.4288**	**0.3167**	**0.7455**	**0.0000**	**6,134.6124**	**6,134.6124**	**0.0439**	**0.0000**	**6,135.5344**

Appendix D
Health Risk Calculations

Appendix D – Health Risk Calculations

Table of Contents

PM10 Modeling Results 2

PM10 Emission Estimates for PM10 Modeling 2

AERMOD DPM Graphical Results 4

DPM Health Risk Assessment 8

Crystalline Silica Modeling Results 10

Cystalline Silica Emission Estimates 10

AERMOD Crystalline Silica Graphical Results 11

Crystalline Silica Health Risk Assessment 13

PM10 Modeling Results

PM10 Emission Estimates for PM10 Modeling

The worst-case construction and mining mass emission rate estimates (pounds per day) are based on CalEEMod runs conducted for Phases 1 through 5. The air quality modeling results can be found in Appendices B and C. Onsite mining and plant operations would occur between 7:00 am and 5:00 pm Monday through Friday. Aggregate transport will be conducted between 7:00 am and 5:00 pm Monday through Friday as well as 7:00 am to 1:00 pm on Saturdays. The site will be closed on Sundays and holidays. During maximum production, the site would generate 231 daily one-way truck trips. Table 1 shows the worst-case on- and off-site unmitigated and mitigated emission rates used in the dispersion modeling. Mitigation includes the implementation of MM-AQ-1, which would require all off-road equipment to be retrofitted with EPA certified Tier 4 or greater engines. The County of San Diego does not have specific Toxic – Best Available Control Technologies (T-BACT) for non-stationary sources; however, implementation of MM-AQ-1 would achieve a reduction in diesel particulate matter (DPM) by require the use the cleaner EPA certified Tier 4 engines for all off-road construction equipment.

TABLE 1
EMISSION RATES OF DIESEL PM10 (POUNDS PER DAY)

Category	On-site Exhaust Emissions	Off-site Exhaust Emissions	Total Exhaust Emissions
Unmitigated	4.22	2.64	6.86
Mitigated	1.32	2.64	3.96
Source: ESA, 2015			

On- and off-site emissions in pounds per hour were inputted into AERMOD. Pounds per day emissions from CalEEMod were divided by 10, the number of hours the Project would operate daily. Table 2 shows the worst-case hourly on- and off-site emission rates used in the dispersion modeling analysis. Since both on- and off-site emissions would be generated by mobile sources (i.e., tractors, haul trucks, excavators) volume line sources were used to represent project emissions. A line source was used to represent El Monte Road while a separate line source was used to represent the project site. The line sources are assumed to be 12 feet wide for on-site sources and 24 feet wide for off-site sources.

TABLE 2
EMISSION RATES OF DIESEL PM10 (POUNDS PER HOUR)

Category	On-site Exhaust Emissions	Off-site Exhaust Emissions[1]	Total Exhaust Emissions
Unmitigated	0.422	0.0445	0.686
Mitigated	0.132	0.0445	0.396
1 - Off-site exhaust emissions were adjust to account for a shorter trip length used in AERMOD Source: ESA, 2015			

AERMOD automatically converts line sources to a series of individual volume sources. Each line source within AERMOD was automatically converted into individual area sources of 7.32 meters per side for offsite two-lane roads and 3.66 meters per side for onsite one-lane roads. OEHHA's modeling guidance

was used to setup and run AERMOD, including pollutant type (PM10), averaging time, dispersion coefficient, and met data for Ramona Airport[1]. The modeling analysis also included the appropriate local terrain data obtained from AERMOD, which consisted of7.5-minute and 1-degree digital elevation model (DEM) files with a horizontal datum of NAD 27 and a vertical datum of NGVD 29.

The AERMOD results are shown in Figures 1 through 4 below.

[1] California Air Resources Board (CARB). Ramona Airport Met Data. http://www.arb.ca.gov/toxics/harp/metfiles2.htm. Accessed July 30, 2015.

