HELIX Environmental Planning

Cottonwood Sand Mine Project

Air Quality Technical Report and Addendum

PDS2018-MUP-18-023; PDS2018-RP-18-001; PDS2018-ER-18-19-007

November 2021 | 02975.00002.002
Addendum: January 31, 2023

Prepared for:

County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Project Proponent:

New West Investment Group, Inc.
565 N. Magnolia Avenue
El Cajon, CA 92020

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

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HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942
619.462.1515 tel
619.462.0552 fax
www.**helixepi**.com

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Prepared for:
County of San Diego
Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Project Proponent:
New West Investment Group, Inc.
565 N. Magnolia Avenue
El Cajon, CA 92020

Subject: Addendum to the Cottonwood Sand Mine Project Draft Environmental Impact Report Appendix I Air Quality Technical Report

This addendum addresses revisions and clarifications to the Air Quality Technical Report (AQTR) prepared for the Cottonwood Sand Mine Project (project), included as Appendix I to the Draft Environmental Impact Report (EIR; State Clearinghouse No. 2019100513) circulated for public review from December 16, 2021, to February 28, 2022. The analysis within that report found that the project met the established thresholds of significance and no significant impact would occur as a result of project implementation. Comments received during public review of the Draft EIR challenged assumptions and methods used in the AQTR.

This addendum addresses the comments and includes additional refinements to the assumptions.

PROJECT DESCRIPTION

The project proposes to convert two golf courses to a sand mining operation that would be conducted in three phases over 10 years. The project's mining operations would extract, process, and transport sand using conventional earth moving and processing equipment. Approximately 4.3 million cubic yards (CY; 6.40 million tons) of material are proposed to be extracted. Mining and extraction activities are expected to produce approximately 3.8 million CY (5.7 million tons) of sand and gravel for market use. Extraction operations would be limited to a maximum production of 380,000 CY (570,000 tons) of construction grade aggregate (sand) per calendar year, with a 10 percent waste factor from the total amount extracted that includes wash fines and materials undesirable for processing.

Since the release of the Draft EIR, the project description has been updated to include backfilling of the site in order to achieve final elevations. Backfilling would be accomplished using a combination of wash fines and overburden produced from the mining operations and imported fill. Approximately 2.5 million cubic yards would be needed to be imported to the site to fulfill the backfill requirements. The imported material would consist of inert debris transported to the project site at an estimated rate of 250,000 cubic yards per year for the 10-year duration of mining activities. Backfill material import operations would occur from 9:00 a.m. to 3:30 p.m. Monday through Friday to avoid peak traffic periods. In addition to the 88 trucks necessary for daily export of the saleable material, 58 trucks are assumed to commute to the construction site on a daily basis for the import of backfill material. A comparison of the project description information presented in the Public Review Draft EIR and the current Project Description is presented in Table A, *Project Description Comparison (Volumes and Trucking)*.

Table A
PROJECT DESCRIPTION COMPARISON (VOLUMES AND TRUCKING)

Project Component	Public Review Draft EIR Project Description	Current Project Description
Excavated Sand	4,266,900	4,266,900
Saleable Sand	3,840,210	3,840,210
Waste Sand (10 percent of Excavated Sand)	426,690	426,690
Total Backfill Required	2,928,700	2,928,700
Total Imported Backfill (Backfill – Waste Sand)	0	2,502,010
Export Trucks (Average/Day)	88.6	88.6
Import Trucks (Average/Day)	0	57.7

*All volumes are reported in cubic yards

CHANGES TO OPERATIONAL MODELING METHODS AND ASSUMPTIONS

On-Road Vehicle Emissions

Operational emissions were re-modeled for each mining phase to account for additional truck trips required for the import of backfill material. Based on updated estimates provided by EnviroMINE, the total imported backfill is expected to be 2.5 million cubic yards, which would result in an additional 58 truckloads of import per day. As with the AQTR, criteria air pollutant emissions from on-road vehicle trips associated with each mining phase of the project were modeled using California Emissions Estimator Model (CalEEMod) version 2020.4.0. The import trip distance used in the model was provided in the Addendum to the Transportation Impact Analysis prepared for the project (LLG 2022).

On March 9, 2022, the U.S. Environmental Protection Agency (USEPA) withdrew the Safer Affordable Fuel-Efficient Vehicles Rule Part I (SAFE-1) and restored California's (and other states') authority under the Clean Air Act (CAA) to implement its own fuel efficiency, emission standards, and zero emission vehicle (ZEV) sales mandate. As a result of this action, the CalEEMod option to account for the SAFE Vehicles Rule in accordance with CARB off-model adjustments factors was not selected for the updated modeling presented in this Addendum.

Off-Road Operational Fugitive Dust Emissions

Fugitive dust emissions from vehicle and equipment movement on unpaved surfaces have been updated based on guidance provided by the San Diego County Air Pollution Control District (SDCAPCD) in their memorandum titled *Haul Road Emissions* last updated January 6, 2022. Where the previous analysis utilized the empirical equation provided in the USEPA Compilation of Air Pollutant Emission Factors, 5th Edition, Volume 1 (AP-42) Chapter 13 – Miscellaneous Sources, 13.2.2 (Unpaved Roads) dated November 2006, the SDCAPCD memorandum points to AP-42 Chapter 13 – Miscellaneous Sources, 13.2.2 (Unpaved Roads) dated January 1995. The following is the equation as presented:

$$Ea = (VMT) * \left[(k) * (5.9) * \left(\frac{s}{12}\right) * \left(\frac{S}{30}\right) * \left(\frac{W}{3}\right)^{0.7} * \left(\frac{w}{4}\right)^{0.5} * \left(\frac{365-p}{365}\right)\right] * Ci) * (1-e)$$

Where:

Ea = Annual emissions of each contaminant (pounds per year)
VMT = Vehicle miles traveled on site (miles per year)
k = Particle size multiplier (dimensionless)
s = Unpaved haul road surface material silt content (weight percent)
S = Mean vehicle speed (miles per hour)
W = Mean vehicle weight (tons)
w = Number of vehicle wheels (dimensionless)
p = Days with precipitation (days per year)
Ci = Concentration of each listed substance in the haul road dust (pounds per pound)
e = Control efficiency, if applicable (percent)

The *Haul Road Emissions* memorandum includes a table of default values for use in this equation. For the PM_{10} particle size multiplier (k) the default value is 0.36. This value was also conservatively applied to estimates of $PM_{2.5}$. The table of default values points the user to the list of AP-42 default values for the surface material silt content (s). Table 13.2.2-1 of AP-42 lists the surface silt content for a sand and gravel processing road as 4.8 percent (USEPA 2006). The days per year with precipitation (p) is stated as 40 days per year for San Diego County. The control efficiency (e) for watering at 2-hour intervals as required by the Fugitive Dust Control Plan is 95 percent (HELIX 2021). The fugitive dust trace metal concentrations, Ci, are based on default values available through the SDCAPCD's Air Toxics "Hot Spots" and Emission Inventory Program (SDCAPCD 1999).

Variables where assumptions, measurements, or calculations needed to be made include annual vehicle miles traveled (VMT), mean vehicle speed (S), mean vehicle weight (W), and number of vehicle wheels (w). The annual VMT was calculated by multiplying the mean vehicle speed by the usage rate. For earthmoving equipment, the mean vehicle speed was assumed to be 5 miles per hour and the usage rate was based on the number of daily operating hours. For trucks traveling onsite, the mean vehicle speed was assumed to be 15 miles per hour, the speed limit set by the Fugitive Dust Control Plan, and the usage rate was based on the number of daily trips. Mean vehicle weight and number of vehicle wheels was based on manufacture specifications for a given piece of equipment.

In addition to these revisions to the unpaved road dust calculation methods, this addendum corrects overly conservative assumptions included in the AQTR related to the mining activity that were inconsistent with the project description as presented in the Draft EIR. As stated in Chapter 1 of the

Draft EIR, "Approximately 4.3 million cubic yards (cy) (6.40 million tons) of material are proposed to be extracted (p1-3)" and "sand extraction operations would be conducted approximately 260 days per year (p1-9)." The modeling included in the AQTR assumed up to 7.05 million tons of material extracted with operations occurring approximately 251 days per year.

Updated Operational Emissions Estimate

The revised operational emission estimates, accounting for the changes to the methods and assumptions described above, are provided in Table B, *Estimated Daily Operational Emissions*.

Table B
ESTIMATED DAILY OPERATIONAL EMISSIONS

Category	Pollutant Emissions (pounds per day)					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Phase 1						
Off-Road Equipment Exhaust	1.8	16.0	11.3	<0.1	0.6	0.6
Mining and Processing Dust	-	-	-	-	76.9	14.6
On-Road Mobile Emissions	0.8	49.2	13.5	0.2	7.2	2.3
Phase 2 Demolition	1.2	11.1	10.3	<0.0	0.7	0.5
Phase 1 Total Daily Maximum Emissions	**3.8**	**76.2**	**35.1**	**0.3**	**85.4**	**17.9**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Previous Phase 1 Estimate	***3.7***	***49.0***	***29.9***	***0.2***	***84.5***	***17.4***
Phase 2						
Off-Road Equipment Exhaust	1.8	16.0	11.3	<0.1	0.6	0.6
Mining and Processing Dust	-	-	-	-	76.9	14.6
On-Road Mobile Emissions	0.8	48.0	13.8	0.2	7.2	2.3
Phase 3 Demolition	1.1	10.8	10.3	<0.0	1.2	0.6
Phase 2 Total Daily Maximum Emissions	**3.7**	**74.9**	**35.4**	**0.3**	**85.9**	**17.9**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Previous Phase 2 Estimate	***3.6***	***48.8***	***29.9***	***0.2***	***85.0***	***17.4***
Phase 3						
Off-Road Equipment Exhaust	1.8	16.0	11.3	<0.1	0.6	0.6
Mining and Processing Dust	-	-	-	-	76.9	14.6
On-Road Mobile Emissions	0.8	45.9	14.2	0.2	7.2	2.2
Phase 3 Total Daily Maximum Emissions	**2.6**	**61.9**	**25.5**	**0.2**	**84.7**	**17.4**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Previous Phase 3 Estimate	***2.8***	***41.3***	***22.6***	***0.2***	***83.6***	***16.7***

Source: CalEEMod and calculations using emission factors from CARB ORION Off-Road database and EPA AP-42 (CalEEMod output and calculation data is provided in Appendices E and F).
ROG = reactive organic gas; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_X = oxides of sulfur;
PM_{10} = particulate matter of 10 microns or less in diameter; $PM_{2.5}$ = particulate matter of 2.5 microns or less in diameter

As shown in Table B, project emissions of criteria pollutants and ozone precursors during operation of all mining phases would not exceed the daily screening thresholds. Therefore, the project's operational

emissions would not result in a violation of the NAAQS or CAAQS and the impact would remain less than significant.

CHANGES TO HEALTH RISK ASSESSMENT MODELING METHODS AND ASSUMPTIONS

A Health Risk Assessment (HRA) was completed to support the analysis regarding the potential impacts on the health of nearby potential sensitive receptors and off-site workers due to toxic air contaminants (TACs) generated by the long-term operation of the project. The HRA was completed following OEHHA *Air Toxics Hot Spots Program–Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (2015).

Dispersion Modeling

Following the completion of the AQTR, Lakes Environmental released the version 10.2.1 update to the AERMOD View software. The updates to the software included in version 10.2.1 include design updates, new summary reports for plant boundary receptors, and updates for automated terrain map downloads. The analysis contained in this addendum was updated using this latest version of AERMOD View.

The pre-processed meteorological data used in the AQTR AERMOD analysis has been replaced with the SDCAPCD provided meteorological data for El Cajon for the years 2010 through 2012 per comments received from SDCAPCD.

The Lakes AERMOD View output reports (which include all modeling parameters selected) are included in Appendix G.

Risk Determination

Following the completion of the AQTR, CARB released version 22118 of the Hotspots Analysis and Reporting Program Version 2 (HARP2) Air Dispersion Model and Risk Tool (ADMRT). The update includes various corrections and bug fixes. The analysis contained in this addendum was updated using this latest version of the ADMRT. Additionally, the emission rates were updated based on the revised operational emissions analysis presented above to account for the updated annual workdays and excavation quantity, use of the SDCAPCD recommended unpaved road dust methodology, and the addition of truck trips for backfill import.

Updated Health Risk Assessment Results

As with the AQTR, updated risks for this addendum were evaluated for each scenario (Phase 1, Phase 2, and Phase 3), conservatively assuming a full 10 years of exposure (the anticipated duration of mining activities for the entire project), even though sand extraction for each phase would only last 3 to 4 years. That is, to be conservative, for the residential and worker cancer risk, an exposure duration of 10 years was selected for each phase rather than modeling each phase with a 3- to-4-year duration and summing the results. This yields conservative results because the maximally exposed residence located nearest to the sand extraction activity occurring during Phase 1 would not be the same residence during Phases 2 and 3. The same holds true for the maximally exposed residences for Phases 2 and 3. All receptors were included in each scenario. Results are shown in Table C, *Health Risks from TAC Emissions.*

Table C
HEALTH RISKS FROM TAC EMISSIONS

Maximum Exposed Individual	Risk Type	Previous Maximum Risk	Revised Maximum Risk	SDCAPCD Threshold	Exceed Threshold?
Phase 1					
Resident	Incremental Cancer Risk	2.3 in 1 million	3.80 in 1 million	10 in 1 million	No
	Chronic Hazard Index	0.05	0.08	1	No
	Acute Hazard Index	0.07	0.06	1	No
Non-Project Worker	Incremental Cancer Risk	0.02 in 1 million	0.04 in 1 million	10 in 1 million	No
	Chronic Hazard Index	<0.01	0.01	1	No
	Acute Hazard Index	<0.01	0.04	1	No
Phase 2					
Resident	Incremental Cancer Risk	2.9 in 1 million	7.89 in 1 million	10 in 1 million	No
	Chronic Hazard Index	0.05	0.16	1	No
	Acute Hazard Index	0.09	0.08	1	No
Non-Project Worker	Incremental Cancer Risk	<0.01 in 1 million	0.02 in 1 million	10 in 1 million	No
	Chronic Hazard Index	<0.01	0.01	1	No
	Acute Hazard Index	<0.01	0.03	1	No
Phase 3					
Resident	Incremental Cancer Risk	2.7 in 1 million	3.40 in 1 million	10 in 1 million	No
	Chronic Hazard Index	0.05	0.07	1	No
	Acute Hazard Index	0.07	0.06	1	No
Non-Project Worker	Incremental Cancer Risk	<0.01 in 1 million	0.02 in 1 million	10 in 1 million	No
	Chronic Hazard Index	<0.01	<0.01	1	No
	Acute Hazard Index	<0.01	0.01	1	No

Source: Lakes AERMOD View version 10.2.1 and CARB ADMRT version 22118, Model output files and cancer risk isopleth plots are included in Appendix G.
TAC = toxic air contaminant; SDCAPCD = San Diego County Air Pollution Control District

As shown in Table C, the maximum exposed individual resident (MEIR) (i.e., the individual resident with the highest estimated increased cancer risk and/or health hazard index; located at the north end of Cottonwood View Drive, south of the project site) would have incremental increased cancer risk of 7.89 in 1 million, an acute health hazard index of 0.08, and a chronic health hazard index of 0.16 during Phase 2. The driver for acute hazard is the fugitive TACs released from the mining activity. With the reduction in assumed excavated material from 7.05 to 6.40 million tons, the acute hazard is reduced from the value previously reported in the AQTR. Diesel particulate matter from vehicle exhaust is the driver for cancer risk and chronic hazard. The increase in trucking activity results in increases to those two metrics when compared to the values presented in the AQTR. The increased incremental cancer risk isopleths and the location of the MEIR are shown in Figure A, *Increased Residential Cancer Risk.* The MEIR also coincides with the point of maximum impact (PMI). The maximum exposed individual worker (located on Willow Glen Drive just east of the Jamacha Road intersection) would have an incremental increased cancer risk of 0.04 in 1 million, an acute health hazard index of 0.04, and a chronic health hazard index of 0.01 during Phase 1. The thresholds for increased incremental cancer risk, acute health

risk, and chronic health risk would not be exceeded for the maximum exposed individual non-project worker or resident.

Residential cancer burden was estimated using the highest risk for an MEIR from all phases (which would occur in Phase 2), as described in Section 3.2.3 of the AQTR. Using the 1 in 1 million cancer risk isopleth for a 70-year exposure overlaid on an aerial image, the number of residences within or touching the isopleth is 167 single-family homes. Assuming up to 10 residents per residence, the total exposed population would be 1,670. The cancer burden would be 13.23 x 10^{-6} times 1,670, or 0.022, below the threshold of 0.5.

Therefore, the impact on community health resulting from project operational emissions of TACs would remain less than significant.

CONCLUSION

The revisions and clarifications contained in this addendum result in findings consistent with those disclosed as part of the AQTR prepared in support of the Draft EIR. No changes have been identified to the less-than-significant impacts based on these revised data. The additional information provides clarification and additional documentation.

Sincerely,

Victor Ortiz
Senior Air Quality Specialist

Joanne M. Dramko, AICP
Principal Air Quality Specialist
County-approved Air Quality Consultant

Attachment:

Figure A, *Increased Residential Cancer Risk*

REFERENCES

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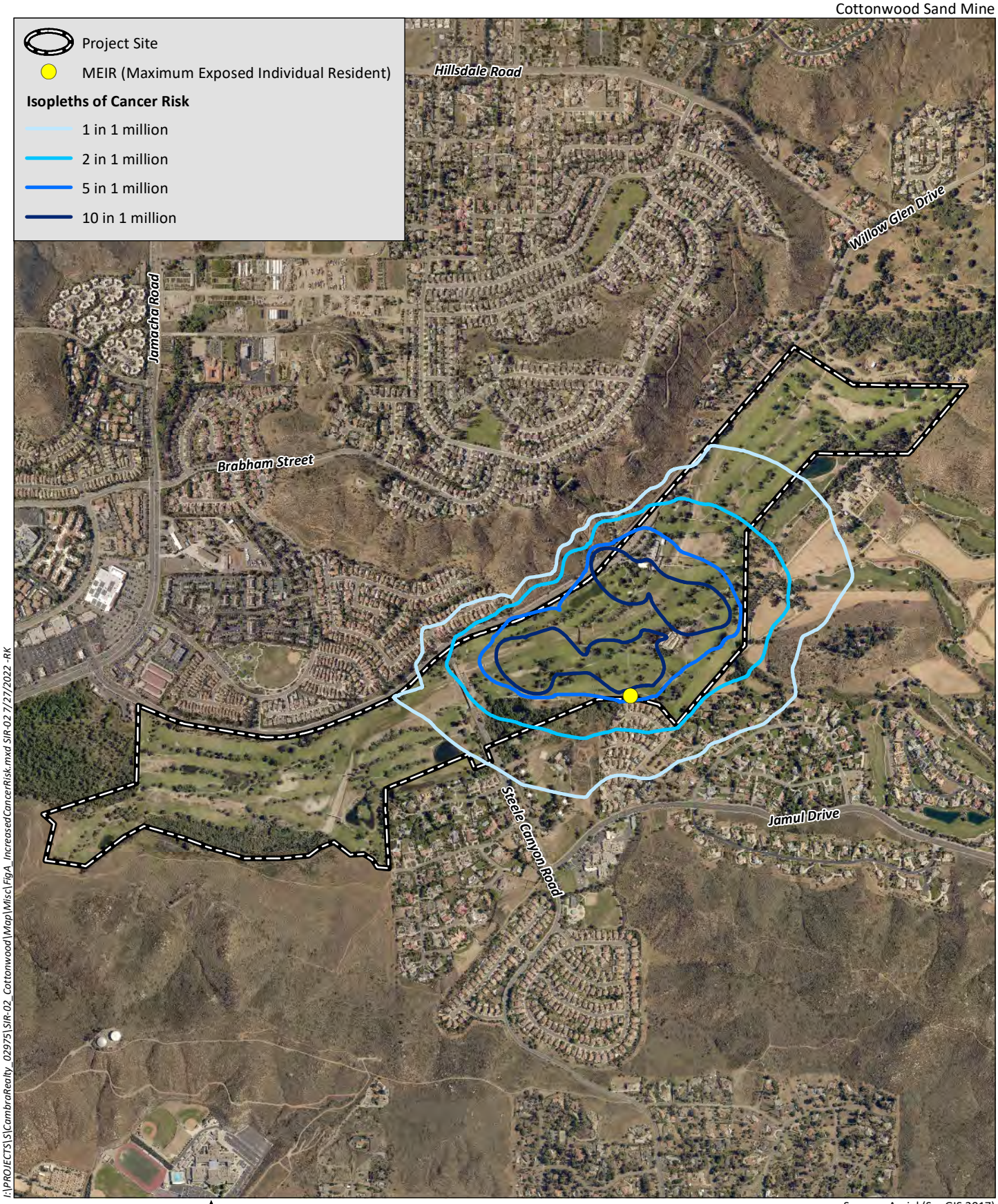

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Source: Aerial (SanGIS 2017)

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Increased Residential Cancer Risk

Figure A

Cottonwood Sand Mine Project

Air Quality Technical Report

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HELIX Environmental Planning, Inc.
Joanne M. Dramko, AICP
County-approved Air Quality Consultant
7578 El Cajon Boulevard
La Mesa, CA 91942

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ADMRT	Air Dispersion Modeling and Risk Tool
amsl	above mean sea level
AQIA	Air Quality Impact Assessment
Attainment Plan	2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County
BACT	Best Available Control Technology
BMPs	best management practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	carbon monoxide
County	County of San Diego
CY	cubic yard
DPM	diesel particulate matter
°F	degrees Fahrenheit
g/L	grams per liter
GHG	greenhouse gas
H_2S	hydrogen sulfide
lbs	pounds
LLG	Linscott, Law & Greenspan, Engineers
LMA	Local Mobility Analysis
LOS	level of service
mph	miles per hour
MUP	Major Use Permit
NAAQS	National Ambient Air Quality Standard
NO	nitrogen oxide
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen

ACRONYMS AND ABBREVIATIONS (cont.)

O_3	ozone
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
PM_{10}	coarse particulate matter (particulate matter with an aerodynamic diameter of 10 microns or less)
$PM_{2.5}$	fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 microns or less)
PM_4	respirable particulate matter (particulate matter with an aerodynamic diameter of 4 microns or less)
ppb	parts per billion
ppm	parts per million
ROG	reactive organic gas
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
SIP	State Implementation Plan
SLT	screening-level threshold
SMARA	Surface Mining and Reclamation Act of 1975
SO_2	sulfur dioxide
SO_X	oxides of sulfur
SR	State Route
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
TIA	Transportation Impact Analysis
VMT	vehicle miles traveled
VOC	volatile organic compound
WRAP	Western Regional Air Partnership
WRCC	Western Regional Climate Center
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
USOSHA	U.S. Occupational Safety and Health Administration

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EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts associated with the proposed Cottonwood Sand Mine Project (project). The evaluation addresses the potential for air pollutant emissions during construction and operation of the project.

The project would result in emissions of air pollutants during the construction and operational phases of the project. Construction and operational best management practices (BMPs) would be implemented by the project, including measures to minimize fugitive dust control emissions, such as watering twice per day, stabilizing storage piles, and enforcing a 15-mile per hour (mph) speed limit on unpaved surfaces. With the inclusion of these BMPs, emissions of all criteria pollutants would be below the daily thresholds during construction and operation of the project and impacts would be less than significant.

Development of the project would be consistent with the San Diego County Air Pollution Control District's (SDAPCD's) 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (Attainment Plan) and would not result in cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

The project would not result in the exposure of sensitive receptors to substantial emissions of pollutants, toxic air contaminants, or odors. The project would not result in the degradation of roadway intersections such that emissions of carbon monoxide (CO) would exceed state or federal standards that would result in a CO hotspot. Construction activities and project operation also would not expose substantial numbers of people to objectionable odors.

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1.0 INTRODUCTION AND PROJECT DESCRIPTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential air quality impacts associated with the proposed Cottonwood Sand Mine Project (project), which includes an evaluation of existing conditions in the project vicinity and an assessment of potential impacts associated with project construction and project operation. The analysis of impacts and report is prepared in accordance with the County of San Diego (County) Guidelines for Determining Significance and Report Content and Format Requirements for Air Quality (County 2007).

1.2 PROJECT LOCATION AND DESCRIPTION

1.2.1 Project Location

The project is located at 3121 Willow Glen Drive in the unincorporated communities of Rancho San Diego and Jamul, southeast of the City of El Cajon in eastern San Diego County (County). The site is north of State Route (SR) 94 and east of SR 54 (see Figure 1, *Regional Location*, and Figure 2, *Aerial Vicinity*). More specifically, the project site is located southeast of Willow Glen Drive, north of Jamul Drive, east of Jamacha Road, and west of Hillsdale Road. Steele Canyon Road bisects the project site from north to south, near the center of the project. Principal site access is from Willow Glen Drive, with regional access from SR 54/Jamacha Boulevard and SR 94/Campo Road.

The approximately 280-acre site is situated within the Sweetwater River valley and in the floodplain of the Sweetwater River, which flows in a northeast-to-southwest direction through the site. Elevations on the project site range from approximately 320 feet above mean sea level (amsl) to 380 feet amsl. Land uses in the project vicinity include residential and rural residential development to the north and south, extractive operations to the east, and an adjacent golf course to the southeast. Open space is present in the hills south, east, and west of the site. A National Wildlife Refuge abuts the western end of the property along the river.

1.2.2 Project Description

The project proposes to convert two golf courses to a sand mining operation that would be conducted in three phases over 10 years. The project includes the following discretionary actions:

- A Major Use Permit (MUP) to allow mining activities; and
- A Reclamation Plan (RP) to specify the standards to which the site must be reclaimed upon completion of mining activities in accordance with the California Surface Mining and Reclamation Act of 1975 (SMARA).

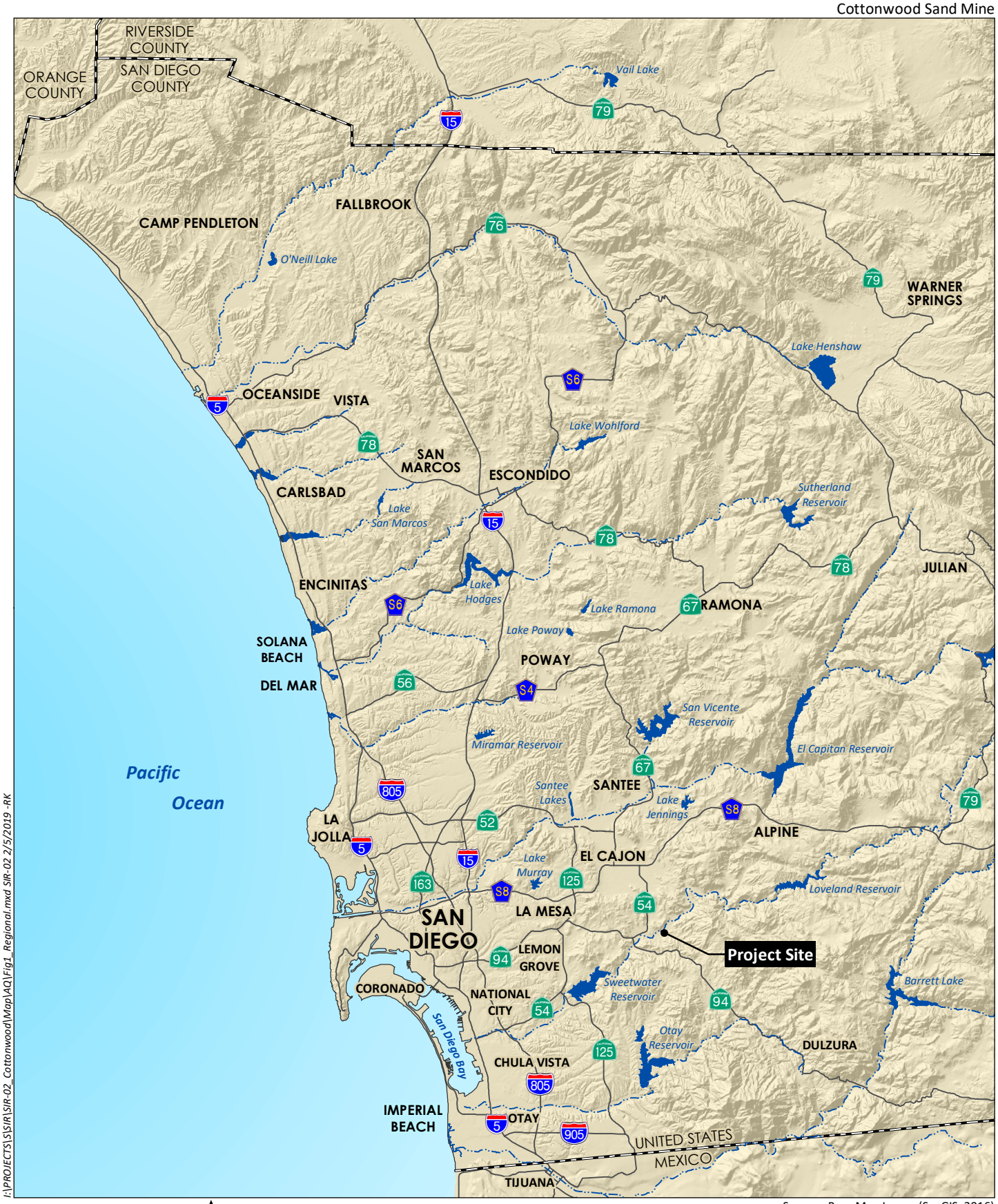
The project's mining operations would extract, process, and transport sand using conventional earth moving and processing equipment. Approximately 4.3 million cubic yards (CY; 6.40 million tons) of material are proposed to be extracted. Mining and extraction activities are expected to produce approximately 3.8 million CY (5.7 million tons) of sand and gravel for market use. Extraction operations would be limited to a maximum production of 380,000 CY (570,000 tons) of construction grade

aggregate (sand) per calendar year, with a 10 percent waste factor from the total amount extracted that includes wash fines and materials undesirable for processing. Material extracted and processed at the site would be suitable for construction uses and would be available to customers in San Diego County. Approximately 214 acres of the approximately 280-acre project site are proposed for extractive use under a phased extraction program. Surface areas not disturbed by mining would be subject to removal of invasive species in the river channel on the southwest portion of the site or be left in their current condition. The existing Sweetwater River channel and the majority of native habitat that currently exists on the site would be retained.

The project would be developed in three continuous mining phases, with sub-phases in each major phase of less than 30 acres per phase, and a fourth phase for cleanup, equipment removal, and final reclamation (see Figure 3, *Mining Phases*). Prior to the initiation of Phase 1, pre-mining activities such as the restriping of Willow Glen Drive between Steele Canyon Road and the Project ingress driveway to provide Class II buffered bike lanes on both sides of the roadway, improvements to the access point from Willow Glen Drive to the Phase 1 excavation area, and installation of screening landscaping would be implemented. Phase 1 would begin with the placement of the processing plant west of the existing clubhouse adjacent Willow Glen Drive. The plant site would consist of aggregate processing and washing facilities, three settling ponds, loadout area, and support structures and buildings (e.g., weigh scale, office kiosk, and office trailer). A portable conveyor line would be installed to transport excavated materials to the processing plant from the excavation areas. The conveyor line would be mobile to provide access within each phase and would be relocated as mining activity is concluded in each phase. The mobile conveyor is proposed to minimize the use of on-site roads to transport excavated material between the plant and excavation areas.

Operations would commence west of the Steele Canyon Road bridge, and then generally proceed in a southwest-to-northeast direction across the project site. Existing vegetation, structures, and infrastructure within the golf courses would be removed as mining operations proceed, with approximately 20 to 30 acres subject to mining at any one time. Sand extraction during Phase 1 is anticipated to commence in 2022 and would be located within the area currently occupied by the closed Lakes Course to the west of Steele Canyon Road. Phase 2 is anticipated to commence in 2024 and would be located in the center of the site, east of Steele Canyon Road, on the currently operating Ivanhoe Course. Phase 3 mining operations are anticipated to commence in 2027 and would encompass the remaining acreage of the project site located to the east of Phase 2. Upon approval of the project and MUP, the eastern Ivanhoe Course would be closed, and all golf course operations would cease; the existing golf clubhouse would be demolished near the end of Phase 2 mining. Phase 4 would consist of removal of the processing plant, grading to final contours, final reclamation and revegetation efforts, cleanup, and equipment removal.

Each phase will include three to four sub-phases that are less than 30 acres each to begin reclamation as soon as possible. Excavation in each sub-phase would be completed before moving the conveyor and excavation equipment to the next sub-phase and reclamation would begin in the completed sub-phase. Topsoil and vegetation stripping would occur in each subsequent sub-phase in advance of completing excavation in the preceding sub-phase. The maximum excavation depth is proposed to be 40 feet below the existing land surface. The average depth of excavation is expected to be approximately 20 feet below the existing land surface outside the main Sweetwater River channel. Excavation would not occur within the bottom of the existing low-flow channel in order to retain existing hydrologic characteristics.



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Source: Base Map Layers (SanGIS, 2016)

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Regional Location

Figure 1

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Source: Aerial (SanGIS 2017)

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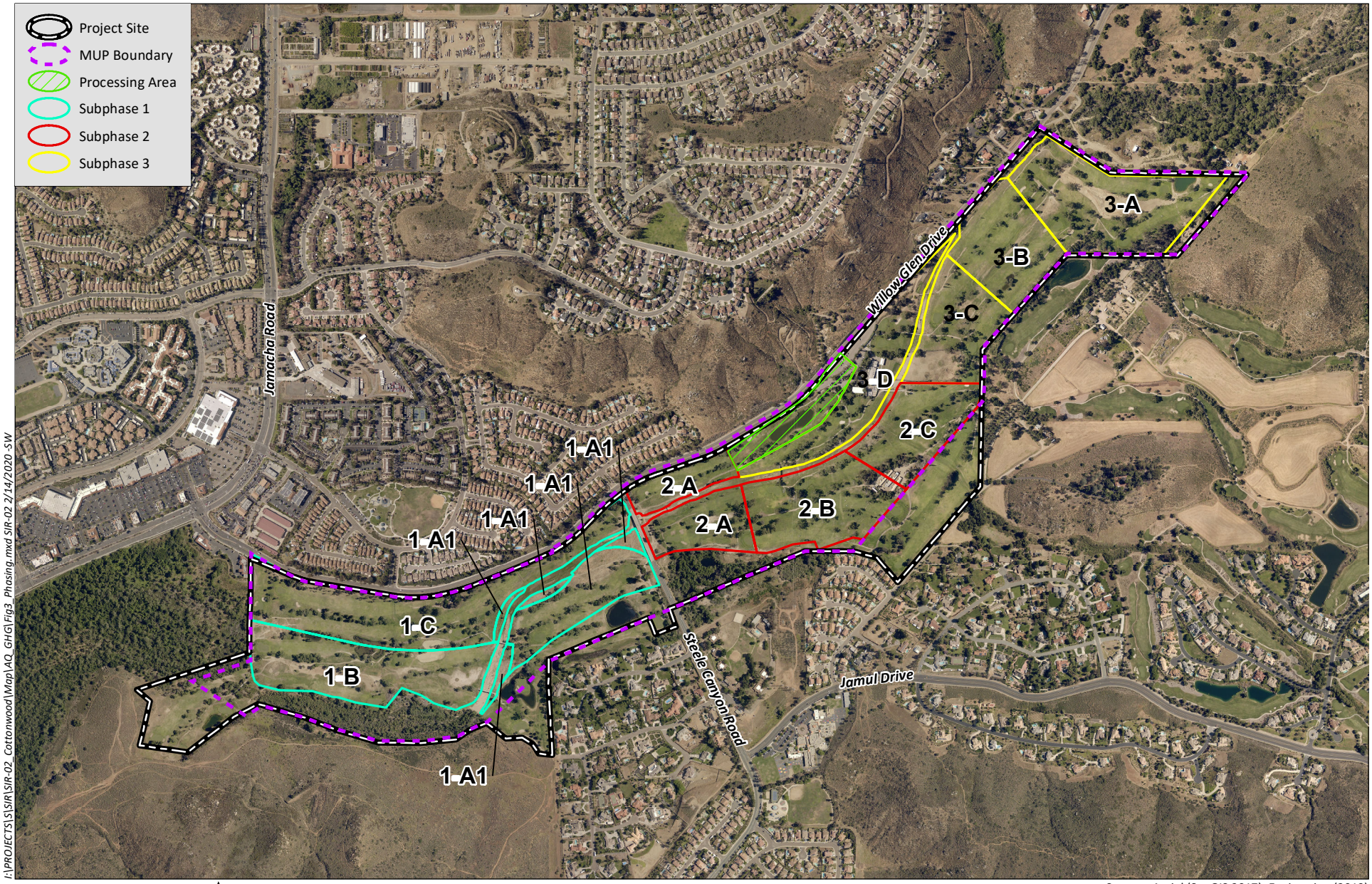
Aerial Vicinity

Figure 2



Source: Aerial (SanGIS 2017); Enviromine (2019)

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Mining Phases

Figure 3

Aggregate material would be processed, sized, and stored in stockpiles up to 25 feet in height near the plant. Wash fines produced from the processing plant would be gathered in three settling ponds located near the plant that would be 300 feet long, 50 feet wide, and 10 feet deep. When ponds are cleaned, wash fines (silt, clay, and organic material) would either be sold as a soil amendment or returned to excavation areas that have been completed to be used as backfill or incorporated into the surface of reclaimed areas as soil amendment.

Sand excavation and processing would occur Monday through Friday, between the hours of 7:00 a.m. and 5:00 p.m. Trucking operations for material sales would occur from 9:00 a.m. to 3:30 p.m. Monday through Friday to avoid peak traffic periods.

The project proposes to restripe Willow Glen Drive between Steele Canyon Road and the project ingress driveway to provide Class II buffered bike lanes on both sides of the roadway per the County Roadway Standards and the General Plan Mobility Element roadway classification. To facilitate deceleration of right-turning vehicles into the Project ingress driveway, a dedicated right-turn lane would also be constructed, which would serve as the primary access for mining operations, material sales, employees, and vendors. A new egress point would be established in the approximate center of the existing parking lot. The project also proposes to construct a two-way left-turn lane between the ingress and egress driveways, which would serve as a refuge lane for trucks to complete their outbound maneuver. A pedestrian pathway would be provided along the northern Project frontage/Willow Glen Drive east of Steele Canyon Road to provide pedestrian access within the Project vicinity where there are no existing sidewalks. In addition, a new access point to the property from Willow Glen Drive west of the Steele Canyon Road (Phase 1 area) would be necessary as the clearance height of the bridge that crosses the Sweetwater River on Steele Canyon Road would not allow most large trucks used by service vendors to pass beneath the bridge. Additional access points are proposed to be constructed at the intersection of Willow Glen Drive and Muirfield Drive. The new driveway would be restricted to servicing the mining operations.

Areas disturbed by resource extraction would be progressively reclaimed in an ongoing process that commences when mining operations have ceased within a given sub-phase area and continues until all mining-related disturbance is reclaimed and all equipment involved in these operations has been removed. Reclamation would include establishment of all final slopes, incorporation of accumulated wash fines and topsoil (as applicable), installation of irrigation lines, revegetation of the channel and slopes using appropriate native species, weed control, and monitoring. Upon completion of the extraction activities, the entire site would be reclaimed in accordance with the mining and reclamation plan. Reclamation of the site would include: (1) removal of all manufactured structures; (2) grading to achieve final landforms; and (3) revegetation and monitoring. The final landform is proposed to be a relatively flat plain that gently slopes downward from east to west, with a widened river channel bisecting the length of the site. The reclaimed river channel is expected to average approximately 250 to 300 feet in width; the low-flow channel would be retained to accommodate annual water transfers from Loveland Reservoir to Sweetwater Reservoir. Reclaimed and revegetated areas would be restored to an end use of undeveloped lands, recreational trails, and land suitable for uses allowed by the Open Space land use designation and existing zoning classifications. Revegetation monitoring would continue for a minimum of five years or until revegetation standards are met after this final phase.

1.3 REGULATORY REQUIREMENTS AND BEST MANAGEMENT PRACTICES

1.3.1 Construction and Operation Measures

The project would incorporate best management practices (BMPs) during construction and mining operations to reduce emissions of fugitive dust (refer to Appendix A of this report for a complete discussion of dust control measures the project would incorporate). San Diego County Air Pollution Control District (SDAPCD) Rule 55 – Fugitive Dust Control states that no dust and/or dirt shall leave the property line, as follows (SDAPCD 2005):

1. **Airborne Dust Beyond the Property Line:** No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

2. **Track-Out/Carry-Out:** Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

   (i) be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation:

      (a) track-out grates or gravel beds at each egress point;

      (b) wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks;

      (c) using secured tarps or cargo covering, watering, or treating of transported material; and

   (ii) be removed at the conclusion of each workday when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/ carry-out, only respirable particulate matter (PM_{10}) -efficient street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

1.3.2 Construction and Mining Operation Best Management Practices

The project would implement the BMP control measures listed below to meet the requirements of SDAPCD Rule 55:

- Dirt and aggregate storage piles shall be stabilized by chemical binders, tarps, fencing or other erosion control.

- A 15-mph speed limit shall be enforced on unpaved surfaces.

- During dry weather, dirt and debris spilled onto paved surfaces shall be removed promptly to reduce resuspension of particulate matter caused by vehicle movement. Track out of material onto public roads shall be cleaned daily during dry weather.

- Trucks hauling dirt, sand, soil, or other loose materials shall be covered or two feet of freeboard will be maintained.

- Disturbed areas where construction or extraction is complete shall be hydroseeded or revegetated as quickly as possible and as directed by the County and/or SDAPCD to reduce dust generation.

- Ground disturbance shall be terminated if winds exceed 25 mph.

- All exposed areas shall be watered a minimum of twice per day.

In addition, dust would be controlled in the sand processing and washing facilities using best available control technology (BACT), primarily the application of sufficient water to eliminate visible emissions. Diesel exhaust emissions from on- and off-road equipment would be required to implement BACT for reduction of exhaust particulate matter, involving replacement of older equipment with equipment meeting the U.S. Environmental Protection Agency (USEPA) Tier-4 specifications or retrofitting equipment with diesel particulate filters, in accordance with California Air Resources Board (CARB) regulations and implementation schedules.

2.0 EXISTING CONDITIONS

2.1 EXISTING SETTING

The project site is currently developed with two 18-hole golf courses. The eastern Ivanhoe course is still in operation; the western Lakes course has ceased operations and is not anticipated to reopen. The Sweetwater River channel passes through the site in a northeast to southwest direction. Surrounding land uses include residential, rural residential, extractive operations to the east, and an adjacent golf course. Open space is present in the hills south, east, and west of the site. A National Wildlife Refuge abuts the western end of the property along the Sweetwater River. Land use near the project site is limited by physical constraints with the presence of the Sweetwater River channel and by steep terrain on the north and south.

2.1.1 Sensitive Receptors

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The closest existing sensitive receptors to the project site are the ADEONA healthcare facility and single-family homes adjacent to the existing and former golf courses on the south and east sides of the project

site. In addition, there are single- and multi-family homes along the primary routes for aggregate delivery trucks entering and exiting the project site, including along Willow Glen Drive and Jamacha Road. The closest school is the Jamacha Elementary School approximately 1,280 feet (0.24 mile) south of the project Phase 2 mining area. The sensitive receptor locations are shown in Figure 4, *Receptor Locations*.

2.2 CLIMATE/METEOROLOGY AND TEMPERATURE INVERSIONS

The climate in southern California, including the San Diego Air Basin (SDAB), is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast experience moderate temperatures and comfortable humidity.

The annual average maximum temperature in the project area is approximately 75 degrees Fahrenheit (°F), and the average minimum temperature is approximately 53°F. Total precipitation in the project area averaged approximately 12.9 inches between 1899 and 2006. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2019).

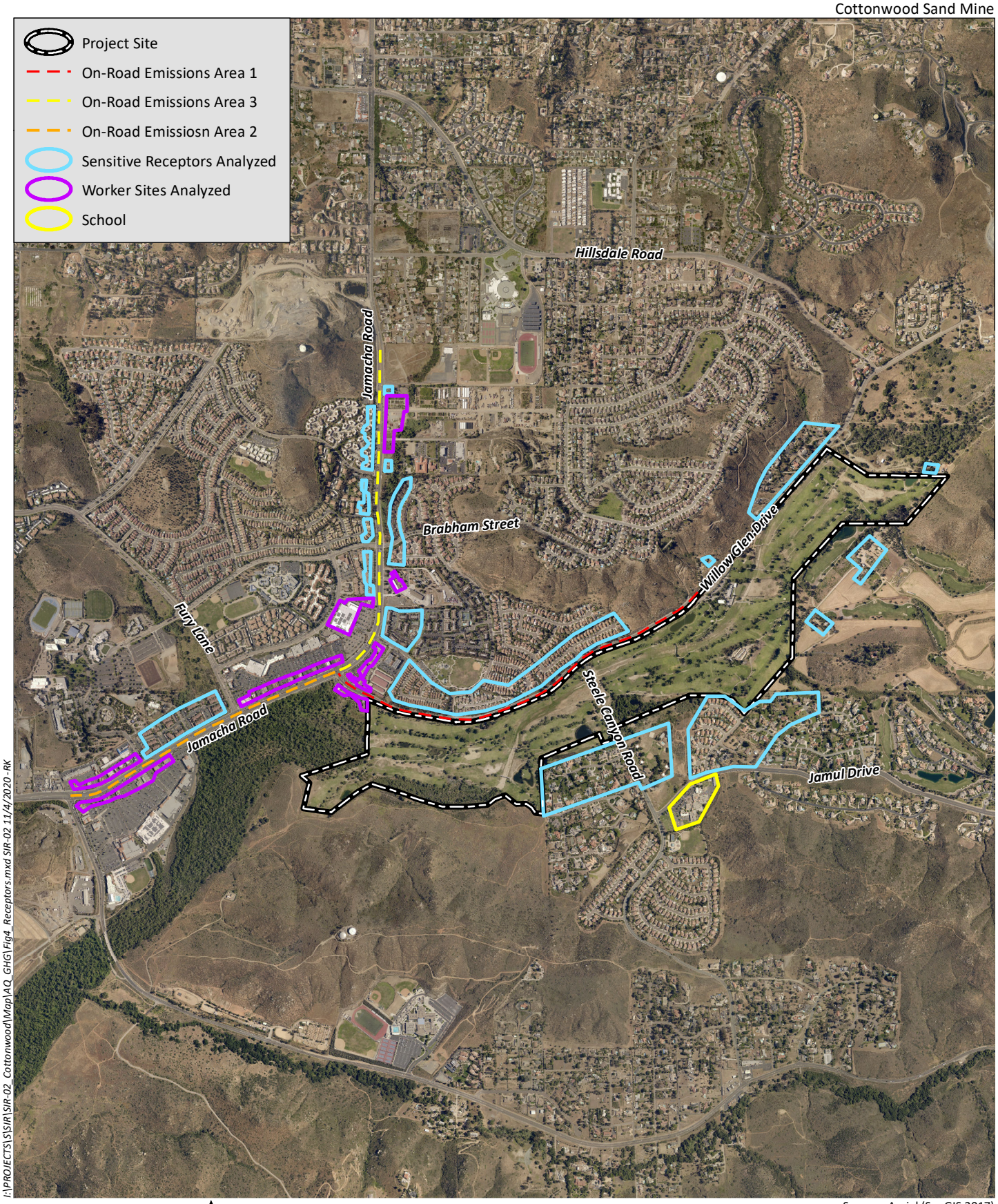
Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions.

2.3 AIR POLLUTANTS OF CONCERN

2.3.1 Criteria Air Pollutants

Six air pollutants have been identified by the USEPA and CARB as being of concern both on a nationwide and statewide level: ground-level ozone (O_3), CO, NO_2, sulfur dioxide (SO_2), lead, and particulate matter (PM), which is subdivided into two classes based on particle size: coarse PM equal to or less than 10 micrometers in diameter (PM_{10}) and fine PM equal to or less than 2.5 micrometers in diameter ($PM_{2.5}$). These air pollutants are commonly referred to as "criteria air pollutants" because air quality standards are regulated using human health and environmentally based criteria. Criteria pollutants can be emitted directly from sources (primary pollutants; e.g., CO, SO_2, PM_{10}, $PM_{2.5}$, and lead), or they may be formed through chemical and photochemical reactions of precursor pollutants (secondary pollutants; e.g., ozone and NO_2) in the atmosphere. The principal precursor pollutants of concern are reactive organic gasses ([ROGs] also known as volatile organic compounds [VOCs])[1] and nitrogen oxides (NO_X).

[1] CARB defines and uses the term ROGs while the USEPA defines and uses the term VOCs. The compounds included in the lists of ROGs and VOCs and the methods of calculation are slightly different. However, for the purposes of estimating criteria pollutant precursor emissions, the two terms are often used interchangeably.



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Source: Aerial (SanGIS 2017)

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Receptor Locations

Figure 4

The descriptions of sources and general health effects for each of the criteria air pollutants are shown in Table 1, *Summary of Common Sources and Human Health Effects of Criteria Air Pollutants,* based on information provided by the California Air Pollution Control Officers Association (CAPCOA; 2018). Specific adverse health effects to individuals or population groups induced by criteria pollutant emissions are highly dependent on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, and the number and character of exposed individuals [e.g., age, gender]). Criteria pollutant precursors (ROG and NO_X) affect air quality on a regional scale, typically after significant delay and distance from the pollutant source emissions. Health effects related to ozone and NO_2 are, therefore, the product of emissions generated by numerous sources throughout a region. As such, specific health effects from these criteria pollutant emissions cannot be directly correlated to the incremental contribution from a single project.

Table 1
SUMMARY OF COMMON SOURCES AND HUMAN HEALTH EFFECTS OF CRITERIA AIR POLLUTANTS

Pollutant	Major Man-Made Sources	Human Health Effects
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to climate change and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases (ROGs) and nitrogen oxides (NO_X) in the presence of sunlight. Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes.
Particulate Matter (PM_{10} and $PM_{2.5}$)	Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and other sources.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze).
Sulfur Dioxide (SO_2)	A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from oil, or when metal is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.

Pollutant	Major Man-Made Sources	Human Health Effects
Lead	Metallic element emitted from metal refineries, smelters, battery manufacturers, iron, and steel producers, use of leaded fuels by racing and aircraft industries.	Anemia, high blood pressure, brain and kidney damage, neurological disorders, cancer, lowered IQ. Affects animals, plants, and aquatic ecosystems.

Source: CAPCOA 2018

2.3.2 Toxic Air Contaminants

Toxic air contaminants (TACs) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or in serious illness or that may pose a present or potential hazard to human health. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation (a cough), runny nose, throat pain, and headaches. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For carcinogenic TACs, there is no level of exposure that is considered safe and impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

The Health and Safety Code (§39655, subdivision (a).) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, including both gaseous and solid material. The solid material in diesel exhaust is known as diesel particulate matter (DPM). Almost all DPM is 10 microns or less in diameter, and 90 percent of DPM is less than 2.5 microns in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung. In 1998, the CARB identified DPM as a toxic air contaminant based on published evidence of a relationship between diesel exhaust exposure and lung cancer and other adverse health effects. DPM has a significant impact on California's population—it is estimated that about 70 percent of total known cancer risk related to air toxics in California is attributable to DPM (CARB 2018).

Crystalline silica is a common mineral found in the earth's crust. Materials like sand, stone, concrete, and mortar contain crystalline silica. Respirable crystalline silica—very small particles at least 100 times smaller than ordinary sand—is created when cutting, sawing, grinding, drilling, and crushing stone, rock, concrete, brick, and mortar. Potential health risks resulting from inhalation of respirable crystalline silica include silicosis, an incurable lung disease; lung cancer; chronic obstructive pulmonary disease; and kidney disease (USOSHA 2018). In addition to respirable crystalline silica, the dust from mining operations and processing plants can contain very small amounts of toxic metals and elements including arsenic, beryllium, cadmium, copper, chromium, manganese, mercury, nickel, and selenium. Significant exposure to these toxic metals and elements can result in a wide range of health effects including

cancer, long-term chronic conditions, and short-term acute effects. The project would primarily mine, classify, and wash sand. Because dust from native sand can contain these toxic metals and elements, it assumed they are present in all fugitive dust particulate matter emitted during mining and processing operations.

2.4 REGULATORY SETTING

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for criteria pollutants. Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the more stringent California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and has established CAAQS for additional pollutants, including sulfates, H_2S, vinyl chloride and visibility-reducing particles. Table 2, *California and National Ambient Air Quality Standards,* shows the federal and state ambient air quality standards.