AERMOD DPM Graphical Results

Figure 1: DPM Unmitigated Overview (blue lines represents volume line sources included in the modeling)

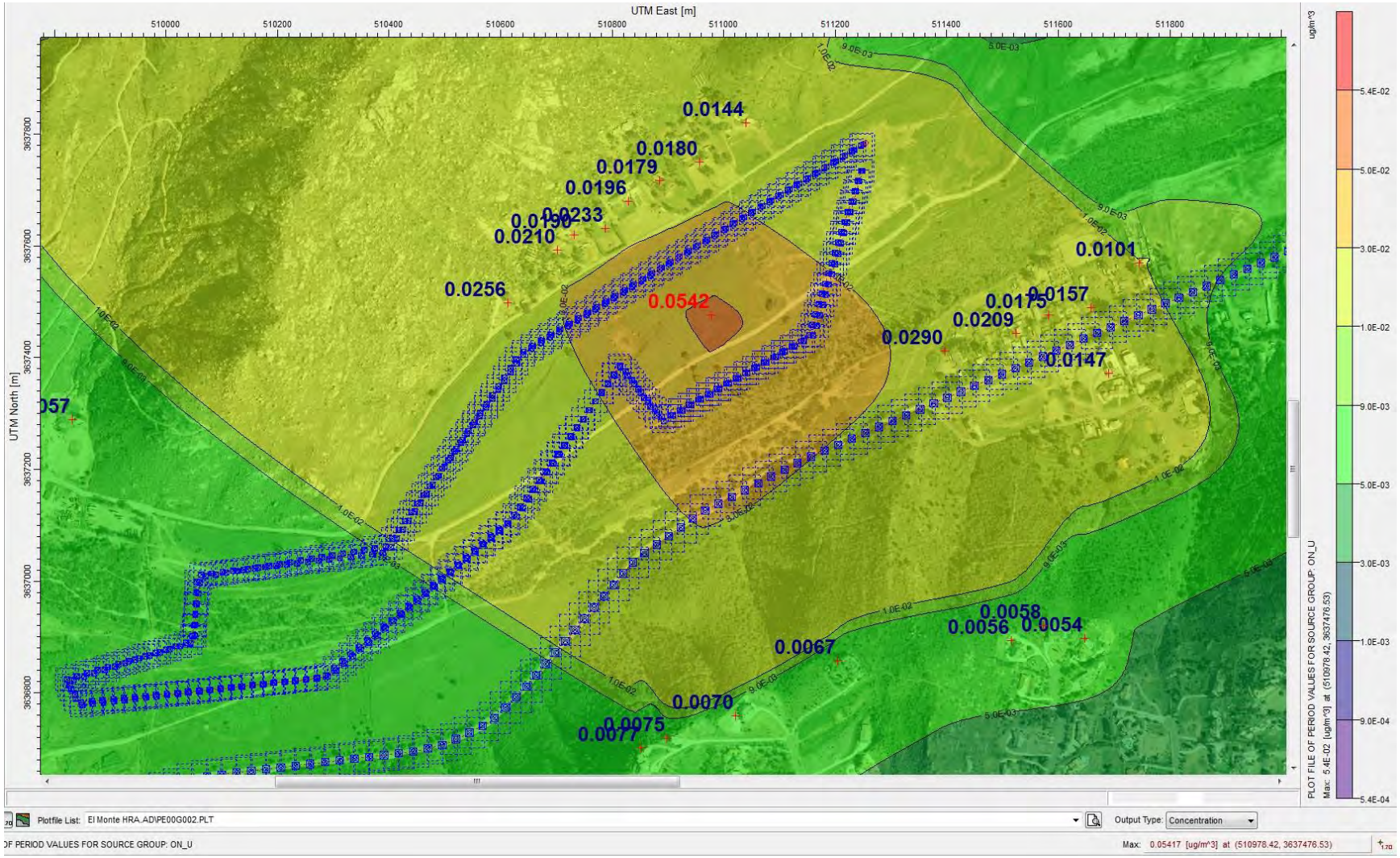


Figure 2: DPM Maximum Unmitigated On- and Off-Site Concentrations

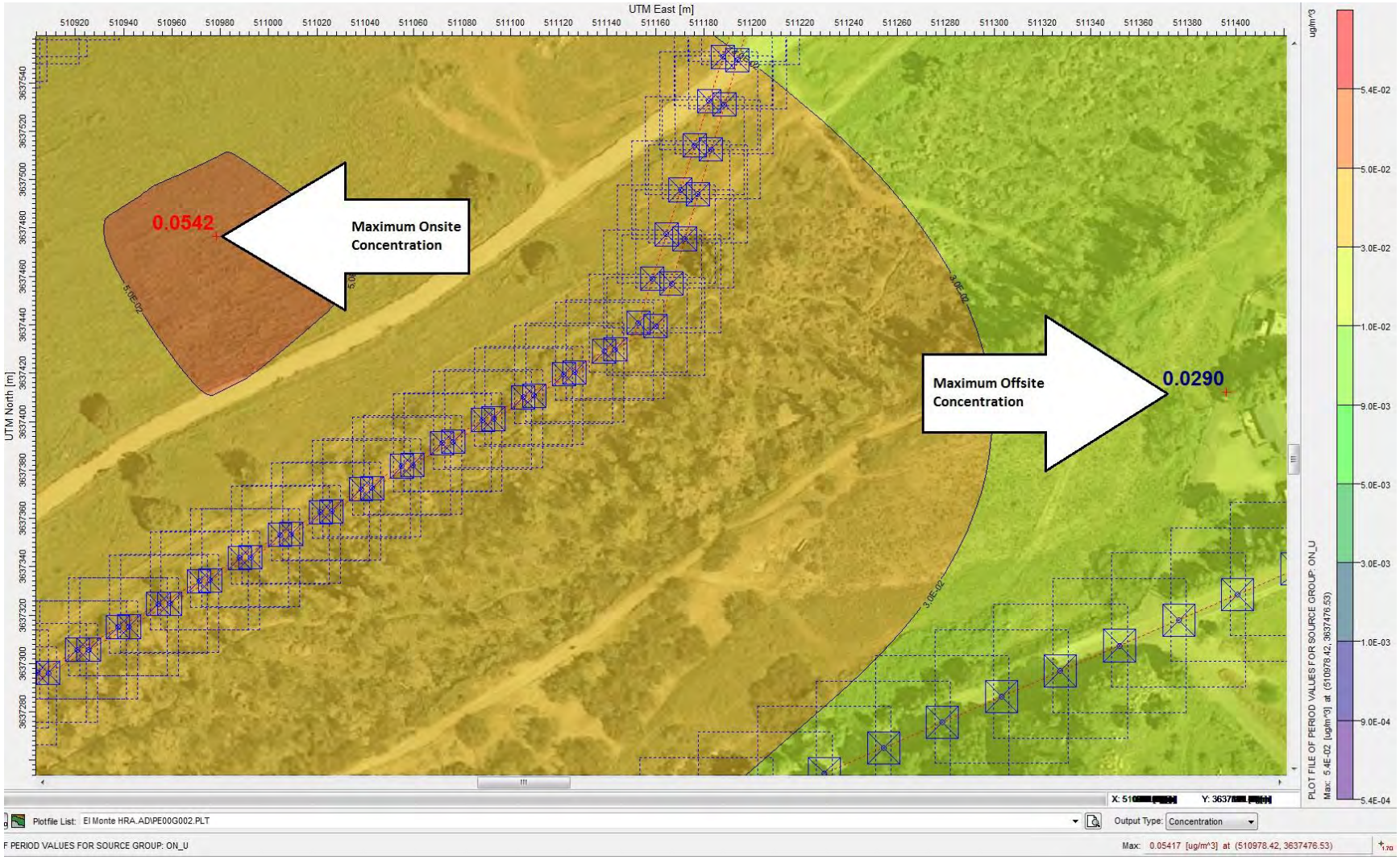


Figure 3: DPM Mitigated Overview (blue lines represents volume line sources included in the modeling)