Table 2
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[a]	Federal Standards Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	Same as Primary
	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
CO	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
	24 Hour	0.04 ppm (105 µg/m^3)	–	–
SO_2	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
	30-day Avg.	1.5 µg/m^3	–	–

Pollutant	Averaging Time	California Standards	Federal Standards Primary[a]	Federal Standards Secondary[b]
Lead	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 Hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	**No Federal Standards**	**No Federal Standards**
Sulfates	24 Hour	25 µg/m^3	**No Federal Standards**	**No Federal Standards**
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	**No Federal Standards**	**No Federal Standards**
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	**No Federal Standards**	**No Federal Standards**

Source: CARB 2016

Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).

[a] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[b] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

O_3 = ozone; ppm = parts per million; µg/m^3 = micrograms per cubic meter; PM_{10} = large particulate matter; AAM = Annual Arithmetic Mean; $PM_{2.5}$ = fine particulate matter; CO = carbon monoxide; mg/m^3 = milligrams per cubic meter; NO_2 = nitrogen dioxide; SO_2 = sulfur dioxide; km = kilometer; – = No Standard.

Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On April 30, 2012, the SDAB was classified as a marginal nonattainment area for the 8-hour NAAQS for ozone. The SDAB is currently classified as a nonattainment area under the CAAQS for ozone (serious nonattainment), PM_{10}, and $PM_{2.5}$. The SDAB is an attainment area for the NAAQS and CAAQS for all other criteria pollutants (SDAPCD 2017).

The USEPA and the NHTSA worked together on developing a national program of regulations to reduce greenhouse gas (GHG) emissions and to improve fuel economy of light-duty vehicles. The USEPA established the first-ever national GHG emissions standards under the CAA, and the NHTSA established Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. On April 1, 2010, the USEPA and NHTSA announced a joint Final Rulemaking that established standards for 2012 through 2016 model year vehicles. This was followed up on October 15, 2012, when the agencies issued a Final Rulemaking with standards for model years 2017 through 2025. On August 2, 2018, the agencies released a notice of proposed rulemaking—the Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule). The purpose of the SAFE Vehicles Rule is "to correct the national automobile fuel economy and greenhouse gas emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment." The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon (mpg) in 2020 to 50 mpg in 2025. The new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels. The new SAFE Vehicles Rule also results in the withdraw of the waiver previously provided to California for that State's GHG and zero emissions vehicle (ZEV) programs under Section 209 of the CAA. The combined USEPA GHG standards and NHTSA CAFE standards resolve previously conflicting requirements under both federal programs and the

standards of the State of California and other states that have adopted the California standards. While the SAFE Vehicle Rule primarily affects GHG emissions, the resulting decreases in anticipated future fuel economy also results in slightly higher emissions of ROG, NO_X and exhaust PM from gasoline-powered cars and light trucks.

CARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for the County.

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The regional air quality plan for San Diego County is SDAPCD's 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County (Attainment Plan; SDAPCD 2020). The Attainment Plan, which would be a revision to the state implementation plan (SIP), outlines SDAPCD's plans and control measures designed to attain the NAAQS for ozone. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and SIP.

The Attainment Plan relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan. Projects which are consistent with the growth assumptions used in the Attainment Plan and do not conflict with the control measures in the Attainment Plan, and which do not result in criteria pollutant and precursor emissions in excess of the thresholds adopted by the County (as described in Section 3.1, below), would not hinder the goal of the Attainment Plan to bring the SDAB into compliance with the NAAQS and CAAQS for the protection of public health.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin.

The current federal and state attainment status for San Diego County is shown in Table 3, *Federal and State Air Quality Designation.*

Table 3
FEDERAL AND STATE AIR QUALITY DESIGNATION

Criteria Pollutant	Federal Designation	State Designation
Ozone (1-hour)	(No federal standard)	Nonattainment
Ozone (8-hour)	Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment	Attainment
PM_{10}	Unclassified	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassifiable
Visibility Reducing Particles	(No federal standard)	Unclassifiable

Source: SDAPCD 2017

2.5 AMBIENT AIR QUALITY

The SDAPCD operates a network of ambient air monitoring stations throughout the County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the project site is the El Cajon-Lexington Elementary School Monitoring Station located at 533 First Street in El Cajon, approximately 3.4 miles northwest of the project site. The El Cajon-Lexington Elementary School Monitoring Station is located in an inland valley and is representative of the climatological and topographical conditions at the project site. Air quality data for the years 2018 through 2020 are shown on Table 4, *Air Quality Monitoring Data.*

Table 4
AIR QUALITY MONITORING DATA

Air Pollutant	2018	2019	2020
Ozone – El Cajon Monitoring Station			
Max 1-hour (ppm)	0.087	0.094	0.094
Days > CAAQS (0.09 ppm)	0	0	0
Max 8-hour (ppm)	0.079	0.074	0.083
Days > NAAQS (0.070 ppm)	2	2	14
Days > CAAQS (0.070 ppm)	2	2	14
Particulate Matter (PM_{10}) – El Cajon Monitoring Station			
Max Daily ($\mu g/m^3$)	43.0	38.7	*
Days > NAAQS (150 $\mu g/m^3$)	0	0	*
Days > CAAQS (50 $\mu g/m^3$)	0	0	*
Annual Average ($\mu g/m^3$)	23.0	*	*
Exceed CAAQS (20 $\mu g/m^3$)	Yes	*	*

Air Pollutant	2018	2019	2020
Particulate Matter ($PM_{2.5}$) – El Cajon Monitoring Station			
Max Daily (µg/m^3)	36.2	23.8	38.2
Days > NAAQS (35 µg/m^3)	1	0	2
Annual Average (µg/m^3)	9.6	8.5	10.3
Exceed NAAQS (15 µg/m^3)	No	No	No
Exceed CAAQS (12 µg/m^3)	No	No	No
Nitrogen Dioxide (NO_2) – El Cajon Monitoring Station			
Max 1-hour (µg/m^3)	45.0	39.0	44.0
Days > NAAQS (188 µg/m^3)	0	0	0
Days > CAAQS (339 µg/m^3)	0	0	0

Sources: CARB 2021a

Notes: > = exceeding; ppm = parts per million; µg/m^3 = micrograms per cubic meter;
* = Insufficient data available to determine the value.

Monitoring data at El Cajon-Lexington Elementary School Monitoring Station show no exceedances of the state 1-hour standard for ozone from 2018 to 2020. Exceedance of the state and federal 8-hour standards for ozone occurred on two days in 2018, and on two days in 2019, and on 14 days in 2020. Exceedance of the federal daily standard for $PM_{2.5}$ occurred once in 2018. Data from the monitoring station showed no days in exceedance of the maximum daily standards for PM_{10}. The annual average for state PM_{10} was exceeded in 2018.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 SIGNIFICANCE CRITERIA

The County (2007) has approved guidelines for determining significance (County Guidelines) based on Appendix G.III of the State California Environmental Quality Act (CEQA) Guidelines, which provide guidance that a project would have a significant environmental impact if it would:

1. Conflict with or obstruct the implementation of the SDAPCD's Attainment Plan or applicable portions of the SIP;

2. Result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation;

3. Result in a cumulatively considerable net increase for which the SDAB is in non-attainment of NAAQS or CAAQS;

4. Expose sensitive receptors (including, but not limited to, residences, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations; and/or

5. Create objectionable odors affecting a substantial number of people.

The CEQA Guidelines were revised effective January 1, 2020, and the above standards of significance 2 and 3 were merged, reflecting an acknowledgment that air quality impacts related to exceedance of

NAAQS or CAAQS at the regional level are inherently cumulative impacts. The above standards of significance approved by the County address all recommended Air Quality impact concerns in the revised CEQA Guidelines.

To determine whether a project would (a) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, or (b) result in a cumulatively considerable net increase of PM_{10} or exceed quantitative thresholds for ozone precursors, NO_X and ROGs, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. The County has adopted as screening-level thresholds (SLTs), the Air Quality Impact Analysis (AQIA) trigger levels for new or modified stationary sources from the SDAPCD Rules 20.2 and 20.3 (SDAPCD 2019a, 2019b). The County has also adopted the SCAQMD's screening threshold of 55 pounds (lbs) per day or 10 tons per year as a significance threshold for $PM_{2.5}$, and the SCAQMD's Coachella Valley screening threshold of 75 lbs per day or 13.7 tons per year significance threshold for VOCs (SCAQMD 2015).

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds are included in Table 5, *Screening-Level Thresholds for Air Quality Impact Analysis*.

Table 5
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions (pounds per day)			
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOCs)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: County 2007; SDAPCD 2019a, 2019b; SCAQMD 2015.
T-BACT = Toxics Best Available Control Technology

3.2 METHODOLOGY

The air quality impact analysis contained in this report was prepared in accordance with the methodologies provided by the County as included in the *Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality* (County 2007).

Criteria pollutant emissions for project construction and operation were calculated using the California Emissions Estimator Model (CalEEMod), Version 2020.4.0. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. The model was developed for CAPCOA in collaboration with the California air districts. CalEEMod allows for the use of default data (e.g., emission factors, trip lengths, meteorology, source inventory) provided by the various California air districts to account for local requirements and conditions, and/or user-defined inputs. The calculation methodology and input data used in CalEEMod can be found in the CalEEMod User's Guide Appendices A, D, and E (CAPCOA 2021). The input data and subsequent construction and operation emission estimates for the proposed project are discussed below. Emissions calculations sheets and CalEEMod output files for the project are included in Appendix B and Appendix C, respectively, to this report.

3.2.1 Construction Emissions

CalEEMod incorporates CARB's EMFAC2017 model for on-road vehicle emissions and the OFFROAD2017 model for off-road vehicle emissions. CalEEMod is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the number of equipment, hours of operations, duration of construction activities, and selection of emission control measures. The model calculates emissions of CO, PM_{10}, $PM_{2.5}$, SO_2, and the ozone precursors ROG and NO_X.

Construction activities including site access, improvements to Willow Glen Drive, site preparation, demolition, and grading would be required prior to the start of mining (prior to Phase 1) to clear land and prepare a pad for the sand processing area. Demolition activities would also be required prior to commencement of mining phases 2 and 3. The construction analysis included modeling of the projected construction equipment that would be used during each construction activity and quantities of earth and debris to be moved. Heavy equipment would be required during site preparation, demolition, and grading. Because all equipment and structures would be mobile and/or prefabricated, the project would not require building construction, paving, or architectural coatings (e.g., painting). Construction equipment estimates are based on default values in CalEEMod and input from the project applicant. Table 6, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 6
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Site Access (Prior to Phase 1 only)	Graders	1
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	1
Willow Glen Drive Improvements – Demolition (Prior to Phase 1 only)	Concrete/Industrial Saws	1
	Graders	1
	Water Trucks	1
Willow Glen Drive Improvements – Grading (Prior to Phase 1 only)	Crawler Tractors	1
	Rollers	1
	Skid-Steer Excavators	1
Willow Glen Drive Improvements – Paving (Prior to Phase 1 only)	Water Trucks	1
	Pavers	1
	Paving Equipment (curb former)	1
Willow Glen Drive Improvements – Striping (Prior to Phase 1 only)	Rollers	1
	Crane (light installation)	1
Site Preparation (Prior to Phase 1 only)	Striping Truck	1
	Tractors/Loaders/Backhoes	1
Demolition (Prior to Phases 1, 2 and 3)	Concrete/Industrial Saws	1
	Excavators	1
	Rubber Tired Dozers	1
	Excavators	1
Grading (Prior to Phase 1 only)	Graders	1
	Rubber Tired Dozers	1
	Tractors/Loaders/Backhoes	3

Source: CalEEMod (output data, including equipment horsepower, is provided in Appendix C).

The construction schedule was determined by using CalEEMod defaults, input from the project applicant, and consideration of the size of the processing pad and estimates of structures to be demolished from aerial images. Construction and demolition activities prior to Phase 1 would commence as early as February 2022 and finish by May 2022. Demolition activity for Phase 2 and Phase 3 is assumed to occur near the end of the prior phase and concurrent with mining activities. Phase 2 demolition would last approximately 10 working days and Phase 3 demolition (which includes the golf course clubhouse) would last approximately 20 working days.

The quantity, duration, and the intensity of construction activity have an effect on the amount of construction emissions and their related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. Because of this conservative assumption, actual emissions could be less than those forecasted. If construction is delayed or occurs over a longer time period, emissions could be reduced because of (1) a more modern and cleaner-burning construction equipment fleet mix than incorporated in the CalEEMod, and/or (2) a less intensive schedule (i.e., fewer daily emissions occurring over a longer time interval). A complete listing of the assumptions used in the analysis and model output is provided in Appendix C of this report.

Although it was assumed that all of the dust control measures listed in Section 1.3 of this report would be implemented, to model the most conservative construction estimates, only application of water

twice per day and limiting vehicle speed to 15 mph during construction activities were taken into consideration. Based on CalEEMod defaults, the control efficiency for watering twice per day is 55 percent (CAPCOA 2021).

3.2.2 Operational Emissions

3.2.2.1 On-Road Vehicle Emissions

Operational emissions were modeled for each mining phase. Criteria air pollutant emissions from on-road vehicle trips (including sand delivery trucks, employee vehicles, and vendor vehicles) associated with each mining phase of the project were modeled using CalEEMod version 2020.4.0. The trip rates used in the model were provided in the Local Mobility Analysis (LMA) for the project (Linscott, Law & Greenspan, Engineers [LLG] 2021a). Emissions were modeled for the first full year of operation for each mining phase: assumed to be 2023 for Phase 1; 2025 for Phase 2; and 2028 for Phase 3. CalEEMod's default motor vehicle emission rates and fleet mix for San Diego County are based on CARB's EMFAC2017 database. The CalEEMod option to account for the SAFE Vehicles Rule in accordance with CARB off-model EMFAC2017 adjustments factors was selected. Sand delivery trip distance used in the model were provided in the Transportation Impact Analysis (TIA) for the project (LLG 2021b). The San Diego County default CalEEMod values for vehicle speeds, worker and vendor trip lengths, and trip purpose were used. Model output data sheets are included in Appendix C.

3.2.2.2 Off-Road Vehicle Exhaust Emissions

Criteria air pollutant emissions from vehicle exhaust due to all vehicle and equipment movement on unpaved surfaces within the project site were calculated using emissions and equipment data for San Diego County from the CARB Off-road Diesel Analysis & Inventory, OFFROAD2017 Database (CARB 2021b). To be conservative, it was assumed that the mining equipment used would be a mixture of new and used equipment. The age of off-road equipment analyzed corresponds to the average ages of equipment for the year 2022 in San Diego. All equipment was assumed to comply with the minimum fleet average exhaust emissions for off-road diesel equipment per CARB regulations. The equipment type, numbers, and usage used in mining and processing operations for the project were identified in the *Project Description for the Cottonwood Sand Mining Project* prepared by EnviroMINE, Inc. and are listed in Table 7, *Operational Off-Road Diesel Equipment* (EnviroMINE 2018). Typical load factors for off-road equipment are provided in the CARB Off-road Diesel Emission Factors: Load Factor Look Up Table (CARB 2017). The spreadsheet print files used in calculating off-road vehicle exhaust criteria air pollutant and precursor emissions are included in Appendix B.

Table 7
OPERATIONAL OFF-ROAD DIESEL EQUIPMENT

Equipment	Horsepower	Number	Purpose	Equipment Operating Hours per Day
Loader (Cat 988K)	541	2	Sand Extraction, Reclamation	8
Excavator (Cat 349)	396	1	Sand Extraction, Reclamation	6.4
Dozer (Cat D8T)	354	1	Mine area clearing/grading, Reclamation	6.4
Loader (Cat 988K)	541	1	Highway Truck Loading	6.4
Loader (Cat 966M-BR)	276	1	Highway Truck Loading	1.6
Skid Steer Loader (Cat 246D)	74	1	Highway Truck Loading	4
Off-Road Haul Truck (Cat 740EJ)	496	1	Reclamation Fines Hauling	3.2
Supervisor/Maintenance Truck	450	1	Quality Control/Maintenance	1.2
Water Truck (4000 gallon)	350	1	Dust Suppression	6
Grader (Cat 140K)	171	1	Reclamation Finish Grading	2.4
Seeding Truck	450	1	Hydroseeding	N/A[1]

Source: EnviroMINE 2018.

[1] Hyrdroseeding during mine operation assumed to require a 4,000-gallon seeding truck for 8 hours per day, 3 days per year

3.2.2.3 Off-Road Operational Fugitive Dust Emissions

Fugitive dust emissions from vehicle and equipment movement on unpaved surfaces were calculated using emissions factors from the USEPA Publication AP-42, *Compilation of Air Pollutant Emission Factors Vol. I: Stationary, Point, and Area Sources*. Fugitive dust emissions from open storage stockpiles, loading, transferring, and processing sand were calculated using emission factors from the SDAPCD Air Toxics "Hot Spots" and Emission Inventory Program (SDAPCD 1999). Representative emissions factors for the following activities were estimated using the source documents identified for each activity type:

- Mining pit activity (SDAPCD Mineral Products Industry – Quarry Activity – Sand Mining [SDAPCD 1999]).
- Storage piles (SDAPCD Mineral Products Industry – Open Material Storage Piles – Sand Mining [SDAPCD 1999]).
- Truck travel on unpaved roads (13.2.2 Unpaved Roads [USEPA 2006b]).
- Worker and other light/medium duty vehicle travel on unpaved surfaces (13.2.2 Unpaved Roads [USEPA 2006b]).
- Material loading, conveyor transfer, and radial stacking (SDAPCD Mineral Products Industry – Aggregate Transfer Point [SDAPCD 1999]).
- Size classification, screening, and sand processing (SDAPCD Mineral Products Industry – Aggregate Screening [SDAPCD 1999]).

Although it was assumed that all of the dust control measures listed in Section 1.3 of this report would be implemented, to model the most conservative operational dust estimates, only application of water twice per day and limiting vehicle speed to 15 mph on unpaved surfaces were taken into consideration. The control efficiency for the application of water twice daily (55 percent) was based on the CalEEMod default (CAPCOA 2021). The AP-42 emission factors for travel on unpaved roads assume an uncontrolled speed of 45 mph. The control factor for a reduction in speed from 45 to 15 mph (67 percent) was based on guidance and calculations from the Western Regional Air Partnership's (WRAP) *Fugitive Dust Handbook,* Chapter 6 – *Unpaved Roads* (WRAP 2006). The spreadsheet print files used in calculating off-road fugitive dust emissions are included in Appendix B.

3.2.2.4 Wind Erosion

Wind-blown fugitive dust is most prevalent if high wind and loose soil are substantial characteristics for a given land use (USEPA 2006a). The dust control measures listed in Section 1.3 of this report would be implemented, including watering or stabilizing all exposed areas, unpaved roads, and stockpiles; and terminating ground disturbance when wind gusts exceed 25 mph. Stockpiles which are unused for six or more months would either be seeded or covered to prevent wind erosion. With implementation of the fugitive dust BMPs, the wind erosion potential of exposed surfaces and stockpiles would be negligible. Wind-blown fugitive dust emissions during disturbance of surfaces and stockpiles are included in the fugitive dust calculations described in Section 3.2.2.3, above. Therefore, wind erosion fugitive dust emissions are not anticipated to be substantial and are not estimated in this report.

3.2.2.5 Reclamation Activities

As mining operations are completed, all areas disturbed by mining and processing activities would be graded and revegetated in accordance with the required mining and reclamation plans. Reclamation would be implemented in those areas of the site for which no further mining is planned and concurrently with mining using the same equipment used for clearing and sand extraction activities, including a grader and the fines off-road hauling truck, as well as a seeding truck (as shown in Table 7). Accordingly, the maximum daily and annual average emissions estimates account for grading and replacing topsoil as well as planting, where mining is complete. Once all mining is complete, final reclamation activities (Phase 4) would occur. During Phase 4, final grading of the last Phase 3 extraction area would be accomplished in a few days with the grader and dozer listed in Table 7. In addition, a small tractor with a cultivator and a hydroseed truck may be used for several days for final revegetation. Because the total equipment used for final reclamation activities (a dozer, grader, hydroseed truck, and small tractor) would be a small fraction of equipment used for operations (all of the equipment listed in Table 7), the intensity (and pollutant emissions) of these final reclamation activities would be substantially lower than the maximum daily and annual emissions analyzed for project operations. Therefore, these emissions are not estimated in this report.

3.2.3 Impacts to Sensitive Receptors

As discussed in Section 2.3.1, above, criteria pollutants that would be generated by the proposed project are associated with some form of health risk. Existing models have limited sensitivity to small changes in criteria pollutant concentrations; attempting to correlate the small amount of project-generated criteria pollutants specific health effects or additional days of nonattainment would not yield meaningful results. Consequently, an analysis of impacts on human health associated with project-generated regional ROG and NO_X emissions is not included in this assessment.

However, localized pollutants generated by a project can directly affect nearby sensitive receptors. Consistent with the current state of practice and published guidance by CAPCOA (2009) and CARB (2000), the analysis in this assessment focuses only on those pollutants with the greatest potential to result in a significant, material impact on human health, which are TACs and locally concentrated CO (i.e., CO hot spots).

3.2.3.1 Toxic Air Contaminants

A Health Risk Assessment (HRA) was completed to support the analysis regarding the potential impacts on the health of nearby potential sensitive receptors and off-site workers due to TACs generated by the long-term operation of the project. The HRA was completed following OEHHA *Air Toxics Hot Spots Program–Risk Assessment Guidelines – Guidance Manual for Preparation of Health Risk Assessments* (2015).

Almost all diesel exhaust particle mass is 10 microns or less in diameter. Therefore, it was conservatively assumed that all PM_{10} emissions from project diesel powered vehicle exhaust emissions are DPM.

The fugitive dust trace metal concentrations are based on default values available through the SDAPCD's Air Toxics "Hot Spots" and Emission Inventory Program (SDAPCD 1999). TACs analyzed include arsenic, beryllium, cadmium, chromium (hexavalent and non-hexavalent), copper, lead, manganese, mercury, nickel, selenium, and crystalline silica.

A 30-day lead concentration screening analysis for evaluating sub-chronic lead exposure was completed following direction from the SDAPCD and maximum off-site exposure concentration limits from the CARB's *Risk Management Guidelines for New, Modified, and Existing Sources of Lead* (CARB 2001).

Dispersion Modeling

Localized concentrations of pollutants were modeled using the Lakes AERMOD View version 10.0.1. The Lakes program utilizes the USEPA's AERMOD gaussian air dispersion model. Because each phase of mining would concentrate the operation of sand extraction equipment in different areas, potentially affecting different sensitive receptors, separate dispersion models were completed for each mining phase.

Emissions from vehicles operating in the sand extraction area and the sand processing area, including diesel exhaust and fugitive dust, were modeled as volume sources with an initial horizonal dimension of 50 meters (14 feet), an initial vertical dimension of 4.5 meters (14.8 feet), and a release height of 3 meters (9.8 feet) located at the approximate center of each mining phase sub area. Emissions from the conveyors moving sand from the extraction area to the processing plant, and the radial stackers moving sand from the processing plant to storage piles were modeled as volume line sources with an initial width of 1.8 meters (6 feet), a release height corresponding to the conveyor/stacker transfer point height, and an initial vertical dimension 1.5 times the transfer point height. Emissions from on-site haul routes and access roads (including diesel exhaust and fugitive dust) were modeled as a volume line source following the recommendations of the USEPA *Haul Road Workgroup Final Report* (2011). Emissions from sand delivery trucks (diesel exhaust only) operating on public roads were also modeled as volume line sources using the USEPA haul road modeling parameter recommendations and the trip distributions calculated in the TIA (LLG 2021a). Line volume sources for on-road truck traffic were modeled for: a 1.2-mile segment of Willow Glen Drive from the project entrance west to Jamacha Drive; a 1.4-mile segment of Jamacha Drive from Willow Glen Drive southwest to Campo Road; and a segment

of Jamacha Drive extending north from Willow Glen Drive approximately 1 mile. Each segment was apportioned a part of the total on-road emissions corresponding to the fraction of the total haul distance (segment length divided by average trip length) times the trip distribution percentage.

Variable emissions were selected in the model with daily on-site exhaust and fugitive dust emissions assumed to occur evenly from 7:00 a.m. to 5:00 p.m., Monday through Friday, and off-site sand truck delivery emissions assumed to occur evenly from 9:00 a.m. to 3:30 p.m. Monday through Friday.

CARB provides pre-processed meteorological data suitable for use with AERMOD (CARB 2015a). The available data set most representative of conditions in the project vicinity was from the Gillespie Field Airport station, approximately 6.5 miles northwest of the project site. The Gillespie Field Airport data set includes 5 years of data collected from 2009 to 2013. Rural dispersion coefficients were selected in the model to reflect the relatively undeveloped nature of the project site and the region downwind (east).

United States Geological Survey (USGS) National Elevation Dataset (NED) files with a 10-meter resolution covering were used in the model to cover the analysis area.

For the 30-day lead concentration modeling, the annual average lead emissions were assumed to occur in a 30-day period: an hourly emissions rate was calculated by dividing the annual emissions by 720 (the number of hours in a 30-day period). To be conservative in calculating the highest lead screening concentration, variable emissions were not used (emissions were assumed to be constant 24 hours per day).

The Lakes AERMOD View output reports (which include all modeling parameters selected) are included in Appendix D.

Risk Determination

To develop risk isopleths (linear contours showing equal level of risk), and ensure the area of maximum impact was captured, receptors were placed in cartesian grids covering the project site, off-site workers, sensitive receptors, and portions of the haul route modeled. Additional discrete receptors were placed at the closest non-project worker buildings, at the residential property line of the closest identified sensitive receptors surrounding the project site, along the segments of the haul route included in the model, and at the closest school to the project site (see Figure 4).

Health risks resulting from localized concentration DPM and fugitive dust trace TACs were estimated using the CARB Hotspots Analysis and Reporting Program (HARP), Air Dispersion Modeling and Risk Tool (ADMRT) version 21081. The plot files of localized concentrations from AERMOD were imported into the ADMRT model to determine health risks. Sand extraction for each mining phase would last 3 to 4 years. However, emissions from the processing area and on-road truck deliveries would last for the duration of the project mining (10 years). Therefore, to be conservative, for the residential and worker cancer risk, an exposure duration of 10 years was selected. The model conservatively assumes that residents would be standing and breathing at the location of the property line closest to the project site or haul route every day between 17 and 21 hours per day (depending on the age group, starting with fetuses in utero in the third trimester of pregnancy) for 10 years. For off-site worker cancer risk, an exposure duration of 10 years was selected with an assumption of 8 hours per day, 5 days per week of exposure, in accordance with the OEHHA guidelines (2015). Because the dispersion modeling used variable emissions approximately equivalent to typical worker hours, no worker adjustment factors were used. Fraction of time at home adjustments for residential exposure were selected for age bins 16 years and up. Because

a school is located within 0.25 mile of the project site, fraction of time at home adjustments were not selected for age bin below 16 years. The output of the modeling provides unitized ground level concentrations of the modeled constituent in micrograms per cubic meter for the maximum one-hour and the average over the 5-year period of the meteorological data. An inventory of maximum hourly and average annual emissions for each source of TACs was entered into the ADMRT program. The ADMRT combines the emissions inventory, the ground level concentration plots from AERMOD, and pollutant-specific risk factors to determine the health risks at each receptor point identified in the model. The ADMRT output files are included in Appendix D.

Cancer burden evaluates an overall population's increased cancer risk and is defined as the increases in cancer cases in the population due exposure to TACs from a project. Cancer burden is calculated differently from individual risk. Per OEHHA, cancer burden uses a 70-year exposure to evaluate population-wide cancer risk, and the cancer burden only evaluates residential exposure (not schools or worksites). Cancer burden is calculated by multiplying the number of residents exposed to an incremental excess cancer risk of 1 in 1 million by the estimated incremental excess cancer risk of the maximum exposed individual resident (MEIR). The SDAPCD or the County have not adopted thresholds for cancer burden and the operation of the project is expected to last only 10 years. However, to be conservative and provide comparison to an existing threshold, cancer burden was estimated for the project (using a 70-year exposure) and compared to the SCAQMD's threshold of an increase in cancer cases in the population of 0.5 (SCAQMD 2015).

4.0 PROJECT IMPACT ANALYSIS

4.1 CONFORMANCE TO THE ATTAINMENT PLAN

4.1.1 Guideline for the Determination of Significance

Would the project conflict with or obstruct the implementation of the SDAPCD's Attainment Plan or applicable portions of the SIP?

The Attainment Plan outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through the implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and the CARB, and the emissions and reduction strategies related to mobile sources are considered in the Attainment Plan and SIP.

The Attainment Plan relies on information from the CARB and SANDAG, including projected growth in the County, mobile, area, and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and the County. As such, projects that propose development that is consistent with the growth anticipated by the local jurisdictions' general plans would be consistent with the Attainment Plan. In the event that a project proposes development that is less dense than anticipated within the General Plan, the project would likewise be consistent with the Attainment Plan. If a project proposes development that is greater than

that anticipated in the County General Plan and SANDAG's growth projections upon which the Attainment Plan is based, the project would be in conflict with the Attainment Plan and SIP and might have a potentially significant impact on air quality. This situation would warrant further analysis to determine whether the project and the surrounding projects exceed the growth projections used in the Attainment Plan for the specific subregional area.

4.1.2 Significance of Impacts Prior to Mitigation

The project site is currently zoned as Open Space (S80), Specific Planning Area (S88), and Holding Area (S90). The S80 designation is used to provide appropriate controls for areas considered generally unsuitable for intensive development, including hazard or resource areas, public lands, recreation sites, or lands subject to open space easement or similar restrictions. The S90 zone is intended to prevent premature urban or non-urban development until more precise zoning regulations are prepared. Mineral extraction use is allowed within the S80 and S90 classifications with the issuance of a Major Use Permit. S88 zoning restricts extractive uses to site preparation, which allows the off-site removal of materials when it is secondary to the future use of the site. The two project parcels zoned S88 would not be actively mined and the end use for both parcels would be open space, consistent with the Rancho San Diego Specific Plan. The entire project site is identified in the General Plan Land Use Element Open Space-Recreation (OS-R) land use designation, which applies to large, existing recreational areas and allows for active and passive recreational uses. The project does not have a residential component and would not result in direct or indirect population growth in the County. The project is anticipated to employ approximately nine persons, less than the employment from the project site's use as golf courses. Therefore, the project would be consistent with the General Plan, the Valle De Oro Community Plan, and the Rancho San Diego Specific Plan and consistent with the growth projections from those plans used in development of the Attainment Plan and the SIP.

The County of San Diego has developed a number of strategies and plans aimed at improving air quality. The aggregate produced by the project must be transported to the project sites where it would be used. SANDAG released their *San Diego Region Aggregate Supply Study* in January 2011, which presented information related to the average miles traveled, and associated air quality emissions produced, by vehicles delivering aggregate to project sites (SANDAG 2011). The document explains that if the aggregate is transported by truck from current local mines to local project sites, the average distance between existing mines and construction sites in the region is 26 miles, which is used for vehicle miles traveled (VMT) projections in SANDAG's 2050 RTP for San Diego County, which in turn is used to develop mobile source emissions projections and control strategies for the Attainment Plan and SIP. Other options for aggregate transportation include truck, rail, and barge transportation from regions outside of the San Diego region (should the aggregate originate from a different region). The project VMT analysis concluded that the average one-way sand hauling distance for the project would be 16 miles based on the midpoint location of existing ready-mix concrete batch plants (the primary market for the project's sand) located within San Diego County (LLG 2021b). Although the project would generate new VMT in the region, the project would result in lower aggregate hauling VMT than assumed in the development of mobile source emissions projections and control strategies for the Attainment Plan and SIP.

The 570,000 tons of sand produced annually at the project site is anticipated to be supplied entirely to local markets within the County. A VMT comparison of existing and near-term future sand transport in the region (sand procured within the county and imported into the county), and the project sand transportation was completed in the TIA. The VMT analysis concluded that the project's production and

local distribution of 570,000 tons annually, which would reduce the import of this amount of sand from out-of-county suppliers, would result in a 79.2-percent reduction in region-wide VMT for sand transportation in the existing plus project scenario and a 75.8-percent reduction in region-wide VMT for sand transportation in the near-term plus project scenario (LLG 2021b). Consequently, the regional mobile-source air quality impacts produced by the project aggregate transportation would be offset by the reduction of aggregate import transportation impacts and the project would not result in an increase in the emissions from aggregate hauling over that assumed in development of the Attainment Plan.

The Conservation and Open Space Elements of the County General Plan present goals and policies designed to balance the regional need for construction materials with the community need for freedom from any disturbing effects of mining and aggregate processing activities while protecting public health (County 2011). The goal of the long-term production of mineral materials is to meet the local County
average annual demand, while maintaining permitted reserves equivalent to a 50-year supply, using operational techniques and site reclamation methods consistent with California standards so that adverse effects on surrounding land uses, public health, and the environment are minimized. Implementation of these policies supports the controls for mobile source emissions in the Attainment Plan and SIP:

COS-10.5 Reclamation Plans. Require all mining projects to be conducted in accordance with a reclamation plan that meets the minimum reclamation standards required by the California Surface Mining and Reclamation Act and the associated State Mining and Geology Board regulations. Require the reclamation plan to include a phasing plan that provides for the completion of the surface mining on each segment of the mined lands so that the reclamation can be initiated at the earliest possible time on those portions of the mined lands that will not be subject to further disturbance by the surface mining operation.

COS-10.6 Conservation of Construction Aggregate. Encourage the continued operation of existing mining facilities and streamline the permitting of new mining facilities consistent with the goal to establish permitted aggregate resources that are sufficient to satisfy 50 years of County demand.

COS-10.8 New Mining Facilities. Develop specific permit types and procedures for the authorization of new mining facilities that recognize the inherent physical effects of mining operations and the public necessity for available mineral resources adequate to meet local demand, in accordance with PRC Section 2762.

In addition to the policies in the General Plan, the project would be required to comply with the SDAPCD Rules and Regulations. The Attainment Plan control measures include the assumptions that new facilities with the required air permits would be consistent with the goals of the SIP. The project, when constructed and operated using the BACT and BMPs described in section 1.3.2, would comply with all of the standards of the SDAPCD Rules and Regulations. The Attainment Plan also assess the impact of all emission sources and all control measures, including those under the jurisdiction of the CARB (e.g., on-road motor vehicles, off-road vehicles and equipment, and consumer products).

4.1.3 Mitigation Measures and Design Considerations

Impacts would be less than significant and no mitigation is required.

4.1.4 Conclusions

The project would be consistent with and support the General Plan goals of long-term production of mineral materials to meet the local County average annual demand and establishment of permitted aggregate resources that are sufficient to satisfy 50 years of County demand. The project would be consistent with the land use designation and resulting growth projections in the General Plan, the Valle De Oro Community Plan, and the Rancho San Diego Specific Plan used in development of the Attainment Plan and SIP. In addition, the project would result in a reduction of sand transport VMT in the region (and a reduction in the related aggregate hauling emissions). Therefore, the project would not conflict with or obstruct the implementation of the San Diego Air Pollution Control District's Attainment Plan or applicable portions of the SIP and the impact would be less than significant.

4.2 CONFORMANCE TO FEDERAL AND STATE AMBIENT AIR QUALITY STANDARDS

4.2.1 Construction Impacts

Project construction activities would have the potential to adversely affect air quality through the generation of criteria pollutants (which includes fugitive dust emissions) and TAC emissions. Developing the project site for mining would require site preparation, demolition and grading prior to Phase 1 to prepare the processing area pad, install settling ponds, and improve site access. Additional demolition would be required prior to Phase 2 and Phase 3. Based on the County Guidelines (2007), construction impacts would be potentially significant if they exceed the quantitative screening-level thresholds for attainment/maintenance pollutants (NO_2, SO_2, and CO), and would result in a significant impact if they exceed the screening-level thresholds for nonattainment pollutants (ozone precursors and PM).

4.2.1.1 Guideline for the Determination of Significance

Would the project construction result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation?

To determine whether a project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD (as shown in Table 5).

4.2.1.2 Significance of Impacts Prior to Mitigation

General Construction Activities

Table 8, *Estimated Daily Construction Emissions,* provides a summary of the worst-case daily construction emission estimates by activity. As noted above, it was assumed that dust control measures (watering a minimum of two times daily and a 15-mph speed limit on unpaved surfaces) would be employed to reduce emissions of fugitive dust during construction.

Table 8
ESTIMATED DAILY CONSTRUCTION EMISSIONS

Construction Activity	ROG*	NO_X*	CO*	SO_X*	PM_{10}*	$PM_{2.5}$*
Phase 1 Site Access	1.5	15.8	7.8	<0.1	4.0	2.2
Roadway Improvements - Demolition	1.1	10.1	7.3	0.0	0.5	0.4
Roadway Improvements - Grading	1.3	13.8	9.5	0.0	1.0	0.6
Roadway Improvements - Paving	1.1	8.3	8.2	0.0	0.7	0.4
Roadway Improvements - Striping	16.1	6.2	5.4	0.0	0.6	0.3
Phase 1 Demolition	1.4	13.5	10.8	<0.1	0.8	0.7
Phase 1 Site Preparation	1.0	10.5	6.0	<0.1	3.5	2.0
Phase 1 Grading	2.0	20.9	15.8	<0.1	4.3	2.5
Phase 2 Demolition	1.2	11.1	10.3	<0.1	0.7	0.5
Phase 3 Demolition	1.1	10.8	10.3	<0.1	1.2	0.6
Maximum Daily Emissions	**16.1**	**20.9**	**15.8**	**<0.1**	**4.3**	**2.5**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod, output files included in Appendix C.
Note: Estimates assume the implementation of fugitive dust measures (watering twice daily and a 15-mph speed limit on unpaved roads).
* Pollutant Emissions (pounds per day)
ROG = reactive organic gas; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_X = oxides of sulfur; PM_{10} = particulate matter of 10 microns or less; $PM_{2.5}$ = particulate matter of 2.5 microns or less

As shown in Table 8, without mitigation, emissions of all criteria pollutants would be below the daily thresholds during construction. The Phase 2 and Phase 3 demolition activities would overlap with the Phase 1 and Phase 2 mining operations, respectively, and are included in the Operational Impact analysis, below. The project's construction activities would not result in a violation of the NAAQS or CAAQS and the impact would be less than significant.

4.2.1.3 Mitigation Measures and Design Considerations

As discussed in Section 1.3, the project would incorporate construction BMPs to reduce project-related emissions to satisfy the requirements of the SDAPCD Rule 55. Not all BMPs were included in the project's construction emissions calculations, thus implementation of the BMPs would further reduce fugitive dust (PM_{10} and $PM_{2.5}$) emissions resulting from project construction activity.

4.2.1.4 Conclusions

The project's construction activities would not result in a violation of the NAAQS or CAAQS and the impact would be less than significant.

4.2.2 Operational Impacts

Project operational activities would have the potential to adversely affect air quality through the generation of criteria pollutants (which includes fugitive dust emissions) and TAC emissions. Operation of the project through the three mining phases would result in emissions of criteria pollutants and TAC from exhaust emissions from the operation of off-road diesel powered equipment; fugitive dust emissions from off-road equipment moving on unpaved surfaces; fugitive dust emissions from off-road

equipment digging, moving, or transferring material; fugitive dust emissions from sand conveyance and processing equipment; and exhaust and fugitive dust emissions from on-road vehicle travel.

4.2.2.1 Guideline for the Determination of Significance

Based on the County Guidelines (2007), operational impacts would be potentially significant if they exceed the quantitative screening-level thresholds for criteria pollutants as listed under Section 4.2.1.1.

4.2.2.2 Significance of Impacts Prior to Mitigation

Table 9, *Estimated Daily Operational Emissions*, presents the summary of operational emissions for the project for each phase of mining with implementation of the BMPs for fugitive dust control described in Section 1.3, including watering of exposed surfaces and unpaved roads twice per day and enforcing a 15-mph speed limit on all unpaved surfaces. Phase 2 and Phase 3 demolition activities are presumed to occur near end of the prior phase and concurrent with mining activities. Phase 1 construction activities are assumed to be completed prior to the start of mining and are not included in the maximum daily operational emissions estimates. The Phase 1, 2, and 3 operational activities include ongoing reclamation as mining is completed in each sub-area. As discussed in Section 3.2, due to the limited amount of equipment use and duration, it is anticipated that the pollutant emissions from the Phase 4 final reclamation activities would be substantially lower than the maximum daily and annual emissions analyzed for project Phases 1 through 3, and the Phase 4 emissions are not included in the analysis. Operational emission calculations and model outputs are provided in Appendices B and C.

Table 9
ESTIMATED DAILY OPERATIONAL EMISSIONS

Category	ROG*	NO_X*	CO*	SO_X*	PM_{10}*	$PM_{2.5}$*
Phase 1						
Off-Road Equipment Exhaust	2.0	18.0	12.7	<0.1	0.7	0.6
Mining and Processing Dust	-	-	-	-	80.3	15.3
On-Road Mobile Emissions	0.5	19.9	6.9	<0.1	2.9	0.9
Phase 2 Demolition	1.2	11.1	10.3	<0.0	0.7	0.5
Phase 1 Total Daily Maximum Emissions	**3.7**	**49.0**	**29.9**	**0.2**	**84.5**	**17.4**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***
Phase 2						
Off-Road Equipment Exhaust	2.0	18.0	12.7	<0.1	0.7	0.6
Mining and Processing Dust	-	-	-	-	80.3	15.3
On-Road Mobile Emissions	0.4	19.4	6.9	<0.1	2.9	0.9
Phase 3 Demolition	1.1	10.8	10.3	<0.0	1.2	0.6
Phase 2 Total Daily Maximum Emissions	**3.6**	**48.8**	**29.9**	**0.2**	**85.0**	**17.4**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Category	ROG*	NO_X*	CO*	SO_X*	PM_{10}*	$PM_{2.5}$*
Phase 3						
Off-Road Equipment Exhaust	2.0	18.0	12.7	<0.1	0.7	0.6
Mining and Processing Dust	-	-	-	-	80.3	15.3
On-Road Mobile Emissions	0.8	23.3	9.9	0.1	2.7	0.8
Phase 3 Total Daily Maximum Emissions	**2.8**	**41.3**	**22.6**	**0.2**	**83.6**	**16.7**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceed Thresholds?	***No***	***No***	***No***	***No***	***No***	***No***

Source: CalEEMod and calculations using emission factors from CARB ORION Off-Road database and EPA AP-42 (CalEEMod output and calculation data is provided in Appendices B and C).
* Pollutant Emissions (pounds per day)
ROG = reactive organic gas; CO = carbon monoxide; NO_X = oxides of nitrogen; SO_X = oxides of sulfur;
PM_{10} = particulate matter of 10 microns or less in diameter; $PM_{2.5}$ = particulate matter of 2.5 microns or less in diameter

As shown in Table 9, project emissions of criteria pollutants and ozone precursors during operation of all mining phases would not exceed the daily screening thresholds. As discussed in Section 3.2.2, because the total equipment used for final reclamation activities (Phase 4; a dozer, grader, hydroseed truck, and small tractor) would be a small fraction of equipment used for operations (all of the equipment listed in Table 7), the intensity (and pollutant emissions) of these final reclamation activities would be substantially lower than the maximum daily and annual emissions analyzed for project operations and shown in Table 9. Therefore, the project's operational emissions would not result in a violation of the NAAQS or CAAQS and the impact would be less than significant.

4.2.2.3 Mitigation Measures and Design Considerations

The standard BMPs for fugitive dust control described in Section 1.3 would be required for mining operations to ensure compliance with SDAPCD Rule 55 and were accounted for in calculating operational emissions, as described in Section 3.2.2.

4.2.2.4 Conclusions

The project's operational emissions would not exceed the County screening threshold levels. Therefore, operation of the project would not result in a violation of the NAAQS or CAAQS and the impact would be less than significant.

4.3 CUMULATIVELY CONSIDERABLE NET INCREASE OF CRITERIA POLLUTANTS

4.3.1 Construction Impacts

Based on the County Guidelines (2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in pollutants for which the SDAB is listed as nonattainment for the CAAQS and NAAQS. As discussed in Section 2.0, the SDAB is designated as a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$.

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously under construction. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_X, or VOCs during construction would also have a significant cumulatively considerable net increase. In the event direct impacts from a

proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.3.1.1 Guidelines for the Determination of Significance

The following thresholds are used for the assessment of cumulative construction impacts:

Would the project result in emissions that exceed 250 lbs per day of NO_X or 75 lbs per day of VOCs?

Would the project result in emissions of $PM_{2.5}$ that exceed 55 lbs per day?

Would the project result in emissions of PM_{10} that exceed 100 lbs per day and increase the ambient PM_{10} concentration by 5.0 micrograms per cubic meter ($\mu g/m^3$) or greater at the maximum exposed individual?

4.3.1.2 Significance of Impacts Prior to Mitigation

Short-term emissions associated with construction may result in localized impacts to receptors located close to the project construction area. As shown in Section 4.2.1, project construction emissions would be below significance levels. Short-term cumulative impacts related to air quality could occur if construction of the project and other projects in the surrounding area were to occur simultaneously. In particular, with respect to local impacts, the consideration of cumulative construction particulate matter (PM_{10} and $PM_{2.5}$) impacts is limited to cases when projects constructed simultaneously are within a few hundred yards of each other because of (1) the combination of the short range (distance) of particulate dispersion (especially when compared to gaseous pollutants) and (2) the SDAPCD's required dust control measures which further limit particulate dispersion from a project site. The LMA identified projects in the traffic study area that would add traffic to the local circulation system in the near future (LLG 2021a). The closest large project on this list is the Ivanhoe Ranch (119 single-family residential units) on the southeast side of the project site. The construction schedule of Ivanhoe Ranch was not known at the time of this analysis. The closest lot in the Ivanhoe Ranch development is approximately 1,400 feet (0.25 mile) from the construction for the project's processing area. According to the Desert Research Institute (DRI), with implementation of standard dust control measures like those required by SDAPCD Rule 55, particulate concentrations are reduced by more than 99 percent at a distance of 400 feet (DRI 1996). As such, even if construction of the Ivanhoe Ranch development were to occur concurrently with the project, because of the distance between the projects, the project's construction activities are not anticipated to result in a cumulatively significant impact on air quality.

Section 4.2 concludes that the project's construction emissions would be well below the screening thresholds and impacts would be less than significant; and as discussed in Section 4.4 below, the project would not have significant impacts to sensitive receptors during construction. Therefore, construction of the project would not result in a cumulatively considerable contribution to a significant air quality impact pertaining to emissions of criteria air pollutants and ozone precursors.

4.3.1.3 Mitigation Measures and Design Considerations

Control measures for construction are discussed in Section 1.3. As discussed in that section, implementation of construction BMPs controlling fugitive dust emissions would minimize the project's

contribution to cumulative air quality impacts from construction activities. Cumulative projects would also need to comply with SDAPCD Rules for dust control and construction equipment. No mitigation measures would be required.

4.3.1.4 Conclusions

Cumulative impacts associated with project construction emissions of criteria pollutants and ozone precursors would be less than cumulatively considerable.

4.3.2 Operational Impacts

As discussed above, based on the County Guidelines (2007), a project would result in a cumulatively significant impact if the project results in a significant contribution to the cumulative increase in criteria pollutants and ozone precursors. In accordance with the guidelines, a project that does not conform to the Attainment Plan and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Also, projects that cause road intersections to operate at or below a level of service (LOS) E and create a CO hotspot create a cumulatively considerable net increase of CO.

4.3.2.1 Guidelines for the Determination of Significance

The following thresholds are used for the assessment of cumulatively considerable net increases in air pollutants during the operational phase:

Would the project conform to the SDAPCD's Attainment Plan and/or have a significant direct impact on air quality with regard to operational emissions of PM_{10}, $PM_{2.5}$, NO_X, and/or VOCs, which would also have a significant cumulatively considerable net increase in these emissions?

Would the project cause road intersections or roadway segments to operate at or below LOS E and create a CO hotspot that would result in a cumulatively considerable net increase of CO?

4.3.2.2 Significance of Impacts Prior to Mitigation

As described in Sections 4.1 and 4.2, the project would be consistent with the Attainment Plan and would not exceed the County's screening-level thresholds. As discussed in Section 4.4.2, the project would not create a CO hotspot that would result in a cumulatively considerable net increase of CO. Therefore, operation of the project would not create a cumulatively considerable net increase in criteria pollutants associated with operation and the impacts would be less than significant.

4.3.2.3 Mitigation Measures and Design Considerations

The project would be required to comply with SDAPCD Rule 55 and incorporate the BMPs described in Section 1.3. No further mitigation would be required.

4.3.2.4 Conclusions

Cumulative impacts associated with project operational emissions of criteria pollutants and ozone precursors would be less than cumulatively considerable.

4.4 IMPACTS TO SENSITIVE RECEPTORS

4.4.1 Guidelines for the Determination of Significance

Would the project expose sensitive receptors to substantial pollutant concentrations?

The following guidelines of significance are used by the County to address the above question:

Would the project place sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors?

Would project implementation result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 10 million with Toxics-Best Available Control Technology or a health hazard index greater than 1 and, thus, be deemed as having a potentially significant impact?

4.4.2 Significance of Impacts Prior to Mitigation

4.4.2.1 CO Concentrations (CO Hotspot Analysis)

CO hotspots are most likely to occur at heavily congested intersections where idling vehicles increase localized CO concentrations. The County guidelines call for a CO hotspot analysis if the project would:

- Place sensitive receptors within 500 feet of a signalized intersection with a LOS of E or F, with peak-hour trips exceeding 3,000 vehicles; or

- Cause intersections to operate at LOS E or F, with peak-hour trips exceeding 3,000 vehicles.

The project would generate approximately 212 average daily trips (ADT) during operation, or 476 ADT including a 2.5 passenger car equivalent factor for trucks (LLG 2021a). According to the LMA, one signalized intersection in the study area operates with a LOS of E or F under existing conditions. The two-way stop-controlled intersection of Willow Glen Drive and Muirfield Drive would continue to operate at LOS E during the PM peak hour and degrade from LOS E to LOS F during the AM peak hour under the existing plus project plus cumulative conditions with a peak hour traffic volume of 2,032 vehicles. The LMA concluded that this would be an acceptable LOS, and no mitigation would be required. Because the only intersection operating at LOS E or F with a significant increased delay resulting from project and cumulative traffic is not signalized and would have a peak hour traffic less than 3,000 vehicles, project implementation would not result in the formation of CO hotspots. Impacts to sensitive receptors resulting from CO hotspots would be less than significant.

4.4.2.2 Construction-Related Health Risk

Project construction would generate DPM emissions from the use of off-road diesel equipment required for demolition, site preparation, and grading and other construction activities. DPM is the primary toxic air contaminant that would be emitted during construction. Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The amount to which the receptors could be exposed, which is a function of concentration and duration of exposure, is the primary factor used to determine health risk. The generation of TAC emissions during construction would be variable and sporadic due to the nature of construction activity. The longest construction period would be prior to Phase 1 for preparation and grading the processing

pad and settling ponds. This construction utilizing heavy diesel equipment is anticipated to last a maximum of 50 working days and would require up to six pieces of heavy equipment working at one time (see Table 6). The closest sensitive receptors to this activity would be 650 feet west (upwind) of the settling ponds. Project construction activities would also generate fugitive dust emissions (PM_{10} and $PM_{2.5}$). Because the native sand could contain TACs, construction fugitive dust could also include some respirable TACs. During construction implementation of the BMPs for the control of fugitive dust, described in Section 1.3, would substantially reduce emissions of fugitive dust related TACs. In addition, as described above, the longest period of construction is anticipated to last 50 working days and would be located 650 feet from the nearest sensitive receptor. DPM disperses rapidly with distance, and concentrations of DPM emissions are typically reduced by 70 percent at approximately 500 feet (CARB 2005). The maximum daily on-site emissions of exhaust PM_{10} (a proxy for DPM) during grading are anticipated to be 0.6 pounds per day (see Appendix C for CalEEMod outputs). This can be compared to, and is less than, the operational off-road equipment exhaust of 0.7 pounds per day of PM_{10}. As such, it can be concluded that construction period health risks would be less than those analyzed below for operations. Therefore, due to the short duration and minimal amount of emissions and distance to the nearest receptors, project-related TAC emission impacts during construction would not expose sensitive receptors including residences, schools, hospitals, resident care facilities, or day-care centers, to substantial pollutant concentrations and the impact would be less than significant.