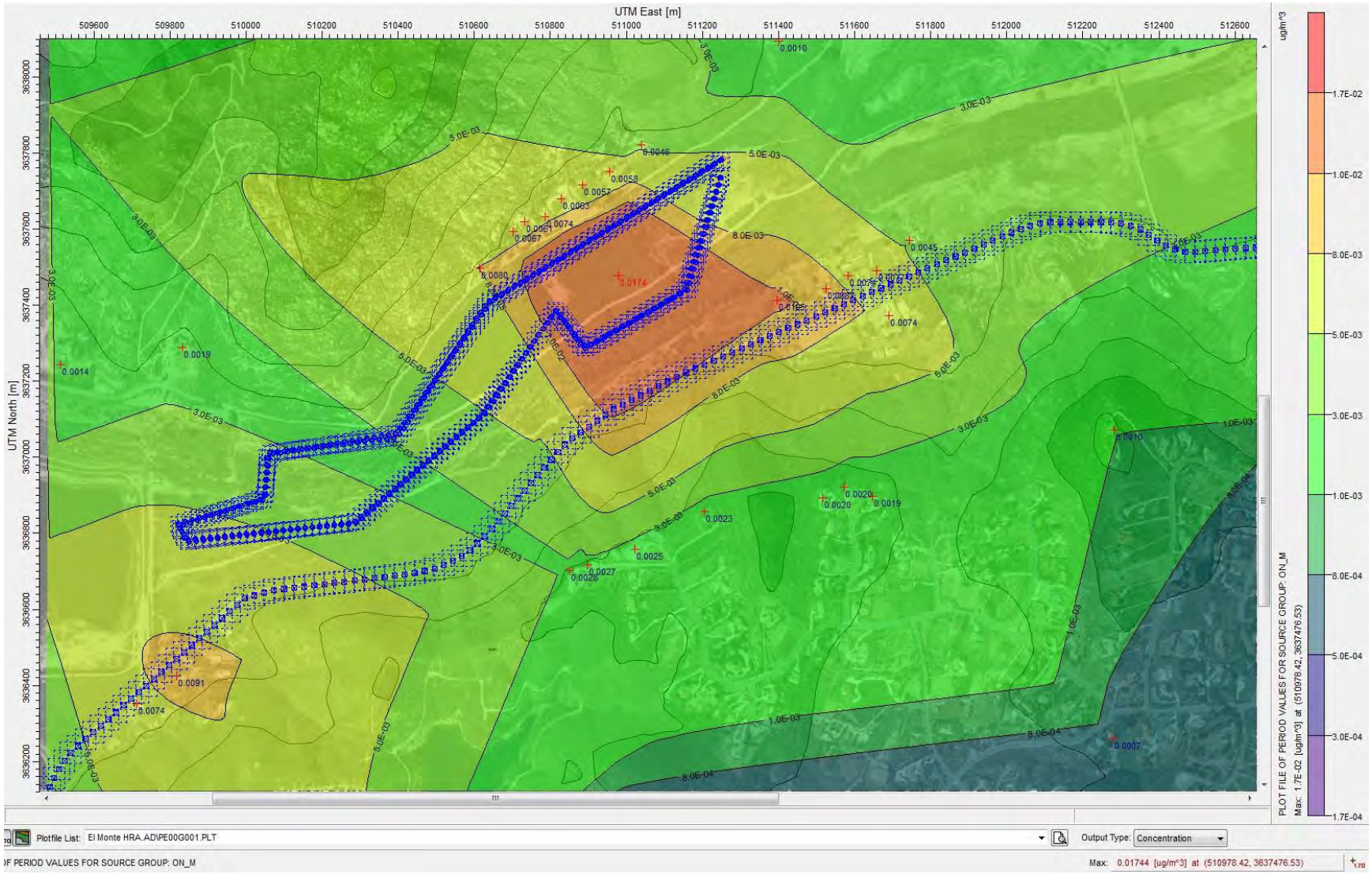
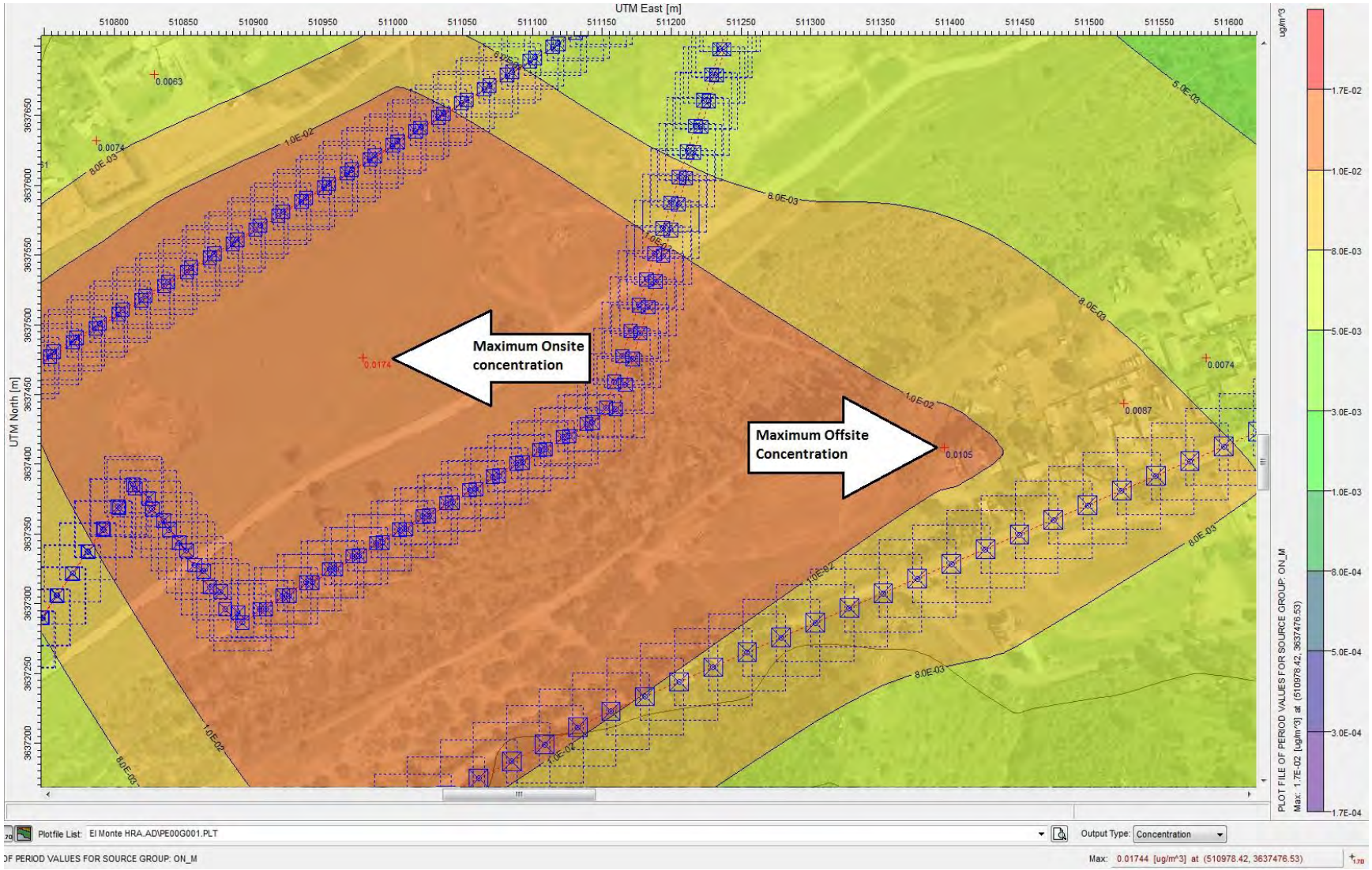


Figure 4: DPM Maximum Mitigated Concentration



DPM Health Risk Assessment

The health risk assessment combines the annual DPM concentrations and the DPM cancer potency factor and chronic reference exposure level (REL) to estimate cancer risk and chronic hazard index (HI). As shown in Figures 1 and 2, the maximum on- and off-site annual DPM concentrations were found to be 0.05 µg/m^3 onsite and 0.03 µg/m^3 offsite, respectively. These annual on- and off-site concentrations were entered into the California Air Resources Board's (CARB's) HARP 2 (risk assessment standalone tool) computer model to convert concentrations to cancer risks and chronic hazards. Cancer risks were estimated using a residential 30-year exposure and an occupational 25-year exposure.

According to SDAPCD's Regulation XII: Prohibitions, Rule 1200: Air Contaminants, an incremental cancer risk greater than 1 in one million without implementation of BACT, or greater than 10 in one million with the application of BACTs is considered a significant impact. The project would also result in a significant impact if residents or workers are exposed to chronic health hazards greater than one. The County of San Diego does not have specific Toxic – Best Available Control Technologies (T-BACT) for non-stationary sources. However, according to SDAPCD's *New Source review Requirements for Best Available Control Technology* (BACT) *Guidance Document*[2], the following applicable BACT's would apply to the project in respect to off-road construction equipment:

- California use Clean Diesel fuel and Turbocharger, Low Temperature Aftercooler, and Retardation of Fuel Injection Timing 4 Degrees from manufacturer's specification, EPA or ARB certified engine and PCV filter.

Table 3 shows unmitigated cancer risks and the hazard indices for on-site workers and off-site residences. The unmitigated HI is less than the threshold of one (calculated as the maximum annual DPM concentration of 0.05 µg/m^3 divided by the OEHHA inhalation REL for DPM of 5 µg/m^3). The maximum annual DPM concentrations would result in a 25-year occupational exposure cancer risk of 3.1 in one million and a 30-year residential exposure cancer risk of 26.5 in one million. The employees working within the project site and residences near the project would not be exposed to DPM concentrations that would exceed SDAPCD's cancer risk significance threshold of 1 in one million.