4.4.2.3 Operation-Related Health Risk

As discussed in Section 2.1, the closest existing sensitive receptors to the project site are the ADEONA Healthcare facility and single-family homes adjacent to the existing and former golf courses south and east of the project site. In addition, there are single- and multi-family homes along the primary routes for aggregate delivery trucks entering and exiting the project site, including along Willow Glen Drive and Jamacha Road. The closest school is the Jamacha Elementary School approximately 1,280 feet (0.24 mile) south of the Phase 2 mining area. The sensitive receptor locations are shown in Figure 4.

The incremental excess cancer risk is an estimate of the chance a person exposed to a specific source of a TAC may have of developing cancer from that exposure beyond the individual's risk of developing cancer from existing background levels of TACs in the ambient air. For context, the average cancer risk from TACs in the ambient air for an individual living in an urban area of California is 830 in 1 million (CARB 2015b). Cancer risk estimates do not mean, and should not be interpreted to mean, that a person will develop cancer from estimated exposures to toxic air pollutants.

Operation of the project would result in the generation of DPM emissions and fugitive dust trace TACs from the use of off-road diesel equipment, on-road haul trucks, and sand processing operations. Fugitive dust trace TACs analyzed include arsenic, beryllium, cadmium, chromium (hexavalent and non-hexavalent), copper, manganese, mercury, nickel, selenium, and crystalline silica. The project would implement T-BACT, specifically, the implementation of BMPs (as described in Section 1.3) and the use of water for dust suppression in sand processing, and the implementation of DPM emissions reduction technologies in accordance with USEPA and CARB regulations and implementation schedules. As described in Section 3.2.3, above, air dispersion modeling of TAC emissions was completed using Lakes AERMOD View and risks were evaluated using the CARB Hotspots Analysis and Reporting Program ADMRT program. The resulting health risks for the maximum exposed non-project worker and the maximum exposed individual residents near the project site and/or near the haul route are summarized in Table 10, *Health Risks from TAC Emissions*. Model output files and cancer risk isopleth plots are included in Appendix D.

Table 10
HEALTH RISKS FROM TAC EMISSIONS

Maximum Exposed Individual	Risk Type	Maximum Risk	SDAPCD Threshold	Exceed Threshold?
Phase 1				
Resident	Incremental Cancer Risk	2.3 in 1 million	10 in 1 million	No
	Chronic Hazard Index	0.05	1	No
	Acute Hazard Index	0.07	1	No
Non-Project Worker	Incremental Cancer Risk	0.02 in 1 million	10 in 1 million	No
	Chronic Hazard Index	<0.01	1	No
	Acute Hazard Index	<0.01	1	No
Phase 2				
Resident	Incremental Cancer Risk	2.9 in 1 million	10 in 1 million	No
	Chronic Hazard Index	0.05	1	No
	Acute Hazard Index	0.09	1	No
Non-Project Worker	Incremental Cancer Risk	<0.01 in 1 million	10 in 1 million	No
	Chronic Hazard Index	<0.01	1	No
	Acute Hazard Index	<0.01	1	No
Phase 3				
Resident	Incremental Cancer Risk	2.7 in 1 million	10 in 1 million	No
	Chronic Hazard Index	0.05	1	No
	Acute Hazard Index	0.07	1	No
Non-Project Worker	Incremental Cancer Risk	<0.01 in 1 million	10 in 1 million	No
	Chronic Hazard Index	<0.01	1	No
	Acute Hazard Index	<0.01	1	No

Source: Lakes AERMOD View version 9.6.1 and CARB ADMRT version 18159, Model output files and cancer risk isopleth plots are included in Appendix D.
TAC = toxic air contaminant; SDAPCD = San Diego Air Pollution Control District

As discussed in Section 3.2, above, risks were conservatively evaluated for each scenario (Phase 1, Phase 2, and Phase 3) assuming a full 10 years of exposure (the anticipated duration of mining activities for the entire project), even though sand extraction for each phase would only last 3 to 4 years. All receptors were included in each scenario. As shown in Table 10, the MEIR (i.e., the individual resident with the highest estimated increased cancer risk and/or health hazard index; located at a rural residence off of Ivanhoe Ranch Road southeast of the project site) would have incremental increased cancer risk of 2.9 in 1 million, an acute health hazard index of 0.05, and a chronic health hazard index of 0.07 during Phase 2. The increased incremental cancer risk isopleths and the location of the MEIR are shown in Figure 5, *Increased Residential Cancer Risk.* The maximum exposed individual worker (located on Willow Glen Drive just east of the Jamacha Road intersection) would have an incremental increased cancer risk of 0.02 in 1 million, an acute health hazard index of less than 0.01, and a chronic health hazard index of less than 0.01 during Phase 1. The thresholds for increased incremental cancer risk, acute health risk, and chronic health risk would not be exceeded for the maximum exposed individual non-project worker or resident.

Residential cancer burden was estimated using the highest risk for an MEIR from all phases (which would occur in Phase 2), as described in Section 3.2.3. Using the 1 in 1 million cancer risk isopleth for a 70-year exposure overlaid on an aerial image, the number of residences within or touching the isopleth is 23 single-family homes. Assuming up to 10 residents per residence, the total exposed population

would be 230. The cancer burden would be 3.4 x 10^{-6} times 230, or 0.0008, below the SCAQMD threshold of 0.5.

A screening analysis was completed for sub-chronic lead exposure, as described in Section 3.2.3. Using conservative assumptions (a year of calculated lead emissions emitted in 30 days and emissions steady 24-hours per day), the maximum on-site lead concentration would be 0.014 µg/m^3 and the highest concentration at any off-site sensitive receptor would be 0.003 µg/m^3. These lead concentration levels would be well below the high exposure scenario approval level of 0.12 µg/m^3 (CARB 2001). No further refinement of the lead concentration modeling/analysis is required.

Therefore, the impact on community health resulting from project operational emissions of TACs would be less than significant.

4.4.3 Mitigation Measures and Design Considerations

Impacts are less than significant; therefore, no mitigation measures are required.

4.4.4 Conclusions

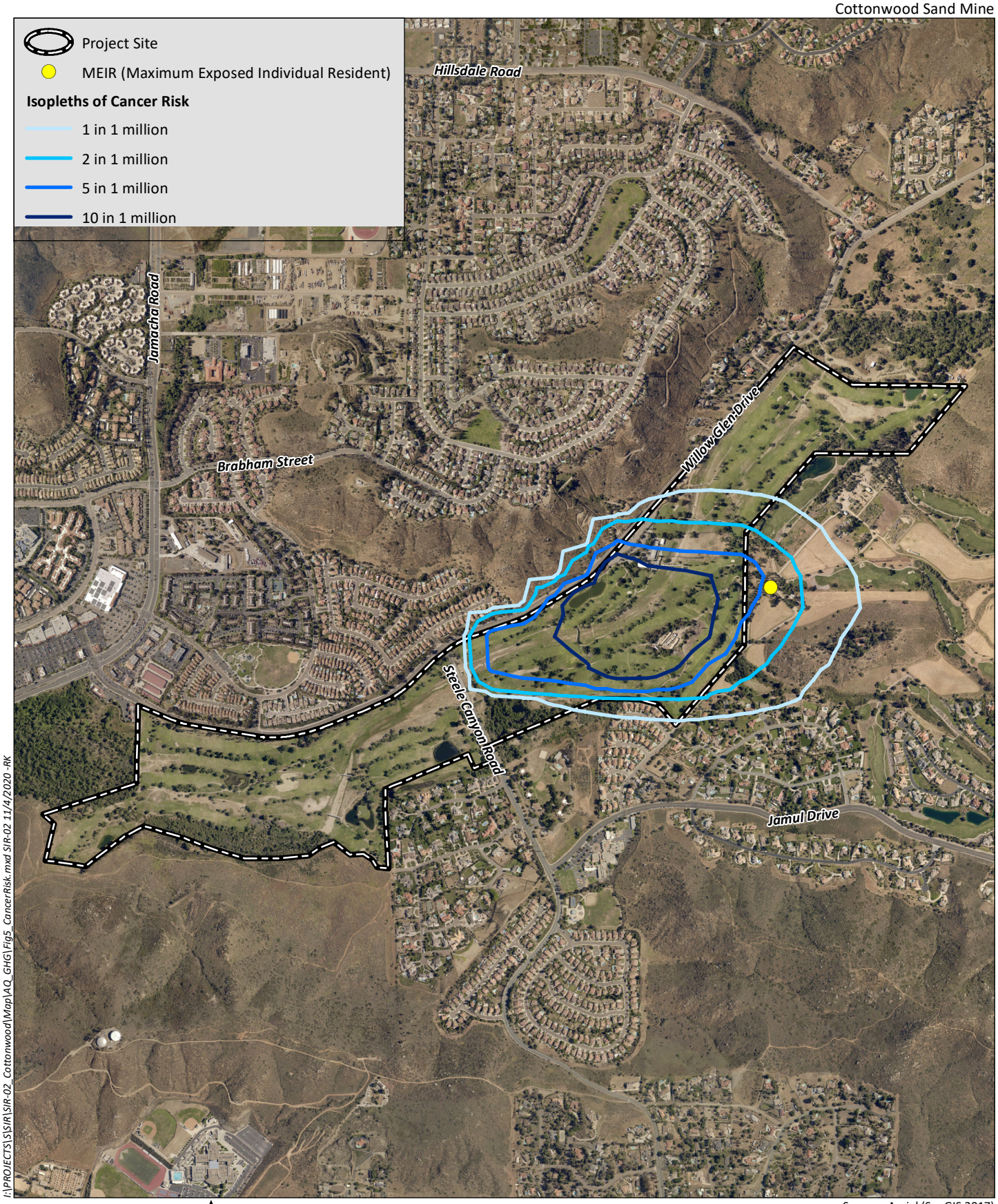
Implementation of the project would not result in the formation of CO hotspots due to project-related traffic. Due to the short-term and intermittent nature of construction activity, and due to the distance to the closest sensitive reports from construction areas, impact from construction-period TACs would be less than significant. Operation of the project would not result in increased incremental cancer risks or health hazard indexed in excess of County thresholds with T-BACT implemented. The project would not expose sensitive receptors to substantial concentrations of pollutants and impacts would be less than significant.

4.5 ODOR IMPACTS

4.5.1 Guidelines for the Determination of Significance

Based on the County Guidelines (2007), a project would have a significant impact if it would generate objectionable odors or place sensitive receptors next to existing objectionable odors that would affect a considerable number of persons or the public.

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 541700, prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. In addition, the County's Zoning Ordinance, Section 6318, states: "all commercial and industrial uses shall be so operated as to not emit matter causing unpleasant odors which are perceptible by the average person at or beyond any lot line of the lot containing said uses." 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.



Source: Aerial (SanGIS 2017)

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Increased Residential Cancer Risk

Figure 5

4.5.2 Significance of Impacts Prior to Mitigation

According to the SCAQMD *CEQA Air Quality Handbook*, land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations (SCAQMD 1993). The project, involving a sand mining and processing facility, would not include any of these uses. Project construction and operation could result in minor amounts of odors associated with unburned hydrocarbons in diesel heavy equipment exhaust. The project sand processing and truck loading area would be located approximately 650 feet from the nearest residence. Sand extraction activities could require up to three pieces of equipment, but the equipment would be located at least 100 feet from residences in accordance with the Project's proposed property line setbacks. Most mining activity would occur at distances much greater than 100 feet from residences based on the large area of the mining site. The odor of diesel exhaust from the mining equipment may be objectionable to some; however, emissions would be intermittent based on the mobile nature of mining activities and the Project's proposed phasing and would disperse rapidly with distance (CARB 2005); therefore, the Project's mining activities would not affect a substantial number of people. As such, impacts associated with odors during construction and operation of the project would be less than significant.

4.5.3 Mitigation Measures and Design Considerations

Because the project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no mitigation measures or additional design considerations are required.

4.5.4 Conclusions

Due to the nature of the development, there are no significant odorous air emissions anticipated from construction or operation; therefore, impacts would be less than significant.

5.0 SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS, AND MITIGATION

5.1 PROJECT DESIGN FEATURES

As described in Section 1.3, the project would incorporate measures to minimize fugitive dust emissions, including watering twice per day during grading and stabilization of storage piles. The project would comply with Rule 55, which requires that no visible dust is emitted beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period. The project would incorporate measures to minimize the track-out/carry-out of visible roadway dust per Rule 55 and fugitive dust BMPs including watering exposed surfaces a minimum of twice per day and enforcing a 15-mph speed limit on unpaved surfaces.

5.2 PROJECT IMPACTS

As described in Section 4.1, the project would be consistent with the Attainment Plan.

The control measures listed above constitute BMPs for dust control. With the implementation of construction BMPs, air pollutant emissions impacts associated with project construction and operation would be less than significant.

The project would not result in cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

Impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

Impacts from odors generated from construction and operation of the project would be less than significant.

5.3 PROJECT MITIGATION

Because the project would not result in significant impacts, no mitigation is required.

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7.0 LIST OF PREPARERS

Joanne M. Dramko, AICP	County-approved Air Quality Consultant
Victor Ortiz	Senior Air Quality Specialist
Martin Rolph	Air Quality Specialist
Vanessa Toscano	Project Manager
Andrea Bitterling	Principal Planner
Hunter Stapp	Environmental Planner

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

Appendix A

Fugitive Dust Control Plan

HELIX Environmental Planning

Cottonwood Sand Mine Project

Fugitive Dust Control Plan

November 2021 | 02975.00002.002

Prepared for:

New West Investment Group, Inc.
565 N. Magnolia Avenue
El Cajon, CA 92020

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

Cottonwood Sand Mine Project

Fugitive Dust Control Plan

Prepared for:

New West Investment Group, Inc.
565 N. Magnolia Avenue
El Cajon, CA 92020

Prepared by:

HELIX Environmental Planning, Inc.
7578 El Cajon Boulevard
La Mesa, CA 91942

November 2021 | 02975.00002.002

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ACRONYMS AND ABBREVIATIONS

BACT	Best Available Control Technology
CARB	California Air Resources Board
County	County of San Diego
CY	cubic yard
mph	miles per hour
NESHAP	National Emission Standard for Hazardous Air Pollutants
NO_X	oxides of nitrogen
NSPS	New Source Performance Standard
OEHHA	Office of Environmental Health Hazard Assessment
operator	project applicant or the applicant's designated mine operations manager
PM_{10}	coarse particulate matter (particulate matter with an aerodynamic diameter of 10 microns or less)
$PM_{2.5}$	fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 microns or less)
Project	Cottonwood Sand Mine Project
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SDAPCD	San Diego County Air Pollution Control District
Site Coordinator	Fugitive Dust Control Plan Project Site Coordinator
SJVAPCD	San Juaquin Valley Air Pollution Control District
SO_X	oxides of sulfur
SR	State Route
TACs	toxic air contaminants
T-BACT	Toxics Best Available Control Technology
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

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1.0 INTRODUCTION

This Fugitive Dust Control Plan (Plan) for the Cottonwood Sand Mine Project (project) summarizes the responsible parties, project description and potential dust sources, applicable local rules and regulations, fugitive dust control measures, and Plan implementation for the project. The purpose of the Plan is to implement the fugitive dust control project design features, reduce potential fugitive dust impacts resulting from construction and operation of the project, and ensure compliance with San Diego County Air Pollution Control District (SDAPCD) and San Diego County (County) rules and regulations.

2.0 RESPONSIBLE PARTIES

2.1 PROJECT SITE COORDINATOR

The project applicant shall designate a Fugitive Dust Control Plan Project Site Coordinator (Site Coordinator) and Assistant Site Coordinator. The Site Coordinator and Assistant Site Coordinator shall be California Air Resources Board (CARB) certified for Visual Emissions Evaluation and trained in all aspects of the project design features/dust control measures, Plan implementation and recordkeeping requirements. The Site Coordinator will be responsible for implementing the fugitive dust control measures as specified in this Plan. The Site Coordinator will have authority and responsibility for overseeing implementation of the measures identified in Section 5. In the event the Site Coordinator is not on site, the Assistant Site Coordinator will serve in a similar capacity. Prior to site preparation and extraction activities and after issuance of SDAPCD or County permit(s), the contact information (provided in Section 2.2) for the designated Site Coordinator and Assistant Site Coordinator shall be provided to both the SDAPCD and the County. The Site Coordinator has the following responsibilities:

- Read and understand the Plan and have a copy available at the project site.
- Implement the Plan and ensure that all employees and contractors know their fugitive dust control responsibilities.
- Use alternative fugitive dust control measures when specified fugitive dust control measures are ineffective.
- Monitor the worksite for compliance with the Plan.
- Maintain a checklist monitoring the implementation and effectiveness of the fugitive dust control measures. Inspections shall be conducted twice a month, at minimum. A self-inspection checklist will be used for each source of fugitive dust emissions identified in Section 3.3 to help incorporate routine tasks of fugitive dust control into daily schedules. The checklist will serve as a job reminder on a daily basis and as record of efforts to keep fugitive dust to a minimum. An example of a checklist is included as Attachment A.
- The Site Coordinator shall be available to respond to complaints or reports on operating days to ensure the project operation shall not cause or allow any emissions of fugitive dust from any transport, handling, or storage activity for which such dust remains visible in the atmosphere beyond the property line of the emission source (this condition does not apply when the wind speed instantaneously exceeds 25 miles per hour (mph) or when the wind speed averages for

15 minutes is greater than 15 mph). The Site Coordinator shall maintain a log of visible emission observations (which includes images taken of dust being generated on the property) and will make that log available to SDAPCD inspectors upon request. CARB's Visible Emission Observation Form is included as Attachment B. The Site Coordinator shall also organize and conduct an employee and contractor awareness training for all new employees and contractors that will include all applicable fugitive dust control measures and the importance of strict compliance. A sign-in sheet will be completed for all participants and hard hat decals will be provided to all individuals that have completed the training. An example of an employee and contractor awareness training sign-in sheet is included as Attachment C.

- All recordkeeping will be kept on site for a minimum period of 5 years.

2.2 PROJECT CONTACT LIST

The contact information for the individuals responsible for the preparation and implementation of the Plan is provided in Tables 1, 2, and 3. The responsibilities of the project site coordinator are detailed in Section 2.1, above.

Table 1
FUGITIVE DUST CONTROL PLAN PROJECT CONTACT

Name	
Title	
Address	
Phone	
Mobile	
Fax	
Email	

Table 2
FUGITIVE DUST CONTROL PLAN PROJECT SITE COORDINATOR

Name	
Title	
Address	
Phone	
Mobile	
Fax	
Email	

Table 3
FUGITIVE DUST CONTROL PLAN ASSISTANT PROJECT SITE COORDINATOR

Name	
Title	
Address	
Phone	
Mobile	
Fax	
Email	

3.0 PROPOSED PROJECT

3.1 PROJECT LOCATION

The project is located at 3121 Willow Glen Drive in the unincorporated communities of Rancho San Diego and Jamul, southeast of the City of El Cajon in eastern San Diego County. The site is north of State Route (SR) 94 and east of SR 54. More specifically, the project site is located on the southeast side of Willow Glen Drive, north of Jamul Drive, east of Jamacha Road, and west of Hillsdale Road. Steele Canyon Road bisects the project site from north to south, near the center of the project (see Figure 1, *Regional Location* and Figure 2, *Aerial Vicinity*). Principal site access is from Willow Glen Drive, with regional access from SR 54/Jamacha Boulevard and SR 94/Campo Road.

3.2 PROJECT OVERVIEW

The project would extract, process, and transport sand using conventional earth moving and processing equipment. Approximately 4.3 million cubic yards (CY; 6.40 million tons) of material are proposed to be extracted. Mining and extraction activities are expected to produce approximately 3.8 million CY (5.7 million tons) of sand and gravel for market use. Extraction operations would be limited to a maximum production of 380,000 CY (570,000 tons) of construction grade aggregate (sand) per calendar year, with a 10 percent waste factor from the total amount extracted that includes wash fines and materials undesirable for processing.

The project would be developed in three continuous mining phases, with subphases of less than 30 acres per phase, and a fourth phase for cleanup, equipment removal, and final reclamation (see Figure 3, *Mining Phases*). Prior to the initiation of Phase 1, pre-mining activities such as the restriping of Willow Glen Drive between Steele Canyon Road and the Project ingress driveway to provide Class II buffered bike lanes on both sides of the roadway, improvements to the access point from Willow Glen Drive to the Phase 1 excavation area, and installation of screening landscaping would be implemented. Phase 1 would begin with the placement of the processing plant west of the existing clubhouse adjacent Willow Glen Drive. The plant site would consist of aggregate processing and washing facilities, three settling ponds, loadout area, and support structures and buildings (e.g., scale, office kiosk, and office trailer). A portable conveyor line would be installed to transport excavated materials to the processing plant from the excavation areas. The conveyor line would be mobile to provide access within each phase and would be relocated as mining activity is concluded in each phase. The mobile conveyor is proposed to minimize the use of on-site roads to transport excavated material between the plant and excavation areas.

Construction activities would include Willow Glen Drive improvements, demolition of structures, preparation of the processing area and settling ponds, construction of site access points, and installation of processing equipment. As noted above, an initial construction period would occur prior to Phase 1 mining to prepare the processing area and the Phase 1 extraction area. Subsequent construction and demolition activities for Phase 2 and Phase 3 mining would occur concurrently with sand mining and processing. The fugitive dust control measures described in this plan would apply to both construction and operation of the project.

Areas disturbed by resource extraction would be progressively reclaimed in an ongoing process that commences when mining operations have ceased within a given subphase area and continues until all mining-related disturbance is reclaimed and all equipment involved in these operations has been removed. Reclamation would include establishment of all final slopes, incorporation of accumulated wash fines and topsoil (as applicable), installation of irrigation lines, revegetation of the channel and slopes using appropriate native species, weed control, and monitoring. Upon completion of the extraction activities, the entire site would be reclaimed in accordance with the mining and reclamation plan.

3.3 POTENTIAL DUST SOURCES

The following potential fugitive dust sources may occur at the project area:

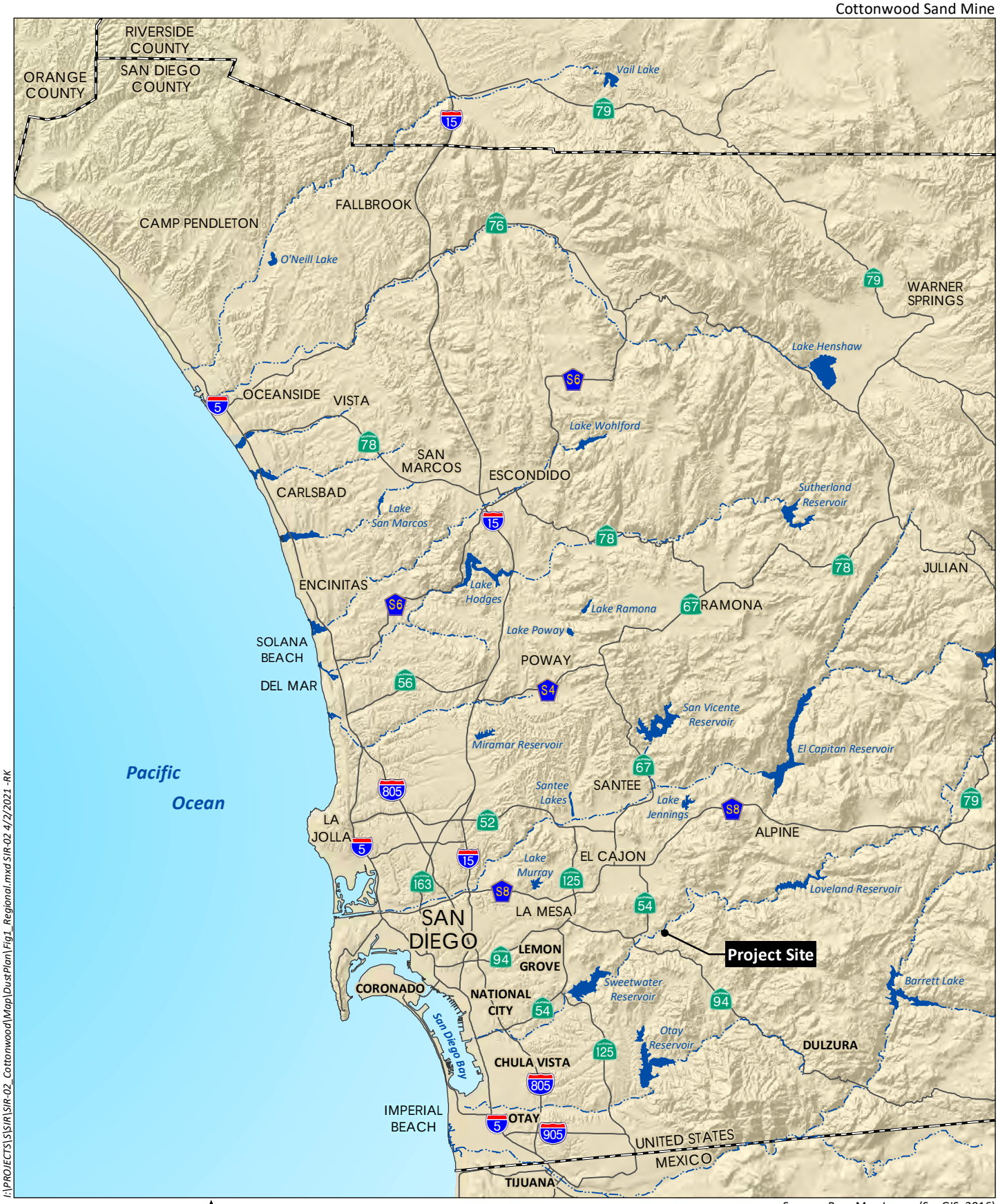
- Demolition of existing structures on the project site.
- Site grading and other earth-moving activities.
- Vehicles and equipment driving on paved roads (both on site and off site).
- Vehicles and equipment driving on unpaved roads.
- Aggregate and sand loading and unloading operations to/from conveyors, haul trucks, storage piles, and the aggregate processing plant.
- Aggregate processing plant operation.
- Wind erosion of areas disturbed from operation.
- Significant wind action on unprotected storage piles and areas.

3.4 WATER SOURCES

Operation of the project would require approximately 140 acre-feet of water per year for aggregate processing, dust suppression, and irrigation (if needed). Water would be sourced from eight existing groundwater wells on the project site.

3.5 SENSITIVE RECEPTORS

CARB and the Office of Environmental Health Hazard Assessment (OEHHA) have identified the following groups of individuals as the most likely to be affected by air pollution: the elderly over 65, children under 14, infants (including in utero in the third trimester of pregnancy), and persons with



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0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

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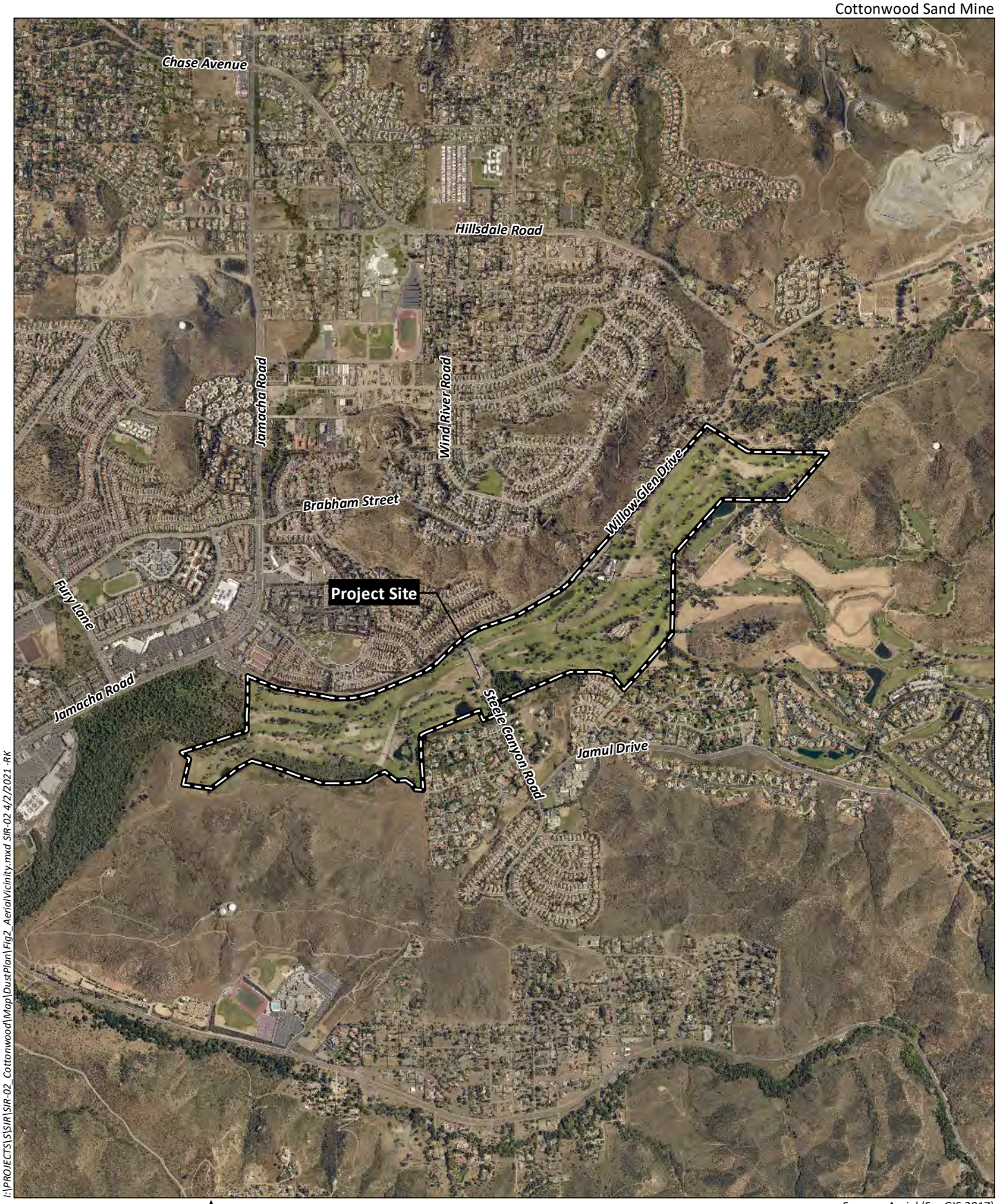
Regional Location

Figure 1



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0 2,000 Feet

Source: Aerial (SanGIS 2017)

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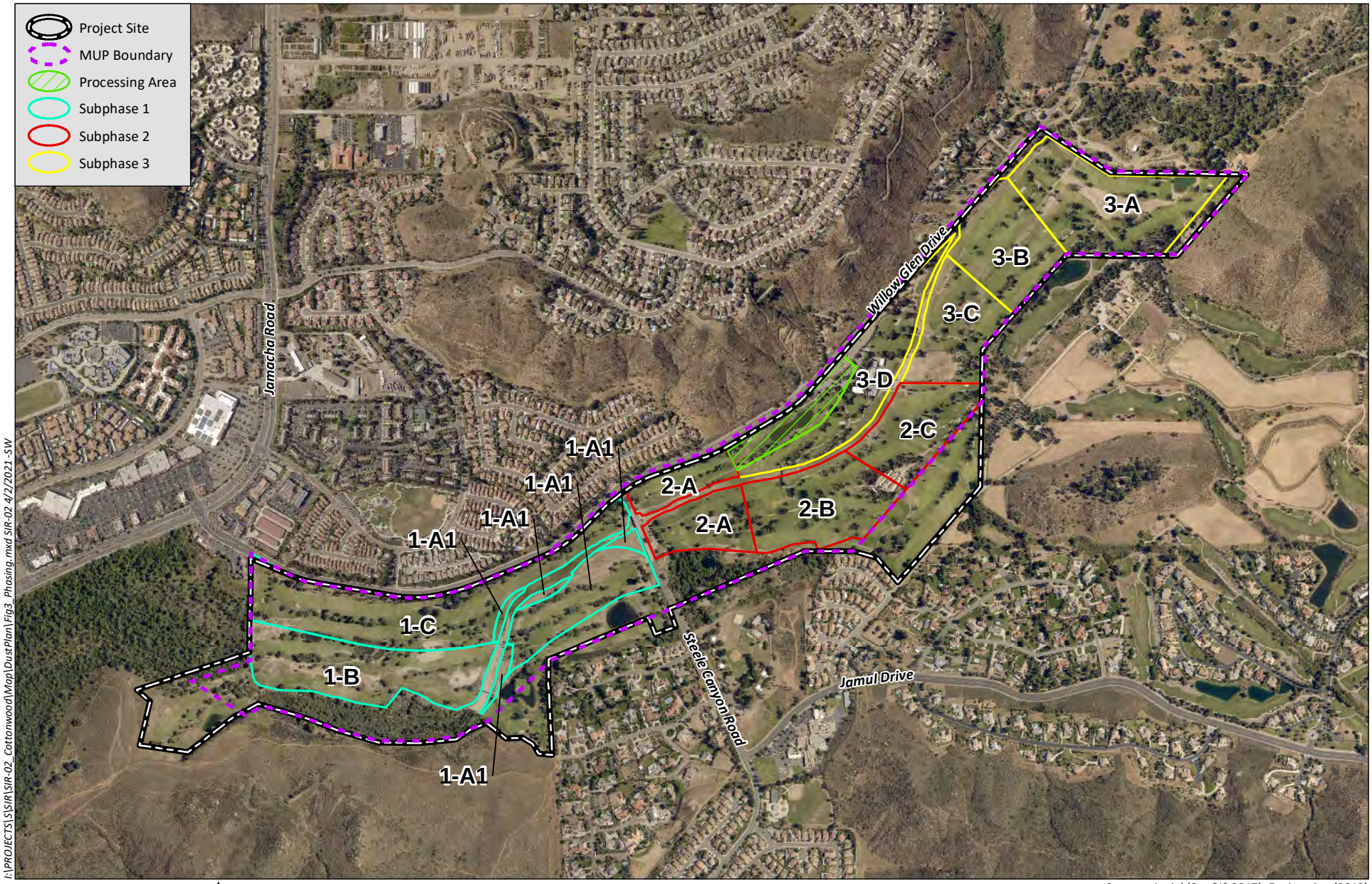
Aerial Vicinity

Figure 2



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Source: Aerial (SanGIS 2017); Enviromine (2019)

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Mining Phases

Figure 3

cardiovascular and chronic respiratory diseases such as asthma, emphysema, and bronchitis (CARB 2005; OEHHA 2015). Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved and are referred to as sensitive receptors. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers.

The closest existing sensitive receptors to the project site are the Adeona healthcare facility and single-family homes adjacent to the existing and former golf courses on the south and east sides of the project site. In addition, there are single- and multi-family homes along the primary routes for aggregate delivery trucks entering and exiting the project site, including along Willow Glen Drive and Jamacha Road. The closest school is the Jamacha Elementary School approximately 1,280 feet (0.24 mile) south of the project Phase 2 mining area. The sensitive receptor locations are shown in Figure 4, *Receptor Locations.*

4.0 APPLICABLE RULES AND REGULATIONS

Fugitive dust is particulate matter that is suspended in the air by activities such as aggregate excavation and processing operations; dust stirred up by vehicles traveling on unpaved roads; and windblown dust over disturbed and open lands. Project operation is expected to generate fugitive dust which may include trace amounts of minerals such as silica, aluminum, iron, arsenic, nickel, and lead. As such, the dust control measures identified herein will also address the potential exposure to soil constituents.

The San Diego Air Basin (SDAB) is designated as a nonattainment area for particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}) and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) under the California Ambient Air Quality Standards and is designated as attainment under the National Ambient Air Quality Standards (SDAPCD 2017).

The Site Coordinator, employees, and contractors shall review the SDAPCD rules and County code to ensure project compliance. Applicable rules and regulations are summarized in Sections 4.1 and 4.2 and full text is provided as Attachment D to this Plan.

4.1 SAN DIEGO AIR POLLUTION CONTROL DISTRICT

4.1.1 Regulation II: Permits; Rule 20.2: New Source Review Non-Major Stationary Sources.

Requires new or modified stationary source units (that are not major stationary sources) with the potential to emit 10 pounds per day or more of volatile organic compounds (VOCs), oxides of nitrogen (NO_X), oxides of sulfur (SO_X), or (PM_{10}) to be equipped with best available control technology (BACT). For those units with a potential to emit above Air Quality Impact Assessments Trigger Levels, the units must demonstrate that such emissions would not violate or interfere with the attainment of any national air quality standard (SDAPCD 2019a).

4.1.2 Regulation II: Permits; Rule 20.3: New Source Review Major Stationary Sources and PSD Stationary Sources

Requires new or modified stationary source units (that are major stationary sources) with the potential to emit 10 pounds per day or more of VOC, NO_X, SO_X, or PM_{10} to be equipped with BACT. For those units

with a potential to emit above Air Quality Impact Assessments Trigger Levels, the units must demonstrate that such emissions would not violate or interfere with the attainment of any national air quality standard (SDAPCD 2019b).

4.1.3 Regulation IV: Prohibitions; Rule 50: Visible Emissions

Prohibits discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period, or periods, aggregating more than 3 minutes in any period of 60 consecutive minutes that is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart (SDAPCD 1997).

4.1.4 Regulation IV: Prohibitions; Rule 50.1: NSPS and NESHAPS Visible Emissions Requirements

Requires sources subject to the provisions of any federal New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAPS) which has been delegated to the SDAPCD to, in addition to complying with Rule 50, comply with Regulation X or Regulation XI, respectively (SDAPCD 1976).

4.1.5 Regulation IV: Prohibitions; Rule 51: Nuisance

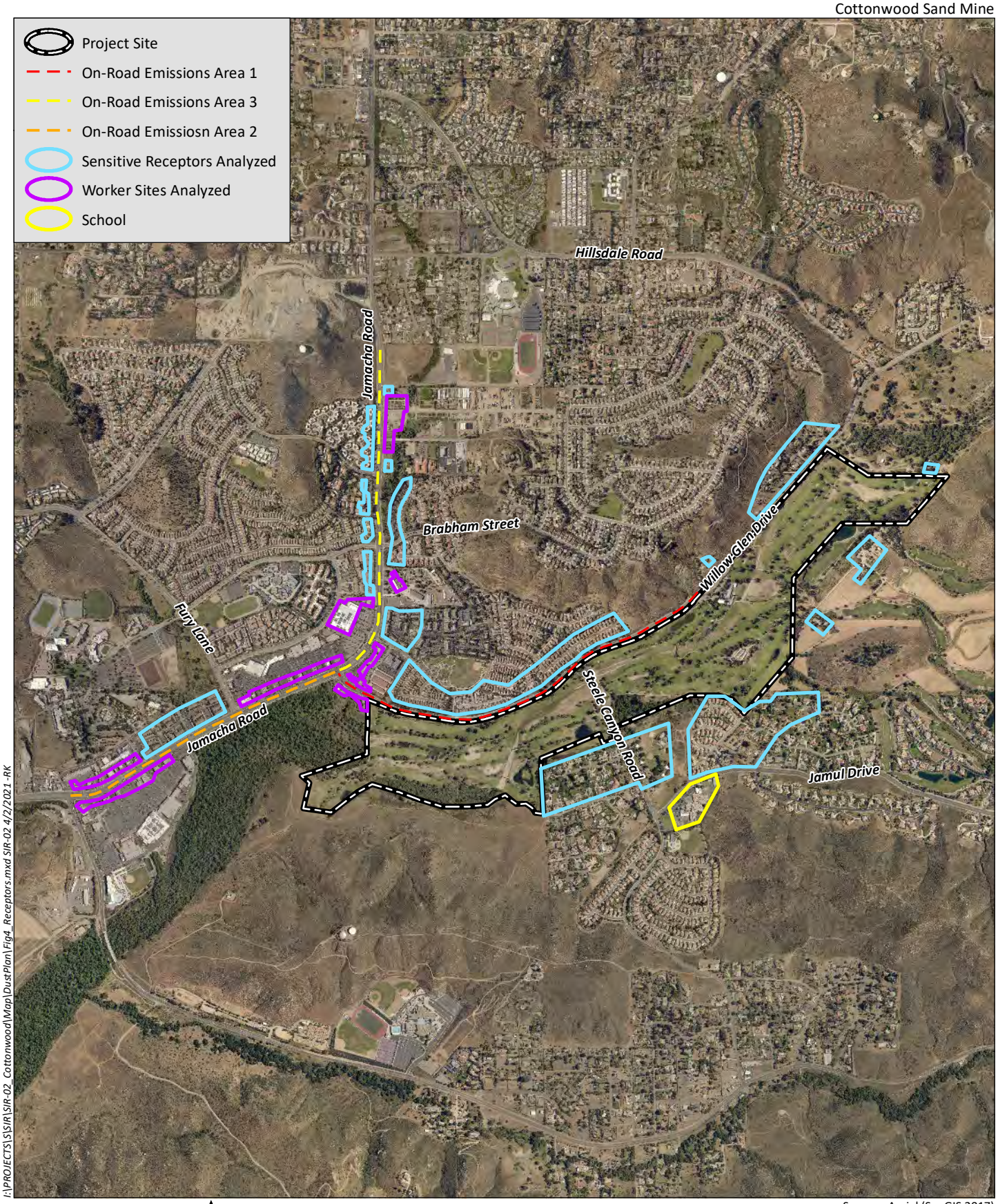
Prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause, or tend to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976).

4.1.6 Regulation IV: Prohibitions; Rule 55: Fugitive Dust

Prohibits discharge of visible dust emissions from construction or demolition activities into the atmosphere beyond the property line for a period, or periods, aggregating more than 3 minutes in any 60-minute period. 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 (SDAPCD 2009).

4.1.7 Regulation XII: Toxic Air Contaminates; Rule 1200: Toxic Air Contaminants – New Source Review

Requires new or modified stationary source units with the potential to emit toxic air contaminants (TACs) above rule threshold levels to either demonstrate that they will not increase the maximum incremental cancer risk above 1 in 1 million at every receptor location, or demonstrate that toxics best available control technology (T-BACT) will be employed if maximum incremental cancer risk is equal to or less than 10 in 1 million, or demonstrate compliance with SDAPCD's protocol for those sources with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in 1 million but less than 100 in 1 million (SDAPCD 2021).



I:\PROJECTS\SIR\SIR-02_Cottonwood\Map\DustPlan\Fig4_Receptors.mxd SIR-02 4/2/2021 -RK

0 2,000 Feet

Source: Aerial (SanGIS 2017)

HELIX Environmental Planning

Receptor Locations

Figure 4

4.2 SAN DIEGO COUNTY

4.2.1 Grading Ordinance

The County Grading Ordinance requires that projects involving grading, clearing, and/or removal of natural vegetation obtain a grading permit, unless the project meets one or more of the exemptions listed in Section 87.202 of the Grading Ordinance. Per Section 87.202(g), the proposed project is exempt from obtaining a grading permit; however, as specified in Section 87.202, projects that are exempt from obtaining a grading permit remain subject to other requirements contained in the Grading Ordinance, including those related to dust control. The Ordinance requires clearing and grading to be carried out with dust control measures adequate to prevent creation of a nuisance to people or public or private property. Measures must be undertaken to achieve this result, including watering, application of surfactants, shrouding, control of vehicle speeds, paving access areas, or implementing other operational or technological measures to reduce dispersion of dust. These project design measures are to be incorporated into all earth-disturbing activities to minimize the amount of particulate matter emissions from construction (County 2012).

5.0 FUGITIVE DUST CONTROL MEASURES

To reduce the amount of fugitive dust generated from project construction, operation, and reclamation, the project applicant, or the applicant's designated mine operations manager (operator), shall implement primary available control measures when and where appropriate. The factors that affect dust control include ambient conditions (e.g., temperature, wind, humidity), processing plant production rate, size and weight of vehicles and equipment, vehicle speed, frequency and number of vehicles, haul road distance, soil characteristics (e.g., chemical composition, particle size distribution, organic compounds), and day-to-day aggressiveness of fugitive dust control measures (e.g., application of water or dust suppressants).

The fugitive dust control measures shall apply to construction, operation, and reclamation activities for of the project. The following fugitive dust control measures are anticipated to be adequate to meet all applicable dust control requirements under normal conditions. In the event that high wind or other atypical conditions affect the site, standby measures shall be implemented as appropriate.

5.1 GENERAL REQUIREMENTS

- The operator shall prepare, submit to the SDAPCD for approval, and implement the approved Fugitive Dust Control Plan for the project.

- The operator shall identify and provide a Fugitive Dust Control Site Coordinator before site preparation and extraction activities and after issuance of SDAPCD permit to respond to concerns of neighboring property owners about fugitive dust. The Site Coordinator's name and telephone shall be posted at the ingress and egress of the project site so that the public may call to report visible fugitive dust emissions beyond the property line. The operator shall log all such calls, take appropriate actions to minimize visible fugitive dust emissions, if necessary, and record the disposition or remedial action taken.

- The employee shall be a CARB certified Visual Emissions Evaluation monitor to monitor fugitive dust emissions from the project site. The Site Coordinator shall be available to respond to complaints or reports on operating days to ensure the project operation shall not cause or allow any emissions of fugitive dust from any transport, handling, or storage activity for which such dust remains visible in the atmosphere beyond the property line of the emission source (this condition does not apply when the wind speed instantaneously exceeds 25 mph or when the wind speed averages for 15 minutes is greater than 15 mph). The Site Coordinator shall maintain a log of visible emission observations (which includes images taken of dust being generated on the property) and will make that log available to SDAPCD inspectors upon request. CARB's Visible Emission Observation Form is included as Attachment B.

- The Site Coordinator shall maintain a checklist monitoring the implementation and effectiveness of the fugitive dust control measures. Inspections shall be conducted twice a month, at minimum. A self-inspection checklist will be used for each source of fugitive dust emissions identified in Section 3.3 to help incorporate routine tasks of fugitive dust control into daily schedules. The checklist will serve as a job reminder on a daily basis and as record of efforts to keep fugitive dust to a minimum. An example of a checklist is included as Attachment A.

5.2 PUBLIC OUTREACH

- The operator shall host public meetings for residents, as needed, to provide a summary of the fugitive dust monitoring.

5.3 TRAVEL ON UNPAVED ROADS

- Gravel shall be placed on the main haul road between the entrance to the site and the plant to reduce dust, to the extent feasible, and dust-suppressant shall be applied on the unpaved portion of the main haul road.

- Vehicle speeds on unpaved roadways shall be maintained to the lowest practical speeds, no greater than 10 mph.

- The ingress onto unpaved roads shall be posted with visible speed limit signs.

- Watering frequency shall be sufficient such that there are no visible emissions (0 percent opacity) 8 feet above haul roads. Or

  Watering shall occur at 2-hour intervals during any time the project is in operation unless the road surface appears wet. If the road surface is found visibly wet, it shall be logged as "visibly wet" in lieu of entering the 2-hour interval watering in the log.

- All haul trucks leaving the site with aggregate shall maintain at least 2 feet of freeboard or securely cover the loads, if required.

- Non-toxic, environmentally safe soil stabilizers, such as Aggrebind®, or other methods of soil stabilization/fugitive dust prevention, shall be applied to all disturbed surfaces left inactive for 4 or more days (e.g., berms for topsoil storage or visual or noise mitigation). The U.S. Environmental Protection Agency and CARB-approved list of non-toxic, environmentally safe soil

stabilizers (San Joaquin Valley Air Pollution Control District [SJVAPCD] 2017) and the U.S. Department of Agriculture (USDA) Dust Palliative Selection and Application Guide (USDA 1999) are provided as Attachment E.

- Inactive disturbed areas where mining activities have been completed shall be revegetated as soon as possible to prevent wind erosion.

5.4 TRAVEL ON PAVED ROADS

- The ingress and egress of the project site shall be paved to minimize mud and dust from being transported onto paved roadway surfaces.

- Vehicle speeds on on-site paved roadways shall not exceed 10 mph.

- Paved roads shall be swept every 4 hours during anytime the project is in operation and shall be swept at the end of every workday. The time of sweeping shall be recorded in a log. Or

  Rumble grates and wheel washer shall be installed prior to the paved roads and the paved roads shall be swept on a weekly basis. The speed limit across the rumble grates and through the wheel washer shall be posted at 5 mph to ensure proper wheel washing. The rumble grates shall be cleaned on a weekly basis. Records of paved road sweeping time and rumble grate cleaning shall be maintained on -site and made available to the SDAPCD inspectors upon request.

- SDAPCD Rule 55 requires that visible roadway dust as a result of active project operations, spillage from transport trucks, erosion, or track-out/carry-out shall be minimized by the use of track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, geotextiles, mulching, or seeding; watering or treating of transported material for out-bound transport trucks, or equally effective track-out/carry-out and erosion control measures; and be removed with a sweeper or with manual methods at the conclusion of each project workday when active project operations cease, or every 24 hours for continuous project operations.

- SDAPCD Rule 55 requires that if a street sweeper is used to remove any track-out/carry-out, only PM_{10}-efficient street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

5.5 OPERATIONS

- Exposed stockpiles of sand shall be contained within perimeter silt fencing, treated with water or non-toxic, environmentally safe soil stabilizers, or covered, as necessary.

- Drop heights from excavators and loaders shall be minimized to a distance no more than 5 feet.

- Mining activities shall be suspended when sustained (i.e., a period or periods of time aggregating more than 3 minutes in any 60-minute period) wind speed instantaneously exceeds 25 mph or when the wind speed average for 15 minutes is greater than 15 mph.

- A water truck with ample water supply shall be on the project site at all times (including nights, weekends, and holidays).

5.6 AGGREGATE PROCESSING PLANT

- Water sprayers shall be used, or material moisture maintained, at transfer points and screening emissions as necessary to control dust from aggregate washing/separation activities to not exceed SDAPCD's limit of 20% opacity for greater than 3 minutes in any 60-minute period.

- The operator shall not cause or allow the emissions of fugitive dust from any transport, handling, or storage activity for which such dust remains visible in the atmosphere beyond the property line of the emissions source (this condition does not apply when the wind speed instantaneously exceeds 25 mph or when the wind speed average for 15 minutes is greater than 15 mph).

5.7 STANDBY/CONTINGENCY CONTROL MEASURES

- In the event that wind speed instantaneously exceeds 25 mph or when average wind speed for 15 minutes is greater than 15 mph or other atypical conditions affect the site, standby measures will be implemented as appropriate. Standby control measures can include increased watering or temporary suspension of activities. The determination to use standby control measures will be per the discretion of the Site Coordinator.

6.0 EMPLOYEE AND CONTRACTOR AWARENESS TRAINING

To ensure that all fugitive dust control measures are implemented, the operator shall conduct an employee and contractor awareness training that shall include all applicable fugitive dust control measures and the importance of strict compliance. The operator shall track training events by ensuring that all participants complete a sign-in sheet and that hard hat decals are provided to all individuals that have completed the training. The operator shall conduct internal inspections to ensure that appropriate fugitive dust control measures are being implemented as outlined in Section 5. Inspections shall be conducted by the Site Coordinator trained in all parts of the Plan. The responsibilities of the Site Coordinator are described in detail in Section 2.1. An example of a sign-in sheet is provided as Attachment C.

7.0 REFERENCES

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. Available at: https://www.arb.ca.gov/ch/handbook.pdf.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments. Available at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

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1976. Regulation IV: Prohibitions; Rule 50.1: NSPS and NESHAPS Visible Emissions Requirements; and Rule 51: Nuisance. November 11. Available at: https://www.sdapcd.org/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Prohibitions/APCD_R50-1-51.pdf.

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U.S. Department of Agriculture (USDA). 1999. Dust Palliative Selection and Application Guide. November. Available at: http://bentoncleanair.org/uploads/pdfs/dust_palliative.pdf.