TABLE 3
UNMITIGATED CANCER RISK AND CHRONIC HAZARDS

Maximum Exposed Receptor	Cancer Risk (per million)	Chronic Hazard Index
Residential	**26.5**	0.006
Worker	3.1	0.01
Significance Threshold	1	1.0
Exceed Threshold?	Yes	No

Source: ESA, 2015

Additional modeling was conducted to evaluate health risks with implementation of MM-AQ-1. This mitigation measure represents toxics best available control technology (T-BACT) because it requires all

[2] San Diego County Air Pollution Control District (SDAPCD). 2011. New Source Review Requirements for Best Available Control Technology (BACT) Guidance Document. June 2011.

off-road equipment to be retrofitted with Tier 4 engines, which are the lowest emitting engines available. MM-AQ-1 results in significant DPM reductions. Detailed modeling assumptions and results can be found in Appendices B and C. The mitigated on- and off-site emission rates were entered into AERMOD. Figures 3 and 4 show the resulting annual concentrations, which were then converted to health risks using CARB's HARP 2 computer model. Table 2 shows the mitigated cancer risk and HI to on-site workers and off-site residences. The mitigated maximum annual DPM concentrations would result in a 25-year work exposure cancer risk of 1.1 in one million and 30-year residential exposure cancer risk of 8.8 in one million, which are both below the SDAPCD's cancer risk significance threshold of 10 in one million with implementation of T-BACT. [3]

TABLE 4
MITIGATED CANCER RISK AND CHRONIC HAZARDS

Maximum Exposed Receptor	Cancer Risk (per million)	Chronic Hazard Index
Residential	8.8	0.0021
Worker	1.1	0.0035
Significance Threshold	10	1.0
Exceed Threshold?	No	No

Source: ESA, 2015

[3] The San Diego Air Pollution Control District uses a threshold of 10 in one million if toxics best available control technology is implemented (SDAPCD Regulation X11, Rule 1200, Section (d)Standards, (1)Cancer Risk, (ii)T-BACT Applied.)

Crystalline Silica Modeling Results

Crystalline Silica Emission Estimates

The El Monte Sand Mine would export a maximum of 1,500,000 tons per year. To estimate the mass emission rate of crystalline silica from the project, a crystalline silica emission factor was used.[4] The emission factor for crystalline silica ranges from 0.000006 to 0.00011 lbs. per ton of material exported. For this analysis, the upper range of 0.00011 lbs. crystalline silica per ton of material was used to estimate the project's crystalline silica mass emission rate.

Assuming the project would export 1,500,000 tons of aggregate per year and using the emission factor of 0.00011 lbs. of crystalline silica emitted per ton of aggregate exported, the project would generate approximately 0.0825 tons per year of crystalline silica during mining operations. As previously stated, aggregate transport will occur would occur 10 hours a day Monday through Friday as well as 6 hours per day on Saturdays. Based on this mining schedule and the calculated tons per year of crystalline silica, the mass emission rate of crystalline silica would be 0.057 pounds per hour.

On-site emissions in pounds per hour of crystalline silica were inputted into AERMOD. Since on-site emissions would be generated by mobile sours (i.e., tractors, haul trucks, excavators) volume line sources were used to represent the project emissions. The line sources are assumed to be 12 feet wide for on-site sources and 24 feet wide for off-site sources.

AERMOD automatically converts line sources to a series of individual volume sources. Each line source within AERMOD was automatically converted into individual area sources of 7.32 meters offsite and 3.66 meters onsite per side. OEHHA's modeling guidance was used to setup and run AERMOD, including pollutant type (crystalline silica), averaging time, dispersion coefficient, and met data for Ramona Airport[5]. The modeling analysis also included the appropriate local terrain data obtained from AERMOD, which consisted of 7.5-minute and 1-degree DEM files with a horizontal datum of NAD 27 and a vertical datum of NGVD 29.

The AERMOD results are shown in Figures 1 through 4 below.

[4] JR, Richards, Brozell, Rea, Boraston, Hayden. 2009. *PM4 Crystalline Silica Emissions Factors and Ambient Concentrations at Aggregate-Producing Sources in California.* November 2009.

[5] California Air Resources Board (CARB). Ramona Airport Met Data. http://www.arb.ca.gov/toxics/harp/metfiles2.htm. Accessed July 30, 2015.