Attachment A

Example Checklists

Fugitive Dust Control Inspection Checklist – Forecasted High Winds

Date/Time Observed	Observation/ Wind Speed (mph)	Comments (including location, wind speed, wind direction, and observed rainfall)	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Haul Roads Moisture/Watering/Suppressants

Date/Time Observed	Observation (Visibly Wet or Watering Interval)	Comments (including location, wind speed, wind direction, and observed rainfall, and if visible emissions eight feet above haul roads)	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Unstabilized Areas Watering/Moisture or Soil Suppressants Used

Date/Time Observed	Observation	Comments (including location, wind speed, wind direction, and observed rainfall)	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Sweeping of Paved Roads

Date/Time Observed	Observation	Comments (including location, wind speed, wind direction, and observed rainfall)	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Aggregate Processing Plant Water Spray Operation

Date/Time Observed	Observation	Comments (including location, wind speed, wind direction, and observed rainfall)	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Water Tank Filled and Number of Water Trucks Operating

Date/Time Observed	Observation	Comments	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Fugitive Dust Readings

Date/Time Observed	Observation	Comments (including location, wind speed, wind direction, and observed rainfall)	Observer Name/Title/Signature/Date

Fugitive Dust Control Inspection Checklist – Complaints and Corrective Actions Taken

Date/Time Observed	Complaint	Corrective Action Taken	Observer Name/Title/Signature/Date

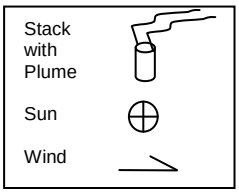
Attachment B

Visible Emission Observation Form

California Environmental Protection Agency
Air Resources Board

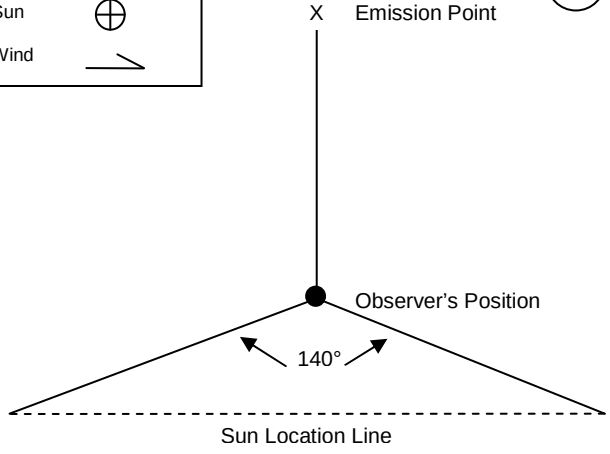
VISIBLE EMISSION OBSERVATION FORM

Company Name		
Street Address		
City	State	Zip
Phone	Source ID Number	
Process Equipment	Operating Mode	
Control Equipment	Operating Mode	
Describe Emission Point		
Height Above Ground Level	Height Relative to Observer Start: End:	
Distance from Observer Start: End:	Direction from Observer Start: End:	
Describe Emissions Start: End:		
Emission Color Start End:	If Water Droplet Plume Attached ☐ Detached ☐	
Point in plume at which opacity was determined Start: End:		
Describe Plume Background Start: End:		
Background Color Start: End:	Sky Conditions Start: End:	
Wind Speed Start: End:	Wind Direction Start: End:	
Ambient Temp Start: End:	Wet Bulb Temp	RH, Percent



Source Layout Sketch

North Arrow



Additional Information

Observation Date	Start Time	End Time

Sec / Min	0	15	30	45	Comments
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					

Observers Name (Print)	
Observers Signature	Date
Organization	
Certified By	Date
Continued on VEO form Number	

Attachment C

Awareness Training Sign-In

Employee and Contractor Awareness Training Sign-in Sheet

Date: _____

Time: _____

Location: _____

Name	Signature	Date

Attachment D

Applicable Rules and Regulations

RULE 20.2
NEW SOURCE REVIEW
NON - MAJOR STATIONARY SOURCES
(ADOPTED AND EFFECTIVE 5/17/94)
(REV. ADOPTED AND EFFECTIVE 12/17/97)
(REV. ADOPTED 11/4/98; EFFECTIVE 12/17/98)
(REV. ADOPTED 4/27/16; EFFECTIVE 11/5/18)

Table of Contents

Table of Contents

NOTE: The following listed sections and subsections will not be submitted to the federal Environmental Protection Agency (EPA) for inclusion in the San Diego State Implementation Plan (SIP). As such, the following listed sections and subsections are not enforceable by EPA, but remain enforceable by the San Diego County Air Pollution Control District.

Subsections (d)(2)(i)(B), (d)(2)(v) and (d)(2)(vi)(B); and Subsection (d)(3).

RULE 20.2. NEW SOURCE REVIEW - NON-MAJOR STATIONARY SOURCES

(Adopted & Effective 5/17/94)
(Rev. Adopted & Effective 12/17/97)
(Rev. Adopted 11/4/98; Effective 12/17/98)
(Rev. Adopted 4/27/16; Effective 11/5/18)

(a) APPLICABILITY

This rule applies to any new or modified stationary source, to any new or modified emission unit, to any replacement emission unit, and to any relocated emission unit being moved to a stationary source provided that, after completion of the project, the stationary source is not a major stationary source. This rule does not apply to identical or like-kind replacement emission units exempt from Authority to Construct and modified Permit to Operate requirements pursuant to these Rules and Regulations. This rule does not apply to any portable emission unit. Compliance with this rule does not relieve a person from having to comply with other applicable requirements in these rules and regulations, or state and federal law.

(b) EXEMPTIONS

The exemptions contained in Rule 20.1, Section (b) apply to this rule. In addition, for purposes of this rule, the following exemptions shall apply.

(1) An existing permitted emission unit which is to be relocated from one stationary source within San Diego County to another shall be exempt from the BACT requirements of Subsection (d)(1)(ii), provided that:

(i) The emission unit is not being modified,

(ii) There is no increase in the emission unit's potential to emit,

(iii) The unit is not located for more than 180 days at the stationary source where it is moved to, and

(iv) The emission unit is not located at more than two stationary sources over any 365-day period.

(2) An existing permitted emission unit which is to be permanently relocated from one stationary source within San Diego County to another stationary source shall be exempt from the BACT requirements of Subsection (d)(1)(ii), provided that:

(i) There is no increase in the emission unit's potential to emit,

(ii) The relocation occurs within 10 miles of the previous stationary source,

(iii) The relocated emission unit commences operating at the stationary source it was relocated to within one year of the emission unit ceasing operations at its previous stationary source.

(c) **DEFINITIONS**

The definitions contained in Rule 20.1, Section (c) apply to this rule.

(d) **STANDARDS**

(1) **BEST AVAILABLE CONTROL TECHNOLOGY (BACT)**

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any emission unit and project subject to this rule unless the applicant demonstrates that the following requirements will be satisfied:

(i) **New or Modified Emission Units**

Any new or modified emission unit which has any increase in its potential to emit particulate matter (PM_{10}), oxides of nitrogen (NOx), volatile organic compounds (VOC) or oxides of sulfur (SOx) and which unit has a post-project potential to emit of 10 pounds per day or more of PM_{10}, NOx, VOC, or SOx shall be equipped with Best Available Control Technology (BACT) for each such air contaminant.

(ii) **Relocated Emission Units**

Except as provided for in Subsections (b)(1) and (b)(2), any relocated emission unit with a post-project potential to emit of 10 pounds per day or more of PM_{10}, NOx, VOC or SOx shall be equipped with BACT for each such air contaminant.

(iii) **Replacement Emission Units**

Any replacement emission unit with a post-project potential to emit of 10 pounds per day or more of PM_{10}, NOx, VOC or SOx shall be equipped with BACT for each such air contaminant.

(iv) **Emergency Equipment Emission Units**

For any emergency equipment emission unit subject to the BACT requirements of Subsections (d)(1)(i), (ii) or (iii) of this rule, BACT shall apply based on the unit's non-emergency operation emissions and excluding the unit's emissions while operating during emergency situations.

(v) **Projects with Multiple Emission Units**

Where a project at a stationary source consists of multiple new, modified, relocated or replacement emission units required by this Subsection (d)(1) to be equipped with BACT, BACT shall be evaluated for each such emission unit pursuant to (d)(1)(i) through (iv). The Air Pollution Control Officer may require that BACT be also evaluated for combinations of such emission units. Where technologically feasible, lowest emitting and cost-effective, the Air Pollution Control Officer may

require that BACT be applied to a combination of such emission units. In such case, BACT applied to such combinations shall not result in greater emissions for the project nor for each emission unit that is part of the project than were BACT applied to each emission unit.

(2) **AIR QUALITY IMPACT ANALYSIS (AQIA)**

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any emission unit and project subject to this rule unless the following requirements are satisfied.

The demonstrations required by this Subsection (d)(2) shall be based on the emission unit or project emission exhaust system design and discharge characteristics but not to an extent greater than good engineering practice stack height. This provision shall not be applied to limit actual stack height.

(i) **AQIA for New, Modified, Replacement or Relocated Emission Units and Projects**

(A) For each new, modified, replacement or relocated emission unit and project which results in an emissions increase equal to or greater than any of the amounts listed in Table 20.2 – 1 below, the applicant shall demonstrate to the satisfaction of the Air Pollution Control Officer through an AQIA, as defined in Rule 20.1, that such emissions increase will not:

(1) cause a violation of a national ambient air quality standard anywhere that does not already exceed such standard, nor

(2) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor

(3) prevent or interfere with the attainment or maintenance of any national ambient air quality standard.

(B) For each new, modified, replacement or relocated emission unit and project which results in an emissions increase equal to or greater than any of the amounts listed in Table 20.2 – 1 below, the applicant shall demonstrate to the satisfaction of the Air Pollution Control Officer through an AQIA that such emissions increase will not:

(1) cause a violation of a state ambient air quality standard anywhere that does not already exceed such standard, nor

(2) cause additional violations of a state ambient air quality standard anywhere the standard is already being exceeded, except as provided for in Subsection (d)(2)(v), nor

(3) prevent or interfere with the attainment or maintenance of a state ambient air quality standard.

TABLE 20.2 - 1
AQIA Trigger Levels

Air Contaminant	Emission Rate (lb/hr)	(lb/day)	(tons/yr)
Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	67	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6

(ii) **AQIA for $PM_{2.5}$ and PM_{10} Emission Increases**

In determining if a $PM_{2.5}$ or PM_{10} AQIA is required under this Subsection (d)(2), the emissions increases shall include both directly emitted $PM_{2.5}$ and PM_{10}, and $PM_{2.5}$ and PM_{10} which would condense after discharge to the atmosphere. If a $PM_{2.5}$ or PM_{10} AQIA is required, the AQIA shall include both directly emitted $PM_{2.5}$ or PM_{10}, and $PM_{2.5}$ or PM_{10} which would condense after discharge to the atmosphere. Any permit terms or conditions limiting emissions of $PM_{2.5}$ or PM_{10} as a result of the requirements of this Subsection (d)(2) shall apply to the combination of both directly emitted and condensable $PM_{2.5}$ or PM_{10}. The provisions of this Subsection (d)(2)(ii) shall apply separately to $PM_{2.5}$ and PM_{10}.

(iii) **AQIA for Projects**

Where a project consists of multiple new, modified, replacement or relocated emission units, the determination of whether an air quality impact analysis is required under this Subsection (d)(2) shall be based on the aggregate total of emission increases occurring from those project emission units for which emissions are increasing, excluding any concurrent actual emission reductions occurring from other emission units at the same stationary source. If an air quality impact analysis is required, the air quality impacts of the project shall be based on the aggregate of the air quality impacts of each unit's emission increases at each off-site location analyzed. The simultaneous air quality impact reduction at each off-site location analyzed that results from any concurrent, enforceable actual emission reductions occurring from other emission units at the same stationary source may be included to determine the net air quality impacts of a project at each off-site location.

(iv) **AQIA Not Required for NOx or VOC Impacts on Ozone**

Notwithstanding the requirements of this Subsection (d)(2), a demonstration shall not be required for determining the impacts from an emission unit's or project's NOx or VOC emissions on an ambient air quality standard for ozone unless the Air Pollution Control Officer determines that adequate procedures exist for determining the impacts of NOx or VOC emissions from such emission unit or

project on ozone ambient air quality standards and that such procedures are acceptable to the California Air Resources Board (ARB) with regard to state ambient air quality standards and the federal Environmental Protection Agency (EPA) with regard to national ambient air quality standards.

(v) **AQIA Requirements for PM_{10} Impacts May be Waived**

Notwithstanding the requirements of Subsection (d)(2)(i), the Air Pollution Control Officer may waive the AQIA requirements for PM_{10} impacts on the state ambient air quality standards, as follows:

(A) If the project will result in a maximum PM_{10} air quality impact of less than 5 $\mu g/m^3$ (24-hour average basis) and 3 $\mu g/m^3$ (annual geometric mean basis), all of the project's PM_{10} emission increases, including area fugitive emissions of PM_{10}, must be offset at a ratio of 1.5 to 1.

(B) If the project will result in a maximum PM_{10} air quality impact equal to or greater than 5 $\mu g/m^3$ but less than 10 $\mu g/m^3$ (24-hour average basis) or equal to or greater than 3 $\mu g/m^3$ but less than 6 $\mu g/m^3$ (annual geometric mean basis):

(1) the project must be equipped with BACT for PM_{10} emissions without consideration for cost-effectiveness,

(2) all of the project's PM_{10} emission increases, including area fugitive emissions of PM_{10}, must be offset at an overall ratio of 1.5 to 1,

(3) sufficient emission offsets must be provided within the project's impact area to offset all of the project's PM_{10} emission increases, including area fugitive emissions of PM_{10}, at a ratio of at least 1 to 1,

(4) emission offsets in an amount and location which are demonstrated to have a modeled off-stationary source air quality impact at least equal to the project's PM_{10} ambient air quality impact minus 5 $\mu g/m^3$ (24-hour average basis) and 3 $\mu g/m^3$ (annual geometric mean basis) must be provided, and

(5) all reasonable efforts to reduce the air quality impacts of the project are made.

(C) In no case shall the project result in a maximum PM_{10} air quality impact equal to or greater than 10 $\mu g/m^3$ (24-hour average basis) or equal to or greater than 6 $\mu g/m^3$ (annual geometric mean basis).

(vi) **AQIA May be Required**

(A) Notwithstanding any other provision of this rule, the Air Pollution Control Officer may require an AQIA for any new or modified stationary source, any new or modified emission unit or any project if the stationary source, emission unit or project may be expected to:

(1) cause a violation of a national ambient air quality standard anywhere that does not already exceed such standard, or

(2) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, or

(3) prevent or interfere with the attainment or maintenance of any national ambient air quality standard.

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any stationary source, emission unit or project for which an AQIA is required pursuant to this Subsection (d)(2)(vi)(A) unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that the emission increases from such source, unit or project will not result in any of the impacts to the national ambient air quality standards specified above in (1), (2) and (3) of this Subsection (d)(2)(vi)(A).

(B) Notwithstanding any other provision of this rule, the Air Pollution Control Officer may require an AQIA for any new or modified stationary source, any new or modified emission unit or any project if the stationary source, emission unit or project may be expected to:

(1) cause a violation of a state ambient air quality standard anywhere that does not already exceed such standard, or

(2) cause additional violations of a state ambient air quality standard anywhere the standard is already being exceeded, except as provided for in Subsection (d)(2)(v), or

(3) prevent or interfere with the attainment or maintenance of a state ambient air quality standard.

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any stationary source, emission unit or project for which an AQIA is required pursuant to this Subsection (d)(2)(vi)(B) unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that the emission increases from such source, unit or project will not result in any of the impacts to state ambient air quality standards specified above in (1), (2) and (3) of this Subsection (d)(2)(vi)(B).

(3) **SIGNIFICANT IMPACT IN CLASS I AREAS**

The Air Pollution Control Officer shall not issue an Authority to Construct or modified Permit to Operate for any emission unit or project which is expected to have a significant impact on any Class I area, as determined by an AQIA required pursuant to Subsection (d)(2), unless the following requirements are satisfied. The Air Pollution Control Officer shall:

(i) **Federal Land Manager and Federal EPA Notification**

Notify the Federal Land Manager and the federal EPA, in writing. This notification shall include all of the information specified by Subsection (d)(4)(iv), the location of the project, the project's approximate distance from all Class I areas within 100 km of San Diego County (as specified in Table 20.1 - 3) and the results of the AQIA, and

(ii) **ARB, SCAQMD and Imperial County APCD Notification**

Notify and submit to the California ARB, the South Coast Air Quality Management District and the Imperial County Air Pollution Control District the information specified in Subsection (d)(4)(iv).

(4) **PUBLIC NOTICE AND COMMENT**

The Air Pollution Control Officer shall not issue an Authority to Construct or modified Permit to Operate for any emission unit or project subject to the AQIA or notification requirements of Subsection (d)(2) or (d)(3), nor for any emission unit or project which results in an emissions increase of VOCs equal to or greater than 250 pounds per day or 40 tons per year, unless the following requirements are satisfied.

(i) **Public Comment Period**

At least 40 days before taking final action on an application subject to the requirements of Subsection (d)(2) or (d)(3), the Air Pollution Control Officer shall:

(A) provide the public with notice of the proposed action in the manner prescribed by Subsection (d)(4)(iii), and

(B) provide a copy of the public notice to the federal EPA Administrator, through its Region 9 office, to the California ARB and to any tribal air pollution control agencies having jurisdiction in the San Diego Air Basin, and

(C) make available for public inspection all information relevant to the proposed action as specified in Subsection (d)(4)(iv), and

(D) provide at least a 30-day period within which comments may be submitted.

The Air Pollution Control Officer shall consider all comments submitted.

(ii) **Applicant Response**

Except as agreed to by the applicant and the Air Pollution Control Officer, no later than 10 days after close of the public comment period, the applicant may submit written responses to any comment received during the public comment period. Responses submitted by the applicant shall be considered prior to the Air Pollution Control Officer taking final action. The applicant's responses shall be made available in the public record of the permit action.

(iii) **Publication of Notice**

The Air Pollution Control Officer shall publish a notice of the proposed action in at least one newspaper of general circulation in San Diego County. The notice shall:

(A) describe the proposed action, including the use of any modified or substitute air quality impact model as allowed under 40 CFR Part 51, Appendix W, and

(B) identify the location(s) where the public may inspect the information relevant to the proposed action, and

(C) indicate the date by which all comments must be received by the District for consideration prior to taking final action.

(iv) **Information to be Made Available for Public Inspection**

The relevant information to be made available for public inspection shall include but not be limited to:

(A) the application and all analyses and documentation used to support the proposed action, the District's evaluation of the project, a copy of the draft Authority to Construct or modified Permit to Operate and any information submitted by the applicant not previously labeled Trade Secret pursuant to Regulation IX, and

(B) the proposed District action on the application, including the preliminary decision to approve, conditionally approve or deny the application and the reasons therefore.

(5) **RESERVED**

(6) **RESERVED**

RULE 20.3
NEW SOURCE REVIEW
MAJOR STATIONARY SOURCES AND PSD STATIONARY SOURCES
(ADOPTED AND EFFECTIVE 5/17/94)
(REV. ADOPTED AND EFFECTIVE 12/17/97)
(REV. ADOPTED 11/4/98; EFFECTIVE 12/17/98)
(REV. ADOPTED 4/27/16; EFFECTIVE 11/5/18)

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NOTE: The following listed sections and subsections will not be submitted to the federal Environmental Protection Agency (EPA) for inclusion in the San Diego State Implementation Plan (SIP). As such, the following listed sections and subsections are not enforceable by EPA, but remain enforceable by the San Diego County Air Pollution Control District.

Subsection(d)(1)(vi); Subsections (d)(2)(i)(B), (d)(2)(v), and (d)(2)(vi)(B); and, Subsection (d)(3).

RULE 20.3. NEW SOURCE REVIEW - MAJOR STATIONARY SOURCES AND PREVENTION OF SIGNIFICANT DETERIORATION (PSD) STATIONARY SOURCES

(Adopted & Effective 5/17/94)
(Rev. Adopted & Effective 12/17/97)
(Rev. Adopted 11/4/98; Effective 12/17/98)
(Rev. Adopted 4/27/16; Effective 11/5/18)

(a) APPLICABILITY

This rule applies to any new or modified major stationary source, to any new or modified emission unit, to any replacement emission unit, and to any relocated emission unit being moved to a stationary source if, after completion of the project, the stationary source will be a major stationary source or a Prevention of Significant Deterioration (PSD) Stationary Source. This rule does not apply to identical or like-kind replacement emission units exempt from Authority to Construct and modified Permit to Operate requirements pursuant to these Rules and Regulations. This rule does not apply to any portable emission unit. Compliance with this rule does not relieve a person from having to comply with other applicable requirements in these rules and regulations, or state and federal law.

(b) EXEMPTIONS

The exemptions contained in Rule 20.1, Section (b) apply to this rule. In addition, for purposes of this rule, the following exemptions shall apply.

(1) An existing permitted emission unit which is to be temporarily relocated from one stationary source within San Diego County to another stationary source shall be exempt from the BACT requirements of Subsection (d)(1)(ii) provided that:

(i) The emission unit is not being modified,

(ii) There is no increase in the emission unit's potential to emit,

(iii) The unit is not located for more than 180 days at the stationary source where it is moved to,

(iv) The emission unit is not located at more than two stationary sources over any 365-day period, and

(v) The emission unit at the new location does not constitute a new federal major stationary source nor a federal major modification.

(2) An existing permitted emission unit which is to be permanently relocated from one stationary source within San Diego County to another stationary source shall be exempt from the BACT requirements of Subsection (d)(1)(ii), provided that:

(i) There is no increase in the emission unit's potential to emit,

(ii) The relocation occurs within 10 miles of the previous stationary source,

(iii) The relocated emission unit commences operating at the stationary source it was relocated to within one year of the emission unit ceasing operations at its previous stationary source, and

(iv) The emission unit at the new location does not constitute a new federal major stationary source nor a federal major modification.

(3) Emission increases resulting from an air contaminant emission control project shall be exempt from the emission offset requirements of Subsection (d)(5) of this rule to the extent that the project does not include an increase in the capacity of the emission unit being controlled. Emission increases that are associated with an increase in capacity of the emission unit being controlled shall be subject to the emission offset provisions of this rule, as applicable. This exemption from offsets shall not apply to any air contaminant for which the emissions increase constitutes a new federal major stationary source or a federal major modification.

(c) DEFINITIONS

The definitions contained in Rule 20.1, Section (c) apply to this rule.

(d) STANDARDS

(1) BEST AVAILABLE CONTROL TECHNOLOGY (BACT) AND LOWEST ACHIEVABLE EMISSION RATE (LAER)

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any emission unit and project subject to this rule unless the applicant demonstrates that the following requirements will be satisfied:

(i) New or Modified Emission Units - BACT

Except as provided in Subsection (d)(1)(v), any new or modified emission unit which has any increase in its potential to emit particulate matter (PM_{10}), oxides of nitrogen (NOx), volatile organic compounds (VOC), or oxides of sulfur (SOx) and which unit has a post-project potential to emit 10 pounds per day or more of PM_{10}, NOx, VOC or SOx shall be equipped with BACT for each such air contaminant.

(ii) Relocated Emission Units - BACT

Except as provided in Subsections (b)(1), (b)(2) and (d)(1)(v), any relocated emission unit with a post-project potential to emit of 10 pounds per day or more of PM_{10}, NOx, VOC or SOx shall be equipped with BACT for each such air contaminant.

(iii) **Replacement Emission Units - BACT**

Except as provided in Subsection (d)(1)(v), any replacement emission unit with a post-project potential to emit of 10 pounds per day or more of PM_{10}, NOx, VOC or SOx shall be equipped with BACT for each such air contaminant.

(iv) **Emergency Equipment Emission Units**

For any emergency equipment emission unit subject to the BACT requirements of Subsections (d)(1)(i), (ii), (iii) or (vi) of this rule, BACT shall apply based on the unit's non-emergency operation emissions and excluding the unit's emissions while operating during emergency situations.

(v) **Lowest Achievable Emission Rate (LAER)**

(A) Except as provided for in paragraphs (d)(1)(v)(B) and (C) below, LAER shall be required for each new, modified, relocated or replacement emission unit and project which results in an emissions increase which constitutes a new major stationary source or major modification. LAER shall be required only for those air contaminants and their precursors for which the stationary source is major and for which the District is classified as non-attainment of a national ambient air quality standard.

(B) If actual emission reductions of VOC or NOx, as applicable, are provided from within the stationary source at a ratio of at least 1.3 to 1.0 for the emissions increases of VOC or NOx from an emissions unit or project subject to the LAER provisions of this Subsection (d)(1)(v), such emission increases shall be exempt from the requirement for LAER and from further emission offsets under Subsection (d)(5) of this rule and shall instead be subject to BACT.

(C) A new, modified, relocated or replacement emission unit or project at an existing major stationary source which results in an emission increase of VOC or NOx, and which increase would be otherwise subject to LAER, shall be subject to BACT instead of LAER provided the stationary source's post-project aggregate potential to emit is less than 100 tons per year of VOC or NOx. This provision shall apply on a pollutant-specific basis.

(vi) **New, Modified, Relocated or Replacement Emission Units – PSD Stationary Sources**

Any new, modified, relocated or replacement emission unit at a PSD stationary source, which emission unit has an emission increase of one or more air contaminants which constitutes a new PSD stationary source (see Table 20.1-11) or PSD modification (see Tables 20.1-8 and 20.1-10), shall be equipped with BACT for each such air contaminant.

(vii) **Projects with Multiple Emission Units**

Where a project at a stationary source consists of more than one new, modified, relocated or replacement emission unit required by this Subsection (d)(1) to be equipped with BACT or LAER, BACT or LAER, as applicable, shall be evaluated for each such emission unit. The Air Pollution Control Officer may require that BACT or LAER, as applicable, be also evaluated for combinations of such emission units. Where technologically feasible, lowest emitting and, for BACT, cost-effective, the Air Pollution Control Officer may require that BACT or LAER be applied to a combination of such emission units. In such case, BACT or LAER applied to such combinations shall not result in greater emissions for the project nor for each emission unit that is part of the project than were BACT or LAER, as applicable, applied to each emission unit.

(2) **AIR QUALITY IMPACT ANALYSIS (AQIA)**

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any emission unit or project subject to this rule unless the following requirements are satisfied.

The demonstrations required by this Subsection (d)(2) shall be based on the emission unit or project emission exhaust system design and discharge characteristics but not to an extent greater than good engineering practice stack height. This provision shall not be applied to limit actual stack height.

(i) **AQIA for New, Modified, Replacement or Relocated Emission Units and Projects**

(A) For each new, modified, replacement or relocated emission unit and project which results in an emissions increase equal to or greater than any of the amounts listed in Table 20.3 – 1 below, the applicant shall demonstrate to the satisfaction of the Air Pollution Control Officer through an AQIA, as defined in Rule 20.1, that such emissions increase will not:

(1) cause a violation of a national ambient air quality standard anywhere that does not already exceed such standard, nor

(2) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, nor

(3) prevent or interfere with the attainment or maintenance of any national ambient air quality standard, nor

(4) by itself, result in an increase in ambient concentrations of any air contaminant, for which San Diego County is in attainment of the applicable national ambient air quality standards, greater than the applicable air quality increment above the baseline concentration for that air contaminant in any Class I or Class II area. This provision shall only

apply if the emissions increase constitutes a new federal major stationary source or federal major modification.

(B) For each new, modified, replacement or relocated emission unit and project which results in an emissions increase equal to or greater than any of the amounts listed in Table 20.3 – 1 below, the applicant shall demonstrate to the satisfaction of the Air Pollution Control Officer, through an AQIA, that such emissions increase will not:

(1) cause a violation of a state ambient air quality standard anywhere that does not already exceed such standard, nor

(2) cause additional violations of a state ambient air quality standard anywhere the standard is already being exceeded, except as provided for in Subsection (d)(2)(v), nor

(3) prevent or interfere with the attainment or maintenance of any state ambient air quality standard.

TABLE 20.3 - 1
AQIA Trigger Levels

	Emission Rate		
Air Contaminant	(lb/hr)	(lb/day)	(tons/yr)
Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	67	10
Oxides of Nitrogen (NOx)	25	250	40
Oxides of Sulfur (SOx)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6

(ii) **AQIA for $PM_{2.5}$ and PM_{10} Emission Increases**

In determining if a $PM_{2.5}$ or PM_{10} AQIA is required under this Subsection (d)(2), the emissions increases shall include both directly emitted $PM_{2.5}$ and PM_{10}, and $PM_{2.5}$ and PM_{10} which would condense after discharge to the atmosphere. If a $PM_{2.5}$ or PM_{10} AQIA is required, the AQIA shall include both directly emitted $PM_{2.5}$ or PM_{10}, and $PM_{2.5}$ or PM_{10} which would condense after discharge to the atmosphere. Any permit terms or conditions limiting emissions of $PM_{2.5}$ or PM_{10} as a result of the requirements of this Subsection (d)(2) shall apply to the combination of both directly emitted and condensable $PM_{2.5}$ or PM_{10}. The provisions of this Subsection (d)(2)(ii) shall apply separately to $PM_{2.5}$ and PM_{10}.

(iii) **AQIA for Projects**

Where a project consists of multiple new, modified, replacement or relocated emission units, the determination of whether an air quality impact analysis is required under this Subsection (d)(2) shall be based on the aggregate total of emissions increases occurring from those project emission units for which emissions are increasing, excluding any concurrent actual emission reductions occurring from

other emission units at the same stationary source. If an air quality impact analysis is required, the air quality impacts of the project shall be based on the aggregate of the air quality impacts of each unit's emission increases at each off-site location analyzed. The air quality impact reduction at any off-site location analyzed that results from any concurrent, enforceable actual emission reductions occurring from other emission units, at the same stationary source, may be included to determine the net air quality impacts of a project at such off-site location.

(iv) **AQIA Not Required for NOx or VOC Impacts on Ozone**

Notwithstanding the requirements of this Subsection (d)(2) a demonstration shall not be required for determining the impacts from an emission unit's or project's NOx or VOC emissions on an ambient air quality standard for ozone, unless the Air Pollution Control Officer determines that adequate procedures exist for determining the impacts of NOx or VOC emissions from such emission unit or project on ozone ambient air quality standards and that such procedures are acceptable to the California Air Resources Board (ARB) with regard to state ambient air quality standards and the federal Environmental Protection Agency (EPA) with regard to national ambient air quality standards.

(v) **AQIA Requirements for PM_{10} Impacts May be Waived**

Notwithstanding the requirements of Subsection (d)(2)(i), the Air Pollution Control Officer may waive the AQIA requirements for PM_{10} impacts on the state ambient air quality standards, as follows:

(A) If the project will result in a maximum PM_{10} air quality impact of less than 5 $\mu g/m^3$ (24-hour average basis) and 3 $\mu g/m^3$ (annual geometric mean basis), all of the project's PM_{10} emission increases, including area fugitive emissions of PM_{10}, must be offset at a ratio of 1.5 to 1.

(B) If the project will result in a maximum PM_{10} air quality impact equal to or greater than 5 $\mu g/m^3$ but less than 10 $\mu g/m^3$ (24-hour average basis) or equal to or greater than 3 $\mu g/m^3$ but less than 6 $\mu g/m^3$ (annual geometric mean basis):

(1) the project must be equipped with BACT for PM_{10} emissions without consideration for cost-effectiveness,

(2) all of the project's PM_{10} emission increases, including area fugitive emissions of PM_{10}, must be offset at an overall ratio of 1.5 to 1,

(3) sufficient emission offsets must be provided within the project's impact area to offset all of the project's PM_{10} emission increases, including area fugitive emissions of PM_{10}, at a ratio of at least 1 to 1,

(4) emission offsets in an amount and location which are demonstrated to have a modeled off-stationary source air quality impact at least equal to the project's PM_{10} ambient air quality impact minus 5 $\mu g/m^3$ (24-hour average basis) and 3 $\mu g/m^3$ (annual geometric mean basis) must be provided, and

(5) all reasonable efforts to reduce the air quality impacts of the project are made.

(C) In no case shall the project result in a maximum PM_{10} air quality impact equal to or greater than 10 $\mu g/m^3$ (24-hour average basis) or equal to or greater than 6 $\mu g/m^3$ (annual geometric mean basis).

(vi) **AQIA May be Required**

(A) Notwithstanding any other provision of this rule, the Air Pollution Control Officer may require an AQIA for any new or modified stationary source, any emission unit or any project if the stationary source, emission unit or project may be expected to:

(1) cause a violation of a national ambient air quality standard anywhere that does not already exceed such standard, or

(2) cause additional violations of a national ambient air quality standard anywhere the standard is already being exceeded, or

(3) prevent or interfere with the attainment or maintenance of any national ambient air quality standard, or

(4) by itself, result in an increase in ambient concentrations of any air contaminant, for which San Diego County is in attainment of the applicable national ambient air quality standards, greater than the applicable air quality increment above the baseline concentration for that air contaminant in any Class I or Class II area. This provision shall only apply if the emissions increase constitutes a new federal major stationary source or federal major modification.

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any stationary source, emission unit or project for which an AQIA is required pursuant to this Subsection (d)(2)(vi)(A) unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that the emission increases from such source, unit or project will not result in any of the impacts to the national ambient air quality standards or an air quality increment specified above in (1), (2), (3) and (4) of this Subsection (d)(2)(vi)(A).

(B) Notwithstanding any other provision of this rule, the Air Pollution Control Officer may require an AQIA for any new or modified stationary source, any emission unit or any project if the stationary source, emission unit or project may be expected to:

(1) cause a violation of a state ambient air quality standard anywhere that does not already exceed such standard, or

(2) cause additional violations of a state ambient air quality standard anywhere the standard is already being exceeded, except as provided for in Subsection (d)(2)(v), or

(3) prevent or interfere with the attainment or maintenance of any state ambient air quality standard.

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any stationary source, emission unit or project for which an AQIA is required pursuant to this Subsection (d)(2)(vi)(B) unless the applicant demonstrates to the satisfaction of the Air Pollution Control Officer that the emissions increases from such source, unit or project will not result in any of the impacts to state ambient air quality standards specified above in (1), (2) and (3) of this Subsection (d)(2)(vi)(B).

(3) **PREVENTION OF SIGNIFICANT DETERIORATION (PSD)**

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any project subject to this Subsection (d)(3) unless the applicant demonstrates that the following requirements are satisfied. The demonstrations required by this Subsection (d)(3) shall be based on the emission unit or project emission exhaust system design and discharge characteristics but not to an extent greater than good engineering practice stack height. This provision shall not be applied to limit actual stack height.

(i) **Applicability**

(A) PSD Stationary Sources

(1) The provisions of Subsections (d)(3)(ii) through (vii) below shall apply to any new PSD stationary source and to any PSD modification, for those air contaminants for which the District is classified as attainment or unclassified with respect to a national ambient air quality standard.

(2) The provisions of Subsections (d)(3)(ii), (iii), (v) and (vii) below shall apply to any emission increase of a non-criteria air contaminant at a PSD stationary source with a potential to emit equal to or greater than a non-criteria pollutant emissions significance level (see Table 20.1-8) for the air contaminant.

(B) Major Stationary Sources – Projects Causing a Significant Impact

The provisions of Subsections (d)(3)(ii) through (vii) shall apply to any project at a new or modified major stationary source, which project is expected to have, as determined by an AQIA required pursuant to Subsection (d)(2):

(1) a significant impact on any Class I area, regardless of the Class I area's national attainment or nonattainment classification, or

(2) a significant impact on any Class II area where the Class II area is classified as attainment of the national ambient air quality standard for that air contaminant for which there is a significant impact.

(ii) **Notification Requirements**

(A) Notification of Federal Land Manager - Before Application Submittal

The applicant shall provide written notification to the Federal Land Manager of the applicant's intent to file an application for an Authority to Construct, Permit to Operate, or a Determination of Compliance pursuant to Rule 20.5, not less than 30 days prior to application submittal. The applicant's notification to the Federal Land Manager shall include copies of all of the analyses required by this Subsection (d)(3). Concurrently, the applicant shall notify the federal EPA and the District, and provide copies of the written notification given to the Federal Land Manager.

(B) Notification of Federal Land Manager - After Application Submittal

If a project is modified prior to issuance of an Authority to Construct such that it becomes subject to Subsection (d)(3), the Air Pollution Control Officer shall provide the notification required by Subsection (d)(3)(ii)(A) no later than 15 days after it is determined that the provisions of Subsection (d)(3) apply.

(C) Failure to Notify

If the applicant has failed to provide the notification required by Subsection (d)(3)(ii)(A) within the time periods described in that subsection, the applicant shall provide the notification required by that subsection no later than 15 days after the Air Pollution Control Officer informs the applicant that the provisions of Subsection (d)(3) apply.

(iii) **Air Quality Impact Analysis (AQIA)**

Notwithstanding the emission threshold requirements of Subsection (d)(2), the applicant shall perform an AQIA as prescribed in Subsection (d)(2) for those pollutants for which, pursuant to Subsection (d)(3)(i), Subsection (d)(3) applies. In

conducting the AQIA, projected growth calculated pursuant to (d)(3)(v)(A) shall be taken into account. The Air Pollution Control Officer shall comply with the public comment and notice provisions of Subsection (d)(4) and with the following:

(A) Federal Land Manager and Federal EPA Notification

Notify the Federal Land Manager and EPA. This notification shall include all of the analyses required by Subsection (d)(3), the location of the project, the project's approximate distance from all Class I areas within 100 km of San Diego County (as specified in Rule 20.1, Table 20.1 - 3), and the results of the AQIA, at least 60 days prior to the public comment period required by Subsection (d)(4).

(B) ARB, SCAQMD and Imperial County APCD Notification

Notify and submit to the California ARB, the South Coast Air Quality Management District and the Imperial County Air Pollution Control District all of the information required by Subsection (d)(4)(iv).

(iv) **Air Quality Increment**

If the stationary source is located in an area designated as attainment or unclassified for the SO_2, NO_2, $PM_{2.5}$ or PM_{10} national ambient air quality standards pursuant to Section 107(d)(1)(D) or (E) of the federal Clean Air Act, the following shall be satisfied:

(A) The applicant shall demonstrate to the satisfaction of the Air Pollution Control Officer, using procedures approved by the Air Pollution Control Officer, that the applicable air quality increments are not exceeded within the project's impact area.

(B) The demonstration required by Subsection (d)(3)(iv)(A) shall include the following:

(1) a description of the federal attainment area where a significant impact occurs and the attainment area's corresponding minor source baseline date, and

(2) an analysis of the air quality impacts of all increment consuming and increment expanding emissions within the impact area, and

(3) an analysis of the air quality impacts of increment consuming and increment expanding emissions outside the impact area that may have a significant impact within the impact area.

(v) **Additional Impacts Analyses**

The analyses required by Subsections (d)(3)(v)(A) through (C) shall include the impacts of total emissions which exceed a non-criteria emissions significance level.

(A) Growth Analysis

The applicant shall prepare a growth analysis containing all of the following:

(1) an assessment of the availability of residential, commercial, and industrial services in the area surrounding the stationary source,

(2) a projection of the growth in residential, industrial and commercial sources, construction related activities, and permanent and temporary mobile sources which will result from the construction of the new major stationary source or major modification, including any secondary emissions associated with the construction,

(3) an estimate of the emission of all pollutants from the projected growth, and

(4) a determination of the air quality impacts occurring due to the combined emissions from the projected growth and the stationary source's emissions increase.

(B) Soils and Vegetation Analysis

The applicant shall perform an analysis of the impacts from air contaminants on soils and vegetation containing all of the following:

(1) the analysis shall be based on an inventory of the soils and vegetation types found in the impact area, including all vegetation with any commercial or recreational value, and

(2) the analysis shall consider the impacts of the combined emissions from projected growth as determined above, pursuant to Subsection (d)(3)(v)(A) and the stationary source's emissions increase.

(C) Visibility Impairment Analysis

The applicant shall perform a visibility impairment analysis. The analysis shall focus on the effects of the emission increases from the new PSD stationary source or PSD modification and their impacts on visibility within the impact area. The analysis shall include a catalog of scenic vistas, airports, or other areas which could be affected by a loss of visibility within the impact area, a determination of the visual quality of the impact area, and an initial

screening of emission sources to assess the possibility of visibility impairment. If the screening analysis indicates that a visibility impairment will occur, as determined by the Air Pollution Control Officer, a more in-depth visibility analysis shall be prepared.

(vi) **Protection of Class I Areas**

(A) Requirements

(1) An AQIA shall be prepared as prescribed in Subsection (d)(2) for all emission increases attributable to the new or modified stationary source, notwithstanding the emission threshold requirements of Subsection (d)(2). The AQIA shall include a demonstration that the new or modified stationary source will not cause or contribute to a violation of any national ambient air quality standard nor interfere with the attainment or maintenance of those standards.

(2) The analyses contained in Subsections (d)(3)(iii) through (v) shall be prepared for all emission increases which will result in a significant impact.

(B) Application Denial - Federal Land Manager/Air Pollution Control Officer Concurrence

The Air Pollution Control Officer shall deny an Authority to Construct for a new or modified stationary source subject to this Subsection (d)(3)(vi), if the Federal Land Manager demonstrates, and the Air Pollution Control Officer concurs, that granting the Authority to Construct would result in an adverse impact on visibility, soils, vegetation or air quality related values of a Class I area. The Air Pollution Control Officer shall take into consideration mitigation measures identified by the Federal Land Manager in making the determination.

(vii) **Additional Requirements**

(A) Tracking of Air Quality Increment Consumption Sources

The Air Pollution Control Officer shall track air quality increment consumption, consistent with current requirements established by the federal EPA.

(B) Preconstruction Monitoring Requirement

The applicant shall submit at least one year of continuous monitoring data, unless the Air Pollution Control Officer determines that a complete and adequate analysis can be accomplished with monitoring data gathered over a shorter period. Such shorter period shall not be less than four consecutive

months. The requirement for monitoring may be waived by the Air Pollution Control Officer if representative monitoring data is already available.

(C) Cancellation of Authority to Construct

Any Authority to Construct or modified Permit to Operate issued to a PSD stationary source subject to the provisions of Subsection (d)(3) of this rule, shall become invalid if construction or modification is not commenced within 18 months after its issuance or if construction or modification is discontinued for a period of 18 months or more after its issuance. The 18-month period may be extended by the Air Pollution Control Officer for good cause.

(4) **PUBLIC NOTICE AND COMMENT**

The Air Pollution Control Officer shall not issue an Authority to Construct or modified Permit to Operate for any emission unit or project subject to the AQIA or notification requirements of Subsections (d)(2) or (d)(3) above, nor for any emission unit or project which results in an emissions increase of VOC equal to or greater than 250 pounds per day or 40 tons per year, nor for any emission unit or project that would otherwise constitute a new major stationary source or a major modification, unless the following requirements are satisfied.

(i) **Public Comment Period**

At least 40 days before taking final action on an application, the Air Pollution Control Officer shall:

(A) provide the public with notice of the proposed action in the manner prescribed in Subsection (d)(4)(iii), and

(B) provide the California ARB, federal EPA, and any tribal air pollution control agencies having jurisdiction in the San Diego Air Basin with notice of the proposed action and all of the information specified in Subsection (d)(4)(iv), and

(C) make available for public inspection all information relevant to the proposed action as specified in Subsection (d)(4)(iv), and

(D) provide at least a 30-day period within which comments may be submitted.

The Air Pollution Control Officer shall consider all comments submitted.

(ii) **Applicant Response**

Except as agreed to by the applicant and the Air Pollution Control Officer, no later than 10 days after close of the public comment period, the applicant may submit written responses to any comment received during the public comment period. Responses submitted by the applicant shall be considered prior to the Air Pollution Control Officer taking final action. The applicant's responses shall be made available in the public record of the permit action.

(iii) **Publication of Notice**

The Air Pollution Control Officer shall publish a notice of the proposed action in at least one newspaper of general circulation in San Diego County. The notice shall:

(A) describe the proposed action, including the use of any modified or substitute air quality impact model as allowed under 40 CFR Part 51, Appendix W, and

(B) identify the location(s) where the public may inspect the information relevant to the proposed action, and

(C) indicate the date by which all comments must be received by the District for consideration prior to taking final action.

(iv) **Information to be Made Available for Public Inspection**

The relevant information to be made available for public inspection shall include, but not be limited to:

(A) the application and all analyses and documentation used to support the proposed action, the District's evaluation of the project, a copy of the draft Authority to Construct or modified Permit to Operate and any information submitted by the applicant not previously labeled Trade Secret pursuant to Regulation IX, and

(B) the proposed District action on the application, including the preliminary decision to approve, conditionally approve or deny the application and the reasons therefor.

(5) **EMISSION OFFSET REQUIREMENTS**

Except as provided for in Subsection (b)(3), the Air Pollution Control Officer shall not issue an Authority to Construct or modified Permit to Operate for any new or modified stationary source, new or modified emission unit, replacement or relocated emission unit or project which results in an emissions increase that constitutes a new major stationary source or a major modification for NOx or VOC, or for any air contaminant, or its precursor air contaminants, for which the San Diego Air Basin has

been designated by EPA as nonattainment for the NAAQS for such air contaminant, unless emission offsets are provided, on a pollutant-specific basis, for such emission increases as specified below. Interpollutant offsets may be used, provided such offsets meet the requirements of Subsection (d)(5)(iii).

(i) **DETERMINATION OF APPLICABILITY**

The determination that a new emission unit, project or new stationary source is a new major stationary source shall be based on the emission unit's post-project potential to emit, or the project's or stationary source's aggregate post-project potential to emit, respectively. The determination that a new, modified, replacement or relocated emission unit or project at an existing major stationary source is a major modification shall be based on the stationary source's contemporaneous net emissions increase. These determinations shall be made on a pollutant-specific basis.

The applicant for a new major stationary source or a new, modified, replacement or relocated emission unit or project at an existing major stationary source shall submit, with each application for such emission unit, project or source, sufficient information to determine the emissions increases for the unit, project or source, and the contemporaneous net emissions increases if located at an existing major stationary source.

(ii) **EMISSION OFFSETS**

(A) If the NOx or VOC emissions increase from the project under review constitutes a new major stationary source or a major modification, such emissions increase shall be offset at a ratio of 1.2 to 1.0. For any other EPA designated nonattainment air contaminant or its precursor for which the emissions increase from the project under review constitutes a new major stationary source or a major modification, such emissions increase shall be offset at a ratio of 1.0 to 1.0. Interpollutant offsets may be used provided they meet the requirements of Subsection (d)(5)(iii) of this rule.

(B) When an emissions increase from a new, modified, replacement or relocated emission unit or project has been determined to be subject to, and approved as in compliance with, the emission offset requirements of this rule, the contemporaneous net emissions increase for the subject air contaminant shall thereafter not include the amount of such offset emissions increase from the new or modified emission unit or project, on a pollutant-specific basis.

(C) When the emissions offset requirements of this Subsection (d)(5) are being applied to a new federal major stationary source or federal major modification, the amount of creditable emission reductions from any emission reduction credits to be provided shall be adjusted as specified in Rule 20.1, Subsection (d)(5)(v). Such adjustments shall be made at the time that an Authority to Construct is issued, for credits provided by the applicant on or

before such issuance, and at the time that a credit is surrendered, for credits provided by the applicant after issuance of the Authority to Construct.

(iii) **Interpollutant Offsets**

The Air Pollution Control Officer may allow the use of interpollutant emission offsets at the ratios specified in Table 20.3 – 2 to satisfy the VOC and NOx offset requirements of this Subsection (d)(5). For any other EPA-designated nonattainment air contaminant having precursor air contaminant relationships specified in Table 20.1-9 of Rule 20.1, the Air Pollution Control Officer may allow the use of interpollutant offsets of such precursor air contaminants in addition to or in lieu of providing offsets of the nonattainment air contaminant only if done pursuant to an interpollutant offset protocol approved by the Air Pollution Control Officer and the federal EPA. Interpollutant offsets may only be allowed if the applicant demonstrates, to the satisfaction of the Air Pollution Control Officer, that the AQIA requirements of Subsection (d)(2), as applicable, are satisfied for the emissions increases. The interpollutant ratios shall be multiplied by the emission offset ratios required by this rule to determine the final offset ratio.

TABLE 20.3 – 2
Interpollutant Ratio

Emission Increase	Decrease	Interpollutant Ratio
Oxides of Nitrogen (NOx)	NOx	1.0
	VOC	2.0
Volatile Organic Compounds (VOC)	VOC	1.0
	NOx	1.0

(e) **ADDITIONAL REQUIREMENTS – FEDERAL MAJOR STATIONARY SOURCES**

(1) **Compliance Certification**

Prior to receiving an Authority to Construct or modified Permit to Operate pursuant to this rule, an applicant for any new federal major stationary source or federal major modification shall certify that all major stationary sources owned or operated by such person, or by any entity controlling, controlled by or under common control with such a person, in the state are in compliance, or on an approved schedule for compliance, with all applicable emission limitations and standards under the federal Clean Air Act.

(2) **Alternative Siting and Alternatives Analysis**

The applicant for any new federal major stationary source or federal major modification shall conduct an analysis of alternative sites, sizes, production processes, and environmental control techniques for such proposed source or modification which demonstrates that the benefits of the proposed source or modification outweigh the environmental and social costs imposed as a result of its location or construction. Analyses conducted in conjunction with state or federal statutory requirements may be used.

(3) **ANALYSIS OF VISIBILITY IMPAIRMENT IN CLASS I AREAS**

The Air Pollution Control Officer shall deny an Authority to Construct or modified Permit to Operate for any emission unit or project which constitutes a new federal major stationary source or federal major modification and which may have an impact on visibility in a Class I area unless the applicant demonstrates that the following requirements are satisfied. The demonstrations required by this Subsection (e)(3) shall be based on the emission unit or project emission exhaust system design and discharge characteristics but not to an extent greater than good engineering practice stack height. This provision shall not be applied to limit actual stack height.

(i) **Required Analyses**

At the time of application submittal, the applicant shall provide an initial screening analysis of the impairment to visibility, including any integral vista, in each affected Class I area as a result of the emissions increases from the new federal major stationary source or federal major modification, and any general commercial, residential, industrial and other growth associated with the new source or modification. If a screening analysis indicates that a visibility impairment will occur, as determined by the Air Pollution Control Officer, a more in-depth visibility impairment analysis shall be prepared. All analyses of impairment to visibility shall be conducted using applicable methods and procedures promulgated or approved by the federal EPA.

(ii) **Notification Requirements**

The Air Pollution Control Officer shall notify the Federal Land Manager and EPA not later than 30 days after receipt of an application for a new federal major source or a federal major modification subject to the requirements of this Subsection (e)(3). The notification shall include a copy of the application submittal, the location of the project, the project's approximate distance from all Class I areas within 100 km of San Diego County (as specified in Rule 20.1, Table 20.1 - 3), the results of any AQIA, and the results of any screening analysis and any more in-depth analysis of the impacts of the project on visibility in any Class I area.

(iii) **Application Denial**

The Air Pollution Control Officer shall deny an Authority to Construct or Permit to Operate for any new federal major stationary source or federal major modification if the Air Pollution Control Officer finds, after consideration of comments and any analysis from the Federal Land Manager, that the emissions increases from such new source or modification would have an adverse impact on visibility in a Class I area. As defined in 40 CFR 52.21(b)(29), an adverse impact on visibility means visibility impairment which interferes with the management, protection, preservation or enjoyment of the visitor's visual experience of the Class I area.

REGULATION IV. PROHIBITIONS

RULE 50. VISIBLE EMISSIONS (Effective 1/1/69; Rev. Effective 8/13/97)

(a) **APPLICABILITY**

Except as otherwise provided in Section (b), this rule applies to the discharge of any air contaminant other than uncombined water vapor.

(b) **EXEMPTIONS**

The provisions of this rule shall not apply to:

(1) Smoke from the use of an orchard or citrus grove heater which does not produce unconsumed solid carbonaceous matter at a rate in excess of one gram per minute;

(2) Emissions from the use of equipment in agricultural operations;

(3) Smoke from open fires set pursuant to a permit and its conditions;

(4) Abrasive blasting operations subject to the provisions of Rule 71 of Regulation IV of these Rules and Regulations;

(5) The use of visible emissions generating equipment in training sessions conducted by governmental agencies for the purpose of certifying persons to evaluate visible emissions from compliance with applicable provisions of the State of California Health and Safety Code and District Rules and Regulations;

(6) The use of obscurants for the purpose of training military personnel and the testing of military equipment by the United States Department of Defense on any military reservation;

(7) Equipment used exclusively for the purpose of flash-over fire fighting training; and

(8) Emissions from vessels using steam boilers during emergency boiler shutdowns for safety reasons, safety and operational tests required by governmental agencies, and where maneuvering is required to avoid hazards. Emissions from vessels during a breakdown condition, as long as it is reported in accordance with District Rule 98.

(c) **DEFINITIONS**

(1) **"Asphalt Plant Drop Zone"** means the area immediately below a device, in an asphalt manufacturing facility that loads or drops asphalt onto the cargo beds of trucks and trailers.

(2) **"Asphalt Paving Equipment"** means equipment handling asphalt cement or asphaltic concrete as part of a paving operation, including chip seal or sand seal.

(3) **"Obscurants"** means fog oil released into the atmosphere during military exercises which produces a smoke screen designed to eliminate the detection of persons or objects by visual or electronic means of observation within a localized area.

(4) **"Observer"** means a certified human observer or a certified, calibrated opacity monitoring system.

(5) **"Pavement Rehabilitation Equipment"** means equipment used to resurface or refinish an existing paved surface, such as asphalt pavement heaters, asphalt grinders, planers, profilers.

(6) **"Single Source"** means individual unit of equipment or operations at a given location, including any associated outlets to the atmosphere, which may be operated simultaneously.

(7) **"Rubber Modified Spray Applied Asphalt"** means rubber modified asphaltic cement, including, but not limited to rubber modified asphaltic cement containing polymers or asphalt rubber binders, applied with an application temperature specification of 320^{o}F or higher, or encompassing a temperature range including 320^{o}F or higher, in a thin layer to a road surface.

(d) **STANDARDS**

(1) Except as otherwise provided in Section (b) above and subsections below, a person shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes which is darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart.

(2) A person shall not discharge into the atmosphere from any asphalt plant drop zone any contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes which is as dark or darker in shade than that designated as Number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 2 on the Ringelmann Chart.

(3) A person shall not discharge into the atmosphere from any diesel pile driving hammer any contaminant for a period or periods aggregating more than four minutes during the driving of a single pile which is as dark or darker in shade than that designated as Number 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer’s view to a degree greater than does smoke of a shade designated as Number 1 on the Ringelmann Chart.

(4) A person shall not discharge into the atmosphere from any diesel pile driving hammer which uses kerosene fuel, smoke suppressing fuel additives, and synthetic lubricating oil any contaminant for a period or periods aggregating more than four minutes during the driving of a single pile which is as dark or darker in shade than that designated as Number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 2 on the Ringelmann Chart.

(5) A person shall not discharge into the atmosphere from any asphalt paving equipment with an application temperature specification of 320°F or higher, or encompassing a temperature range including 320°F or higher, or pavement rehabilitation equipment, any emissions whatsoever of air contaminants for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes which is darker in shade than that designated as Number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 2 on the Ringelmann Chart. This provision does not apply to portable rubber modified spray applied asphalt cement equipment.

(6) A person shall not discharge into the atmosphere from the operation, maintenance or testing of fire fighting training units used exclusively for the purpose of shipboard fire fighting training, from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any period of 60 consecutive minutes which is darker in shade than that designated as Number 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or of such opacity as to obscure an observer's view to a degree greater than does smoke of a shade designated as Number 2 on the Ringelmann Chart.

RULE 55 FUGITIVE DUST CONTROL
(Adopted June 24, 2009; Effective December 24, 2009)

(a) APPLICABILITY

Except as provided in Section (b), the provisions of this rule shall apply to any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas. Activities subject to this regulation are also subject to the applicable requirements of Rule 50 (Visible Emissions) and Rule 51 (Nuisance).

(b) EXEMPTIONS

The provisions of this rule shall not apply to the following:

(1) Noncommercial construction or demolition activities in support of any structure designed for and used exclusively as a dwelling for not more than four families;

(2) Emergency operations conducted during and in response to life-threatening situations, or in conjunction with any officially declared disaster or state of emergency;

(3) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and/or sewer during periods of unplanned service outages and emergency disruptions;

(4) Any active operation, open storage pile, or inactive disturbed area for which the owner/operator can demonstrate that necessary fugitive dust preventive or mitigating actions are in conflict with the California or federal Endangered Species Acts, or a local, state, or federal water quality requirement;

(5) Explosive blasting operations. However, any other activities capable of generating fugitive dust emissions and performed in conjunction with explosive blasting, such as vehicle transport of materials produced by blasting operations, are not exempt from complying with the provisions of this rule or other applicable rules;

(6) Abrasive blasting operations regulated by Rule 71 (Abrasive Blasting);

(7) Activities subject to an Air Pollution Control District permit to operate;

(8) Permanent unpaved roads.

(c) DEFINITIONS

For the purpose of this rule, the following definitions shall apply:

(1) **"Active Operation"** means any construction or demolition activity capable of generating fugitive dust. This includes but is not limited to, earth-moving activities, and heavy- and light-duty vehicular movement on disturbed surface areas or on unpaved roads.

(2) **"Bulk Materials"** means any material which can emit fugitive dust when stored, disturbed, or handled, and is un-packaged. Bulk material includes, but is not limited to, sand, gravel, soil, aggregate material, and other organic or inorganic particulate matter.

(3) **"Commercial"** means work conducted for financial compensation by other than a tenant or property owner.

(4) **"Construction or Demolition Activity"** means any on-site activity preparatory to or for the purpose of building, altering, rehabilitating, raising, tearing down, breaking into pieces, or improving property, including, but not limited to, the following activities: grading, excavation, loading, transporting, crushing, cutting, planing, shaping or ground breaking.

(5) **"Dust"** means minute solid particles released into the air by natural forces or by mechanical processes including, but not limited to: crushing, grinding, milling, drilling, demolishing, shoveling, conveying, covering, bagging, and sweeping.

(6) **"Earth-moving Activities"** means activities that include, but are not limited to, grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing bulk materials from open storage piles, or soil mulching.

(7) **"Emergency"** means an immediate threat to human health or property.

(8) "**Erosion**" means the movement and deposition of land surface materials by water or wind primarily as a result of human activities.

(9) **"Inactive Disturbed Area"** means a portion of the earth's surface that has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emissions of fugitive dust. This definition excludes those areas that have:

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

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

(iii) Established a vegetative ground cover equivalent to at least 70% percent of the background coverage for nearby undisturbed areas.

(10) **"Open Storage Pile"** means any accumulation of bulk material with five percent or greater silt content which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more

square feet. Silt content level is assumed to be five percent or greater unless a person can show, by sampling and analysis in accordance with ASTM Method C-136 or other equivalent method approved in writing by the California Air Resources Board, that the silt content is less than five percent.

(11) "**Owner/operator"** means any person who owns, leases, operates, controls, or supervises any activity subject to this rule or any person who owns, leases, operates, controls, or supervises the site at which any activity subject to this rule occurs, or both.

(12) **"Particulate Matter"** means any finely divided material which exists as a solid or liquid at standard conditions, excluding uncombined water.

(13) **"Paved Road"** means an improved street, highway, alley, public way, or easement that is covered by concrete, asphaltic concrete, fresh or recycled asphalt, or rubberized asphalt, excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic.

(14) "**Permanent Unpaved Road**" means any unsealed or dirt roadway that is not covered by concrete, asphaltic concrete, fresh or recycled asphalt, or rubberized asphalt, and which is designed and intended to remain unsealed and uncovered indefinitely. This definition excludes public or private roads undergoing construction or resurfacing.

(15) "**Person"** means any individual, firm, association, organization, partnership, business trust, corporation, company, contractor, supplier, installer, user or owner, or any state or local government agency or public district and any officer or employee thereof, or the federal government and any officers or employees thereof to the extent authorized by federal law, or any other entity whatsoever which is recognized by law as the subject of rights and duties.

(16) **"Property Line"** means the boundaries of an area in which either a person causing the fugitive dust emissions or a person allowing such emissions has the legal control or possession. This may include all or portions of a legal parcel or parcels as defined by the San Diego County Assessor.

(17) **"Track-Out/Carry-Out"** means any bulk materials that adhere to and agglomerate on the exterior surfaces of motor vehicles and/or equipment (including tires), or are inadvertently carried out, and that fall onto a paved road, creating visible roadway dust.

(18) **"Visible Dust Emissions"** means any solid particulate matter that is visually detectable in the air without the aid of instruments other than corrective lenses.

(19) **"Visible Roadway Dust"** means any sand, soil, dirt, or other solid particulate matter which is visible upon paved public road surfaces and which can be removed by a vacuum sweeper, or a wet sweeper under normal operating conditions.

(d) **STANDARDS**

(1) **Airborne Dust Beyond the Property Line:** No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60 minute period.

(2) **Track-Out/Carry-Out:** Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

(i) be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the project or operation: track-out grates or gravel beds at each egress point, wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks: using secured tarps or cargo covering, watering, or treating of transported material; and

(ii) be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/carry-out, only PM10-efficient street sweepers certified to meet the most current South Coast Air Quality Management District Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

RULE 50.1. NSPS AND NESHAPS VISIBLE EMISSIONS REQUIREMENTS (Effective 11/8/76)

A person owning or operating any source subject to the provisions of any federal New Source Performance Standard (NSPS) or National Emission Standard for Hazardous Air Pollutants (NESHAPS) which has been delegated to the Air Pollution Control District of San Diego County must, in addition to complying with Rule 50, comply with Regulation X or Regulation XI, respectively.

RULE 51. NUISANCE

A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such persons or the public or which cause or have a natural tendency to cause injury or damage to business or property. The provisions of this rule do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowls or animals.

REGULATION XII. TOXIC AIR CONTAMINANTS

RULE 1200. TOXIC AIR CONTAMINANTS - NEW SOURCE REVIEW

(Adopted & Effective 6/12/96)
(Tables I, II, III-Toxic Air Contaminants: Rev. Effective 7/11/17)
(Table II-Toxic Air Contaminants: Rev. Effective 7/19/18)
(Table I-Toxic Air Contaminants: Rev. Effective 5/29/19)

(a) **APPLICABILITY**

Except as provided in Section (b) of this rule, this rule applies to any new, relocated, or modified emission unit which may increase emissions of one or more toxic air contaminant(s) and for which an Authority to Construct or Permit to Operate is required pursuant to Rule 10, or for which a Notice of Intention or Application for Certification has been accepted by the California Energy Commission. An Application for Certification shall be considered equivalent to an application for an Authority to Construct. Compliance with this rule does not relieve a person from having to comply with other applicable requirements in these rules and regulations, or state and federal law.

(b) **EXEMPTIONS**

(1) The standards of Section (d) shall not apply to:

(i) The modification of an emission unit made exclusively to comply with the Maximum Achievable Control Technology (MACT) requirements adopted pursuant to either Section 111 or 112 of the Federal Clean Air Act or to comply with requirements of these rules and regulations adopted to implement federal MACT requirements.

(ii) The modification of an emission unit made exclusively to comply with a state Air Toxic Control Measure (ATCM) required by Division 26, Part 2, Chapter 3.5 of the California Health and Safety Code (AB 1807 program) or to comply with a requirement of these rules and regulations adopted to implement state ATCM requirements.

(iii)An existing emission unit requiring a permit solely because of changes to Rule 11 of these rules and regulations provided the application for permit is submitted within one-year after the applicable change to Rule 11 is adopted.

(iv) The modification of an emission unit made exclusively to implement a District approved risk reduction plan required by Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 program) or to comply with a requirement of these rules and regulations adopted to implement state SB 1731 program requirements.

(v) The following emission units provided the resulting increase in maximum incremental cancer risk at every receptor location is less than 100 in one million, the total acute noncancer health hazard index is less than 10 and the total chronic noncancer health hazard index is less than 10:

(A) Dry cleaning emission units, provided that Toxics Best Available Control Technology (T-BACT) will be installed.

(B) Gasoline service station emission units, provided that T-BACT will be installed.

(C) Asphalt roofing kettles and tanks.

(D) Automotive refinishing operations not using chrome or lead pigmented coatings.

(E) Emission units used for wood product stripping operations, provided that T-BACT will be installed.

(2) The standards of Subsections (d)(1) and (d)(3) shall not apply to the modification of an emission unit made exclusively to comply with a requirement of these rules and regulations, but not including Rule 1200. The Air Pollution Control Officer may determine for good cause, on a case-by-case basis, that this exemption does not apply to a modified emission unit. In the event such a determination is made, written notice shall be provided by the Air Pollution Control Officer to the project applicant as soon as possible and before the application is deemed complete pursuant to Rule 18. This notice shall state the specific reason why the Air Pollution Control Officer has determined that this exemption does not apply and shall specify what additional requirements the project applicant must meet.

(c) **DEFINITIONS**

(1) "**Air Toxic Control Measure (ATCM)**" means a requirement to reduce emissions of one or more toxic air contaminants developed pursuant to Division 26, Part 2, Chapter 3.5 of the California Health and Safety Code (AB 1807 program).

(2) "**Cancer Burden**" means the estimated potential increase in the occurrence of cancer cases in a population subject to an incremental cancer risk of greater than one in one million resulting from exposure to toxic air contaminants. It shall be calculated pursuant to Section (e).

(3) "**Concurrent Emission Reductions**" means permanent, quantifiable, enforceable, and surplus emission reductions occurring at the same stationary source and within the six months prior to or at the same time as the commencement of operations of new or modified emission units constituting a project. Emission reductions resulting from the shutdown of an emission unit are eligible to be concurrent emission reductions. Concurrent emission reductions shall be calculated pursuant to Section (e).

Notwithstanding the definition of "Surplus," emission reductions required by Section 111 or 112 (MACT) of the federal Clean Air Act, or Division 26, Part 2, Chapter 3.5 (ATCM) of the California Health and Safety Code may be used as concurrent emission reductions if they occur before they are required by the applicable MACT or ATCM. However, their use as concurrent emission reductions shall expire on the date the reductions required by the applicable MACT or ATCM are actually required to take place. The Permit to Operate for any emission unit which has used such an emission reduction to satisfy in whole or in part the requirements of this rule, shall expire and become null and void on the date that the reductions required by the applicable MACT or ATCM are actually required to take place, unless additional concurrent emission reductions are provided in an amount necessary to satisfy the requirements of this rule.

(4) "**Contiguous Property**" means the same as defined in Rule 2 of these Rules and Regulations.

(5) "**Emission Unit**" means any article, machine, equipment, contrivance, process or process line which emits or may emit one or more toxic air contaminants.

(6) "**Enforceable**" means can be enforced by the District through inclusion of conditions on a valid and current permit.

(7) "**Future Potentially Feasible Cancer Risk Reduction Measure**" means control measures and techniques that are in excess of T-BACT and are expected to be technologically feasible and economically practicable in the future. They include, but are not limited to, pollution prevention measures such as product substitution or modification, process modification, feedstock modification, operational and maintenance improvements; changes in basic control equipment; and enclosing systems or processes to reduce emissions. Future potentially feasible cancer risk reduction measures are different from T-BACT in that they apply to existing permit units. Future potentially feasible cancer risk reduction measures are determined on a case-by-case basis.

(8) "**Maximum Achievable Control Technology (MACT)**" means emission controls or limitations included in any Section 112 requirement of the federal Clean Air Act, including any implementing regulations of the U.S. Environmental Protection Agency, for any source class or category.

(9) "**Maximum Incremental Cancer Risk**" **(MICR)** means the estimated probability of a potential maximally exposed individual contracting cancer as a result of exposure to toxic air contaminant(s). It shall be calculated pursuant to Section (e) and using net emission increases from the project or emission unit.

(10) "**Modified Emission Unit**" means an emission unit which undergoes any physical or operational change which results or may result in an increase in an emission unit's toxic air contaminant potential to emit, including toxic air contaminants not previously emitted. An emission unit which undergoes the following shall not be considered a modified emission unit, provided such change is not contrary to any permit condition, and the change does not result in an increase in the toxic air contaminant potential to emit of any toxic air contaminant:

(i) The movement of a portable emission unit from one stationary source to another.

(ii) Repair or routine maintenance.

(iii) An increase in the hours of operation.

(iv) Use of alternate fuel or raw material.

(11) "**Permanent**" means enforceable and which will exist for the life of the project or emission unit, as may be limited by enforceable permit conditions.

(12) "**Post-Project Potential To Emit**" means a project's or emission unit's potential to emit after issuance of an Authority to Construct for the proposed project or emission unit, calculated pursuant to Section (e).

(13) "**Potential to Emit**" means the maximum quantity of toxic air contaminant emissions, including fugitive emissions, that a project or emission unit is capable of emitting considering emission control equipment and calculated pursuant to Section (e).

(14) "**Pre-Project Potential To Emit**" means a project's or emission unit's potential to emit prior to issuance of an Authority to Construct for the proposed project or emission unit, calculated pursuant to Section (e).

(15) "**Project**" means an emission unit or aggregation of emission units located at a stationary source for which an application or combination of applications for Authority to Construct or modified Permit to Operate are under District review. It includes any emission unit(s) modified to provide concurrent emission reductions.

(16) "**Quantifiable**" means that a reliable basis for calculating the amount, rate, nature and characteristics of an emission change can be established, as determined by the Air Pollution Control Officer.

(17) "**Receptor Location**" means any location beyond the project's or emission unit's stationary source boundaries where the Air Pollution Control Officer has determined exposure to the project's or emission unit's (not including any emission unit modified to provide concurrent emission reductions) emissions could reasonably occur.

(18) "**Relocated**" means moved within San Diego County from one stationary source to another stationary source.

(19) "**Stationary Source**" means the same as defined in Rule 2 of these Rules and Regulations.

(20) "**Surplus**" means in excess of any emission reductions which are required by this rule, or which are required by or which the Air Pollution Control Officer reasonably expects will be required by Section 111 or 112 (MACT) of the federal Clean Air Act, or Division 26, Part 2, Chapter 3.5 (ATCM) of the California Health and Safety Code.

Emission reductions used as concurrent emission reductions as part of a project or emission unit subject to the requirements of this rule which occur before the Air Pollution Control Officer reasonably expects they will be required by Section 111 or 112 (MACT) of the federal Clean Air Act, or Division 26, Part 2, Chapter 3.5 (ATCM) of the California Health and Safety Code shall be deemed to be permanently surplus. Emission reductions occurring before December 12, 1995 are not surplus.

Emission reductions associated with Section 111 or 112 (MACT) of the federal Clean Air Act, or Division 26, Part 2, Chapter 3.5 (ATCM) of the California Health and Safety Code and which have been publicly noticed to be required by the federal Environmental Protection Agency (EPA) or the California Air Resources Board (ARB), as applicable, may be deemed to be reasonably expected to occur by the Air Pollution Control Officer. If subsequent public notice is given by such agency that such emission reductions will not be required, such emission reductions shall be deemed to be surplus.

(21) "**Total Acute Noncancer Health Hazard Index**" means the estimated potential risk of acute public health effects and is the sum of the individual substance acute health hazard indexes affecting the same target organ system for a potential maximally exposed individual for all toxic air contaminants identified in Table III. It shall be calculated using net emission increases from the project or emission unit. It shall be calculated pursuant to Section (e).

(22) "**Total Chronic Noncancer Health Hazard Index**" means the estimated potential risk of chronic public health effects and is the sum of the individual substance chronic health hazard indexes affecting the same target organ system for a potential maximally exposed individual for all toxic air contaminants identified in Table II. It shall be calculated using net emission increases from the project or emission unit. It shall be calculated pursuant to Section (e).

(23) "**Toxic Air Contaminant (TAC)**" means the air contaminants listed in Table I (carcinogenic), Table II (noncarcinogenic - chronic) or Table III (noncarcinogenic - acute) which have a health standard, approved by the state Office of Environmental Health Hazard Assessment (OEHHA) and listed in the California Air Pollution Control Officers Association (CAPCOA) Air Toxics Hot Spots Program Risk Assessment Guidelines, October, 1993 or listed in any health risk assessment guidelines adopted by OEHHA, pursuant to Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 procedures), that replaces all or part of such CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October, 1993.

The Air Pollution Control Officer may revise Tables I, II, or III upon OEHHA adoption of revised CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines or upon OEHHA adoption of any health risk assessment guidelines or revisions pursuant to Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 procedures), that replace all or part of such CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October, 1993, or with the concurrence of OEHHA and 30 days after public notice of the proposed changes is published in a newspaper of general circulation. A member of the public may petition the Air Pollution Control Officer to add air contaminants to these tables.

(24) "**Toxics Best Available Control Technology (T-BACT)**" means the most effective emission limitation or emission control device or control technique which:

(i) has been achieved in practice for that source or category of source; or

(ii) is any other emissions limitation or control technique, including process and equipment changes of basic and control equipment and implementation of pollution prevention measures, found by the Air Pollution Control Officer to be technologically feasible for that source or category of source, or for a specific source. If there is an applicable MACT standard, the Air Pollution Control Officer shall evaluate it for equivalency with T-BACT.

(d) **STANDARDS**

The Air Pollution Control Officer shall deny an Authority to Construct or Permit to Operate for any new, relocated, or modified emission unit increasing emissions of one or more toxic air contaminants listed in Tables I, II, or III unless all of the following requirements are met:

(1) Cancer Risk

(i) T-BACT Not Applied. The increase in maximum incremental cancer risk at every receptor location is equal to or less than one in one million for any project for which new, relocated, or modified emission units that increases maximum incremental cancer risk are not equipped with T-BACT; and

(ii) T-BACT Applied. Except as provided in (d)(1)(iii), the increase in maximum incremental cancer risk at every receptor location is equal to or less than 10 in one million for any project for which all new, relocated, or modified emission units that increases maximum incremental cancer risk are equipped with T-BACT.

(iii) Maximum Incremental Cancer Risk Greater Than 10 in One Million. The Air Pollution Control Officer may grant an Authority to Construct and/or Permit to Operate for a new, relocated, or modified emission unit with an increase in maximum incremental cancer risk at any receptor location of greater than 10 in one million but less than 100 in one million provided all of the following conditions are met:

(A) All new, relocated, or modified emission unit(s) associated with the project that increase maximum incremental cancer risk by more than one in one million are equipped with T-BACT.

(B) The Air Pollution Control Officer prepares a report in support of approving an Authority to Construct for the project. The following information shall be included in the report and shall be provided by the project applicant in report format to the satisfaction of the Air Pollution Control Officer:

(1) Identification of the toxic air contaminants that would be emitted.

(2) Identification of the cancer and noncancer (chronic and acute) health impacts of the toxic air contaminants that would be emitted.

(3) A discussion of any uncertainty associated with the risk assessment that the applicant believes is noteworthy.

(4) A discussion of the benefits associated with the new or modified project (any emission unit modified to provide concurrent emission reductions need not be included).

(5) A discussion of any local, state or federal mandates requiring the new or modified project (any emission unit modified to provide concurrent emission reductions need not be included).

(6) Identification of project impacts on environmental media other than air.

(7) Identification of all sensitive receptors impacted by the new or modified project (any emission unit modified to provide concurrent emission reductions need not be included).

(8) A discussion of how the stationary source will comply with all applicable MACT and ATCM requirements at the time of Authority to Construct issuance.

(9) A demonstration that the cancer burden as a result of the project will not exceed 1.0.

(10) A cancer risk reduction plan for the project (any emission unit modified to provide concurrent emission reductions need not be included) to include the following information:

(i) Identification of the processes and activities causing the toxic air contaminant emissions from the project and what portion of the total project risk is due to each.

(ii) Identification of all future potentially feasible cancer risk reduction measures for the project type.

(iii) An estimate of the risk reduction potential of all future potentially feasible cancer risk reduction measures.

(iv) An estimate of how long it would take to implement all future potentially feasible cancer risk reduction measures.

(v) A determination of the technical feasibility and cost-effectiveness to implement all future potentially feasible cancer risk reduction measures.

(vi) Identification of and a commitment to implement future potentially feasible cancer risk reduction measures for the project to reduce the maximum incremental cancer risk increase from the project to 10 in one million or less, and a detailed schedule for implementation.

(11) A discussion of how each requirement of Subsections (d)(1)(iii), (d)(2), and (d)(3) will be met.

The report required by this Subsection shall be available in draft form for public review at the Air Pollution Control District and at a minimum of one public library (to be determined by the Air Pollution Control Officer) near affected persons for the 30 days required by Subsection (d)(1)(iii)(J) before it is finalized.

(C) The Air Pollution Control Officer will include in any Authority to Construct that is issued for the project a condition(s) requiring implementation of the future potentially feasible cancer risk reduction measures the project applicant committed to implement pursuant to the requirement of Subsection (d)(1)(iii) (B)(10)(vi).

(D) If the project is a modification of an existing stationary source emitting one or more toxic air contaminant(s), T-BACT shall be installed on all permitted emission units at the stationary source that have a maximum incremental cancer risk impact of greater than 10 in one million at any receptor location where the increase in maximum incremental cancer risk as a result of the project is greater than 10 in one million. The Air Pollution Control Officer shall not consider emission units modified to comply with this requirement as part of the project unless specifically requested to do so by the project applicant. Emissions and risk impact data to be used for such impact determinations from non-project emission units shall be from the District

program to implement Section 44362 of Division 26 (AB 2588) of the California Health and Safety Code, as such data exists on the date a complete permit application for the project is filed with the District, unless the Air Pollution Control Officer approves the use of other emissions and risk impact data as being more representative.

(E) If the increase in maximum incremental cancer risk as a result of the project is greater than 50 in one million at any receptor location,

(1) all available cancer risk reductions shall be provided from permitted emission units:

(i) located at stationary sources other than the stationary source where the project is located or will be located (e.g. off-site emission reductions), and

(ii) which have a maximum incremental cancer risk impact of greater than 10 in one million at any receptor location where the maximum incremental cancer risk impact as a result of the project is greater than 10 in one million;

or,

(2) cancer risk reductions shall be provided until the increase in maximum incremental cancer risk from the project at all receptor locations is equal to or less than 10 in one million.

Emissions and risk impact data to be used for such impact determinations shall be from the District program to implement Section 44362 of Division 26 (AB 2588) of the California Health and Safety Code, as such data exists on the date a complete permit application for the project is filed with the District, unless the Air Pollution Control Officer approves the use of other emissions and risk impact data as being more representative.

Cancer risk reductions from any single emission unit required by this Subsection (d)(1)(iii)(E) shall not be required if the project applicant demonstrates to the satisfaction of the Air Pollution Control Officer that the annualized cost of such cancer risk reduction (from such single emission unit) per unit of maximum incremental cancer risk reduced is greater than 1.25 times the annualized cost per unit of maximum incremental cancer risk reduced by T-BACT for the project (not including any emission unit modified to provide concurrent emission reductions).

All emission reductions provided pursuant to this subsection shall be enforceable, permanent, and quantifiable. The stationary source operator shall demonstrate to the satisfaction of the Air Pollution Control Officer that the requirements of this subsection have been met. If emission reductions from permitted units are provided such that the resulting maximum incremental cancer risk from the project at all receptor locations within the project impact area is equal to or less than 10 in one million, the requirements of Subsections (d)(1)(iii)(B), (D), (F), (I), and (J) shall not apply.

(F) The stationary source operator will prepare an annual report on risk reduction methods, including pollution prevention, available for reducing the resulting project (not including any emission unit modified to provide concurrent emission reductions) maximum incremental cancer risk for affected emission units to less than or equal to 10 in one million. Such report shall meet the same requirements as established for the District's program to implement Division 26, Part 6, Chapter 6 (SB 1731 risk reduction program) of the California Health and Safety Code. The stationary source operator shall implement the approved risk reduction methods within one year from the date of approval by the District.

(G) The stationary source is in compliance with all applicable MACT and ATCM requirements at the time of Authority to Construct issuance.

(H) The cancer burden as a result of the project is equal to or less than 1.0.

(I) The stationary source operator will notify affected persons of the project and, after providing a minimum 30 day notice, hold a public meeting (in the area affected by the project) to discuss the project. Notification shall be in writing and shall meet the same requirements as established for District notification procedures to implement Section 44362 of Division 26 (AB 2588 Air Toxics Hot Spots notification program) of the California Health and Safety Code.

(J) After written notice is provided to affected persons, the Air Pollution Control Officer has provided a 30 day period for the public to submit written comments on the following as they relate to the project:

(1) Does the project meet all applicable federal, state and Air Pollution Control District requirements;

(2) Are there any special considerations in the affected community that warrant disapproval of the project;

(3) Are there alternative processes or control technologies that should be considered;

(4) Are the applicable terms and conditions of the proposed permit enforceable by the Air Pollution Control Officer; and,

(5) Was proper public notice provided regarding the project?

Written notice of the proposed project and comment period shall be prepared by the Air Pollution Control Officer and shall include notice that the draft report required by Subsection (d)(1)(iii)(B) and the Air Pollution Control Officer's analysis of the project are available for public review at the Air Pollution Control District and at a minimum of one specified public library (to be determined by the Air Pollution Control Officer) near the affected persons. The notice shall be provided to affected persons by the stationary source operator at the same time as the notice required by Subsection (d)(1)(iii)(I) is provided to affected persons.

(2) Total Acute Noncancer Health Risk

The increase in the total acute noncancer health hazard index at every receptor location as a result of the project is equal to or less than one unless the Air Pollution Control Officer, after consulting with the state OEHHA, determines that an alternate total acute noncancer health hazard index is sufficiently health protective. In such case, the increase in total acute noncancer health hazard index shall be limited to the alternative total acute noncancer health hazard index at every receptor location.

(3) Total Chronic Noncancer Health Risk

The increase in the total chronic noncancer health hazard index at every receptor location as a result of the project is equal to or less than one unless the Air Pollution Control Officer, after consulting with the state OEHHA, determines that an alternate total chronic noncancer health hazard index is sufficiently health protective. In such case, the increase in total chronic noncancer health hazard index shall be limited to the alternative total chronic noncancer health hazard index at every receptor location.

(e) **PROCEDURES**

(1) Health risk estimates shall be performed for toxic air contaminants listed in Tables I, II, III using corresponding state OEHHA health risk values in effect on the date action on the application(s) is taken. In the event health risk values are added or revised by OEHHA after the application is deemed complete pursuant to Rule 18, the Air Pollution Control Officer shall advise the project applicant in writing as soon as possible thereafter. The project applicant shall make the necessary changes to the health risk estimates to incorporate the new or revised health risk values and submit them to the Air Pollution Control Officer. However, if requested to do so by the project applicant, the Air Pollution Control Officer (in lieu of the project applicant) shall make the necessary changes to the health risk estimates to incorporate the new or revised health risk values.

(2) The Air Pollution Control Officer shall estimate health risk (cancer and non-cancer) and cancer burden in accordance with procedures specified in the CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October, 1993 or specified in any health risk assessment guidelines adopted by the state OEHHA, pursuant to Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 program), that replace all or part of such CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October, 1993.

(3) Exposure Periods of Concern

Total chronic noncancer health risk and maximum incremental cancer risk estimates shall be calculated based on the project's or emission unit's emission increase in annual toxic air contaminant potential to emit. Total acute noncancer health risk estimates shall be based on the project's or emission unit's emission increase in toxic air contaminant potential to emit for the exposure period of concern.

(4) Calculation of Emission Increases

Emission increases from a new or relocated project or emission unit shall be calculated as the new project's or emission unit's post project potential to emit. Emission increases from a modified project or emission unit shall be calculated as the project's or emission unit's post project potential to emit minus its pre-project potential to emit.

(5) Calculation of Potential to Emit

Except as provided in (i) and (ii) below, the potential to emit shall be calculated based on the maximum design capacity or other operating conditions which reflect the maximum potential emissions, including fugitive emissions.

(i) Permit Limitations Shall Be Used: If specific limiting conditions contained in an Authority to Construct or Permit to Operate restrict or will restrict emissions to a lower level, these limitations shall be used to calculate the potential to emit.

(ii) Potential to Emit Shall Not Exceed Maximum Potential: If specific conditions limiting a project's or emission unit's pre-project potential to emit are not contained in an Authority to Construct or a Permit to Operate, the pre-project potential to emit shall be limited to the project's or emission unit's actual emissions only to the extent that such emissions do not violate any District, state or federal law, rule, regulation, order or permit condition.

For purposes of this requirement, the Air Pollution Control Officer may allow the pre-project potential to emit to be based on the highest level of actual emissions occurring during a consecutive one-year period within the five-year period preceding the receipt date of the application to the extent that the emission level was not in excess of any District, state or federal law, rule, regulation, order or permit condition.

(6) Calculation of Actual Emissions for Determining Emission Reductions

(i) Actual emissions of an existing emission unit shall be averaged over the most representative two consecutive years within the five years preceding the receipt date of an application, as determined by the Air Pollution Control Officer. Such actual emissions shall not include emissions in excess of any District, state or federal law, rule, regulation, order or permit condition.

(ii) For emission units that have not been operated for a consecutive two-year period, which is representative of actual operations within the five years preceding the receipt date of the application, the calculation of actual emissions shall be based on the average of any two one-year operating periods determined by the Air Pollution Control Officer to be representative within that five-year period. If a representative two-year time period or two one-year time period does not exist, the calculation of actual emissions shall be based on the average of the total operational time period within that five-year period.

(iii) Actual emissions for emission units operated for a period of less than six months shall be based on an average over the longest operating time period determined by the Air Pollution Control Officer to be most representative of actual operations.

(7) When concurrent emission reductions are provided, the resulting reduction in health risk at each evaluated receptor location shall be subtracted from the health risk increase at the same receptor location to provide a net health risk as a result of the project at each such receptor location.

Total chronic noncancer health risk and maximum incremental cancer risk reduction estimates shall be calculated based on the project's or emission unit's annual emission reduction in toxic air contaminants. Total acute noncancer health risk reduction estimates shall be based on the project's or emission unit's emission reduction in toxic air contaminants for the exposure period of concern.

In order for an emission reduction to qualify as a concurrent emission reduction when determining the net acute noncancer health risk as a result of a project or emission unit, the applicant shall demonstrate that there will be a resulting health risk reduction to mitigate emission increases from the project or emission unit for each and every acute time period of concern.

(8) Calculation of Emission Reductions

(i) An actual emission reduction may only be used as a concurrent emission reduction. Actual emissions calculated pursuant to Subsection (e)(6) shall be used for purposes of determining an actual emission reduction in accordance with this Subsection (e)(8). An actual emission reduction must be quantifiable, enforceable and surplus and may be temporary or permanent in duration. A temporary actual emission reduction shall be identified as temporary and shall include a specific date beyond which the reductions are no longer valid.

(A) Actual emission reductions from the shutdown or relocation of an emission unit shall be calculated based on the emission unit's pre-project actual emissions.

(B) Actual emission reductions from a modified project or emission unit shall be calculated as the project's or emission unit's pre-project actual emissions minus the project's or emission unit's post-project potential to emit.

(ii) Adjustment for Determining Actual Emission Reduction: If an emission unit has been permitted and operated for a period of less than two years, the emission unit's actual emissions, for purposes of determining decreases in cancer risk or noncancer chronic risk, shall be calculated as the unit's actual emissions over the actual operating time period times the actual operating time period in days divided by 1460.

(iii) If an emission unit was operated in violation of any District, state or federal law, rule, regulation, order, or permit condition during the period used to determine actual emissions, the actual emissions shall be adjusted to reflect the level of emissions which would have occurred if the emission unit had not been in violation.

(9) When concurrent emission reductions are provided, the project applicant shall apply for and the Air Pollution Control Officer shall approve or deny, as appropriate, an Authority to Construct and a new or modified Permit to Operate with appropriate conditions for the emission unit(s) providing the concurrent emission reductions, or retire a Permit to Operate for the emission unit(s) in the event of a shutdown.

(10) Toxic air contaminant exposure scenarios used to estimate health risk shall be consistent with land use designations at the time the application is deemed complete, except where the project owner has direct control over discretionary uses.

(11) To the extent possible, the Air Pollution Control Officer shall develop screening risk assessment procedures for common equipment and toxic air contaminants to expedite and standardize review for compliance with Section (d). The procedures shall be maintained in writing and available upon request. The Air Pollution Control Officer shall propose additional exemptions to Section (b) that the Air Pollution Control Officer deems appropriate, based on the results of these screening procedures.

Table I

Toxic Air Contaminants For Which Potential Carcinogenic Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Acetaldehyde	75-07-0	6/12/1996
Acetamide	60-35-5	1/11/2001
Acrylamide	79-06-1	6/12/1996
Acrylonitrile	107-13-1	6/12/1996
Allyl chloride	107-05-1	1/11/2001
2-Aminoanthraquinone	117-79-3	1/11/2001
Aniline	62-53-3	1/11/2001
Arsenic (inorganic) and compounds	7440-38-2	6/12/1996
Asbestos	1332-21-4	6/12/1996
Benzene	71-43-2	6/12/1996
Benzidine (and its salts) as follows:	92-87-5	6/12/1996
Benzidine based dyes	1020	6/12/1996
Direct Black 38	1937-37-7	6/12/1996
Direct Blue 6	2602-46-2	6/12/1996
Direct Brown 95 (technical grade)	16071-86-6	6/12/1996
Benzyl chloride	100-44-7	1/11/2001
Beryllium and compounds	7440-41-7	6/12/1996
Bis (2-chloroethyl) ether (Dichloroethyl ether)	111-44-4	1/11/2001
Bis (chloromethyl) ether	542-88-1	1/11/2001
Potassium Bromate	7758-01-2	1/11/2001
1,3-Butadiene	106-99-0	6/12/1996
Cadmium and compounds	7440-43-9	6/12/1996
Carbon tetrachloride (tetrachloromethane)	56-23-5	6/12/1996
Chlorinated Paraffins	108171-26-2	1/11/2001
4-Chloro-o-phenylenediamine	95-83-0	1/11/2001
Chloroform	67-66-3	6/12/1996
Chlorophenols as follows:	N/A	6/12/1996
Pentachlorophenol	87-86-5	6/12/1996
2, 4, 6 - trichlorophenol	88-06-2	6/12/1996
P-chloro-o-toluidine	95-69-2	1/11/2001
Chromium (hexavalent) and compounds including, but not limited to:	18540-29-9	6/12/1996
Barium chromate	10294-40-3	6/12/1996
Calcium chromate	13765-19-0	6/12/1996
Lead chromate	7758-97-6	6/12/1996
Sodium dichromate	10588-01-9	6/12/1996
Strontium chromate	7789-06-2	6/12/1996
Chromium trioxide (as chromic acid mist)	1333-82-0	6/12/1996
P-cresidine	120-71-8	1/11/2001
Cupferron	135-20-6	1/11/2001
2,4-diaminoanisole	615-05-4	1/11/2001
2,4-diaminotoluene	95-80-7	1/11/2001
1,2-dibromo-3-chloropropane (DBCP)	96-12-8	6/12/1996
P-dichlorobenzene	106-46-7	6/12/1996
3,3-dichlorobenzidine	91-94-1	6/12/1996

Table I - continued

Toxic Air Contaminants For Which Potential Carcinogenic Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
1,1-dichloroethane (ethylidene dichloride)	75-34-3	1/11/2001
Di (2-ethylhexyl) phthalate (DEHP)	117-81-7	6/12/1996
P-dimethylaminoazobenzene	60-11-7	1/11/2001
2,4-dinitrotoluene	121-14-2	1/11/2001
1,4-dioxane (1,4-diethylene dioxide)	123-91-1	6/12/1996
Epichlorohydrin (1-chloro-2,3-epoxypropane)	106-89-8	6/12/1996
Ethyl benzene	100-41-4	11/14/2007
Ethylene dibromide (1, 2 - dibromoethane)	106-93-4	6/12/1996
Ethylene dichloride (1, 2 – dichloroethane)	107-06-2	6/12/1996
Ethylene oxide (1,2-epoxyethane)	75-21-8	6/12/1996
Ethylene thiourea	96-45-7	1/11/2001
Formaldehyde	50-00-0	6/12/1996
Hexachlorobenzene	118-74-1	6/12/1996
Hexachlorocyclohexanes (mixed or technical grade)	608-73-1	6/12/1996
Alpha - hexachlorocyclohexane	319-84-6	6/12/1996
Beta - hexachlorocyclohexane	319-85-7	6/12/1996
Gamma - hexachlorocyclohexane (Lindane)	58-89-9	6/12/1996
Hydrazine	302-01-2	6/12/1996
Lead (inorganic) and compounds including, but not limited to:	7439-92-1	1/11/2001
Lead acetate	301-04-2	1/11/2001
Lead phosphate	7446-27-7	1/11/2001
Lead subacetate	1335-32-6	1/11/2001
Methyl tertiary-butyl ether	1634-04-4	1/11/2001
4,4'-methylene bis (2-chloroaniline) (MOCA)	101-14-4	1/11/2001
Methylene chloride (dichloromethane)	75-09-2	6/12/1996
4,4'-Methylene dianiline (and its dichloride)	101-77-9	1/11/2001
Michler's Ketone (4,4'-Bis (dimethylamino) benzophenone)	90-94-8	1/11/2001
N-nitrosodi-n-butylamine	924-16-3	6/12/1996
N-nitrosodi-n-propylamine	621-64-7	6/12/1996
N-nitrosodiethylamine	55-18-5	6/12/1996
N-nitrosodimethylamine	62-75-9	6/12/1996
N-nitrosodiphenylamine	86-30-6	1/11/2001
N-nitroso-n-methylethylamine	10595-95-6	6/12/1996
N-nitrosomorpholine	59-89-2	6/12/1996
N-nitrosopiperidine	100-75-4	6/12/1996
N-nitrosopyrrolidine	930-55-2	6/12/1996
Naphthalene	91-20-3	8/03/2004
Nickel and compounds including, but not limited to:	7440-02-0	6/12/1996
Nickel acetate	373-02-4	6/12/1996
Nickel carbonate	3333-67-3	6/12/1996
Nickel carbonyl	13463-39-3	6/12/1996
Nickel hydroxide	12054-48-7	6/12/1996
Nickelocene	1271-28-9	6/12/1996
Nickel oxide	1313-99-1	6/12/1996

Table I – continued

Toxic Air Contaminants For Which Potential Carcinogenic Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Nickel refinery dust from the pyrometallurgical process	1146	6/12/1996
Nickel subsulfide	12035-72-2	6/12/1996
p-Nitrosodiphenylamine	156-10-5	6/12/1996
Particulate emissions from diesel-fueled engines	9901	9/15/2000
Perchloroethylene (tetrachloroethylene)	127-18-4	6/12/1996
Polychlorinated biphenyls (PCBs) unspeciated mixtures	1336-36-3	6/12/1996
Polychlorinated biphenyls (PCBs) speciated as follows:	N/A	
3,3',4,4'-tetrachlorobiphenyl	32598-13-3	8/29/2003
3,4,4',5-tetrachlorobiphenyl	70362-50-4	8/29/2003
2,3,3',4,4'-pentachlorobiphenyl	32598-14-4	8/29/2003
2,3,4,4',5-pentachlorobiphenyl	74472-37-0	8/29/2003
2,3',4,4',5-pentachlorobiphenyl	31508-00-6	8/29/2003
2,3',4,4',5'-pentachlorobiphenyl	65510-44-3	8/29/2003
3,3',4,4',5-pentachlorobiphenyl	57465-28-8	8/29/2003
2,3,3',4,4',5-hexachlorobiphenyl	38380-08-4	8/29/2003
2,3,3',4,4',5'-hexachlorobiphenyl	69782-90-7	8/29/2003
2,3',4,4',5,5'-hexachlorobiphenyl	52663-72-6	8/29/2003
3,3',4,4',5,5'-hexachlorobiphenyl	32774-16-6	8/29/2003
2,3,3',4,4',5,5'-heptachlorobiphenyl	39635-31-9	8/29/2003
Polychlorinated dibenzo-p-dioxins (PCDD) as follows:	1086	6/12/1996
2,3,7,8-tetrachlorodibenzo-p-dioxin	1746-01-6	6/12/1996
1,2,3,7,8-pentachlorodibenzo-p-dioxin	40321-76-4	6/12/1996
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	39227-28-6	6/12/1996
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	57653-85-7	6/12/1996
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	19408-74-3	6/12/1996
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	35822-46-9	6/12/1996
1,2,3,4,6,7,8,9-octachlorodibenzo-p-dioxin	3268-87-9	6/12/1996
Polychlorinated dibenzofurans (PCDF) as follows:	1080	6/12/1996
2,3,7,8-tetrachlorodibenzofuran	5120-73-19	6/12/1996
1,2,3,7,8-pentachlorodibenzofuran	57117-41-6	6/12/1996
2,3,4,7,8-pentachlorodibenzofuran	57117-31-4	6/12/1996
1,2,3,4,7,8-hexachlorodibenzofuran	70648-26-9	6/12/1996
1,2,3,6,7,8- hexachlorodibenzofuran	57117-44-9	6/12/1996
1,2,3,7,8,9- hexachlorodibenzofuran	72918-21-9	6/12/1996
2,3,4,6,7,8-hexachlorodibenzofuran	60851-34-5	6/12/1996
1,2,3,4,6,7,8-heptachlorodibenzofuran	67562-39-4	6/12/1996
1,2,3,4,7,8,9-heptachlorodibenzofuran	55673-89-7	6/12/1996
1,2,3,4,6,7,8,9-octachlorodibenzofuran	39001-02-0	6/12/1996
Polycyclic Aromatic Hydrocarbon (PAH) as follows:	1151	6/12/1996
Benz[a]anthracene	56-55-3	6/12/1996
Benzo[a]pyrene	50-32-8	6/12/1996
Benzo[b]fluoranthene	205-99-2	6/12/1996
Benzo[j]fluoranthene	205-82-3	6/12/1996
Benzo[k]fluoranthene	207-08-9	6/12/1996
Chrysene	218-01-9	6/12/1996

Table I - continued

Toxic Air Contaminants For Which Potential Carcinogenic Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Dibenz[a,h]acridine	226-36-8	6/12/1996
Dibenz[a,j]acridine	224-42-0	6/12/1996
Dibenz[a,h]anthracene	53-70-3	6/12/1996
Dibenzo[a,e]pyrene	192-65-4	6/12/1996
Dibenzo[a,h]pyrene	189-64-0	6/12/1996
Dibenzo[a,i]pyrene	189-55-9	6/12/1996
Dibenzo[a,l]pyrene	191-30-0	6/12/1996
7h-dibenzo[c,g]carbazole	194-59-2	6/12/1996
7,12-dimethylbenz[a]anthracene	57-97-6	6/12/1996
1,6-dinitropyrene	42397-64-8	6/12/1996
1,8-dinitropyrene	42397-65-9	6/12/1996
Indeno[1,2,3-c,d]pyrene	193-39-5	6/12/1996
3-methylcholanthrene	56-49-5	6/12/1996
5-methylchrysene	3697-24-3	6/12/1996
Naphthalene	91-20-3	8/03/2004
5-nitroacenaphthene	602-87-9	6/12/1996
6-nitrochrysene	7496-02-8	6/12/1996
2-nitrofluorene	607-57-8	6/12/1996
1-nitropyrene	5522-43-0	6/12/1996
4-nitropyrene	57835-92-4	6/12/1996
1,3-propane sultone	1120-71-4	1/11/2001
Propylene oxide	75-56-9	6/12/1996
Tertiary butyl-acetate (TBAc)	540-88-5	5/29/2019
1,1,2,2-tetrachloroethane	79-34-5	1/11/2001
Thioacetamide	62-55-5	6/12/1996
Toluene diisocyanates including, but not limited to:	26471-62-5	1/11/2001
Toluene-2,4-diisocyanate	584-84-9	1/11/2001
Toluene-2,6-diisocyanate	91-08-7	1/11/2001
1,1,2-Trichloroethane (vinyl trichloride)	79-00-5	1/11/2001
Trichlorethylene	79-01-6	6/12/1996
Urethane (ethyl carbamate)	51-79-6	6/12/1996
Vinyl chloride (chloroethylene)	75-01-4	6/12/1996

a. Unit Risk Values shall be obtained from the CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October 1993 or any health risk assessment guidelines adopted by the state Office of Environmental Health Hazard Assessment (OEHHA), pursuant to Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 program), that replace all or part of such CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October 1993. Table I was last revised pursuant to Rule 1200(c)(23) and Rule 1210(c)(18) on May 29, 2019.

b. Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report is listed. For information on the origin and use of the 4-digit code, see the EICG report.

Table II

Toxic Air Contaminants For Which Potential Chronic Noncancer Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Acetaldehyde	75-07-0	6/12/1996
Acrolein	107-02-8	1/11/2001
Acrylonitrile	107-13-1	6/12/1996
Ammonia	7664-41-7	6/12/1996
Arsenic (inorganic) and compounds including, but not limited to:	7440-38-2	6/12/1996
Arsine	7784-42-1	6/12/1996
Benzene	71-43-2	6/12/1996
Beryllium and compounds	7440-41-7	6/12/1996
1,3-butadiene	106-99-0	1/11/2001
Cadmium and compounds	7440-43-9	6/12/1996
Caprolactam	105-60-2	6/16/2014
Carbon disulfide	75-15-0	1/11/2001
Carbon tetrachloride (tetrachloromethane)	56-23-5	6/12/1996
Carbonyl sulfide	463-58-1	7/11/2017
Chlorine	7782-50-5	6/12/1996
Chlorine dioxide	10049-04-4	1/11/2001
Chlorobenzene	108-90-7	6/12/1996
Chloroform	67-66-3	6/12/1996
Chloropicrin	76-06-2	6/12/1996
Chromium (hexavalent) and compounds including, but not limited to:	18540-29-9	6/12/1996
Barium chromate	10294-40-3	6/12/1996
Calcium chromate	13765-19-0	6/12/1996
Lead chromate	7758-97-6	6/12/1996
Sodium dichromate	10588-01-9	6/12/1996
Strontium chromate	7789-06-2	6/12/1996
Chromium trioxide (as chromic acid mist)	1333-82-0	3/12/2001
Cresols (mixtures of)	1319-77-3	6/12/1996
m-cresol	108-39-4	6/12/1996
o-cresol	95-48-7	6/12/1996
p-cresol	106-44-5	6/12/1996
Cyanide (inorganic)	57-12-5	1/11/2001
Hydrogen cyanide (hydrocyanic acid)	74-90-8	6/12/1996
P – dichlorobenzene (1,4-dichlorobenzene)	106-46-7	6/12/1996
Diethanolamine	111-42-2	1/14/2002
N,n-dimethyl formamide	68-12-2	1/11/2001
1,4-dioxane	123-91-1	6/12/1996
Epichlorohydrin (1-chloro-2,3-epoxypropane)	106-89-8	6/12/1996
1,2-epoxybutane	106-88-7	1/11/2001
Ethyl benzene	100-41-4	1/11/2001
Ethyl chloride	75-00-3	6/12/1996
Ethylene dibromide (1,2-Dibromoethane)	106-93-4	6/12/1996
Ethylene dichloride (1,2-Dichloroethane)	107-06-2	6/12/1996
Ethylene glycol	107-21-1	6/12/1996
Ethylene oxide	75-21-8	6/12/1996

Table II – continued

Toxic Air Contaminants For Which Potential Chronic Noncancer Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Fluorides and Compounds	1101	1/11/2001
Hydrogen fluoride (hydrofluoric acid)	7664-39-3	6/12/1996
Formaldehyde	50-00-0	6/12/1996
Glutaraldehyde	111-30-8	6/12/1996
Glycol Ethers as follows:	N/A	6/12/1996
Ethylene glycol butyl ether – EGBE	111-76-2	7/19/2018
Ethylene glycol ethyl ether – EGEE	110-80-5	6/12/1996
Ethylene glycol ethyl ether acetate – EGEEA	111-15-9	6/12/1996
Ethylene glycol methyl ether – EGME	109-86-4	6/12/1996
Ethylene glycol methyl ether acetate – EGMEA	110-49-6	6/12/1996
n-Hexane	110-54-3	1/11/2001
Hydrazine	302-01-2	6/12/1996
Hydrochloric acid	7647-01-0	6/12/1996
Hydrogen sulfide	7783-06-4	6/12/1996
Isophorone	78-59-1	1/14/2002
Isopropyl alcohol (Isopropanol)	67-63-0	1/11/2001
Maleic anhydride	108-31-6	6/12/1996
Manganese	7439-96-5	6/12/1996
Mercury (inorganic) and compounds including, but not limited to:	7439-97-6	6/12/1996
Mercuric chloride	7487-94-7	6/12/1996
Methanol	67-56-1	6/12/1996
Methyl bromide (Bromomethane)	74-83-9	6/12/1996
Methyl tert-butyl ether	1634-04-4	1/11/2001
Methyl chloroform (1, 1, 1 – TCA)	71-55-6	6/12/1996
Methyl isocyanate	624-83-9	6/12/1996
Methylene chloride (Dichloromethane)	75-09-2	6/12/1996
4,4'-methylene dianiline (and its dichloride)	101-77-9	6/12/1996
Methylene diphenyl diisocyanate (Polymeric)	101-68-8	6/12/1996
Naphthalene	91-20-3	6/12/1996
Nickel and compounds including, but not limited to:	7440-02-0	6/12/1996
Nickel acetate	373-02-4	6/12/1996
Nickel carbonate	3333-67-3	6/12/1996
Nickel carbonyl	13463-39-3	6/12/1996
Nickel hydroxide	12054-48-7	6/12/1996
Nickelocene	1271-28-9	6/12/1996
Nickel oxide	1313-99-1	6/12/1996
Nickel refinery dust from the pyrometallurgical process	1146	6/12/1996
Nickel subsulfide	12035-72-2	6/12/1996
Particulate emissions from diesel-fueled engines	9901	9/15/2000
Perchloroethylene (Tetrachloroethylene)	127-18-4	6/12/1996
Phenol	108-95-2	6/12/1996
Phosphine	7803-51-2	6/12/1996
Phosphoric acid	7664-38-2	6/12/1996
Phthalic anhydride	85-44-9	6/12/1996

Table II – continued

Toxic Air Contaminants For Which Potential Chronic Noncancer Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Polychlorinated biphenyls (PCBs) speciated as follows:	N/A	
3,3',4,4'-tetrachlorobiphenyl	32598-13-3	8/29/2003
3,4,4',5-tetrachlorobiphenyl	70362-50-4	8/29/2003
2,3,3',4,4'-pentachlorobiphenyl	32598-14-4	8/29/2003
2,3,4,4',5-pentachlorobiphenyl	74472-37-0	8/29/2003
2,3',4,4',5-pentachlorobiphenyl	31508-00-6	8/29/2003
2,3',4,4',5'-pentachlorobiphenyl	65510-44-3	8/29/2003
3,3',4,4',5-pentachlorobiphenyl	57465-28-8	8/29/2003
2,3,3',4,4',5-hexachlorobiphenyl	38380-08-4	8/29/2003
2,3,3',4,4',5'-hexachlorobiphenyl	69782-90-7	8/29/2003
2,3',4,4',5,5'-hexachlorobiphenyl	52663-72-6	8/29/2003
3,3',4,4',5,5'-hexachlorobiphenyl	32774-16-6	8/29/2003
2,3,3',4,4',5,5'-heptachlorobiphenyl	39635-31-9	8/29/2003
Polychlorinated dibenzo-p-dioxins (PCDD) as follows:	1086	6/12/1996
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	6/12/1996
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	6/12/1996
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	6/12/1996
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	6/12/1996
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	6/12/1996
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	6/12/1996
1,2,3,4,6,7,8,9-Octachlorodibenzo-p-dioxin	3268-87-9	6/12/1996
Polychlorinated dibenzofurans (PCDF) as follows:	1080	6/12/1996
2,3,7,8-Tetrachlorodibenzofuran	5120-73-19	6/12/1996
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	6/12/1996
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	6/12/1996
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	6/12/1996
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	6/12/1996
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	6/12/1996
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	6/12/1996
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	6/12/1996
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	6/12/1996
1,2,3,4,6,7,8,9-Octachlorodibenzofuran	39001-02-0	6/12/1996
Propylene (propene)	115-07-1	1/11/2001
Propylene glycol monomethyl ether	107-98-2	6/12/1996
Propylene oxide	75-56-9	6/12/1996
Selenium including, but not limited to:	7782-49-2	6/12/1996
Selenium sulfide	7446-34-6	6/12/1996
Silica (crystalline, respirable)	1175	10/11/2013
Styrene	100-42-5	6/12/1996
Sulfuric acid	7664-93-9	7/11/2017
Sulfur trioxide	7446-71-9	7/11/2017
Toluene	108-88-3	6/12/1996
Toluene diisocyanates	26471-62-5	6/12/1996
Toluene-2,4-diisocyanate	584-84-9	6/12/1996
Toluene-2,6-diisocyanate	91-08-7	6/12/1996
Trichloroethylene	79-01-6	6/12/1996

Table II – continued

Toxic Air Contaminants For Which Potential Chronic Noncancer Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Triethylamine	121-44-8	1/11/2001
Vinyl acetate	108-05-4	1/11/2001
Vinylidene chloride	75-35-4	6/12/1996
Xylenes (mixed isomers)	1330-20-7	6/12/1996
m-Xylene	108-38-3	6/12/1996
o-Xylene	95-47-6	6/12/1996
p-Xylene	106-42-3	6/12/1996

a. Reference Exposure Levels (RELs) and toxic endpoint information shall be obtained from the CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October 1993 or any health risk assessment guidelines adopted by the state Office of Environmental Health Hazard Assessment (OEHHA), pursuant to Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 program), that replace all or part of such CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October 1993. Table II was last revised pursuant to Rule 1200(c)(23) and Rule 1210(c)(18) on July 19, 2018.

b. Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report is listed. For information on the origin and use of the 4-digit code, see the EICG report.