AERMOD Crystalline Silica Graphical Results

Figure 5: Crystalline Silica Overview (blue lines represents volume line sources included in the modeling)

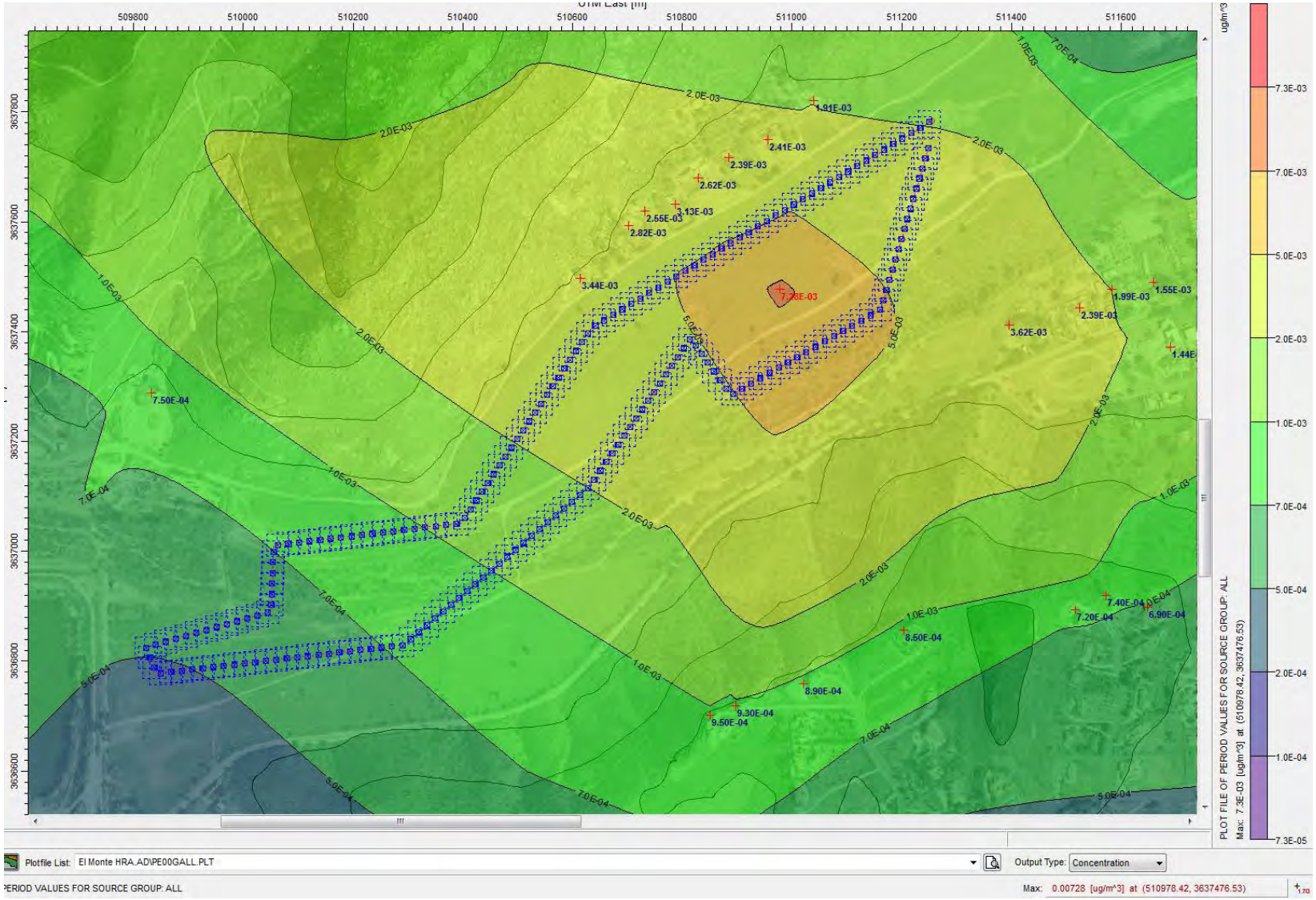
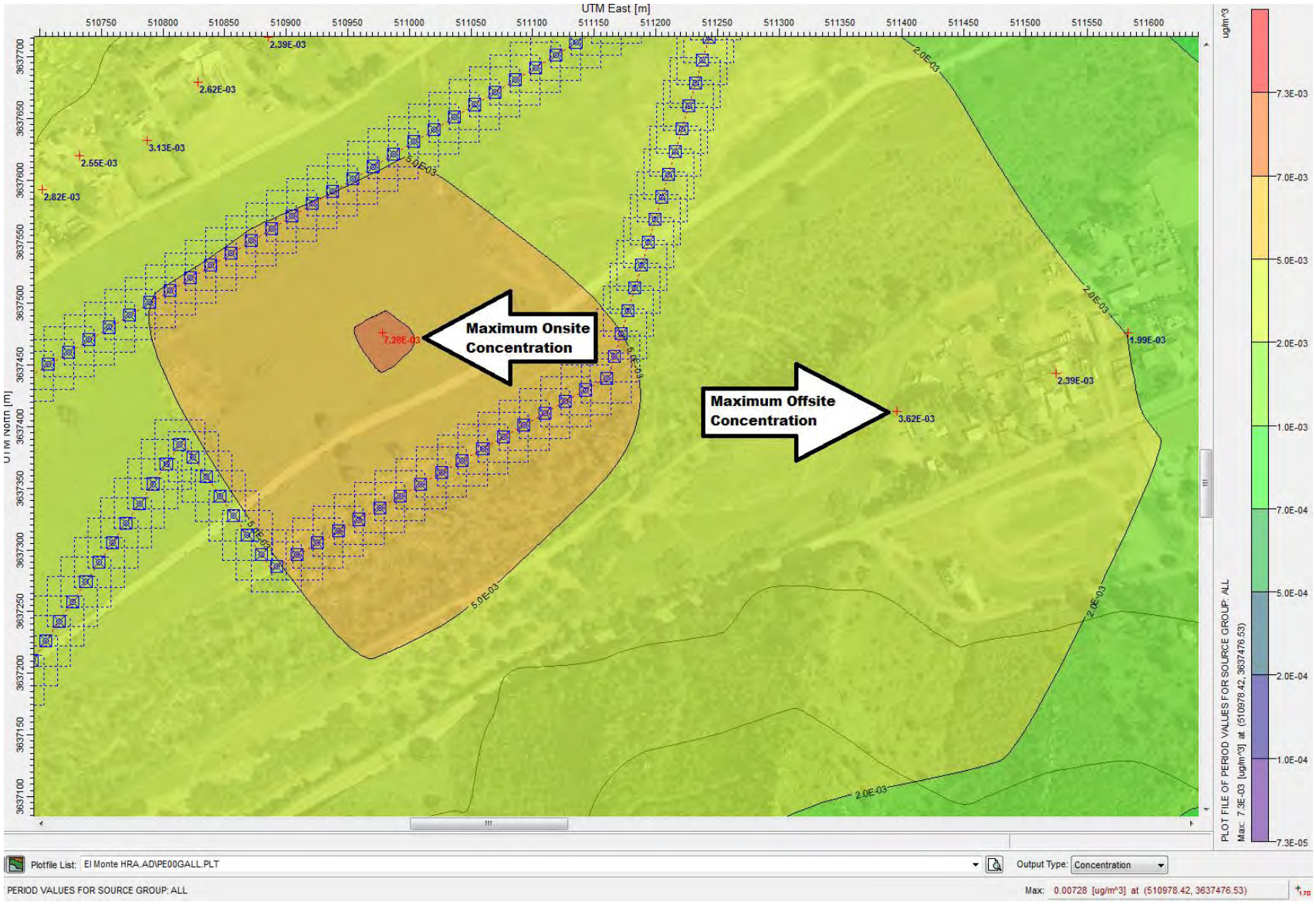