Table III

Toxic Air Contaminants For Which Potential Acute Noncancer Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Acetaldehyde	75-07-0	1/28/2009
Acrolein	107-02-8	1/11/2001
Acrylic acid	79-10-7	1/11/2001
Ammonia	7664-41-7	6/12/1996
Arsenic (inorganic) and compounds including, but not limited to:	7440-38-2	6/12/1996
Arsine	7784-42-1	6/12/1996
Benzene	71-43-2	6/12/1996
Benzyl chloride	100-44-7	6/12/1996
1,3-butadiene	106-99-0	10/11/2013
Caprolactam	105-60-2	6/16/2014
Carbon disulfide	75-15-0	1/11/2001
Carbon monoxide	630-08-0	1/11/2001
Carbon tetrachloride (tetrachloromethane)	56-23-5	6/12/1996
Carbonyl sulfide	463-58-1	7/11/2017
Chlorine	7782-50-5	6/12/1996
Chloroform	67-66-3	6/12/1996
Chloropicrin	76-06-2	1/11/2001
Copper and compounds	7440-50-8	6/12/1996
Cyanide (inorganic)	57-12-5	6/12/1996
Hydrogen cyanide (hydrocyanic acid)	74-90-8	6/12/1996
1,4-Dioxane (1,4-diethylene dioxide)	123-91-1	6/12/1996
Epichlorohydrin (1-chloro-2,3-epoxypropane)	106-89-8	1/11/2001
Fluorides and Compounds	1101	6/12/1996
Hydrogen fluoride (hydrofluoric acid)	7664-39-3	6/12/1996
Formaldehyde	50-00-0	6/12/1996
Glycol ethers as follows:	N/A	6/12/1996
Ethylene glycol butyl ether - EGBE	111-76-2	6/12/1996
Ethylene glycol ethyl ether - EGEE	110-80-5	6/12/1996
Ethylene glycol ethyl ether acetate - EGEEA	111-15-9	6/12/1996
Ethylene glycol methyl ether - EGME	109-86-4	6/12/1996
Hydrochloric acid (hydrogen chloride)	7647-01-0	6/12/1996
Hydrogen selenide	7783-07-5	6/12/1996
Hydrogen sulfide	7783-06-4	6/12/1996
Isopropyl alcohol (isopropanol)	67-63-0	1/11/2001
Mercury (inorganic) and compounds including, but not limited to:	7439-97-6	6/12/1996
Mercuric chloride	7487-94-7	6/12/1996
Methanol	67-56-1	1/11/2001
Methyl bromide (bromomethane)	74-83-9	6/12/1996
Methyl chloroform (1,1,1-trichloroethane)	71-55-6	6/12/1996
Methyl ethyl ketone (2-butanone)	78-93-3	1/11/2001
Methylene chloride (dichloromethane)	75-09-2	6/12/1996
Methylene diphenyl diisocyanate (Polymeric)	101-68-8	6/14/2016

Table III - continued

Toxic Air Contaminants For Which Potential Acute Noncancer Impacts Must Be Calculated[a]

COMPOUND	CAS # [b]	Date Added
Nickel and compounds including, but not limited to:	7440-02-0	6/12/1996
Nickel acetate	373-02-4	6/12/1996
Nickel carbonate	3333-67-3	6/12/1996
Nickel carbonyl	13463-39-3	6/12/1996
Nickel hydroxide	12054-48-7	6/12/1996
Nickelocene	1271-28-9	6/12/1996
Nickel oxide	1313-99-1	6/12/1996
Nickel refinery dust from the pyrometallurgical process	1146	6/12/1996
Nickel subsulfide	12035-72-2	6/12/1996
Nitric acid	7697-37-2	1/11/2001
Nitrogen dioxide	10102-44-0	6/12/1996
Ozone	10028-15-6	6/12/1996
Perchloroethylene (tetrachloroethylene)	127-18-4	6/12/1996
Phenol	108-95-2	1/11/2001
Phosgene	75-44-5	6/12/1996
Propylene oxide	75-56-9	6/12/1996
Sodium hydroxide	1310-73-2	6/12/1996
Styrene	100-42-5	1/11/2001
Sulfates	9960	6/12/1996
Sulfur dioxide	7446-09-5	6/12/1996
Sulfuric acid and oleum	N/A	6/12/1996
Sulfuric acid	7664-93-9	6/12/1996
Sulfur trioxide	7446-71-9	6/12/1996
Oleum	8014-95-7	6/12/1996
Toluene	108-88-3	1/11/2001
Toluene diisocyanates	26471-62-5	6/14/2016
Toluene-2,4-diisocyanate	584-84-9	6/14/2016
Toluene-2,6-diisocyanate	91-08-7	6/14/2016
Triethylamine	121-44-8	1/11/2001
Vanadium (fume or dust)	7440-62-2	1/11/2001
Vanadium pentoxide	1314-62-1	1/11/2001
Vinyl chloride (chloroethylene)	75-01-4	1/11/2001
Xylenes (mixed isomers)	1330-20-7	6/12/1996
m-Xylene	108-38-3	6/12/1996
o-Xylene	95-47-6	6/12/1996
p-Xylene	106-42-3	6/12/1996

a. Reference Exposure Levels (RELs) and toxic endpoint information shall be obtained from the CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October 1993 or any health risk assessment guidelines adopted by the state Office of Environmental Health Hazard Assessment (OEHHA), pursuant to Division 26, Part 6, Chapter 6 of the California Health and Safety Code (SB 1731 program), that replace all or part of such CAPCOA Air Toxics Hot Spots Program Risk Assessment Guidelines, October 1993. Table III was last revised pursuant to Rule 1200(c)(23) and Rule 1210(c)(18) on July 11, 2017.

b. Chemical Abstract Service Number (CAS): For chemical groupings and mixtures where a CAS number is not applicable, the 4-digit code used in the Air Toxics "Hot Spots" Emission Inventory Criteria and Guidelines (EICG) Report is listed. For information on the origin and use of the 4-digit code, see the EICG report.

SAN DIEGO COUNTY

GRADING ORDINANCE

An excerpt from The San Diego County Code of Regulatory Ordinances

Amended by Ord. No. 10224 (N.S.)

Effective 10-25-12

San Diego County Code of Regulatory Ordinances

TITLE 8 ZONING AND LAND USE REGULATIONS*

DIVISION 7. GRADING, CLEARING AND WATERCOURSES*

***Note**–Div. 7, Excavation and Grading, added by Ord. No. 2925 (N.S.), effective 3-3-66; repealed by Ord. No. 9547 (N.S.), effective 5-9-03. New Div. 7, Grading, Clearing and Watercourses, enacted by Ord. No. 9547 (N.S.), effective 5-9-03.

Cross reference(s)--Excavations, fills and obstructions, § 71.301 et seq.

CHAPTER 1.
RESPONSIBILITIES AND ENFORCEMENT

SEC. 87.101. RESPONSIBILITIES OF OWNERS, PERMITTEES AND OTHERS.

(a) General. It shall be unlawful for any owner, permittee or other person to perform or cause to be performed any grading or clearing on any property contrary to any provision of this Division, or to use or maintain such property in an unlawfully graded or cleared condition, or to commit any other act prohibited by this Division. This prohibition shall apply to any person operating grading or clearing equipment or otherwise performing work for hire, only if that person knowingly participates in activity prohibited by this Division. An owner shall be considered to have caused any grading, clearing or prohibited act on the property under the owner's dominion and control, and shall be responsible for the correction of any violation of any provision of this Division, including a violation which occurred prior to the owner's acquisition thereof which continues after such acquisition.

(b) Hazardous Conditions. The owner of the property upon which an excavation, embankment or fill is located, or other person or agent in control of said property, upon receipt of notice in writing from the County Official to do so, shall within the period specified in such notice, repair or eliminate such excavation, embankment or fill so as to eliminate the hazard and be in conformance with the requirements of this Division.

(c) Compliance With Plans and Requirements. All permits issued under this Division shall be presumed to include the provision that the permittee and his or her agent, contractors and employees, shall carry out the proposed work in accordance with the approved plans and specifications, where such approval is required, and in compliance with any applicable storm water pollution prevention plan (SWPPP) prepared and maintained pursuant to federal or state requirements or a County directive, and in compliance with all the requirements of the permit and this Division. Failure to carry out the work in accordance with approved plans and specifications, any applicable SWPPP, and in compliance with all the requirements of the permit and this Division shall be a violation of this Division.

(d) Storm Damage Precautions. The owner, the permittee, and all persons performing any grading operations shall remove all loose dirt from the grading site and provide adequate erosion control or drainage devices, debris basins, or other safety devices and take all safety precautions reasonably necessary to protect persons and property. All such persons shall put into effect all safety precautions which in the opinion of the County Official are necessary.

(e) Maintenance of Protective Devices. The owner of any property on which a fill or excavation has been made, the permittee pursuant to a permit granted under the provisions of this Division, or any other person or agent in control of such property, shall maintain in good condition and repair all retaining walls, cribbing, drainage structures or means and other protective devices and planting shown in the approved plans and specifications or in the record plans filed pursuant to Section 87.425 or required by the permit. Facilities dedicated for use by the public and accepted for such use by a public agency are excepted.

(f) Protection of Utilities and Adjacent Property. During grading operations the permittee shall be responsible for the prevention of damage to any public utilities or services. This responsibility applies within the limits of grading and along any routes of travel of equipment. Notwithstanding the minimum standards set forth in this Division, the permittee is responsible for the prevention of damage to adjacent property and no person shall excavate on land so close to the property line as to endanger any adjoining public street, sidewalk, alley, or any other public or private property without supporting and protecting such property from settling, cracking, or other damage which might result. In the event that, during the grading operation, expansive soil is found within either two feet of the finished lot grade or three feet of the finished floor grade of any area intended or designed to be used as the location of a building, the applicant shall either: (1) remove the expansive soil and replace it with non-expansive soil properly compacted, to a depth of three feet; or (2) install a foundation which either conforms to the San Diego County Standard Foundation System For Single Family Dwellings (on file with the Department of Planning and Development Services) or has been approved and signed by a licensed civil engineer.

(g) Truthful Statements. Owners, permittees, soils engineers, engineers serving as Permit Compliance Engineers, and others filing reports or providing official information to the County pursuant to this Division shall cooperate with and provide truthful and correct information to the County Official relating to the enforcement of this Division. Any falsification or misrepresentation made to the County concerning compliance with this Division, including any voluntary disclosures and including any report that is so deficient or incomplete as to cause misunderstanding, and any withholding of information required to be submitted by or pursuant to this Division, is a violation of this Division.

(h) Compliance with Federal and State Requirements. Any violation of an applicable federal or state-issued Storm Water Permit, or any failure to conform to an applicable storm water pollution prevention plan (SWPPP) prepared pursuant to such a permit or pursuant to this division or Chapter 8 of Division 7 of Title 6 of the San Diego County Code, or any failure to comply with storm water-related provisions of a County-issued grading permit or of a grading plan prepared to secure such a permit, is also a violation of this division. Potentially applicable federal or state-issued Storm Water Permits and requirements include but may not be limited to: the state Industrial Activities Storm Water General Permit (State Water Resources Control Board (SWRCB) Order 97-03-DWQ, National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000001); the state General Permit for Construction Activities Associated With Construction Activities (SWRCB Order 99-08-DWQ, NPDES General Permit No. CAS000002); the State Ocean Plan, Inland Surface Waters Plan, or Enclosed Bays and Estuaries Plan; the State Comprehensive Water Quality Control Plan for the San Diego Basin; any applicable U.S. Environmental Protection Agency or state-issued multi-sector, group, or general permit; and the stormwater-related provisions of any NPDES permit or state-issued Waste Discharge Requirements permit issued to a specific facility, each as it now exists or may hereafter be amended or superseded.

(i) Permits and Compliance. Neither the issuance of a grading permit, clearing permit, watercourse permit, or reclamation plan under the provisions of this division, nor the compliance with any provisions or condition thereof, nor compliance with federal or state requirements, shall relieve any person from any liability or responsibility for compliance with this Division or responsibility or liability otherwise imposed –

—by law for damage to person or property.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.102. ENFORCEMENT AUTHORITY OF COUNTY OFFICIAL.

(a) General. The County Official and each agent or deputy thereof who is assigned to duties which include the enforcement of this Division, and any peace officer, are authorized to enforce the provisions of this Division, including the activities set forth in this section below.

(b) Directors of Public Works and Planning and Development Services. The Director of Public Works and the Director of Planning and Development Services shall each generally have enforcement authority relating to work done pursuant to, or compliance with, a permit issued by the respective Director, acting as the "County Official" in the areas specified in Section 87.803 . Enforcement authority relating to work or activities conducted without the necessary permit having been obtained, is given to the Director of Public Works in cases involving work or activities subject to Chapter 6 (Watercourses) of this Division, and to the Director of Planning and Development Services in all other cases.

(c) Inspections. The County Official may enter any property or premises subject to this Division for the purpose of determining compliance with this Division.

(d) Order to Stop or Repair Work. Whenever the County Official determines that any existing excavation, embankment or fill endangers or adversely affects the safety, use or stability of any public or private property, or that any work is being done contrary to the provisions of this Division or other laws implemented through the enforcement of this Division, he or she may order work to be stopped and/or repairs or corrections to be made, by serving written notice on the owner, permittee or any person engaged in the doing or causing such work to be done, and such persons shall immediately stop such work until authorized by the County Official in writing to proceed.

(e) Notice of Violation. The County Official may issue and enforce Notices of Violation and Notices of Ineligibility For Land Development, pursuant to this Division.

(f) Site Restoration. The County Official may order the site of illegal grading or clearing to be restored, pursuant to Section 87.110 below.

(g) Administrative Remedies. The County Official may pursue the Administrative Remedies set forth at Division 8 of Title 1 of this Code, including the issuance of Administrative Citations pursuant to Chapter 1 (commencing with Section 18.101) of said Division 8.

(h) Arrests and Citations. The County Official shall have the power to make arrests for violations of this Division and State laws which he or she has a duty to enforce, and to issue citations for such violations. Any person so arrested who does not demand to be taken before a magistrate may instead be cited in the manner prescribed in Chapter 5C (commencing with Section 853.5) of Title 3, Part 2 of the Penal Code. The County Official may arrest an owner without warrant whenever they have reasonable cause to believe that the person arrested has committed a violation of this Division, provided that the officer or employee making the arrest shall have completed a course of training that meets the minimum standards prescribed by the Commission on Peace Officer Standards and Training as prescribed by Section 832(a) of the Penal Code. An officer or employee making an arrest under this Section shall follow the citation-release

procedures prescribed by the Penal Code.

(i) Non-Liability. The County Official or any employee charged with the enforcement of this Division, acting in good faith and without malice for the County in the discharge of his duties, shall not thereby render himself or herself liable personally and he or she is hereby relieved from all personal liability for any damage that may accrue to persons or property as a result of any act required or by reason of any act or omission in the discharge of his duties. Any suit brought against the County Official or employee, because of such act or omission performed by him or her in the enforcement of any provisions of this Division, shall be defended by the legal department of the County until final termination of the proceedings.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.103. VIOLATIONS - CRIMINAL PENALTIES.

(a) Any person violating any provision of this Division other than Sections 87.501 or 87.505 shall be deemed guilty of a misdemeanor, unless, in the discretion of the prosecutor, it is charged as an infraction. A person convicted of a third or subsequent such violation within two years from the date of the first conviction shall be deemed guilty of a misdemeanor.

(b) Any clearing which is done in violation of Sections 87.501 or 87.505 shall be a misdemeanor.

(c) Any person convicted of an infraction under this Division shall be punished by a fine not exceeding one hundred dollars for the first violation, two hundred dollars for the second violation within one year, and five hundred dollars for each subsequent violation within one year. Any person convicted of a misdemeanor under this Division shall be punished by imprisonment in the County jail for a term not exceeding six months, or by a fine not exceeding one thousand dollars, or both.

(d) Each day or any portion of a day that any person violates or continues to violate provisions of this Division constitutes a separate offense and may be charged and punished separately without awaiting conviction on any prior offense. The penalties imposed by this section are in addition to penalties imposed under other provisions of this Code and the Zoning Ordinance.

(e) Paying a fine or serving a jail sentence shall not relieve any owner or permittee from responsibility for correcting any condition which violates any provision of this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.104. VIOLATIONS - PUBLIC NUISANCE.

In addition to any penalty prescribed for violation of this Code, any grading, clearing or other act done contrary to the provisions of this Division is unlawful and a public nuisance. Any grading or clearing done without a permit first having been obtained as required by this Division, regardless of whether such failure is due to neglect or refusal, shall be prima facie evidence that a public nuisance has been committed. A public nuisance may be abated in accordance with the Uniform Public Nuisance Abatement Procedure contained in Chapter 2, Division 6, Title 1 (commencing with Section 16.201) of this Code or, upon order of the Board of Supervisors, the County Counsel is authorized to commence necessary proceedings provided by law to abate, remove and/or enjoin such public nuisance.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.105. VIOLATIONS - DENIAL OF SUBSEQUENT PERMITS.

Any grading or clearing which according to a field inspection of the property was done in violation of Sections 87.201, 87.501, 87.505, 87.602 or 87.603, or in violation of one or more conditions of a grading permit or a clearing permit, shall be grounds for denying for five years all applications for grading permits, administrative permits, site plans, use permits, major and minor subdivisions, rezones, specific plans, specific plan amendments, general plan amendments and other land development applications proposed for the property on which the violation occurred. The "property" shall be deemed to include the lot or parcel on which the violation occurred, together with all adjacent parcels owned by the same person or entity or which are part of a common plan of development. The five-year period shall commence from the date of the violation, if documented, or from the date of discovery of the violation. The Board of Supervisors may waive the penalty imposed by this subsection, for good cause. Any such waiver, if granted, shall in no way relieve the owner or applicant for any such subsequent land development application, of their duty to include the effects of the grading or clearing in any environmental analysis performed for the subsequent application, and to restore or rehabilitate the site, provide substitute or compensating resources, or perform other appropriate measures to mitigate the adverse effects of the illegal grading or clearing.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.106. VIOLATIONS - INJUNCTIVE OR DECLARATORY RELIEF.

In addition to or in lieu of other remedies specified in this Chapter, any violation of this division may be enforced by a judicial action for injunctive or declaratory relief.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.107. VIOLATIONS - CIVIL PENALTIES.

(a) As part of a civil action filed by the County to enforce provisions of this Division, a court may assess a maximum civil penalty of $2,500 per violation of this Division for each day during which any violation of any provision of this Division is committed, continued, permitted or maintained by such person(s).

(b) In determining the amount of any civil liability to be imposed pursuant to this division, the superior court shall take into consideration the nature, circumstances, extent, and gravity of the violation or violations, whether any discharge caused by the violation is susceptible to cleanup or abatement, and, with respect to the violator, the ability to pay, the effect on ability to continue in business, the extent of any advantage gained by an unfair business practice, any voluntary cleanup efforts undertaken, any prior history of violations, the degree of culpability, economic savings, if any, resulting from the violation, and such other matters as justice may require.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.108. VIOLATIONS - COST RECOVERY.

In addition to other penalties and remedies permitted in this Division, the following may be awarded without monetary limitations in any civil action:

(a) Costs to investigate, inspect, monitor, survey, or litigate;

(b) Costs to place or remove soils or erosion control materials; costs to correct any violation; and costs to end any adverse effects of a violation;

(c) Compensatory damages for losses to the County or any other plaintiff caused by violations; and/or

(d) Restitution to third parties for losses caused by violations.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.109. NOTICE OF INELIGIBILITY FOR LAND DEVELOPMENT.

(a) If the County Official believes that grading or clearing has been done in violation of this Division, he or she may deliver to the owner of the property upon which the grading occurred a Notice of Intent to File a Notice of Ineligibility for Land Development with the Departments of Planning and Development Services and Public Works. The notice of intent shall be either served upon the owner personally or be both mailed (via certified mail, return receipt requested) to the owner at the address shown on the most recent tax assessment records and posted on the property. The notice of intent shall state the County Official's intention to file the Notice of Ineligibility for Land Development, and shall fix a location, time and date (which shall not be less than fifteen days after the delivery of the notice), at which the County Official will hold a hearing at which the owner may submit to the County Official written comments or reasons why a Notice of Ineligibility for Land Development should not be filed. The County Official shall hold the hearing at the appointed time, shall consider any information provided by the owner, and shall determine whether a violation occurred, whether it has been remedied, and whether to file a Notice of Ineligibility for Land Development.

(b) If the County Official files a Notice of Ineligibility for Land Development, and for so long as said notice remains in effect, no application for a building permit, administrative permit, site plan, use permit, variance, tentative parcel map, tentative map, parcel map or final map or any other permit for the development of the subject property shall be approved. All such applications shall be denied, and the County Official receiving such an application shall not be required to undertake further review of the application. The "subject property" shall be deemed to include the lot or parcel on which the violation occurred, together with all adjacent parcels owned by the same person or entity or which are part of a common plan of development. The Notice of Ineligibility for Land Development shall remain in effect until the County Official files a "Release of Notice of Ineligibility for Land Development," which the County Official shall file when he or she determines that a grading or clearing permit as required by this Division has been obtained for the grading or clearing, and that the grading or clearing has been completed, inspected and approved in writing by the County Official as being in compliance with the requirements of this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.110. VIOLATIONS - SITE RESTORATION.

(a) Whenever the County Official determines that grading or clearing has been done in violation of the requirements of this Division, including grading or clearing without obtaining the required permit or grading or clearing in excess of that permitted by an approved permit, the County Official may order that the site be restored to the condition it was in previous to the unlawful grading or clearing. Restoration ordered may include revegetation of the site with species of plants identical to or serving biological resource values as close as possible to those of the vegetation which existed on the site prior to the illegal grading or clearing.

(b) If the County Official determines that restoration to such previous condition would result in a condition which is unsafe or does not conform to this Division or other applicable laws, or is otherwise impractical, then the County Official may order restoration to such other condition as he or she determines to be as close as practical to the site's previous condition; provided however, that the County Official shall require that any adverse environmental impacts which resulted from the illegal grading or clearing be mitigated (such as through the creation and/or preservation of onsite or offsite substitute habitat or other resources) to at least the same extent as would have been required if the impacts occurred as a result of a development project application which was required to comply with the California Environmental Quality Act, the Resource Protection Ordinance, the Biological Mitigation Ordinance and other County resource protection regulations.

(c) Such an order for restoration may require that the restoration work be performed pursuant to plans which the permittee, owner or other responsible person(s) is directed to prepare and submit for the County Official's approval. Failure to submit such plans within the time specified in the order for restoration shall constitute a violation of this Division. The order may require that permits required by this Division or other laws or regulations be obtained for the restoration work, including compliance with all requirements for obtaining such permits. The order for restoration may require that adequate security be provided to the County Official, to assure completion of the restoration work. The order for restoration may impose time deadlines for performance of certain acts. Failure to timely implement or otherwise comply with an order for restoration shall constitute a violation of this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.111. AGRICULTURAL GRADING PERMIT OR CLEARING PERMIT.

(a) For a period of five years (ten years if the land is located within the "MSCP Subarea" as defined in Section 87.203) from and after the date of issuance of either an agricultural grading permit pursuant to Section 87.205 or an agricultural clearing permit pursuant to Section 87.506, no County decision maker shall grant or approve any authorization for land development on the land for which grading or clearing is authorized by the permit, to the permittee who made the certification required by Section 87.205(c)(12) or any other person who has actual or constructive notice of that certification, unless the authorization would be for a project or activity which is either: (1) one for which an exemption is provided at Sections 87.202 or 87.502; or (2) in furtherance of the agricultural operation specified in the property owner's certification. This prohibition does not prohibit the issuance of a building permit for construction of one single family dwelling on an existing legal lot, or the issuance of a minor grading permit pursuant to Section 87.206 of this Division, if it is found that the circumstances of the case are such that providing the single family dwelling would be in furtherance of the specified agricultural operation.

(b) Where a certification of agricultural operation has been signed pursuant to Section 87.205 for an agricultural grading permit, or pursuant to Section 87.506 for an agricultural clearing permit, if the property owner fails either to establish the stated agricultural operation within one year, or to retain the land in agriculture for five years (ten years if the land is located within the MSCP Subarea) from the date the agricultural grading permit or agricultural clearing permit is issued, the agricultural grading permit or agricultural clearing permit shall immediately expire and the property owner shall restore the land to its condition prior to grading or clearing. The property owner shall obtain the appropriate grading or clearing permit as required by this Division for such restoration work. Such restoration work, which may include excavation, filling, construction or installation of erosion protection or other protective facilities, planting and landscaping, shall be completed to the satisfaction of the County Official. All provisions of Section

87.110(c), including the County Official's authority to require security and to establish time deadlines, shall apply.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.112. GRADING OR CLEARING WITHIN OPEN SPACE EASEMENTS.

It shall be unlawful for any person to maintain or allow any structure, grading or clearing on a property contrary to the express terms of an open space easement, conservation easement or other development restrictive easement which has been granted to the County of San Diego, except where such clearing or grading is performed pursuant to and is limited to the extent authorized by the valid order or regulation of an authorized government official, for fire control or other public safety purposes.
(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 10211 (N.S.), effective 6-1-12)

CHAPTER 2.
GRADING PERMITS

SEC. 87.201. GRADING PERMIT REQUIRED.

(a) Except as exempted by Section 87.202, no person shall do any grading nor shall an owner allow any grading on his property, nor allow property to remain in a graded condition, unless the person or owner has a valid, unexpired grading permit issued by the County Official authorizing such grading or the grading is part of a surface mining operation authorized by Chapter 7 of this Division. A separate grading permit shall be required for each site.

(b) The grading permit shall constitute an authorization to do only that work which is described or illustrated on the grading or improvement plans which are associated with the grading permit approved by the County Official and the work shall be done in accordance with any conditions imposed by the County Official and in accordance with the requirements of this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.202. EXEMPTIONS FROM PERMIT REQUIREMENT.

The following are exempt from the requirements to obtain a grading permit (but not from other requirements of this Division including, but not limited to, the maximum slope, required setbacks, erosion prevention and planting requirements), provided they do not occur in or affect a watercourse or are within one of the exemptions under Section 87.604 of this Division:

(a) An excavation or fill which:

(1) is less than eight feet in vertical height (measured from the toe of the slope to the top of the slope); and

(2) does not result in the movement of more than 200 cubic yards of material on any one site.

(b) An excavation below finished grade for basements and footings of a building, retaining wall, swimming pool, septic tank, leaching system, or other structure authorized by a valid building permit. This paragraph shall not exempt from the permit requirements any fill made with the material from such excavation having an unsupported height greater than eight feet after the completion of such structure.

(c) Refuse disposal areas or sanitary fills operated and conducted in accordance with a use permit issued pursuant to the Zoning Ordinance or a permit issued pursuant to Article 2, Chapter 5, Division 8, Title 6, of this Code or as a lawful non-conforming use and where the operation and conduct thereof does not block or divert any natural drainage way or affect the lateral support of, or unduly increase the stresses in or pressures upon, any adjacent or contiguous property.

(d) Tilling or cultivating land exclusively for agricultural production, subject to the following:

(1) The following limitations must be met:

(aa) no soils shall be exported from the area tilled or cultivated;

(bb) the tilling or cultivating will not block or divert any natural drainage way;

(cc) the tilling or cultivating will not affect the lateral support or unduly increase the stresses in or pressures upon any adjacent or contiguous property; and

(dd) the land to be tilled or cultivated has been in agricultural production for at least one of the preceding five years.

(2) This exemption does not allow:

(aa) the establishment of new agricultural operations on, or the expansion of existing agricultural operations onto, any area which has not been in agricultural production for at least one of the preceding five years;

(bb) conversion of agricultural land to nonagricultural use or activities that reduce habitat and wildlife to facilitate conversion to non-agricultural use;

(cc) conversion of land previously used solely for grazing or beekeeping, to other types of agricultural operations which involve a greater intensity of land disturbance, such as planted crops. Planting crops on land previously used for grazing is a prohibited conversion, unless the grazing conducted for the period specified in paragraph (1)(dd) above included such crop planting.

(e) Grading incidental to the construction or installation of facilities by a public agency or utility not subject to regulation by this Division.

(f) Grading to the limited extent authorized in advance in writing by the County Official to perform repairs so as to prevent immediately threatened injury to persons or property which has arisen as a result of an emergency. The County Official may require that a grading permit subsequently be obtained to reflect the work performed, and may require the submittal of information, documentation, reports and other matter as required by the applicable provisions of this Division for such permit.

(g) Grading or reclamation work pursuant to a use permit or reclamation plan approved pursuant to Chapter 7 of this Division for a borrow pit, quarry or other surface mining operation, unless the operation is not required to obtain a reclamation plan because it will complete the removal of material to be used exclusively for fill at another approved site or sites within one year. Operations required to secure a grading permit must do so for the excavation site as well as the fill sites.

(h) Routine road maintenance activities, such as smoothing, texturing, and filling of small rills and potholes, provided they do not involve land form changes and are conducted entirely within the existing disturbed footprint of an existing road.

(i) Temporary stockpiling of earth authorized by a valid and unexpired permit issued pursuant to Section 87.218 of this Chapter.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.203. ISSUANCE OF GRADING PERMIT.

(a) Upon application signed by the owner of the property, the County Official shall issue a grading permit where the County Official determines that:

(1) The proposed grading substantially complies with grading plans or improvement plans approved pursuant to Section 87.204 through 87.208;

(2) Any conditions imposed upon such grading or improvement plan approval, which are required to be completed or performed prior to grading permit issuance, have been satisfied;

(3) The grading permit application was filed not more than 24 months following the approval of grading plans or improvement plans, or within the duration of a renewal of that period pursuant to paragraph (c) below, and for minor grading permits issued by the Department of Planning and Development Services the plan review for the associated dwelling or accessory building pursuant to Section 87.206(a)(9) must be active;

(4) The grading permit fee specified in Chapter 3 of this Division has been paid;

(5) An Agreement conforming to Section 87.215 has been signed and submitted, for purposes of providing the County with a Right of Entry for Inspection, and Indemnification;

(6) The Agreement and Cash Deposit have been submitted, if required by Section 87.304; and

(7) For Major Grading (Section 87.208), the application is accompanied by an "Acknowledgment to Employ Consultants" form which shall list the Permit Compliance Engineer as required by Sec. 87.420, the Soils Engineer and the Engineering Geologist (if required), and a signed "Acceptance of Employment by Consultants" form for each consultant. The owner shall be responsible for notifying the County Official of any change in the consultants listed on the "Acknowledgment to Employ Consultants" form.

(b) Notwithstanding paragraph (a), where the approval of plans occurred prior to May 9, 2003, the application for a grading permit shall be evaluated based upon the criteria applicable under Sections 87.204 through 87.208; and where federal or state wildlife protection agencies identify newly discovered concerns with impacts to resources that were not known at the time of grading plan or improvement plan approval, the County Official may defer issuance of a grading permit until those agencies' requirements have been complied with.

(c) The 24 month period referenced in paragraph (a)(3) may be renewed by the County Official one time for an additional 24 months, if he or she determines that no significant changes in the work are proposed, environmental review documentation has been appropriately updated and, in the case of major grading, none of the criteria requiring denial under Section 87.211 exist. Notwithstanding the foregoing, the 24 month period shall not be renewed in violation cases, where the application has been filed to correct work done in violation of this Division (including work done without obtaining a grading permit).

(d) Once issued, the grading permit shall authorize only the work shown on the approved grading plans, which shall be deemed to be incorporated into the grading permit, for a period of 36 months following the date of permit issuance, after which time the permit shall expire and be of no further force or effect. All work authorized by the grading permit, including the matters required by Sections 87.425 (Completion of Work -- Final Reports) and 87.426 (Notification of Completion), shall be completed within36 months.

(e) On the effective date of this subsection, a grading permit issued on or after August 21, 2007 and

before August 21, 2009 that was issued for 24 months shall automatically be extended for an additional 12 months to make the expiration date 36 months from the original issue date.

(f) When requested by a permittee, the County Official shall grant a one time extension, up to an additional 12 months for a permit in subsection (d) or subsection (e) if the County Official determines that:

(1) No significant changes in the work are proposed;

(2) For a permit issued before August 21, 2009 the permittee has provided a statement that due to economic reasons, the permittee has not been able to complete at least 30 percent of the total volume of earthwork. For a permit issued after August 21, 2009, substantial progress has been made towards completing the approved grading, in that at least 30 percent of the total volume of earthwork has been completed; and

(3) The estimates of the costs of the work for purposes of Section 87.304 have been updated to current costs at the time of extension.

(g) Upon application by the owner, the County Official shall approve a modification to a grading permit, provided that:

(1) A grading plan or improvement plan change has been approved for the modification pursuant to Section 87.204(c);

(2) The proposed grading, as modified, substantially complies with grading plans or improvement plans approved pursuant to Section 87.204 through 87.208;

(3) The grading permit application was filed not more than 24 months following the approval of grading plans or improvement plans, or within the duration of a renewal of that period pursuant to paragraph (c);

(4) The grading permit modification fee specified in Chapter 3 of this Division has been paid; and

(5) Appropriate amendments have been entered into, if required by the County Official, for the Agreement relating to a Right of Entry for Inspection and Indemnification pursuant to Section 87.215, and the Agreement and Cash Deposit if required by Section 87.304.

A modification to a grading permit shall have no effect on the period of time within which grading shall be completed.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9997 (N.S.), effective 8-21-09; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.204. APPROVAL OF GRADING PLANS OR IMPROVEMENT PLANS -- PLAN CHANGES.

(a) All persons who desire to obtain a grading permit must first obtain the County Official's approval of grading plans or improvement plans for such work. An application for grading plan or improvement plan approval, signed by the owner of the property to be graded, shall be filed with the County Official. All applications shall be reviewed for compliance with the California Environmental Quality Act (Pub. Res.

Code Sec. 21000 et seq.) prior to approval.

(b) The application shall contain all information, documentation and other matters necessary to enable the County Official to make the determinations required by the California Environmental Quality Act, and the appropriate one of the following Sections of this Division, depending upon the type of grading involved:

(1) Agricultural grading: Section 87.205;

(2) Minor grading: Section 87.206;

(3) Previously-approved project grading: Section 87.207;

(4) Major grading: Section 87.208.

(c) Where an owner desires to make modifications to the work shown on approved grading plans or improvement plans (whether before or after a grading permit has been issued), prior to the completion of the grading, the owner may submit an application for a plan change. The County Official shall determine whether the application shall be processed pursuant to Section 87.205, Section 87.206, Section 87.207 or 87.208, based upon the total grading operation as represented in the original grading plans or improvement plans, as modified by the proposed plan change. The County Official may approve the application if he or she determines that the total grading operation as modified by the plan change remains in compliance with this Division; provided that, if the plan change is not in substantial conformance with the approved plans, then prior to approving the plan change, the County Official shall provide the appropriate community sponsor or planning group with an opportunity to review and comment on the proposed plan change. The application shall be accompanied by all information, documentation and other matter which the County Official determines to be necessary to enable him or her to make the determinations required by this paragraph. The approval of the plan change shall have no effect on the time within which a grading permit must be obtained under Section 87.203(c).

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.205. AGRICULTURAL GRADING.

(a) The County Official shall appoint an Agricultural Permit Coordinator to facilitate the filing and processing of applications for agricultural grading plans, improvement plans and grading permits.

(b) The County Official shall prepare, circulate for public review, disseminate and maintain guidance documents which shall identify, explain and clarify standards for approval of grading plans, improvement plans and grading permits for agricultural grading. The guidance documents may include criteria which can be used to assure that proposed grading avoids adverse impacts to neighboring properties or the environment. The guidance documents may also address matters related to compliance with such plans and permits. The County Official may take these guidance documents into consideration when determining whether applications for grading plans or improvement plans for agricultural grading should be approved. The guidance documents shall not confer rights on applicants, nor constrain the discretion of the County Official relative to acting on such applications or enforcing such permits.

(c) An application for grading plans or improvement plans for agricultural grading may be approved if the County Official makes all of the following determinations:

(1) The graded area is to be used exclusively for agricultural production;

(2) There will be no more than 200 cubic yards of soil imported or exported from the site;

(3) The graded area does not include or affect a watercourse (a watercourse may be onsite, but not in the graded area or affected by the proposed grading);

(4) The grading will not result in cut slopes steeper than one and one-half horizontal to one vertical, or in an exposed fill slope steeper than two horizontal to one vertical, exclusive of benches and rounding;

(5) Sections 87.212 and 87.213, regarding specified sensitive areas, have been complied with;

(6) If the grading will involve waters, rivers, streams or lakes, as referenced in Section 87.214, the applicant has submitted documentation of compliance with the requirements of that Section;

(7) The application is accompanied by plans showing a vicinity sketch, property lines, location of all structures in the area to be graded (including those on land of others if within fifteen feet), contours showing the topography of the existing ground, elevations, dimensions, location, extent and slopes of all proposed grading, the location, extent and square footage of the total area to be cleared of vegetation, all areas proposed to be subjected to any "Land Disturbance Activity" (as that term is defined in Section 67.803 of this Code), all watercourses located on site and a map of the drainage area tributary to the site, all at a scale that allows analysis and review of what is proposed and is not smaller than 200 feet = 1 inch;

(8) The grading conforms to the setbacks stated in paragraphs (a) and (b) of Section 87.412;

(9) The application and accompanying plans demonstrate compliance with Title 6, Division 7, Chapter 8 of this code;

(10) The plans include dust control measures sufficient to comply with Section 87.428;

(11) The graded area is not to be used as a site for a building other than a greenhouse or agricultural shade structure; and

(12) The property owner has signed a statement under penalty of perjury (which must be reaffirmed prior to grading permit issuance) certifying the following:

(aa) His or her intention to grade for a specified agricultural operation, to continue or establish the agricultural operation within one year and to retain the land in agriculture (including changing crops and fallowing for the specified agricultural operation) for at least five years (ten years if the land is located within the "MSCP Subarea" as defined in Section 87.803) from the date the permit is issued;

(bb) His or her agreement to take no actions to change from the specified agricultural operation to a different type of land use for the period of time stated at paragraph (aa); and

(cc) His or her acknowledgement that the County will deny any application for any non-agricultural land development, as specified in Section 87.111, for a period of five years (ten years if the land is located within the "MSCP Subarea" as defined in Section 87.803) following the date the grading permit is issued.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04;

amended by Ord. No. 9926 (N.S.), effective 4-11-08)

SEC. 87.206. MINOR GRADING.

(a) Requirements For All Minor Grading. Proposed grading shall be considered "Minor Grading" if it:

(1) will not result in cut slopes steeper than one and one-half horizontal to one vertical, exclusive of benches and roundings;

(2) will not result in an exposed fill slope steeper in average slope than two horizontal to one vertical exclusive of benches and roundings;

(3) will be protected and conducted so that runoff water leaving the premises will not contain sand, silt or other debris;

(4) complies with the requirements of Sections 87.404 and 87.405 regarding fill compaction and preparation of the ground;

(5) includes the following drainage protections: will not result in the ponding of water on or above cut or fill slopes or damage from surface waters to the face of any excavation or fill; includes drainage facilities which will carry surface waters to the nearest practical street, storm drain or other watercourse; any area designed for buildings has a minimum of a one percent grade toward the approved drainage disposal area; all swales and ditches have a minimum grade of two percent and a minimum depth of one foot; and the point at which any drainage facility discharges onto natural ground shall be protected from erosion;

(6) includes installation and maintenance of ground cover or other planting which will protect against erosion and instability, on the face of all cut and fill slopes in excess of three feet in vertical height; such planting is to commence as soon as slopes are completed on any portion of the site and is to be maintained so that 70 percent of the plantings are established on all slopes during construction and established prior to final approval of the grading;

(7) complies with Title 6, Division 7, Chapter 8 of this code;

(8) conforms to the setbacks stated in Section 87.412(a) and (b);

(9) is to prepare the land for the construction of a single or two-family dwelling or accessory structures;

(10) complies with either paragraph (b) or (c) below;

(11) complies with Section 87.213 regarding grading within the "MSCP Subarea" (as defined in Section 87.803);

(12) is not for land development or borrow operation purposes where denial would be required by paragraphs (b) or (g) of Section 87.211 if major grading were involved;

(13) either will not involve waters, rivers, streams or lakes, as referenced in Section 87.214, or the applicant has submitted documentation of compliance with the requirements of that section;

(14) is accompanied by a statement signed by the owner, as to the proposed use of the graded area; and

(15) is described by grading plans or improvement plans which include the following:

(aa) vicinity sketch,

(bb) property lines,

(cc) the location of all structures in the area to be graded, including those on adjacent properties if within fifteen feet of the property line,

(dd) contour lines showing the topography of the existing ground, with a maximum contour interval of five feet;

(ee) the quantity of excavation and fill involved;

(ff) elevations, dimensions, location, extent and slopes of all proposed grading,

(gg) the setbacks from all structures and property lines as stated in Section 87.412;

(hh) all areas proposed to be subjected to any "Land Disturbance Activity" (as that term is defined in Section 67.803 of this Code);

(ii) all drainage devices, walls, cribbing, dams, stormwater protection best management practice devices or other protective devices to be constructed, including all temporary construction erosion and sediment control devices;

(jj) a map of the drainage area of the land tributary to the site;

(kk) dust control measures sufficient to comply with Section 87.428;

(ll) the location, extent and square footage of the total area to be cleared of vegetation; and

(mm) all watercourses located on the site.

(b) Minor Grading or Improvement Plans Under Jurisdiction of Director of Planning and Development Services. The Director of Planning and Development Services may approve grading plans or improvement plans for Minor Grading if he or she determines that the proposed grading complies with paragraph (a) above and:

(1) does not exceed 2,500 cubic yards and will not require more than 200 cubic yards of import or export;

(2) is on a single lot, or within an access easement serving such lot;

(3) will not be on or across or affect any surface water body and will not require the construction of any drainage structures or facilities except for berms, swales brow ditches or driveway culverts, except that a driveway crossing a water body serving a drainage area of 25 acres or less may be allowed; and

(4) will not have a cut or fill bank in excess of 20 feet measured vertically from the toe of the slope to

the top of the slope.

The Director of Planning and Development Services may decline to process, and instead refer to the Director of Public Works for processing under paragraph (c) below, any application where the complexity of grading operations, potential conflict with existing or proposed easements, drainage or storm water issues, unusual soil types or conditions, or potential existence of any of the circumstances requiring denial under Section 878.211, make it more appropriate that the application be subject to the more involved review required by paragraph (c).

(c) Minor Grading Plans Under Jurisdiction of Director of Public Works. The Director of Public Works may approve grading plans or improvement plans for Minor Grading if he or she determines that the proposed grading complies with paragraph (a) above and:

(1) The proposed grading does not exceed a total of 5,000 cubic yards;

(2) The proposed grading is on a lot or adjacent lots under the same ownership, or within access easements serving such lots;

(3) The proposed grading will not be on or across or affect any surface water body, except that a driveway crossing a water body serving a drainage area of 25 acres or less may be allowed;

(4) The proposed grading will not have a cut or fill bank in excess of 25 feet measured vertically from the toe of the slope to the top of the slope;

(5) The application sets forth the estimated start and completion dates and estimated cost;

(6) The grading plans are stamped and signed by a registered civil engineer; and

(7) A calculation is included, showing that the estimated runoff of the area served by any existing or proposed drains can be accommodated by the carrying capacity of such drains.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 9926 (N.S.), effective 4-11-08; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.207. GRADING PLANS OR IMPROVEMENT PLANS FOR PROJECTS WITH PREVIOUS DISCRETIONARY LAND USE APPROVAL.

(a) The County Official may approve grading plans or improvement plans for a project for which a discretionary land use approval has previously been granted, where he or she determines that:

(1) The work substantially conforms to that shown on preliminary grading plans which were reviewed as part of an approved and unexpired tentative map, tentative parcel map, use permit or other land development application;

(2) An analysis is conducted pursuant to Section 15162 of Title 14 of the California Code of Regulations, to determine whether the effects of such grading were analyzed in the environmental review of such approved land development application, and whether further environmental documentation is necessary;

(3) The grading complies with Title 6, Division 7, Chapter 8 of this code.

(4) Sections 87.212 and 87.213, regarding specified sensitive areas, have been complied with;

(5) If the grading will involve waters, rivers, streams or lakes, as referenced in Section 87.214, the applicant has submitted documentation of compliance with the requirements of that Section;

(6) The grading or improvement plans identify any environmental mitigation measures or other conditions which were required by the previous approval to be completed prior to issuance of a grading permit, and makes these conditions which must be fulfilled prior to issuance of a grading permit;

(7) All conditions of the previous approval which were required to be completed prior to approval of grading plans or improvement plans have been fulfilled;

(8) Dust control measures will be employed, sufficient to comply with Section 87.428; and

(9) The grading complies with the design standards stated in Chapter 4 of this Division.

(b) The application shall be accompanied by plans showing a vicinity sketch, property lines, location of all structures in the area to be graded, including those on land of others if within fifteen feet, contours showing the topography of the existing ground, elevations, dimensions, location, extent and slopes of all proposed grading, the location, extent and square footage of the total area to be cleared of vegetation, all areas proposed to be subjected to any "Land Disturbance Activity" (as that term is defined in Section 67.803 of this Code), and all watercourses located on site.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9926 (N.S.), effective 4-11-08)

SEC. 87.208. GRADING PLANS OR IMPROVEMENT PLANS FOR MAJOR GRADING.

(a) Grading not covered by Sections 87.205, 87.206 or 87.207 shall be known as "Major Grading." The County Official may approve grading plans or improvement plans for major grading, if he or she determines that:

(1) The proposed grading conforms to all requirements of this Division;

(2) Denial is not required by Section 87.211;

(3) Sections 87.212, 87.213 and 87.214, regarding specified sensitive areas, have been complied with;

(4) The proposed grading complies with Title 6, Division 7, Chapter 8 of this code; and

(5) If the area to be graded includes a watercourse, the proposed grading conforms to Chapter 6 of this Division.

(b) Grading plans or improvement plans for major grading shall be approved and signed by a registered civil engineer. The plans shall show or be accompanied by the following:

(1) A vicinity sketch or other data adequately indicating the site location;

(2) Property lines of the site on which the work is to be performed;

(3) Location of any buildings or structures on the site where the work is to be performed, and the location of any building or structure on land of adjacent property owners which is within the fifteen feet of the site;

(4) Topographical contour lines adequate to show the topography of the existing ground;

(5) Elevations, dimensions, location, extent, and slopes of all proposed grading, shown by contours or other means;

(6) The quantity of excavation and fill involved, estimated starting and completion dates and the estimated cost;

(7) All drainage devices, walls, cribbing, dams, stormwater protection best management practice devices or other protective devices to be constructed in connection with, or as part of, the proposed work, including all temporary construction erosion and sediment control devices, all watercourses located on the site, a map showing the drainage area of land tributary to the site, the estimated runoff of the area served by any drains, and calculations of the carrying capacity of such drains;

(8) The following shall be required for grading which will require the use of groundwater and for grading to be done during a time when the San Diego County Water Authority declares that a drought is in effect:

(aa) Information demonstrating to the satisfaction of the County Official the source (imported potable water, reclaimed water or groundwater) and amount of water available to be used in grading operations, including a statement from the applicable public agency or other party supplying the water specifying the dates when temporary service shall commence and when temporary service shall cease. The applicant shall specify the timing and duration of water needed to complete each phase of the project;

(bb) A short-term plan for erosion control and for slope stabilization where necessary which, in the opinion of the County Official, can be accomplished with the amount of water demonstrated to be available to the project; and

(cc) Except for grading on projects for which the Director of Planning and Development Services has approved a landscape plan, a long-term plan for erosion control and for slope stabilization where necessary to the satisfaction of the County Official;

(9) A statement of the purpose for which the proposed grading is to be done;

(10) Information demonstrating to the satisfaction of the County Official that the applicant is satisfying Chapter 8 (commencing with Section 67.801) of Division 7 of Title 6 of this Code;

(11) The names and addresses of all owners of property located within 300 feet of the exterior boundaries of the property to be graded, taken from the latest equalized assessment roll or such other records of the County Assessor or Tax Collector as contain more recent information;

(12) Dust control measures sufficient to comply with Section 87.428;

(13) The location, extent and square footage of the total area to be cleared of vegetation;

(14) All areas proposed to be subjected to any "Land Disturbance Activity" (as that term is defined in Section 67.803 of this Code); and

(15) Such other information or data as may be required by the County Official.