Figure 6: Crystalline Silica Maximum On- and Off-Site Concentrations



Crystalline Silica Health Risk Assessment

The health risk assessment combines the annual crystalline silica concentrations and the chronic REL to estimate chronic hazard index (HI). As shown in Figures 5 and 6, the maximum on- and off-site annual concentrations of crystalline silica were found to be 0.00728 µg/m^3 onsite and 0.00362 µg/m^3 offsite, respectively. These annual on- and off-site concentrations were entered into CARB's HARP 2 computer model to convert concentrations to chronic hazards. Chronic hazard risks were estimated using a residential 30-year exposure and an occupational 25-year exposure.

Table 4 shows the hazard indices for on-site workers and off-site residences. The HI is less than the threshold of one (calculated as the maximum annual crystalline silica concentration of 0.00728 µg/m^3 divided by the OEHHA inhalation REL for crystalline silica of 3 µg/m^3). Therefore, on-site workers and off-site residences would not be exposed to high enough concentrations of crystalline silica that would result in a chronic health risk.

TABLE 4
UNMITIGATED CANCER RISK AND CHRONIC HAZARDS

Maximum Exposed Receptor	Chronic Hazard Index
Residential	0.001
Worker	0.002
Significance Threshold	1
Exceed Threshold?	No

Source: ESA, 2015