(c) Prior to approving the grading plans or improvement plans, the County Official shall provide notice to each of the persons identified in the application as being owners of property located within 300 feet of the exterior boundaries of the property to be graded. Said notice shall be sent via United States mail and shall inform the addressee of the following:

(1) The receipt of the application and the official number or name of the application;

(2) A basic description of the location of the property upon which grading is proposed and the nature of the grading operation;

(3) The manner in which more information concerning the application may be obtained;

(4) That the County Official will consider any comments concerning the application which the addressee desires to submit, provided that they are submitted in writing and received no later than a date stated in the notice, which date shall be no sooner than 15 days after the notice was sent. The County Official shall consider any such comments received by the stated date prior to making a decision whether to approve the application.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9926 (N.S.), effective 4-11-08; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.209. SOIL INVESTIGATION REPORT, OR PROOF OF LANDOWNER'S PERMISSION, MAY BE REQUIRED.

(a) The County Official may require a soils investigation prior to approval of grading plans or improvement plans, to correlate surface and subsurface conditions with the proposed grading plan. The results of the investigation shall be presented in a soil report by a soil engineer which shall include, but need not be limited to, data regarding the nature, distribution and strength of existing soils and rock on the site; the soil engineer's conclusions and recommendations for grading requirements, including the correction of weak or unstable soil conditions and treatment of any expansive soils that may be present; and his opinions as to the adequacy of building sites to be developed by the proposed grading operations. The soil engineer shall provide an engineering geology report by an engineering geologist when required by the County Official.

The County Official may require such supplemental reports and data as deemed necessary. Recommendations included in such reports and approved by the County Official shall be incorporated in the grading plan or specifications.

(b) The County Official may require that the applicant provide evidence that the owner of the land upon which any grading work is to be performed, has granted permission for such work, or that the applicant has the right to perform that work on the land.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.210. CONDITIONS OF APPROVAL OF GRADING PLANS, IMPROVEMENT PLANS OR GRADING PERMITS.

In approving grading plans or improvement plans, or in issuing a grading permit, the County Official may impose such conditions as may be reasonably necessary to enable the County Official to make the required determinations and to prevent creation of a nuisance or unreasonable hazard to persons or to public or private property.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.211. DENIAL OF GRADING PLANS OR IMPROVEMENT PLANS.

The County Official shall deny approval of grading plans or improvement plans if he or she makes any of the following determinations:

(a) Hazardous Grading: The proposed grading may:

(1) interfere with any existing drainage course in such a manner as to cause damage to any adjacent property or result in the depositing of debris on any public way; or

(2) create an unreasonable geological, flood or other hazard to person or public or private property (including the land upon which the grading is proposed). If it can be shown that the hazard can be essentially eliminated by the construction of retaining structures, buttress fills, drainage structures or facilities or by other means, the permit may be issued on the condition that such construction work be performed.

(b) Subdivision or Use Permit: The purpose of the proposed grading, based upon the application or other information, is to prepare the land for subdivision or for some use for which a use permit is required, and either:

(1) the required final map or parcel map has not been approved; or

(2) the required use permit either has not been granted or is subject to conditions which may cause its expiration under Section 7374 of The Zoning Ordinance.

Notwithstanding the preceding, if a tentative map or tentative parcel map has been approved but no final map or parcel map has been recorded, or if a use permit has been approved but conditions of that use permit which must be complied with in order to avoid expiration under Section 7374 of The Zoning Ordinance have not yet been completed, then the application for grading plan or improvement plan approval shall be denied unless it is accompanied by an agreement whereby the owner agrees to rehabilitate the site to the satisfaction of the County Official, in the event that the tentative map, tentative parcel map or use permit expires. Said agreement shall require that restoration be completed within 90 days of such expiration (which period may be extended by the County Official for an additional 90 days), and shall be accompanied by faithful performance security in the full amount of the County Official's determination as to the amount necessary to restore the site, and shall remain in effect until a parcel map or final map is recorded, or until the use permit is vested.

(c) Groundwater Impacts: Based upon information from the County Hydrogeologist in conjunction with any available information provided from the applicant, the withdrawal of groundwater for the grading operation would decrease the supply of groundwater to land uses for household or irrigation use to other properties within the basin if developed to the density and intensity permitted by existing provisions of the County General Plan.

(d) Insufficient Water Supply: The water supply is not sufficient to provide for adequate compaction or dust control during grading operations, or to provide for adequate planting of disturbed areas (unless waived under Section 87.419).

(e) Failure To Comply With Stormwater Ordinance: The proposed grading fails in any respect to comply with the requirements of the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance (Section 67.801 and following of this Code).

(f) Non-performance: The applicant has failed or refused to complete the work required by a grading permit within the time allowed and has not renewed the permit. In such cases, the County Official shall refuse to issue a new permit for any work other than the delinquent work, until the delinquent work is complete.

(g) Borrow Operations: No grading plans or improvement plans shall be approved, and no grading permit shall be issued when borrow or waste material is to be removed from a grading site unless a Use Permit and Reclamation Plan have been issued for the operation of a borrow pit on the grading site, a legally nonconforming borrow pit is being operated on the grading site or the grading comes within one of the exceptions to the use permit requirement listed in The Zoning Ordinance.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.212. GRADING WITHIN COASTAL SAGE SCRUB HABITAT.

No grading plans or improvement plans, other than those for Minor Grading pursuant to Section 87.206 of this Chapter, shall be approved for grading on land located outside the "MSCP Subarea" (as defined in Section 87.803), unless Chapter 1 of Division 6 of Title 8 of this Code, regarding Habitat Loss Permits, has been complied with.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.213. GRADING WITHIN MSCP SUBAREA.

No grading plans or improvement plans shall be approved, if the land upon which the proposed grading is to be performed is designated as within the "MSCP Subarea" (as defined in Section 87.803), unless the plans are accompanied by a written certification from the Director of Planning and Development Services that the Biological Mitigation Ordinance has been complied with.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.214. GRADING WITHIN CERTAIN WATERWAYS.

(a) If the County Official suspects that proposed grading may involve jurisdictional waters of the United States (as defined in Section 328.3 of Title 33 of the Code of Federal Regulations), the County Official may defer approval of grading plans or improvement plans until the applicant obtains and submits to the County

Official either evidence that an appropriate permit has been issued pursuant to the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.) authorizing the grading, or a statement from the U.S. Army Corps of Engineers, certifying that such permit is not required.

(b) If the County Official suspects that proposed grading may involve a river, stream or lake (as referenced in Fish and Game Code Section 1603), the County Official may defer approval of grading or improvement plans until the applicant obtains and submits to the County Official evidence that the California Department of Fish and Game has determined that Section 1602 has been complied with.

(c) No permit or approval pursuant to this Chapter shall constitute authorization for grading in violation of any local, state or federal law, including in particular the Federal Water Pollution Control Act (33 U.S.C. Sec. 1251 et seq.) or Chapter 6 of Division 2 of the Fish and Game Code.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.215. RIGHT OF ENTRY -- INDEMNIFICATION.

Prior to issuance of any grading permit, the owner of the site to be graded shall grant to the County a right of entry onto the site for purposes of inspection. The right of entry shall also allow entry for purposes of correction of grading not performed in compliance with the terms and conditions of the permit. The owner and the applicant shall agree to release the County from any and all claims for damages or injury which may result from the County's entry onto the property, including any corrective action taken. The applicant shall also agree to indemnify the County against claims asserted by third parties relating to damage or injury alleged to have resulted from the County's entry or corrective action. The right of entry and indemnification agreements shall be on a form approved by the County Counsel.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.216. MODIFICATION OR REVOCATION OF PERMIT FOR CAUSE.

(a) The County Official may modify or revoke a grading permit granted under the provisions of this Division if he or she determines that:

(1) the permit was obtained by fraud, or the permittee has made false or misleading statements on the application or supporting documents, or has hindered or interfered with enforcement of the permit, the conditions thereof, or this Division;

(2) one or more of the conditions upon which the permit was granted have been violated, or grading or clearing was performed in a manner inconsistent with the permit or plans;

(3) the permittee fails or refuses to correct a deficiency or a hazard upon the receipt of written notice and within the time specified in such notices;

(4) the permittee fails or refuses to perform any of the work required or fails or refuses to conform with any of the standards established by a use permit;

(5) the permittee fails to submit all material necessary for approval of a reclamation plan within 120 days from the date of written request therefor;

(6) revocation or modification is reasonably necessary to prevent creation of a nuisance or unreasonable hazard to persons or to public or private property; or

(7) information has been received indicating that previously unknown historical resources (as defined in Public Resources Code Section 21084.1) or unique archaeological resources (as defined in Public Resources Code Section 21083.2) may be located on the site, and therefore a modification is necessary, to prohibit grading in the area of the resources so as to preserve the resources, or to redirect proposed grading so as to avoid the location of such resources until they can be retrieved, or potential impacts to them have otherwise been appropriately mitigated.

(b) A request to revoke or modify the permit or waiver may be made by any County officer, shall be in writing, and shall set forth the grounds upon which revocation or modification is sought.

(c) If a permit is revoked, no further work shall be done upon the site except the correction of hazards as directed by the County Official. Every agreement and every security required by this Division shall remain in full force and effect notwithstanding any such revocation.

(d) The County Official shall consider the request for revocation at a public hearing, unless a public hearing is waived in writing by the permittee. Request for revocation shall be directed to the County Official, who shall fix a time and place for the hearing, to be published once in a newspaper of general circulation published in the County of San Diego. The County Official shall also notify the permittee of the time and place set for the hearing. Any interested person may appear at the hearing and present evidence. At the conclusion of the hearing, the County Official may deny the request for revocation, grant the request for revocation, or modify existing conditions of or add new conditions to the grading permit. The decision of the County Official shall be final.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.217. PRE-CONSTRUCTION CONFERENCES.

The County Official may condition the issuance of a grading permit upon the permittee attending, prior to commencement of any work authorized by the permit, a pre-construction conference with the County Official. At that conference, the County Official may provide direction to the permittee and others to be involved in the work, as to County requirements. Where such a conference has been required, it shall be a violation of this Division for the permittee to commence or allow any work to be commenced prior to such conference.

(Added by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.218. TEMPORARY STOCKPILING PERMITS.

The County Official may issue a permit for temporary stockpiling (storage) of earth conforming to the following:

(a) Requirements. Temporary stockpiling shall:

(1) not exceed 7,000 cubic yards and cover an area less than one acre in size;

(2) be on a single lot;

(3) not be on or across or affect any surface water body or divert existing drainage;

(4) not have a fill bank in excess of 6 feet measured vertically from the toe of the slope to the top of the slope;

(5) not exceed 18 months (or such shorter period as the County Official may require in the permit) from the date any stockpiled material is initially placed, to the date all material has been removed;

(6) not result in exposed fill slopes steeper in average slope than two horizontal to one vertical, including benches and roundings to ensure stability and reduce visual impacts;

(7) include, on the face of all fill slopes in excess of three feet in vertical height, installation and maintenance of measures to protect against erosion and instability and so that run-off water leaving the premises will not contain sand, silt or other debris, and will comply with Title 6, Division 7, Chapter 8 of this code.

(8) conform to the setbacks stated in Section 87.412(a) and (b) of this Division;

(9) involve placement of material only on areas which have been previously excavated or disturbed and which contain no significant habitat value, designated scenic area, or mapped geologic hazards; and complies with Sections 87.212 and 87.213 of this Chapter, regarding specified sensitive areas; and

(10) involve only material for use on the site, not for export, sales or borrow operations.

(b) Application and Plan. The application shall be signed by the owner of the land upon which the earth is to be stockpiled and be accompanied by a stockpiling plan, grading plan or improvement plan. The application or the plan shall include the following:

(1) a certification that the fill material is for use exclusively on site;

(2) a description of the proposed ultimate use of the stockpiled material;

(3) a vicinity sketch, property lines, the location of all structures in the within 100 feet of the proposed stockpile and those on adjacent properties if within fifteen feet of the property line, contour lines showing the topography of the existing ground, with a maximum contour interval of five feet; the quantity of fill involved; elevations, dimensions, location, extent and slopes of all proposed stockpile areas, the setbacks from all structures and property lines as stated in Section 87.412 of this Division; the extent and square footage of the total footprint of the area proposed to be covered by the stockpiled material; all drainage devices, walls, cribbing, dams, stormwater protection best management practice devices or other protective devices to be constructed, including all temporary construction erosion and sediment control devices; a map of the drainage area of the land tributary to the site; and dust control measures sufficient to comply with Section 87.428 of this Division.

(c) Security. At the time of permit issuance, the applicant shall enter into an agreement pursuant to Section 87.304 of this Division, secured by a cash deposit, to assure the future permanent placement or removal of the stockpiled material.

(Added by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 9926 (N.S.), effective 4-11-08)

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CHAPTER 3.
FEES, DEPOSITS AND SECURITY

SEC. 87.301. FEES AND DEPOSITS FOR PLAN CHECKING, APPLICATION REVIEW, AND GRADING INSPECTION.

At the time of filing the following applications, the following fees or deposits shall be paid to the County Official:

(a) Grading Plans or Improvement Plans for Major Grading (Section 87.208): The actual costs to the County of examining and approving Grading Plans or Improvement Plans, or plan changes, including review under the California Environmental Quality Act, the review of any required reports, compliance with project conditions, and the preparation of all necessary documents, shall be paid by the applicant. At the time of submitting a grading or improvement plan to the County Official for examination and approval, the subdivider shall deposit with the County Official, a sum sufficient to cover actual costs as prescribed by the Board of Supervisors.

(b) Grading Plans or Improvement Plans for Agricultural Grading (Section 87.205), Minor Grading Under Department of Public Works Review (Section 87.206 (c)) or Grading for a Project With a Previous Discretionary Land Use Approval (Section 87.207):

(1) Intake Screening. The actual costs to the County of application intake screening for project impacts for agricultural grading, minor grading under review by the Department of Public Works, or grading associated with a project with a previous discretionary approval, including the review of any plans or reports, comparing project to public information, and the preparation of all necessary documents, shall be paid by the applicant. At the time of submitting a grading or improvement plan for examination and approval, the applicant shall deposit with the County Official, a sum sufficient to cover actual costs as prescribed by the Board of Supervisors.

(2) Plan Review. The actual costs to the County of examining and approving Grading Plans or Improvement Plans, or plan changes, including review under the California Environmental Quality Act, for grading referenced in paragraph (1), including the review of any plans or reports and the preparation of all necessary documents, shall be paid by the applicant. At the time of submitting a grading or improvement plan, or application for plan change, for examination and approval, the applicant shall deposit with the County Official, a sum sufficient to cover actual costs as prescribed by the Board of Supervisors.

(c) Grading Plans or Improvement Plans for Minor Grading Under Department of Planning and Development Services (Section 87.206 (b)). For grading plan or improvement plan review, or plan change review, for a grading permit to be issued for projects subject to Section 87.206(b), the applicant shall pay to the County Official a fee in an amount as prescribed by the Board of Supervisors in Section 362.1 of the San Diego County Administrative Code.

(d) Grading Permits:

(1) For each grading permit or permit modification issued for projects subject to Section 87.206(b) (Minor grading under review by the Department of Planning and Development Services), the applicant shall pay to the County Official a fee in an amount as prescribed by the Board of Supervisors in Section 362.1 of the San Diego County Administrative Code.

(2) For all grading permits not covered under paragraph (1) above, all costs associated with grading permit application processing and permit issuance are included in the cost of checking grading plans or improvement plans. There is no separate fee or deposit for issuance of the grading permit.

(e) Structural Review. Where the plans or specifications provide for the construction of drainage structures or facilities (other than standard terrace drains and similar facilities), including retaining walls and sprinkler irrigation systems, or when such plans include proposals for granting drainage and appurtenant easements to the San Diego County Flood Control District, the applicant shall deposit amounts estimated by the County Official appropriate to pay for the County's actual cost of checking the plans and specifications, preparing the documents for the drainage and appurtenant easements, and inspecting the construction.

(f) Clearing Permits. For all clearing permits applied for pursuant to Chapter 5 of this Division, the applicant shall pay to the County Official both: (1) an "Environmental Action CEQA Processing" fee or deposit, in the amount specified in Section 362.1 of the San Diego County Administrative Code; and (2) a clearing permit review fee in the amount specified in Section 362.1 of the San Diego County Administrative Code.

(g) Deposit Refund or Increase. Where a deposit has been made, if the County's actual cost is less than the amount deposited, the excess shall be refunded. If any deposit is insufficient to pay all the County's actual costs, the permittee, upon demand of the County Official, shall deposit an additional amount deemed sufficient by the County Official to complete the work. If the permittee fails or refuses to pay such additional amount, the County Official may cease further work relating to the application, refuse approval of the plans or issuance of a grading permit until the amount is paid in full, or, if a permit is already issued, consider the grading incomplete and pursue proceedings to revoke the grading permit in accordance with Section 87.216.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 9689 (N.S.), operative 2-4-05, effective 2-13-05; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.302. DEPARTMENT OF ENVIRONMENTAL HEALTH GRADING PLAN EXAMINATION FEE.

Whenever the Department of Environmental Health is required to examine a grading plan in accordance with Section 68.326.2, there shall be paid to that Department an examination fee as set forth in Title 6, Division 5, Section 65.107, paragraph (g), of this Code.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.303. FEE EXEMPTION FOR CONSERVATION PROJECTS.

Applications for grading plans, improvement plans or grading permits for grading for soil and water conservation projects, when they are to be approved and inspected by a State or Federal agency shall be issued without fee.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.304. SECURITY REQUIRED FOR CERTAIN PERMITS.

(a) No grading permit shall be issued pursuant to Section 87.207 or pursuant to Section 87.208 of this

Division, and no temporary stockpiling permit shall be issued pursuant to Section 87.218 of this Division, unless the applicant shall first enter into an agreement with the County assuring that the proposed grading will be completed in accordance with the permit and the terms and conditions thereof. For a temporary stockpiling permit pursuant to Section 87.218, the agreement shall be accompanied by a cash deposit in compliance with paragraph (1) below. For a grading permit, except where the grading will result in the movement of less than 3,000 cubic yards of material, the agreement shall be accompanied by security in the form of either a cash deposit or a combination of cash deposit and performance bond, in the following amounts (except as provided at paragraph (b) below):

(1) Cash Deposit: If the applicant elects to provide a cash deposit only, the amount thereof shall be 5% of the estimated cost of the earthwork, plus 100% of the estimated cost of construction of all drainage or other structures authorized by the permit, with a minimum of $5,000 and a maximum of $30,000.

(2) Cash Deposit and Performance Bond Combination: If the applicant elects to provide a combination of a cash deposit and a faithful performance bond, the following shall apply:

(aa) The bond shall be in an amount equal to 30% of the estimated cost of the earthwork, plus 100% of the estimated cost of construction of all drainage or other structures authorized by the permit. The applicant may elect to provide a separate bond for work involving drainage and other structures, which may also be used for purposes of improvement security required by the Subdivision Ordinance (Section 81.101 and following of this Code).

(bb) The cash deposit shall be in an amount equal to 10% of the total amount of the bond required under subparagraph (aa), up to a bond amount of $75,000 or less, plus an additional 5% of any portion of said required bond amount over $75,000; provided, that the minimum cash deposit shall be $1,000 and the maximum cash deposit shall be $10,000.

(b) The estimated cost of the work shall be determined by the County Official after reviewing the civil engineer's estimates. The phrase, "Drainage or other structures" as used in paragraph (a) shall include retaining walls, sprinkler irrigation systems, landscaping, standard terrace drains, slope planting and similar facilities. Notwithstanding the security amounts specified in paragraph (a), if the County Official determines that possible deficiencies or the hazard or danger created by the work do not justify the full amount of the security, he or she may waive all or part of the amounts to the extent that there is no hazard or danger, and if the County Official determines that possible deficiencies, hazards or dangers posed by the work require greater protection, he or she may increase the amounts.

(c) All agreements and bonds required by this Section shall be in a form approved by the County Counsel, shall remain in effect until the completion of the work to the satisfaction of the County Official, and shall include and be made on condition that the permittee shall:

(1) Comply with all the provisions of this Code and all other applicable laws and ordinances;

(2) Comply with all of the terms and conditions of the grading permit, to the satisfaction of the County Official; and

(3) Complete all of the work contemplated under the grading permit within the time limit specified in the grading permit, or if no time limit is so specified, the time limit specified in Section 87.203(d) of this Division (including any approved time extensions).

(d) The grading permit may provide for the partial release of the security upon the partial acceptance of the work.

(e) In the event of failure to complete the work, failure to comply with any of the conditions or terms of the grading permit or this Division or other ordinances, or when necessary to eliminate any hazardous or dangerous condition, the County Official may cause to be performed such work as in his opinion is necessary to correct such deficiencies. Completion of work shall include the preparation of as-built plans, the certification of compliance and other matters required by Sections 87.425 and 87.426. The County Official may use all or any part of the security for such work. Any unused portion of a cash deposit shall be refunded to the permittee, and any unused portion of the bond shall be released, after the completion of all work and the fulfillment of all requirements.

(f) The permittee shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the County in causing any and all such work to be done. Use of the security or a portion thereof shall in no way limit or release the obligation of the permittee to satisfy the full cost of completing the work or correcting any deficiency, hazard, or injury created by the work. If the amount of the cash deposit is insufficient to satisfy the said cost in full, the permittee shall be liable to satisfy the remainder of the said cost in excess of the cash deposit. In addition, if suit is brought upon the agreement referred to in paragraph (a) by the County and judgment is recovered, the permittee shall pay all costs incurred by the County in such suit, including a reasonable attorney's fee to be fixed by the court.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.305. WAIVER OF SPECIFIED FEES AND DEPOSITS FOR FARM EMPLOYEE HOUSING AND FARM LABOR CAMPS.

Notwithstanding any other provision of this chapter, the examination, plan checking and inspection fees and deposits specified in Section 87.301 shall be waived for:

(a) Any farm employee housing or farm labor camp project for which (i) a complete application for any Administrative Permit or a Minor Use Permit was filed between July 13, 1990, and January 13, 1991 pursuant to Ordinance No. 7768 (N.S.); or was filed between April 5, 1991 and October 5, 1991, pursuant to Ordinance No. 7875 (N.S.); or was filed between October 31, 1991 and June 30, 1993, pursuant to Ordinance No. 8086 (N.S.); or was filed between July 30, 1993 and June 30, 1994, pursuant to Ordinance No. 8271 (N.S.); or was filed between September 2, 1994 and June 30, 1995, pursuant to Ordinance No. 8436 (N.S.); or was filed between September 15, 1995 and June 30, 1998 pursuant to Ordinance No. 8574 (N.S.); or any farm employee housing or farm labor camp project for which a complete application for a Building Permit or Minor Use Permit was filed between May 14, 1999 and June 30, 2004, pursuant to Ordinance No. 9021 (N.S.); or was filed between July 1, 2004 and June 30, 2009 pursuant to Ordinance No. 9647 (N.S.) and (ii) the application was approved; or

(b) Any farm employee housing or farm labor camp project for which (i) Section 17021.5 or Section 17021.6 of the California Health and Safety Code is applicable; (ii) the Agricultural Commissioner has issued a certificate of active agricultural enterprise; (iii) the housing is not the subject of an active code enforcement action; (iv) the applicant has entered into the contract required by Section 6156 u.11 or Section 6906 d. of The Zoning Ordinance; and (v) the application was filed between July 30, 1993, and June 30, 1994, pursuant to Ordinance No. 8271 (N.S.); or was filed between September 2, 1994 and June 30, 1995, pursuant to Ordinance No. 8436 (N.S.); or was filed between September 15, 1995 and June 30, 1998

pursuant to Ordinance No. 8574 (N.S.); or was filed between May 14, 1999 and June 30, 2004, pursuant to Ordinance No. 9021 (N.S.); or was filed between July 1, 2004 and June 30, 2009 pursuant to Ordinance No. 9647 (N.S.).

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9647 (N.S.), effective 6-18-04)

SEC. 87.306. REFUNDS.

No fee collected pursuant to this Division shall be refunded, in whole or in part, except as expressly provided in this Division and in accordance with the following:

(a) Grounds for Refund. Whenever the County Official collects a fee, no part of which is legally due, the entire fee shall be refundable. Whenever the County Official collects a fee in excess of the amount legally due by reason of an error of fact or law made by the County Official, the total amount of the excess shall be refundable. Whenever the County Official collects a fee in excess of the amount legally due because, by reason of a mistake made by the applicant, the permit does not accurately state the true present intent of the applicant, the total amount of the excess, less $5 to cover County costs, shall be refundable.

(b) Claim for Refund. Whenever a fee or a portion of a fee is refundable, the person who paid said fee may submit to the County Official a claim for refund of money setting forth the facts which constitute the basis for a refund. If the basis for a refund is a mistake made by the applicant, the claim must be accompanied by a revised application showing the true facts as they existed at the time of the submission of the original application.

(c) When Refund Not Payable. No refund shall be made pursuant to this section if a claim for refund is submitted to the County Official more than one year from the date of payment of the fee as to which a refund is claimed; nor shall any refund be paid if the total refundable amount, after deduction of County costs as hereinabove provided, is less than $5.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.307. FEES FOR PLANS OR PERMIT WHERE WORK COMMENCED BEFORE PERMIT ISSUED.

In addition to any penalty prescribed for violation of this code or for violation of the provisions of this Division, and in addition to the fees or deposits required by Section 87.301, a fee of $500 shall be assessed for an application for grading plan or improvement plan approval, or for an application for a grading permit, in cases where work for which a permit is required by this Division was commenced prior to obtaining a grading permit. Payment of such fee shall not relieve any person from any liability under provisions of this code or from fully complying with the requirements of this Division. The fee described by this section shall not be construed as a penalty but is added to defray the added expense of investigation, recordkeeping, inspection and enforcement of the provisions of this Division which are involved in such violation cases. The County Official may waive or reduce this fee if he or she determines that the added expenses of the County in a given case do not warrant the full amount of the fee.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

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CHAPTER 4.
DESIGN STANDARDS AND PERFORMANCE REQUIREMENTS

SEC. 87.401. CUTS -- MAXIMUM SLOPE.

(a) Major Slopes. The average slope of each cut surface resulting in a major slope shall not be steeper than two horizontal to one vertical exclusive of benches and exclusive of roundings unless:

(1) a report is received from a soil engineer certifying that he or she has investigated the property and that in his or her opinion the proposed steeper slope will be stable and will not endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course; and

(2) a report is received from a landscape architect certifying that such steeper slope, considering the nature of the soils on the slope surface, will support the proposed planting by maturity without significant or excessive erosion.

All major cut slopes shall be rounded into the existing terrain to produce a contoured transition from cut face to natural ground and abutting cut or fill surfaces where conditions permit. The County Official may require at any time that the excavation be made with a cut face flatter in average slope than two horizontal to one vertical or require such other measures as he or she deems necessary for stability and safety.

(b) Minor Slopes. Cuts resulting in minor slopes shall not be steeper in slope than one and one half horizontal to one vertical unless the County Official approves such steeper slope after receipt of a report by a soil engineer certifying that he or she has investigated the property and that in his or her opinion the proposed steeper slope will be stable and will not endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course.

(c) Borrow Pits. The application of this section to borrow pits shall be limited to the final slopes thereof.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.402. DRAINAGE TERRACES ON CUT OR FILL SLOPES EXCEEDING 40 FEET.

All cut or fill slopes exceeding forty feet in vertical height shall have drainage terraces at vertical intervals not exceeding thirty feet except that where only one terrace is required, it shall be at approximately mid-height unless some other location is approved by the County Official. Such drainage terraces shall be at least six feet wide and be designed and constructed so as to provide a swale or ditch having a minimum depth of one foot and a minimum grade of two percent unless a flatter grade is approved by the County Official. The terrace including the swale or ditch shall provide a paved drainage way based upon the need as determined by the slope, wetted perimeter and discharge that drains into a paved gutter, pipe or other safe disposal area. Such drainage terraces including the swales and ditches shall be paved with a minimum thickness of three inches of portland cement concrete, or with two inches of pneumatically applied concrete mortar, or shall be improved with other materials or with other treatment approved by the County Official as equal. If the drainage discharges onto natural ground, the County Official may require that such natural ground be protected from erosion outlet protection/velocity dissipation devices. Drainage terraces or the paving thereof may be waived by the County Official after receipt of the report by the soil engineer certifying that he or she has investigated the property and that in the engineer's opinion drainage terraces or paving is unnecessary.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.403. CUTS -- EXPANSIVE SOILS.

In the event that during the grading operation, expansive soil (as identified in the American Society for Testing Materials D4829-25 test or modification thereof approved by the County Official) is found within either two feet of the finished lot grade or three feet of the finished floor grade of any area intended or designed as the location for a building, the permittee shall cause such expansive soil to be removed from such building area to a depth specified by the County Official and replaced with nonexpansive soil properly compacted; provided, however, the County Official may, upon receipt of a report by a soil engineer certifying that he or she has investigated the property and recommending a design of footings or floor slab or other procedure that in his opinion will alleviate any problem created by such expansive soil, waive the requirement that such expansive soil be removed and replaced with nonexpansive soil.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.404. FILLS -- COMPACTION.

All fills shall be compacted to a minimum of ninety percent of maximum density as determined in the laboratory by the American Society for Testing Materials D-1557-91 test or modification thereof approved by the County Official, provided that the compactive energy of the test shall not be less than 35,000 foot-pounds per cubic foot. Field density shall be determined by the American Society for Testing Materials D-1556-90 or D2922-91 method, or an equivalent test approved by the County Official. Lower degrees of compaction may be permitted by the County Official after he or she receives a soil engineer's report certifying that the soil engineer has investigated the property, made soil tests, and that in the engineer's opinion such lower degree of compaction will be adequate for the intended use of the property which use shall be described in the report.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.405. FILLS -- PREPARATION OF GROUND.

The natural ground surface shall be prepared to receive fill by removing vegetation, non-complying fill, unsuitable soil, and, where slopes are five horizontal to one vertical or steeper, by benching into material approved by the soil engineer.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.406. FILLS -- MAXIMUM SLOPE.

(a) No fill shall be made which creates an exposed surface steeper in average slope than two horizontal to one vertical exclusive of benches and exclusive of roundings described in subsection (b) unless a report satisfactory to the County Official is received from a landscape architect certifying that such steeper slope, considering the nature of the soils on the slope surface, will support the proposed planting to maturity without significant or excessive erosion and a report by a soil engineer is received certifying that he or she has investigated the property and that in the engineer's opinion such steeper slope will be stable and will not endanger any public or private property or result in the deposition of debris in any public way or interfere with any existing drainage course.

(b) All fill slopes which are major slopes shall be rounded into the existing terrain to produce a contoured transition from fill face to natural ground and abutting cut or fill surfaces where conditions permit.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.407. FILLS -- MATERIALS.

(a) No organic material shall be permitted in fills.

(b) No rock or similar irreducible material with a maximum dimension greater than eight inches shall be buried or placed in any fill unless permitted by the County Official after receipt of a report by a soil engineer certifying that he or she has investigated the property and the fill material and that a fill including such greater size material may be constructed to meet the requirements of this Division. When such greater size material is placed in fills it shall be done under the direction and supervision of a soil engineer.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.408. SCREENING AND MIXING.

Unless specifically prohibited by the terms of the Grading Permit, materials excavated from any site for use thereon may be screened upon that site, and all materials which are to be placed as fill upon any site may be mixed upon that site.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.409. FILLS RESULTING IN STEEP SLOPES.

Fills toeing out on natural slopes which are steeper than two horizontal to one vertical shall not be made unless approved by the County Official after receipt of a report by a soil engineer certifying that he has investigated the property, made soil tests and that in his or her opinion such steeper slope will safely support the fill proposed to be made.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.410. FILLS -- EXPANSIVE SOILS.

In areas intended or designed to support buildings, expansive soil shall not be placed within three feet of the finish grade in such building areas unless approved by the County Official after receipt of a report by a soil engineer certifying that he or she has investigated the property and recommended a design of footings or floor slab or other procedure that will alleviate any problem created by placing the expansive soil within such building areas.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.411. FILLS -- STRUCTURAL ROCK.

Fills constructed predominantly of large rock will be permitted only if the specifications for such fill are prepared by and construction done under the direction and supervision of a soil engineer. Large rock fills will not be permitted within six feet of finish grade or within two feet of the bottom of any utility pipeline.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.412. SETBACKS.

(a) Cuts and fills shall be set back from property lines and buildings shall be set back from cut or fill slopes in accordance with Figure No. 1 of this section.

(b) Fill placed above the top of an existing or proposed cut or above a natural slope steeper than three horizontal to one vertical shall be set back from the edge of the slope a minimum distance of six feet.

(c) The setbacks established by this section are minimum and may be increased by the County Official if he or she deems it necessary for safety or stability or to prevent possible damage from water, soil or debris.

(d) The County Official may reduce the required setback in either of the following cases:

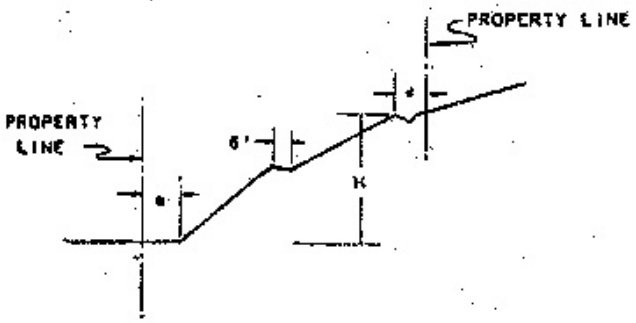
(1) where he or she determines the necessity for the setback eliminated or reduced by the construction of retaining walls or because the owner has the right to extend slopes onto the adjacent property; or

(2) after receipt of a report by a soil engineer certifying that he or she has investigated the property and that in the engineer's opinion the reduction in the setback will not endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course.

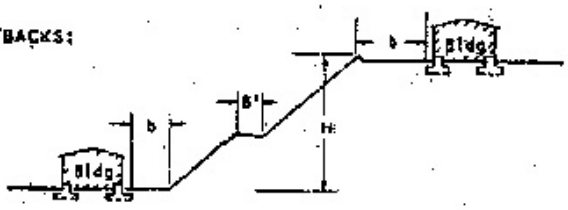
FIGURE NO. 1

REQUIRED SETBACKS

A: PROPERTY LINE SETBACKS:



B: BUILDING SETBACKS:



REQUIRED SETBACKS			
H FEET	a	b	d
0 - 15	1'-6"	5'	5'
15 - 30	3'	5'	5'
OVER 30	5'	5'	5'

a. DISTANCE FROM TOE OF SLOPE TO PROPERTY LINE.

b. DISTANCE FROM EDGE OF FOUNDATION TO TOE OR TOP OF SLOPE.

d. DISTANCE FROM TOP OF SLOPE TO PROPERTY LINE.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.413. DRAINAGE -- DISPOSAL.

(a) The ponding of water shall not be permitted above cut or fill slopes or on drainage terraces. Adequate drainage facilities shall be provided to prevent such ponding.

(b) All drainage facilities shall be designed to carry surface waters to the nearest practical street, storm drain, or other watercourse approved by the County Official or other appropriate governmental agency.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.414. DRAINAGE -- EROSION PREVENTION.

(a) The permittee and the owner shall make adequate provisions to prevent any surface waters from damaging the face of any excavation or fill. All slopes shall be protected from surface water runoff from above by berms, swales or brow ditches unless the County Official determines such berms, swales or brow ditches are unnecessary to provide such protection and waives this requirement.

(b) Where grading operations are to be conducted for any time during the period from November 11 through April 30, the County Official may require the incorporation of additional erosion control measures,

including but not limited to the application of geotextile fabrics, erosion control blankets, particularly if slope plantings required by Section 81.417 have not become established.

(c) If any part of grading work on any site is ceased for any reason for a period in excess of 10 calendar days or prior to the onset of precipitation (50% chance of ½ inch or more of rain), the County Official requires that additional stormwater measures be implemented to disturbed soil areas, as required by Section 67.817, in order to prevent damage such as erosion or sedimentation to the site, slopes, adjoining properties, public rights of way or watercourses.

(d) The active disturbed soil area of a project site shall be no more than 50 acres for an individual grading permit/improvement plan or combination of grading permits under associated Tentative or Final Map (i.e. TM XXXX-1 through 3), unless otherwise approved by the County Official. 125% of the required Stormwater BMP materials shall be maintained on site to protect the disturbed soil area.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9926 (N.S.), effective 4-11-08)

SEC. 87.415. DRAINAGE -- BUILDING PADS.

All areas designed for buildings shall be graded to provide at least one percent grade toward the approved disposal area unless waived by the County Official where the terrain is so flat as to make such grade unnecessary or impractical.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.416. DRAINAGE -- DRAINAGE FACILITIES.

(a) All berms, swales and brow ditches shall be designed and constructed, and when required, shall be paved or otherwise improved to the satisfaction of the County Official.

(b) Except as otherwise provided in Section 87.402, all swales and ditches shall have a minimum grade of two percent, a minimum depth of one foot and shall be paved for a width of at least three feet with a minimum thickness of three inches of portland cement concrete or two inches of pneumatically applied concrete mortar or shall be improved with other material or by other treatment approved by the County Official as equal. The paving of such swales or ditches may be waived by the County Official after receipt of a report by a soil engineer certifying that in the engineer's opinion the paving is unnecessary.

(c) If the drainage discharges onto natural ground, the County Official shall require that such natural ground be protected from erosion.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.417. PLANTING.

(a) General. The face of all cut and fill slopes, in excess of 3 feet in vertical height, but only final slopes of any borrow pit, shall be planted and maintained with a ground cover or other planting to protect the slopes against erosion and instability. Planting shall commence as soon as slopes are completed on any portion of the site and shall be established upon all slopes prior to the final approval of the grading. In order to minimize the period during which a cut or filled surface remains exposed, such planting shall provide for rapid short term coverage of the slope as well as long term permanent coverage. Planting materials and procedures shall conform to regulations adopted by the County Official. Other plant materials as specified

by a landscape architect may be approved by the County Official. The permittee shall maintain such planting until it is well established as determined by the County Official, and at least until coverage of 70%, as compared to the native background plants, is achieved.

(b) Minimum Requirements. In addition to planting with ground cover, slopes in excess of fifteen feet in vertical height shall be planted with shrubs having a one gallon minimum size or trees having a five gallon minimum size. The maximum spacing for shrubs and trees shall be ten feet on center each way. The planting pattern, but not the minimum quantity, may be varied upon the recommendation of landscape architect and approval by the County Official.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.418. IRRIGATION SYSTEM REQUIREMENTS.

(a) General. Except for agricultural grading permits and borrow pits, all slopes to be constructed shall be provided with an irrigation system which shall be used to promote the growth of the slope plantings to protect the slopes against erosion. Slopes for borrow pits shall be planted in accordance with the requirements of the applicable use permit and reclamation plan under Chapter 7 of this Division. The owner shall be responsible for installation and maintenance of the irrigation.

(b) Minimum Requirements.

(1) Plans for the irrigation system shall be in accordance with County of San Diego Standard Specifications for Sprinkler Irrigation Systems and shall be approved by the County Official prior to installation.

(2) The irrigation system shall be located relative to existing and proposed property lines to insure that the irrigation system and the slopes sprinkled thereby will both be within the same property boundaries. The irrigation system shall be supplied or be readily converted so as to be supplied through the metered water service line serving each individual property.

(3) The irrigation system shall provide uniform coverage for the slope area at a precipitation rate not exceeding the intake rate of the soil. A functional test of the irrigation systems shall be performed to the satisfaction of the County Official prior to final approval of the rough grading.

(4) Check valves shall be installed in the irrigation system to prevent erosion from low sprinkler heads.

(5) Adequate back flow protection devices shall be installed in each irrigation system. Such devices shall be protected against physical damage during construction operations.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.419. WAIVER OF PLANTING AND IRRIGATION REQUIREMENTS.

The County Official may modify or waive the requirements for planting and/or irrigation systems if he or she finds that said requirements would be unreasonable or unnecessary for any of the following reasons:

(a) the area is subject to periodic inundation,

(b) water is unavailable to the area such that irrigation would be impractical or impossible,

(c) the area is naturally devoid of vegetation, or

(d) the area consists of cut slopes which are not subject to erosion due to their rocky character or slopes which are protected with pneumatically applied concrete mortar or are otherwise treated to protect against erosion and instability to the County Official's satisfaction.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.420. REGULAR OR SUPERVISED GRADING REQUIRED.

(a) All grading, except grading for a borrow pit, in excess of 5,000 cubic yards shall be performed under the general supervision and coordination of a civil engineer hired by the applicant, who shall assume and perform the duties specified in Section 87.422 throughout grading operations until completion and approval of all work pursuant to Section 87.428. Such grading shall be designated "supervised grading", and such an engineer shall be known as the "Permit Compliance Engineer."

(b) Grading not supervised in accordance with this section shall be designated "regular grading."

(c) For grading of 5,000 cubic yards or less, the permittee may elect to have the grading performed as either supervised grading or regular grading.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.421. INSPECTION AND REPORTING REQUIREMENTS FOR REGULAR AND SUPERVISED GRADING.

The following requirements are applicable to regular and supervised grading:

(a) The County Official shall cause the work to be inspected to the extent he or she deems necessary and may require inspection of excavations and fills and compaction control by a soils engineer. Rough and final grading inspection approvals sought for lots within major subdivisions shall be issued subject to any limitations imposed by section 81.404. At a minimum, the following inspections shall be required:

(1) Initial Site Inspection: A site inspection shall be performed prior to grading permit issuance.

(2) Rough Grading Inspection: Upon completion of rough grading and prior to issuance of a building permit, an inspection of the rough grading, and in particular the drainage and erosion control measures, shall be performed. All required landscaping shall be planted and irrigation systems installed prior to the rough grading inspection. The permittee shall complete and submit to the County Official a compaction report prior to or at the time of this inspection. The County Official shall approve the rough grading if he or she determines, based upon the inspection and the compaction report, that the rough grading complies with the requirements of the grading permit, section 81.404 in the case of grading completed for a major subdivision, and this Division.

(3) Final Grading Inspection: Upon completion of all grading, and prior to occupancy of any building or structure, a final grading inspection shall be performed. The County Official shall review the reports submitted pursuant to paragraph (c) below and shall determine that planting is established and that all

irrigation systems are operational. The County Official shall approve the final grading if it conforms to all requirements of the grading permit, section 81.404 in the case of grading completed for a major subdivision, and this Division.

(b) The County Official may require sufficient inspection by the soil engineer to assure that the soil engineer has adequately considered all geological conditions. These inspections may be required to include, but need not be limited to inspection of cut slopes, canyons during clearing operations for ground water and earth material conditions, benches prior to placement of fill, and possible spring locations. Where geologic conditions warrant, the County Official may require periodic geologic reports.

(c) Reports of a soil engineer certifying the compaction or acceptability of all fills shall be filed with the County Official. The reports shall include but need not be limited to:

(1) inspection of cleared areas and benches prepared to receive fill and removal of all soil and unsuitable materials;

(2) the placement and compaction of fill materials;

(3) the bearing capacity of the fill to support structures;

(4) the inspection or review of the construction of retaining walls, subdrains, drainage facilities and devices, storm water protection devices, buttress fills, and other similar measures;

(5) excavation for and back filling of retaining walls; and

(6) where potentially expansive soils are present at either cut or fill grade, written recommendations regarding treatment given or to be given to such soils.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 10179 (N.S.), effective 11-11-11)

SEC. 87.422. ADDITIONAL INSPECTION AND REPORTING REQUIREMENTS FOR SUPERVISED GRADING.

The following requirements shall apply to "supervised grading" as referenced in Section 87.420:

(a) Requirements Applicable to the Permit Compliance Engineer. It shall be the responsibility of the Permit Compliance Engineer to oversee and coordinate all field surveys, setting of grade stakes in conformance with the plans, and site inspection during grading operations to assure that the site is graded in accordance with the permit, this Division and the San Diego County Watershed Protection and Stormwater Management Ordinance (Division 7 of Title 6 of this Code). This responsibility shall not include the superintendency of the contractor's equipment or personnel. The Permit Compliance Engineer shall file reports with the County Official, as follows:

(1) Said reports shall be filed at the following intervals:

(aa) weekly, during all times when grading of 200 cubic yards or more per week is active on the site;

(bb) monthly, at all other times; and

(cc) at any time when requested in writing by the County Official.

(2) Such reports shall certify to the County Official that the Permit Compliance Engineer has inspected the grading and related activities and has found them to substantially comply with the approved grading plans, the grading permit including any conditions thereof, this Division, and other applicable County ordinances, except with regards to any areas of noncompliance which the engineer shall specify in detail. The reports shall contain all matters required in a standard Report of Grading Activities form which the County Official shall publish.

(b) Other Requirements. Soils reports shall be required and geology reports may also be required as specified in Sections 87.421 (b) and (c). In addition to the copies filed with the County Official, copies of such reports shall be sent by the permittee to the Permit Compliance Engineer. The soil engineer shall make such tests and inspections as necessary to assure that the recommendations given in the soils report and incorporated in the grading plan or specifications or the permit have been followed.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.423. NOTIFICATION OF NONCOMPLIANCE.

If in the course of fulfilling his responsibility under this Division, the Permit Compliance Engineer or the soil engineer finds that the work is not being done in conformance with this Division or the plans approved by the County Official, or in accordance with accepted practices, he or she shall immediately notify the permittee, the person in charge of the grading work and the County Official in writing of the nonconformity and of the corrective measures which should be taken.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.424. SAFETY PRECAUTIONS.

(a) If at any stage of the work the County Official determines that further grading as authorized is likely to endanger any public or private property or result in the deposition of debris on any public way or interfere with any existing drainage course, the County Official may require as a condition to allowing the work to be continued, that such reasonable safety precautions (including forensic testing or other measures) be taken as he or she considers advisable to avoid such likelihood of danger.

(b) In the event the work does not conform to the permit or the plans or specifications or any instructions of the County Official, notice to comply shall be given to the permittee in writing. After a notice to comply is given, a period of 10 days shall be allowed for the permittee or his contractor to begin to make the corrections, unless an imminent hazard exists, in which case the County Official may require that the corrective work begin immediately.

(c) If the County Official finds any existing conditions not as stated in the application, grading permit or approved plans, he or she may refuse to approve further work until approval is obtained for a revised grading plan which will conform to the existing conditions.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.425. COMPLETION OF WORK -- FINAL REPORTS.

Not later than 60 days following completion of grading pursuant to Sections 87.207 or 87.208, the

following reports shall be filed with the County Official unless waived by him or her:

(a) A certification by a civil engineer that all grading, lot drainage, and drainage facilities have been completed in conformance with the approved plans and specifications, the permit and this Division. In making such certification, the civil engineer does not assume responsibility for the correctness of the contents of the reports referred to in paragraphs (c) and (d) of this section;

(b) An "as-built" or record plan of the completed work prepared by a civil engineer;

(c) A soil engineer's report, which shall include certification of soil bearing capacity (except where the County Official determines such certification inapplicable), summaries of field and laboratory tests and location of tests if not previously submitted, and the limits of compacted fill on a record plan. The report shall include reference to the presence of any expansive soils or other soil problems which, if not corrected, would lead to structural defects in buildings constructed on the site. If the report discloses the presence of such expansive soils or such other soil problems, it shall include recommended corrective action which is likely to prevent structural damage to each building proposed to be constructed upon the site; and

(d) A final engineering geology report by an engineering geologist, based on the as-built plan, including specific approval of the grading as affected by geological factors. Where required by the County Official, the report shall include a revised geologic map and cross sections and recommendations regarding building restrictions or foundation setbacks.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.426. NOTIFICATION OF COMPLETION.

The permittee shall notify the County Official when the grading operation is ready for final inspection. Final approval shall not be given until all work including installation of all drainage structures and facilities, sprinkler irrigation systems, and all protective devices have been completed and any required planting established and all as-built plans and reports have been submitted. The County Official may certify in writing to the completion of all work, or any portion of the work, required by the permit issued in accordance with this Division and thereupon accept said work or portion thereof.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.427. SOIL EXPANSION TESTS.

The procedure which shall be used for testing the expansion of soils shall be that specified in the American Society for Testing Materials "Test Method For Expansion Index of Soils" D4829-25.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.428. DUST CONTROL MEASURES.

All clearing and grading shall be carried out with dust control measures adequate to prevent creation of a nuisance to persons or public or private property. Clearing, grading or improvement plans shall require that measures such as the following be undertaken to achieve this result: watering, application of surfactants, shrouding, control of vehicle speeds, paving of access areas, or other operational or technological measures to reduce dispersion of dust.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.429. HUMAN REMAINS OR NATIVE AMERICAN ARTIFACTS.

If, in the process of grading operations, human remains or Native American artifacts are encountered, grading operations shall be suspended in that area and the operator shall immediately inform the County Official, and the requirements of Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.99 shall be complied with.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.430. PALEONTOLOGICAL RESOURCES.

The County Official may require that a qualified paleontologist be present during all or selected grading operations, to monitor for the presence of paleontological resources. If fossils greater than twelve inches in any dimension are encountered, then all grading operations in the area where they were found shall be suspended immediately and not resumed until authorized by the County Official. The permittee shall immediately notify the County Official of the discovery. The County Official shall investigate and determine the appropriate resource recovery operations, which the permittee shall carry out prior to the County Official's authorization to resume normal grading operations.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

CHAPTER 5.
CLEARING REGULATIONS

SEC. 87.501. CLEARING PERMIT REQUIRED.

Except as exempted by Section 87.502, no person shall do any clearing, nor shall an owner allow any clearing on his or her property or allow the property to remain in an unlawfully cleared condition, unless the person or owner has a valid clearing permit issued by the County Official authorizing such clearing. An owner is presumed to have allowed clearing which has been done on property occupied by him or her or is under his dominion and control. This presumption is a presumption affecting the burden of producing evidence. A separate clearing permit shall be required for each site. All clearing shall conform to the conditions of the authorizing permit.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.502. EXEMPTIONS.

The following activities are exempt from the requirements of this Chapter:

(a) Routine landscaping, maintenance, and the removal of dead or diseased trees or shrubs, including trimming or mowing of vegetation to the limited extent required in order to comply with Chapter 4 of Division 8 of Title 6 of this Code, dealing with abatement of weeds and rubbish.

(b) Clearing for fire protection purposes within 100 feet of a dwelling unit. Any additional clearing for fire prevention, control or suppression purposes is exempt when authorized or required, in writing, by a fire prevention or suppression agency.

(c) Clearing limited to the least amount necessary for the purpose of surveying, geotechnical exploration and access for percolation tests and wells. This exemption does not include clearing for building pads or leach fields.

(d) Clearing incidental to the repair, alteration or construction of a single-family dwelling and accessory buildings and structures, pursuant to an approved building permit.

(e) Clearing conforming to the location, extent and purpose authorized, explicitly or implicitly, by an approved plot plan pursuant to a discretionary land use permit or a discretionary development permit.

(f) Clearing incidental to grading activities for which a grading permit has been issued pursuant to this Division, or which are exempt from a grading permit requirement pursuant to Section 87.202, paragraph (b), (c), (f) or (g) of this Division.

(g) Tilling or cultivating which is within the exemption of Section 87.202(d), (reading the terms of said exemption as if they applied to clearing rather than grading).

(h) Limited clearing to provide access to property to perform activities that would otherwise be exempt from the provisions of this Division.

(i) On land located outside the "MSCP Subarea" (as defined in Section 87.803 of this Division), clearing of up to a maximum of five acres, on a parcel zoned for single family residential use and improved with a single family residence. The amount of land cleared under this exemption shall not exceed a total of five

acres, regardless of the number of occasions on which clearing is performed.

(j) On land located within the boundaries of the MSCP Subarea (as defined in Section 87.803 of this Division), clearing shall be exempt from this Division if it is exempt from the Biological Mitigation Ordinance pursuant to its terms.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.503. HABITAT PROTECTION.

No permit required by Section 87.501 shall be issued, unless first:

(a) If the land upon which the proposed clearing is to be performed is within the MSCP Subarea, the County Official shall assure that the Biological Mitigation Ordinance, has been complied with; and

(b) If the land upon which the proposed clearing is to be performed is not within the MSCP Subarea, the County Official shall assure that Chapter 1 of Division 6 of Title 8 of this Code, regarding Habitat Loss Permits, has been complied with.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.504. CLEARING PERMIT PROCEDURE AND REQUIREMENTS.

The following procedures and requirements shall apply to an application for a clearing permit:

(a) The application shall be submitted to the County Official, accompanied by fees and deposits as specified in Section 87.301(f). The application shall be processed as an application for an Administrative Permit pursuant to the Administrative Permit Procedure, Section 7050 and following of the Zoning Ordinance, except as otherwise provided herein. The application (except for an application for agricultural clearing, which is governed by Section 87.506) shall include or be accompanied by plans which show or include the following:

(1) a vicinity sketch;

(2) property lines;

(3) contour lines showing the topography of the existing ground, with a maximum contour interval of five feet;

(4) the location, extent and square footage of the total area to be cleared;

(5) the location, nature and extent of all vegetation growing on the area to be cleared and the area within 100 feet;

(6) dust control measures sufficient to comply with Section 87.428;

(7) information and documentation sufficient to enable the County Official to make the determinations required by the California Environmental Quality Act (CEQA);

(8) a signed statement by the owner as to the proposed use of the area to be cleared;
(9) all watercourses located on the site; and

(10) such other information as the County Official may require.

(b) The application (except for an application for agricultural clearing, which is governed by Section 87.506) may be approved if the County Official determines that:

(1) the proposed clearing is exempt from environmental review under the terms of CEQA, or the proposed clearing would not have a significant effect on the environment, or all significant effects have been mitigated; if the County Official determines that the proposed clearing would have one or more significant effects which are not mitigated, he or she shall deny the permit;

(2) the proposed clearing conforms to all requirements of this Division and other applicable County ordinances; and

(3) none of the grounds for denial of a permit specified at Section 87.211, paragraphs (a), (c), (d), (e) or (f) exists (reading said provisions as if they applied to clearing rather than grading).

(c) The provisions of the Administrative Permit Procedure regarding appeals shall apply, except that an application which has been denied on the basis that the proposed clearing would have one or more significant effects which are not mitigated, is subject to appeal only directly to the Board of Supervisors. If the Board of Supervisors determines that the proposed clearing would have one or more significant effects which are not mitigated, it shall deny the appeal unless it makes a statement of overriding considerations pursuant to CEQA. The time periods specified in the Administrative Permit Procedure shall commence to run from the date that environmental documentation prepared to comply with CEQA has been completed.

(d) All clearing authorized by an approved clearing permit shall be completed within 12 months of the date of approval. The County Official may grant one extension of said period, for up to an additional 12 months, if he or she determines that no significant changes in the work are proposed, and substantial progress has been made towards completion.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.505. CLEARING FOR LAND DEVELOPMENT.

Clearing to be performed in preparation for land development shall not be undertaken until all discretionary approvals for the land development have been issued.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.506. AGRICULTURAL CLEARING.

(a) The Agricultural Permit Coordinator appointed pursuant to Section 87.205 of this Division shall also facilitate applications for agricultural clearing permits. The County Official's guidance documents prepared pursuant to that Section shall also provide guidance concerning approval and implementation of agricultural clearing permits.

(b) An application for an agricultural clearing permit shall comply with Section 87.504, except that the

application contents and the standards for issuance of the permit shall be the same as those specified Section 87.205 of this Division, applying the requirements of that Section as if the term "clearing" were used instead of "grading."

(c) For a period of five years (ten years if the land is located within the MSCP Subarea) from and after the date of issuance of the agricultural clearing permit, no County decisionmaker shall grant or approve any permit or other authorization for land development on the land for which clearing is authorized, to the permittee who made the certification required by Section 87.205(c)(12) or any other person who has actual or constructive notice of that certification, unless the permit or authorization would be for a project or activity either: (a) for which an exemption is provided in Section 87.502; or (b) which is in furtherance of the agricultural operation specified by the permittee in said certification.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

CHAPTER 6.
WATERCOURSES

SEC. 87.601. PURPOSE AND RELATIONSHIP TO OTHER LAWS.

The purpose of this chapter is to protect persons and property against flood hazards. In case of conflict between the regulations imposed by this chapter and other County Ordinances, State and Federal Regulations, the regulation imposing the more stringent restrictions shall prevail.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.602. ACTS PROHIBITED.

No person shall do or commit or cause to be done or committed, any of the following described acts, nor allow the same to be done on his or her property, nor allow the property to remain in such condition:

(a) Deposit any material of any kind in a watercourse which may impair, impede or accelerate the flow of water therein so as to adversely affect adjoining property;

(b) Plant any vegetation (other than grasses or annual crops) within a watercourse which may impair, impede, or divert the flow of water in such watercourse (unless this is required by a land development permit issued by the County);

(c) Commit any act on or in any easement dedicated, granted or reserved for flood control or drainage purposes which will impair the use of such easement for such purposes; or

(d) Within a flood plain where a Flood Plain Designator or a Flood Channel Designator has been applied under the Zoning Ordinance or within a flood plain as delineated on approved maps issued by the Federal Insurance Administrator (designated by the Secretary of the United States Department of Housing and Urban Development), construct new or substantial improvements of structures unless the lowest floor (including basement) is elevated to or above the level of the 100-year flood or the structure, including attendant utility and sanitary facilities, is flood proofed up to the level of the 100-year flood. "Substantial improvements" means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds 50% of the market value of the structure either: (1) before the improvement is started, or (2) if the structure has been damaged, and is being restored, before the damage occurred. "Substantial improvements" are considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure. "Substantial Improvements" do not, however, include any alteration to comply with existing federal, state or local health, sanitary, building or safety codes or regulations.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.603. ACTS PROHIBITED UNLESS PERMIT OBTAINED.

No person shall do or commit or cause to be done or committed, any of the following described acts without first obtaining a grading permit pursuant to Chapter 2 of this Division:

(a) Impair, impede or accelerate the flow of water in a watercourse;

(b) Alter the surface of land, by construction, excavation, embankment or otherwise, so as to reduce the

capacity of a watercourse;

(c) Construct, alter or remove any flood control or storm water drainage structure, facility or channel of or in a watercourse;

(d) Construct or place any structure in, upon or across a watercourse; or

(e) Place fill or encroachments that would increase the flood level or impair the ability of a floodway to carry and discharge the waters resulting from the 100-year flood, within a "floodway" as shown on San Diego County Flood Plan Maps adopted by the Board of Supervisors and on file at the Department of Public Works, as shown on a "Flood Insurance Rate Map" adopted by the Federal Emergency Management Agency, or as defined in Section 87.803(20) of this Division. Permits may be issued where the effect of the fill or encroachment on flood heights is fully offset by stream improvements.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.604. EXCEPTIONS.

(a) Sections 87.602 and 87.603 do not apply to:

(1) Any act lawfully done pursuant to Chapter 3 (Excavations, Fills and Obstructions) or 4 (Construction) of Division 1 (Protection of Highways) of Title 7 of this Code.

(2) Work performed by the Federal Government, the State of California, the County of San Diego or their agents or contractors. (Note that the County of San Diego is not a "person" to whom this Division applies; see Section 87.803(27) of this Division.)

(3) Acts of the owner of the watercourse in the routine maintenance thereof, provided such acts do not impair, impede or divert the flow of water in such watercourse.

(4) Acts of persons engaged in natural resource extraction operations performed pursuant to a Use Permit, provided such acts are normally and routinely associated with such pursuits and provided further that such acts do not substantially impair, impede, or divert the flow of water in the watercourse.

(5) Repair, reconstruction or improvement to existing structures, provided it:

(aa) is not a substantial improvement (as defined in Section 87.602(d));

(bb) is designed and anchored to prevent flotation, collapse or lateral movement of the structure;

(cc) uses construction materials and utility equipment that are resistant to flood damage; and

(dd) uses construction methods and practices that will minimize potential flood damage.

(6) Construction of parking facilities within the flood plain fringe area below the 100-year flood level, provided:

(aa) The parking facility will service a non-residential building; or

(bb) The structure is open and will not impede the flow of flood waters.

(b) In addition, Section 87.603 does not apply to grading which is exempt from the requirement to obtain a grading permit under one or more of the following paragraphs of Section 87.202 of this Division:

(1) Sec. 87.202(d): Specified agricultural tilling or cultivating.

(2) Sec. 87.202(e): Specified utility construction.

(3) Sec. 87.202(f): Emergency watercourse grading.

(4) Sec. 87.202(g): Specified surface mining operations.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.605. GRADING PLANS OR IMPROVEMENT PLANS AFFECTING WATERCOURSES.

Where grading proposed by grading plans or improvement plans would be within or would affect a watercourse, the following requirements shall apply, in addition to the requirements specified in Chapter 2 of this Division:

(a) The County Official shall not approve the grading plans or improvement plans unless he or she has evaluated and determined that the proposed grading is consistent with the San Diego County general plan; provided that, if the proposed grading is associated with a subdivision or other land development project which has been approved by a County decision making body which determined the project to be consistent with the general plan, the County Official shall instead evaluate whether the proposed grading is consistent with such prior project approval and shall not approve the plans if they are not consistent with the prior approval.

(b) The County Official shall not approve the grading plans or improvement plans unless he or she determines that the proposed grading does not create an unreasonable hazard of flood or inundation to persons or property.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.606. EMERGENCY WATERCOURSE GRADING PERMITS.

(a) Notwithstanding any other provision of this Division or any other County Ordinance, an emergency watercourse grading permit may be granted solely for the removal of silt, sand and debris from a watercourse, upon a finding that an emergency exists on public or private property. The permit may be granted by the County Official for the removal of up to 10,000 cubic yards of silt, sand and debris, or by the Board of Supervisors for amounts in excess of 10,000 cubic yards. For purposes of this section, "Emergency" means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of or damage to life, health, property, or essential public services. "Emergency" includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage, (see Section 15025, Title 14 of the California Administrative Code) or projects undertaken, carried out, or approved by a public agency to maintain, repair, restore, demolish or replace property or facilities damaged or destroyed as a result of a disaster in a disaster stricken area in which a state of emergency has been proclaimed pursuant to Chapter 7

of Division 1, Title 2 of the Government Code (see Section 15071, Title 14 of the California Administrative Code).

(b) The emergency watercourse grading permit shall be granted for such periods of time as the County Official or Board shall deem to be reasonable and necessary or advisable under the circumstances, and upon such conditions as the County Official or Board deems necessary to insure the health, safety and welfare of the affected persons or the protection of the affected properties, and to assure that the work shown is in accordance with County Plans and Specifications. Such permit shall be granted to the owner of the property or the authorized agent of the owner.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.607. MAINTENANCE OF WATERCOURSE REQUIRED.

The property owner is responsible for the timely maintenance of any watercourse on the owner's property. "Maintenance" means cleaning, removing obstructions and repair of existing facilities. Obstructions shall include vegetation, shrubs, trees, tree stumps, limbs and foliage, debris, trash, rubbish, waste matter, deposits of dirt, silt, sand or rock, walls, structures, building materials or any other material which may impede, impair, restrict or divert the flow of water from its natural course. (In the case of live vegetation, any required permits and approvals shall be obtained prior to removal.) The owner shall obtain any approvals or permits required by federal or state law (such as section 404 of the Federal Water Pollution Control Act (33 U.S. Code Section 1344) or section 1600 and following of the Fish & Game Code for such work. Failure to maintain a watercourse in a safe and unobstructed condition is hereby declared to be violation of this section, and a public nuisance.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.608. CIVIL ENGINEER FIELD SUPERVISION.

All work under the provisions of this Chapter shall be performed under the general supervision and coordination of a civil engineer unless waived by the County Official for small projects (or minor work) or the work is supervised by an agency of the Federal or State government.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

CHAPTER 7.
SURFACE MINING

SEC. 87.701. PURPOSE.

The Board of Supervisors hereby finds and declares that the extraction of minerals is essential to the continued economic well-being of the County of San Diego and that it is the purpose and intent of this chapter to regulate all surface mining operations in the unincorporated area of the County of San Diego as authorized by The Zoning Ordinance and by the California Surface Mining and Reclamation Act of 1975 ("SMARA") to ensure that:

(a) The continued mining of minerals will be permitted in a manner which will protect the public health and safety and will provide for the protection and subsequent beneficial use of mined and reclaimed land; and

(b) The possible adverse effects of surface mining operations on the environment, including air pollution, impedance of groundwater movement, water quality degradation, damage to aquatic or wildlife habitat, flooding, erosion and sedimentation, will be prevented or minimized; and

(c) The production and conservation of minerals will be encouraged while giving consideration to values relating to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment.

This Chapter is intended to implement the minimum requirements of SMARA as well as to specify local requirements. Should conflict arise between the provisions of this Chapter and the minimum requirements of SMARA, the SMARA requirements shall take precedence.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.702. DEFINITIONS.

Whenever the following words are used in this chapter, they have the following meanings:

(a) "DEPARTMENT" means the Department of Planning and Development Services of the County of San Diego.

(b) "DIRECTOR OF CONSERVATION" means the Director of the Department of Conservation within the California Resources Agency.

(c) "SMARA" means the Surface Mining and Reclamation Act of 1975 (Public Resources Code, Section 2710 et seq.).

(d) "SMGB" means the State Mining and Geology Board.

(e) "SURFACE MINING" means all, or any part of, the process involved in the mining of minerals on mined lands by removing overburden and mining directly from the mineral deposits, open-pit mining of minerals naturally exposed, mining by the auger method, dredging and quarrying, surface work incident to an underground mine, borrow pitting, streambed skimming, and the segregation and stockpiling of mined materials and recovery of same. Surface mining shall include, but is not limited to: (i) inplace distillation or retorting or leaching; (ii) the production and disposal of mining waste; and (iii) prospecting and exploratory activities.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.703. SURFACE MINING PERMIT AND RECLAMATION PLAN REQUIRED.

Except as specified in Section 87.704, no person shall conduct surface mining unless a Major Use Permit therefor is obtained, a Reclamation Plan is approved as provided by this chapter, the Zoning Ordinance, and SMARA, and financial assurances for reclamation have been approved by the County. Grading performed pursuant to such Major Use Permit or Reclamation Plan shall be in accordance with a plot plan and conditions approved therewith. Where surface mining has been conducted in violation of this or other ordinances, a Reclamation Plan shall be obtained for the restoration of the site.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.704. EXEMPTIONS.

(a) The provisions of this chapter do not apply to surface mining operations which the SMGB finds are exempt from the provisions of SMARA under Public Resources Code Section 2714.

(b) Any person who has obtained a vested non-conforming right to conduct surface mining prior to January 1, 1976, shall not be required to secure a Major Use Permit as long as such vested non-conforming right continues; provided, however, that the mining operation is not in violation of any provision of this chapter, and provided further that a person who has obtained such a right to conduct surface mining prior to January 1, 1976, shall obtain approval of a Reclamation Plan for vested operations conducted after January 1, 1976. Nothing in this chapter shall be construed as requiring the filing of a Reclamation Plan for mined lands on which surface mining operations were conducted prior to, but not after, January 1, 1976.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.705. APPLICATION AND REVIEW.

(a) All applications for a Major Use Permit for surface mining shall be made, considered and granted or denied pursuant to The Zoning Ordinance, and shall be accompanied by an "Application for Reclamation Plan" as provided by the Department. Both applications shall be processed concurrently. An application for a Reclamation Plan shall be processed under the same procedures as the Major Use Permit, including those provisions requiring a public hearing those provisions relating to appeals. Reclamation Plans may be granted subject to such conditions and limitations as may be deemed appropriate. All plans and specifications for the grading of the property shall be prepared or approved and signed by a registered civil engineer, and shall include all information required in Section 87.208 and any other information required by the County Official.

(b) Any surface mining operation conducted pursuant to vested non-conforming rights or pursuant to a Major Use Permit, shall cease operating until a Reclamation Plan is approved by the County, unless the Reclamation Plan is on appeal to the SMGB. An "Application for Reclamation Plan" shall be submitted within 120 days from the date the County Official requests in writing to the mining operator or mining site property owner that such Reclamation Plan be submitted or within the extension periods the County Official may grant if cause is shown why more time should be granted for the filing.

(c) The Department shall submit all proposed Reclamation Plans and any proposed amendments to the

Director of Conservation for review at least 45 days before the County acts thereon. The County shall notify the Director of Conservation of the filing of an application for a surface mining permit within 30 days of the filing of an application. The Department shall also send the Director of Conservation a copy of each mining permit approved by the County.

(d) The Reclamation Plan shall contain all matters required by SMARA and Sections 3502 and 3700 and following of Title 14 of the California Code of Regulations, and shall provide in designated phases for the progressive rehabilitation of the mining site land form so that, when reclamation is complete, it will contain stable slopes, be readily adaptable for alternate land uses, and be free of derelict machinery, waste materials and scrap to the satisfaction of the County Official. The proposed mining site land form, to the extent reasonable and practical, shall be revegetated for soil stabilization, free of drainage problems, coordinated with present and anticipated future land use, and compatible with the topography and general environment of surrounding property.

(e) Where any requirement of the reclamation plan conflicts with any requirement of the approved major use permit, the County Official shall determine which requirement shall apply; provided however, that the minimum reclamation standards of SMARA shall apply in any event.

(f) When the approval of any Reclamation Plan and Agreement has become final and effective, the Director shall cause a copy to be filed with the San Diego County Recorder. The documents to be recorded shall set forth the names of all owners of the property subject to the Reclamation Plan. The recorded document shall provide constructive notice to all purchasers, transferees, or other successors to the interests of the owners named, of the rights and obligations created by the Reclamation Plan.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 10119 (N.S.), effective 2-25-11)

SEC. 87.706. FILING FEE FOR RECLAMATION PLAN.

A deposit shall be paid to the Department upon the filing of each application for a Reclamation Plan; provided, however that no deposit shall be charged for applications filed concurrently with, or pursuant to any condition of, a Major Use Permit. The amount of said deposit shall be determined no less than annually by the Board of Supervisors by resolution. If the actual costs of processing the Reclamation Plan are less than the amount deposited, the Department shall refund the balance to the applicant. If any deposit is insufficient to pay all the actual costs of processing the Reclamation Plan the applicant, upon demand of the Department, shall pay an amount deemed sufficient by the Department to complete the work in process.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.707. AGREEMENT, RIGHT OF ENTRY AND FINANCIAL ASSURANCE.

(a) No surface mining shall be conducted pursuant to a Major Use Permit or pursuant to a vested nonconforming right unless prior to commencement an Agreement has been entered into whereby the operator agrees to reclaim the land in accordance with the Reclamation Plan and which allows the County to enter the property to correct any landscaping or irrigation system deficiencies, any unsafe condition, or any breach of provisions of the Major Use Permit and/or Reclamation Plan.

(b) The Agreement shall authorize the County or any person authorized by the County to enter the property at a mutually agreeable time and after having given the mining operator or permittee a minimum

24 hour notice, to perform an inspection at least once each calendar year, as mandated by the State, or follow-up inspections as a result of the once a year inspections. The Agreement shall also authorize the County or any person authorized by the County to enter the property at any reasonable time to investigate any suspected violation of any condition of the Major Use Permit or Reclamation Plan and/or for emergency abatement of hazardous conditions. Said Agreement shall be executed by the permittee, the owner of the property and by holders of any lien upon the property which could ripen into a fee, other than government entities. The permittee shall provide acceptable evidence of title showing all existing legal and equitable interests in the property. The Director of Planning and Development Services is hereby authorized to execute and accept the Agreement on behalf of the County. The Agreement shall be recorded before any mining is done.

(c) The Agreement shall be secured by financial assurances as follows:

(1) Pursuant to Section 2773.1 of SMARA, financial assurances shall be provided in an amount as specified in subsection (d), to assure that the site is reclaimed in accordance with the requirements of the approved Reclamation Plan. The assurance shall be made payable to the Director of Planning and Development Services and the California Department of Conservation and may take the form of surety bonds, irrevocable letters of credit, trust funds, or other forms of financial assurance adopted by the State Mining and Geology Board, which the County reasonably determines will be readily available to pay for reclamation in accordance with the surface mining operation's approved Reclamation Plan.

(2) The County Official may also require that additional, separate security be provided pursuant to Section 7362.a of the Zoning Ordinance, to insure the performance of conditions of a major use permit for a surface mining operation or a reclamation plan, other than the obligation to reclaim the site in accordance with the Reclamation Plan.

(d) The financial assurances required by paragraph (c)(1) shall be in an amount equal to the estimated cost to reclaim, in accordance with the requirements of the approved Reclamation Plan, all disturbed, unreclaimed lands and all acreage expected to be disturbed in the forthcoming year, to a condition that will not constitute a danger to the public health or safety and that will provide for the type of reclamation required in the Reclamation Plan. The surface mining operator or permittee shall provide an estimate of the cost of reclamation prepared by a state-registered civil engineer. All financial assurances shall be forwarded to the California Department of Conservation for review at least 45 days prior to County approval. The Director of Planning and Development Services shall review all financial assurance estimates and shall approve those that are sufficient. The estimate must be submitted not later than July 1st of each year. If the operator or permittee does not submit this estimate by the required deadline, the County may calculate an estimate of assurance. The staff time spent calculating this estimate will be charged against the inspection deposit. The financial assurance shall be provided to the County within 60 days of notification of the Director of Planning and Development Services' approval of the financial assurance amount.

(e) The amount specified in paragraph (d) shall be adjusted annually to account for new lands disturbed or expected to be disturbed in the forthcoming year by surface mining operations, inflation, and reclamation of lands accomplished in accordance with the approved Reclamation Plan. In no event shall the amount of assurance required be construed as a limitation on the liability of the permittee.

(f) The surface mining operator or permittee, and the surety(ies) providing financial assurances, shall continue to be firmly bound under a continuing obligation for the payment of all necessary costs and expenses that may be incurred or expended by the County in causing any and all work covered by the assurances to be done. When reclamation has been completed in accordance with the approved Reclamation

Plan, financial assurances pursuant to paragraph (c)(1) above shall no longer be required and shall be released, upon written notification by the County, which shall be forwarded to the surface mining operator or the permittee and the Director of Conservation. Financial assurances provided pursuant to paragraph (c)(2) above shall be released and returned upon completion of the covered work or performance of applicable conditions. In the case of a cash deposit, any unused portion thereof shall be refunded to the surface mining operator or permittee.

(g) The County must be notified no less than 180 days prior to cancellation of any financial assurance. The County may seek the forfeiture of such financial assurance if new assurance is not posted at least 30 days prior to the expiration of the financial assurance.

(h) If a mining operation is sold or ownership is transferred to another person, the existing financial assurances shall remain in force and shall not be released by the lead agency until new financial assurances are secured from the new owner and have been approved by the County.

(i) The County Official is authorized to terminate and release the Agreement and the right of entry, and to execute all documents necessary to effectuate such termination and release, upon determining that all required reclamation work and other obligations of the Agreement have been completed to the County Official's satisfaction.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

SEC. 87.708. DENIAL OF AN APPLICATION FOR RECLAMATION PLAN.

Any application for a reclamation plan which is denied, shall be revised as directed by the authority denying it and resubmitted within 120 days of such denial. All resubmitted applications shall be accompanied by a fee of $250 paid to the County unless said fee is waived by the decisionmaker, for cause.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.709. MODIFICATION OR REVOCATION OF RECLAMATION PLAN.

(a) An approved Reclamation Plan, or any conditions thereof, may be modified using the same procedures for processing a new application, including environmental review. The application fee and deposit for a Reclamation Plan modification shall be the same as that required for a modification of a Major Use Permit. If both a Major Use Permit and Reclamation Plan modification are applied for concurrently, the fee and deposit are the same as for a modification of a Major Use Permit. The County shall send a copy of all applications to modify Reclamation Plans to the Director of Conservation for review in sufficient time before the County acts on the application, to allow the Director of Conservation 30 days to review the application after receipt of the documents.

A modification to an approved Reclamation Plan shall be filed with the San Diego County Recorder pursuant to Section 87.705(f).

(b) The County Official may approve minor amendments to the Reclamation Plan in the same manner as a Minor Deviation to a Major Use Permit. A minor amendment is a change to the approved Reclamation Plan that the Director determines will not increase any deleterious impact the project has on the environment or the conditions of the project's approved Major Use Permit or Reclamation Plan. The application fee for a minor amendment to an approved Reclamation Plan shall be the same as that required for a Minor Deviation

of Major Use Permit.

(c) Pursuant to Section 2774 of SMARA, any modification or amendment to a Reclamation Plan shall be forwarded to the Director of Conservation. The Director of Conservation shall have 30 days to provide written comments.

(d) The County Official may modify or revoke a reclamation plan for cause, upon the grounds and upon following the same procedures as are specified regarding grading permits at Section 87.216 of this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 10119 (N.S.), effective 2-25-11)

SEC. 87.710. INSPECTION.

(a) The County Official shall inspect each surface mining site at least once each calendar year within 6 months of receipt of a copy of the mining operation's annual report, filed with the State pursuant to Section 2207 of SMARA. A copy of the completed inspection report shall be forwarded to the Director of Conservation, within thirty days of inspection using a form approved by the State.

(b) The mining operator or permittee shall provide to the County Official by each July 1, aerial photographs of the mining site taken in the same month of the second quarter of each year. The aerial photographs shall consist of:

(1) Defined, marked and permanent ground controls; and

(2) Planimetric map of the mining site based on the aerial models with 5" contours and drawn to 1" = 200' scale.

(c) Upon the request of a mining operator or permittee, the County Official may waive the requirement for the aerial photographs on a case by case basis, such as when only channel maintenance is involved or when no excavation has been accomplished since the last inspection, or may adjust the quarter of each year in which the aerial photographs are taken.

(d) Each surface mining operator or permittee shall pay an annual inspection deposit to the County Official by July 1 of each year unless otherwise stated in an approved Reclamation Plan. The amount of the deposit shall be as determined by the Board of Supervisors. This amount shall apply for the first year to all existing surface mining operations and for the first year of any new mining operation. Thereafter, the County Official will determine the amount of the deposit annually based on the cost to inspect each surface mining operation. If the County Official determines that the annual inspection should include volume calculations or a boundary survey, the cost for this work shall be included in the deposit. The County Official shall notify each mining operator by May 1 each year of the amount of the deposit. The amount of the deposit required shall not be construed as a limitation on the liability of the operator or permittee.

(e) If, after inspecting the mining operation, the County Official determines that it does not comply with the Major Use Permit or Reclamation Plan, he or she shall notify the mining operator in writing of the non-compliance and shall give the mining operator a reasonable time, not to exceed 180 days, to comply. If at the end of this time the mining operation still does not comply with the Major Use Permit or Reclamation Plan, the County Official may:

(1) Pursue the remedies specified at Section 2774.1 of SMARA, if the Major Use Permit or Reclamation Plan violation(s) are also violations of said Section;

(2) Pursue the remedies specified in the Zoning Ordinance for violation of a Major Use Permit, including revocation or modification for cause; and/or

(3) Pursue the remedies specified in Chapter 1 of this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04)

SEC. 87.711. SUCCESSORS IN INTEREST.

Whenever any surface mining operation or portion of an operation subject to this Division is sold, assigned, conveyed, exchanged, or otherwise transferred, the successor in interest shall be bound by the provisions of any reclamation plan approved pursuant to the provisions of this Division and shall notify and provide evidence of the transfer to the County Official no later than thirty days from the date of the transfer.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.712. COMPLIANCE WITH DESIGN STANDARDS.

All final grades established pursuant to the major use permit plot plan or reclamation plan shall comply with the "Design Standards -- Performance Requirements" contained in Chapter 4 of this Division; except that the requirement of 90% compaction of fills and the requirements of Section 87.425 "Completion of Work -- Final Reports" may be waived by the County Official. All soil engineer's reports relative to the grading of the property shall be maintained and be made available to the County Official prior to placement of any permanent structure on the property.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.713. IDLE MINES.

An idle mine (as defined by SMARA) must meet all of the following requirements:

(a) Obtain County approval of an Interim Management Plan, pursuant to Section 2770(h) of SMARA and Section 87.714 of this Division. Costs of review of Interim Management Plans shall be charged to the annual inspection deposit;

(b) Comply with the requirements for financial assurance;

(c) Submit the annual report required by Section 2207 of SMARA; and

(d) Submit to an annual inspection, pursuant to Section 2774 of SMARA.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.714. INTERIM MANAGEMENT PLANS.

An Interim Management Plan (required to be submitted pursuant to Section 2770(h) of SMARA) shall include or be accompanied by all of the following:

(a) A cover sheet, or sheets, describing:

(1) The name and address of the person responsible for the mining operation while it is idle;

(2) The date the operation became idle and, if known, the date the operation is expected to resume active status;

(3) A statement outlining reasons for the change in operational status;

(4) A description of the equipment, structures, and other facilities that will remain on the site while the operation is idle; and

(5) A description of expected activity on the site, if any, that will be conducted while the operation is idle, including the estimated annual production from overburden, stockpiles, mining waste, and ore.

(b) A map, or maps, of the site subject to the approved reclamation plan, depicting:

(1) Areas not reclaimed in accordance with the approved reclamation plan, including the location of existing pit slopes and cross-sections of the highest and steepest slopes;

(2) Areas reclaimed in accordance with the approved reclamation plan;

(3) Areas and facilities that will be utilized while the operation is idle; and

(4) The location of all sedimentation ponds, stockpiles, plant facilities, tailings, utilities, and other facilities associated with the surface mining operation.

(c) A drainage plan or description of how erosion and sedimentation will be controlled, including maintenance of sedimentation basins and culverts.

(d) A revegetation plan, if necessary for erosion control or aesthetics, for those areas that will be temporarily replanted. The plan shall explain planting techniques, describe soil amendments to be used, list species to be planted, and include a map delineating areas to be revegetated.

(e) A monitoring maintenance plan, including a description of safety measures, and schedule of activities (such as repairing fences, removing garbage, posting signs, repairing roads, as applicable) that will be followed while the operation is idle to ensure public health and safety and to ensure that the operation is in an environmentally safe and stable condition.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

CHAPTER 8.
GENERAL PROVISIONS AND DEFINITIONS

SEC. 87.801. TITLE AND PURPOSE.

This Division shall be known as "The Grading Ordinance." The purpose of this Division is to establish minimum requirements for clearing, grading and excavating of land and activities affecting watercourses, and to provide for the issuance of permits and to provide for the enforcement of the requirements.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.802. ADMINISTRATION BY COUNTY OFFICIAL.

(a) The County Official is authorized to administer, interpret and enforce the provisions of this Division. His or her authorities with respect to enforcement actions are set forth at Section 87.102.

(b) Guidance Documents. The County Official may prepare, maintain and disseminate guidance documents identifying pollution prevention and control practices for construction activities and other activities that have been determined by the County Official to be effective and practicable in specified circumstances. The County Official may take any such guidance into account when determining whether any practice proposed in a grading plan, or any other submittal, is in compliance with this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

SEC. 87.803. DEFINITIONS.

Whenever the following words are used in this Division they shall have the following meanings:

(1) "AGRICULTURAL OPERATIONS" or "AGRICULTURAL PRODUCTION" shall mean routine and ongoing commercial operations associated with a farm, grove, dairy, or other agricultural business, and shall include:

(a) The cultivation and tillage of the soil; crop rotation; fallowing for agricultural purposes; the production, cultivation, growing, replanting and harvesting of any agricultural commodity including viticulture, vermiculture, apiculture, or horticulture;

(b) The raising of livestock, fur bearing animals, fish, or poultry, and dairying;

(c) Any practices performed by a farmer on a farm as incident to or in conjunction with those farming or grove operations, including the preparation for market, delivery to storage or to market, or delivery to carriers for transportation to market; and

(d) Ordinary pasture maintenance and renovation and dry land farming operations consistent with rangeland management and soil disturbance activities.

All such activities must be consistent with the economics of commercial agricultural operations and other similar agricultural activities. The final determination of a qualifying use shall be made by the County Official.

(2) "BEDROCK" is the solid undisturbed rock in place either at the ground surface or beneath surficial

deposits of gravel, sand or soil.

(3) "CERTIFY" or "CERTIFICATION" shall refer to a signed written statement that the specific inspections and tests where required have been performed and that such tests comply with the applicable requirements of this Division.

(4) "CIVIL ENGINEER" is an engineer duly registered by the State of California to practice in the field of civil engineering.

(5) "CLEARING" shall mean the removal or destruction of natural vegetation by any means, including brushing and grubbing.

(6) "COMPACTION" shall mean densification of a soil or rock fill by mechanical or other acceptable procedures.

(7) "COUNTY OFFICIAL" shall generally mean the Director of Public Works or his or her authorized representative, except that it shall mean the Director of Planning and Development Services or his or her authorized representative when used in any of the following contexts:

(a) minor grading pursuant to Section 87.206 (b);

(b) clearing pursuant to Chapter 5 of this Division;

(c) surface mining pursuant to Chapter 7 of this Division; or

(d) exercise of enforcement authority given to the Director of Planning and Development Services under Section 87.102.

(8) "COUNTY STORMWATER STANDARDS MANUAL" shall mean the manual adopted by Ordinance No. 9426 (N.S.) as Appendix A to the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance (San Diego County Code Section 67.80
1 and following).

(9) "CUT" shall have the same meaning as "excavation."

(10) "EMBANKMENT" shall have the same meaning as "fill."

(11) "ENGINEERING GEOLOGIST" is a geologist duly registered by the State of California and certified in "Engineering Geology" by the State.

(12) "ENGINEERING GEOLOGY" is the application of geological data and principles to engineering problems dealing with naturally occurring rock and soil for the purpose of assuring that geological factors are recognized and adequately interpreted in engineering practice.

(13) "EROSION" shall mean the process by which the ground surface is worn away by the action of water or wind.

(14) "EXCAVATION" shall mean any act by which soil, sand, gravel or rock is cut into, dug, quarried, uncovered, removed, displaced or relocated and shall include the conditions resulting therefrom.

(15) "EXPANSIVE SOIL" is any soil which swells more than 3 percent when prepared and tested in accordance with the test prescribed by Chapter 6 or other equivalent test approved by the County Official.

(16) "FILL" shall mean deposits of soil, sand, gravel, rock or other materials placed by man.

(17) "FINISH GRADE" is the final grade or elevation of the ground surface conforming to the proposed design.

(18) "FLOOD PLAIN" means a land area in and adjoining a river, stream, watercourse, ocean, bay or lake, which is likely to be flooded.

(19) "FLOOD PLAIN FRINGE" means all that land lying within the 100-year flood plain that is not within a floodway, where a floodway has been defined.

(20) "FLOODWAY" means the channel of a river or other watercourse and the adjacent land areas required to carry and discharge a flood. The selection of the floodway shall be based on the principle that the area chosen for the floodway must be designed to carry the waters of the 100-year flood, without increasing the water surface elevation of that flood more than one foot at any point. "100-YEAR FLOOD" means a flood estimated to occur on an average of once in 100 years (one percent probability of occurrence each year) which is determined from an analysis of historical flood and rainfall records and computed in accordance with the San Diego County Flood Control District Design and Procedure Manual approved by the Board of Supervisors on May 19, 1970, and filed with the Clerk of the Board of Supervisors as Document Number 427201 and as amended by the Board of Supervisors on July 8, 1975, and filed with the Clerk of the Board of Supervisors as Document Number 506917.

(21) "GRADING" is any excavating or filling or combination thereof and shall include the land in its excavated or filled condition.

"AGRICULTURAL GRADING" is grading which meets the requirements of Section 87.205 and is not exempt under Section 87.202(d). "MINOR GRADING" is grading which meets the requirements of Section 87.206. "PREVIOUSLY APPROVED PROJECT GRADING" is grading which meets the requirements of Section 87.207. "MAJOR GRADING" is grading which is governed by Section 87.208. In calculating the quantities of grading, soil to be removed and replaced for purposes of conditioning and compaction shall not be included.

(22) "GRADING PLANS" are plans for proposed grading work, which contain the matters required by Section 87.204 through 87.208 of this Division.

(23) "IMPROVEMENT PLANS" are plans for road or drainage improvements which are presented to the County for approval, which also show grading work associated with such road or drainage improvements. "Improvement plans" include plans which accompany a subdivision improvement agreement and other agreements entered into with the County which require the construction of improvements.

(24) "LANDSCAPE ARCHITECT" shall mean a landscape architect registered by the State of California.

(25) "MSCP Subarea" shall mean that area shown as the "County of San Diego MSCP Subarea" on the map referenced in Section 86.502 of this Code.

(26) "MAJOR SLOPE" shall mean any constructed slope which is greater than fifteen feet in vertical height measured from toe of slope to brow of slope as illustrated in San Diego County Design Standard DS-10 and DS-11 on file with the San Diego County Engineer.

(27) "MINOR SLOPE" shall mean any constructed slope which is not a major slope.

(28) "NATURAL GROUND SURFACE" shall mean the ground surface in its original state before any grading, excavation or filling.

(29) "OWNER" shall mean any person who is the owner of, has a possessory interest in, has possession or control of, or occupies, real property. The County of San Diego is not a "person" (See Section 12.115 of this Code) and shall not be considered an "OWNER" of real property for purposes of this Division, even if it is the holder of an open space easement, drainage easement, flowage easement, development restriction easement or other interest less than fee title, and regardless of whether it exercises or enforces its rights under such easement or interest.

(30) "PERMITTEE" shall mean any person to whom a permit is issued pursuant to this division.

(31) "PERSON" shall have the meaning assigned in Section 12.115 of this Code.

(32) "SITE" is any lot or parcel of land or combination of contiguous lots or parcels of land where grading is performed or permitted.

(33) "SLOPE" shall mean the inclined exposed surface of a fill, excavation or natural terrain.

(34) "SOIL" is all earth material of whatever origin that overlies bedrock and may include the decomposed zone of bedrock which can be excavated readily by mechanical equipment.

(35) "SOIL ENGINEER" shall mean a person who meets the qualifications stated in Section 6736.1 of the Professional Engineers Act (Business and Professions Code Section 6700 and following).

(36) "STRUCTURAL ROCK FILLS" shall mean fills constructed predominantly of rock materials for the purpose of supporting structures.

(37) "VERTICAL HEIGHT" shall be the measurement from the toe of the slope to a point projected horizontally from the top of the slope.

(38) "WATERCOURSE" means any surface water body (including any arroyo, canal, channel, conduit, creek, culvert, ditch, drain, gully, ravine, reservoir, river, stream, wash, waterway or wetland), in which waters from a tributary drainage area of 100 acres or larger flow in a definite direction or course, either continuously or intermittently, and any area adjacent thereto which is subject to inundation from a 100-year flood.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03; amended by Ord. No. 9634 (N.S.), effective 4-23-04; amended by Ord. No. 10224 (N.S.), effective 10-25-12)

Cross reference(s)--Definitions, § 12.101 et seq.

SEC. 87.804. ALTERNATIVE GRADING PLANS AND REPORTS.

In lieu of the grading plans and reports required pursuant to this Division, grading plans and reports

prepared for submission to the United States, the State of California, or other public entity may be accepted as drafts and subsequently approved by the County Official if they are substantially the same as the grading plans and reports required by this Division.

(Added by Ord. No. 9547 (N.S.), effective 5-9-03)

Attachment E

Approved Soil Stabilizers

Products Available for Controlling Dust

The source of this information is from a booklet titled "Air Quality Conservation Management Practices for San Joaquin Valley Farms" and was developed in cooperation with the Agriculture Improving Resources (AIR) partners, the USDA Natural Resources Conservation Service, the San Joaquin Valley Region of the California Association of Resource Conservation Districts, and the San Joaquin Valley Air Pollution Control District. You may view the booklet on-line by visiting the California Cotton Ginners and Growers Association web site and clicking here. [The file is quite large and may take a few minutes to download].

The products and brand names mentioned below are for informational purposes only and should not be considered a complete listing of all the available products, nor as an endorsement of any of the products listed.

Per Rule 8011 – General Requirements, any chemical or organic material used for stabilizing solids shall not violate State Water Quality Control Board standards for use as a soil stabilizer. Any material prohibited for use as a dust suppressant by the US Environmental Protection Agency, the California Air Resources Board, or other applicable law, rule, or regulation is also prohibited under Regulation VIII. Hydroscopic materials may be prohibited in areas lacking sufficient atmospheric moisture of soil for such materials to effectively reduce fugitive dust emissions. The atmospheric moisture of soil is considered to be sufficient if it meets the application specifications of the hygroscopic product manufacturer. Use of such materials may be approved in conjunction with sufficient wetting of the controlled area.

Table 1: The suppressant categories listed below have been found to meet the 50 percent PM10 control for a Fugitive PM10 Management Plan. In addition, these products may be effective in limiting visible dust emissions and maintaining a stabilized unpaved road surface.

Suppressant Category	Product Common Name
Hygroscopic Suppressants	
Calcium Chloride	◦ Calcium chloride liquid ◦ Calcium chloride flakes ◦ Dowflake ◦ Durablend-C ◦ Liquidow ◦ Roadsaver-C ◦ Durablend ◦ DustGard
Magnesium Chloride	◦ Dust-off ◦ Chlor-tex ◦ Roadsaver
Blend of Calcium and Magnesium Chloride	◦ Dust Fyghter
Adhesives	
Lignosulfonate	◦ DC-22 ◦ Dustac, Dustac-100 ◦ CalBinder ◦ Lignin Sulfonate ◦ Polybinder ◦ RB Ultra Plus
Calcium Lignosulfonate	◦ Wesling-120
Petroleum Emulsions	◦ Asphotac ◦ Coherex ◦ CSS-1 ◦ DOPE-30 ◦ Duo Prime Oil ◦ Dust Devil ◦ EarthBind 1oo ◦ Earth Glue ◦ EnviroKleen ◦ FlowPro 1505 ◦ Penetrating Emulsion Primer (PEP) ◦ PennzSuppress-D1,2 ◦ Petro Tac ◦ Retain ◦ Road Pro ◦ Sandstill
Polymer Emulsions	◦ Aerospray 70A ◦ Blend R40 Series

	◦ Coherex PM ◦ DC-1000 ◦ DSS-40 ◦ Dustguard ◦ Earthbound L ◦ Earthguard ◦ ECO0110 and C-50 ◦ Eco-Polymer ◦ Envirotac II ◦ Gorilla Snot ◦ Liquid Dust Control ◦ Marloc ◦ PolyPavement ◦ Soiloc-D ◦ Soilfloc DC70 ◦ Soilfloc DC90 ◦ Soil Master WR ◦ Soil Seal ◦ Soil Sement 1,2 ◦ Soil Tech FSB1000 ◦ SR-400 ◦ TerraBond PolySeal ◦ Terrafirma ◦ Top Shield ◦ X-Hesion Pro
Bituminous Materials (Road Oil)	◦ Oil Sand ◦ SC-80 ◦ SC-250 ◦ SC-350 ◦ SC-800

1 "Pre-certified" by the California Air Resources Board

2 "Certified Technology" by the California Environmental Protection Agency

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Table 2: The following suppressant categories have not been demonstrated to achieve the 50 percent PM10 control, but may be useful in limiting visible dust emissions and maintaining a stabilized unpaved road surface.

Suppressant Category	Product Common Name
Electro-chemical	
Enzymes	◦ Bio Cat 300-1 ◦ EMCSQUARED ◦ Perma-Zyme 11x ◦ UBIX No. 0010
Ionic	◦ CBR Plus ◦ Condor SS ◦ Road Bnd EN-1 ◦ SA-44 ◦ Settler ◦ TerraBound Clay Stabilizer ◦ Terrastone
Fibers and Mulches	Agri-Fiber ◦ A/F 2000 ◦ Cellulose Fiber (M-Binder) ◦ Dewatered Residual Wood Fiber ◦ Ecotak-OP and Ecotak-SAT ◦ Excel-Fibermulch II ◦ Fibercraft ◦ Fiberwood ◦ Sentinel ◦ Soil Guard

	◦ Stabilizer
Unclassified	◦ AGRI-LOCK and DUST-LOCK ◦ Airtrol Plaster ◦ Durasoil ◦ Dust Attack ◦ Dust Buster Systems ◦ Dust Sorb 1118 ◦ Dust-Trol DCF ◦ DustSuppress ◦ EnviroCycle ◦ Hydroshield (endosperm product) ◦ Organic Soil Stabilizer ◦ POX-O-CAP lime mixture ◦ Raybinder ◦ Sandcastles Dust Control Mix ◦ Sodium silicate

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Dust Palliative Selection and Application Guide

DUST PALLIATIVE SELECTION AND APPLICATION GUIDE

Peter Bolander
Pavement Engineer, Pacific Northwest Region

Alan Yamada
Project Leader

San Dimas Technology and Development Center
San Dimas, California

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INTRODUCTION

The purpose of this publication is to help practitioners understand and correctly choose and apply the dust palliative that is appropriate for their particular site, traffic conditions, and climate. In addition, this publication describes the expected performance, limitations, and potential environmental impacts of various palliatives.

This guide examines most of the commonly available dust palliatives currently available and does not endorse any particular product. Since new products will become available and existing products will most likely change following publication of this report, it is recommended that this guide be used as a starting point for determining which palliative would be most appropriate for a given situation.

DUST ABATEMENT BASICS

Dust from unpaved roads is not only a nuisance but creates a safety hazard by reducing the driver's visibility. Dust also affects the health of road users and increases wear-and-tear on vehicles. Dust is always considered an intruder at campsites and picnic areas. In some areas there are regulations that limit the amount of particulate allowed in the atmosphere.

Fine particles, including dust, act to help hold the surface of unpaved roads together. With a loss of fine particles from the roadway, there is an increase in roadway surface raveling and maintenance costs. These fines are smaller than what the eye can see and pass through the 75 μm (No. 200) sieve.

How can dust emissions from the roadway be reduced or eliminated? Since the fines act as a binder that holds the surface of the unpaved road together, removing them is not a good option. Sealing the surface with an asphalt or concrete pavement or Bituminous Surface Treatment eliminates the dust problem; however, the low traffic on most Forest Service roads does not justify the cost of sealing the road with asphalt, concrete, or a surface treatment. Another alternative is to apply a dust suppressant product. These products are not a permanent solution and will require further applications as the effectiveness of the product decreases with time. Dust suppressants are one of many possible methods to control dust (Foley 1996; UMA 1987; Washington Dept. of Ecology 1996).

Dust suppressants work by either agglomerating the fine particles, adhering/binding the surface particles together, or increasing the density of the road surface material. They reduce the ability of the surface particles to be lifted and suspended by either vehicle tires or wind.

To properly select the appropriate palliative one must understand the primary factors that generate dust. They include the following:

- Vehicle speed
- Number of wheels per vehicle
- Number of vehicles
- Vehicle weight
- Particle size distribution (gradation) of the surface material
- Restraint of the surface fines (compaction, cohesiveness/bonding, durability)
- Surface moisture (humidity, amount of precipitation, amount of evaporation).

An excellent description of these factors that generate dust and how to analyze total long-term costs can be found in Foley et al. (1996) and UMA Engineering (1987).

Selection of the proper dust abatement program must include an understanding of not only the above factors, but the total long-term cost and environmental impacts of that program. Long-term costs include road improvement, road preparation, application of the suppressant in conjunction with the number of times the palliative needs to be applied, and expected change in maintenance practices. Environmental considerations typically

include impacts to the water quality, aquatic habitat, and plant community.

Besides controlling dust, a good dust abatement program may include reduced maintenance bladings and decreased aggregate loss (UMA 1987; Addo and Sanders 1995; Lund 1973).

DUST PALLIATIVE BASICS

There are a wide variety of dust suppressants available on the market today and there will continue to be more in the future. They can be divided into seven basic categories: water, water absorbing products, petroleum based products, organic nonpetroleum based products, electrochemical products, polymer products, and clay additive products. The categories are listed in order based on an estimate of past usage/ popularity.

Typical suppressants in each category are:

- Water
- Water Absorbing Products (deliquescent/ hydroscopic)
  - calcium chloride brine and flakes
  - magnesium chloride brine
  - sodium chloride (salt)
- Organic Petroleum Products
  - asphalt emulsions
  - cutback asphalt (liquid asphalt)
  - dust oils
  - modified asphalt emulsions
- Organic Nonpetroleum Products
  - animal fats
  - lignosulfonate
  - molasses/sugar beet
  - tall oil emulsions
  - vegetable oils
- Electrochemical Products
  - enzymes
  - ionic products
  - sulfonated oils
- Synthetic Polymer Products
  - polyvinyl acetate
  - vinyl acrylic
- Clay Additives
  - bentonite
  - montmorillonite

Table 1 gives an overview of these seven categories, listing their attributes, limitations, typical application rates, and common names based on Foley et al. (1996), UMA Engineering (1987), TTAO (1986), Bolander (1997), and Scholen (1992). Table 2 lists manufacturers and some distributors of the various dust palliatives.

SUPPRESSANT SELECTION TIPS

To determine the most cost-effective dust palliative, it is recommended that the flow diagram by UMA Engineering (1987) and Washington State Department of Ecology (1996) in figure 1 be followed. Important benefiting factors (Langdon 1980) of dust palliatives that should be considered when evaluating and selecting the proper dust palliative include:

- Cohering the dust particles to themselves or to larger particles
- Resisting wear by traffic
- Remaining on the road
- Resisting aging.

Based on the above characteristics, the product selection chart shown in table 3 should aid in selecting the most suitable dust palliative (Foley et al. 1996; UMA 1987; Bolander 1997; Bolander 1999; Scholen 1992; Langdon et al. 1980; Han 1992). When using the information in table 3, first perform a soils analysis to classify the surface material. Some palliatives require a clay component (plasticity index) or specific amount of fines to properly bind and/or agglomorate. Table 1 provides additional information about dust suppressant limitations, application methods, and environmental impact, which helps further in selecting the best dust palliative. The flow diagram in figure 1 leads the practitioner to figure 2, which is a guide for determining the overall cost of the dust abatement program including the yearly and possibly the multi-year cost of a dust abatement application. Figure 3 is a guide for summarizing the expected benefits of the selected dust control plan.

If a petroleum dust palliative is being considered, further suppressant selection information can be found in Langdon (1980) and Langdon, Hicks, and Williamson (1980).

Table 1—Road dust suppressants.

Dust Suppressant Category	Attributes	Limitations	Application	Origin	Environmental Impact
Water	• agglomerates the surface particles • normally, readily available	• evaporates readily • controls dust generally for less than a day • generally the most expensive and labor intensive of the inorganic suppressants	• frequency depends on temperature and humidity; typically only effective from 1/2 to 12 hours	• any potable water source	• none
Water Absorbing: Calcium Chloride (deliquescent)	• ability to absorb water from the air is a function of temperature and relative humidity; for example, at 25°C (77°F) it starts to absorb water at 29% relative humidity, and at 38°C (100°F) it starts to absorb water at 20% relative humidity • significantly increases surface tension of water film between particles, helping to slow evaporation and further tighten compacted soil as drying progresses • treated road can be regraded and recompacted with less concern for losing moisture and density	• requires minimum humidity level to absorb moisture from the air • doesn't perform as well as MgCl in long dry spells • performs better than MgCl when high humidity is present • slightly corrosive to metal, highly to aluminum and its alloys, attracts moisture, thereby prolonging active period for corrosion • rainwater tends to leach out highly soluble chlorides • if high fines content in treated material, the surface may become slippery when wet • effectiveness when less than 20% solution has performance similar to water	• generally 1 to 2 treatments per season • initial application: flake: @ 0.5 to 1.1 kg/m^2 (1.0 to 2.0 lb/y^2), typical application 0.9 kg/m^2 (1.7 lb/y^2) @ 77% purity liquid: 35 to 38% residual @ 0.9 to 1.6 L/m^2 (0.2 to 0.35 g/y^2), typical application is 38% residual concentrate applied undiluted @ 1.6 L/m^2 (0.35 g/y^2) • follow-up: apply @ 1/2 to 1/3 initial dosage	• by-product in the form of brine from manufacture of sodium carbonate by ammonia-soda process and of bromine from natural brines • three forms: flake, or Type I, @ 77 to 80% purity pellet, or Type II, @ 94 to 97% purity clear liquid @ 35 to 38% solids	• water quality impact: generally negligible if the proper buffer zone exists between treated area and water • fresh water aquatic impact: may develop at chloride concentrations as low as 400 ppm for trout, up to 10,000 ppm for other fish species • plant impact: some species susceptible, such as pine, hemlock, poplar, ash, spruce, and maple • potential concerns with spills of liquid concentrate

Table 1—Road dust suppressants (continued).

Dust Suppressant Category	Attributes	Limitations	Application	Origin	Environmental Impact
Water Absorbing: Magnesium Chloride (deliquescent)	• starts to absorb water from the air at 32% relative humidity independent of temperature • more effective than calcium chloride solutions for increasing surface tension, resulting in a very hard road surface when dry • treated road can be regraded and recompacted with less concern for losing moisture and density	• requires minimum humidity level to absorb moisture from the air • more suitable in drier climates • in concentrated solutions, very corrosive to steel (note: some products may contain a corrosive-inhibiting additive); attracts moisture, thereby prolonging active period for corrosion • rainwater tends to leach out highly soluble chlorides • if high fines content in treated material, the surface may become slippery when wet • effectiveness when less than 20% solution has performance similar to water	• generally 1 - 2 treatments per season • initial application: 28 to 35% residual @ 1.4 to 2.3 L/m^2 (0.30 to 0.5 g/y^2), typical application is 30% residual concentrate applied undiluted @ 2.3 L/m^2 (0.50 g/y^2) • follow-up: apply @ 1/2 initial dosage	• occurs naturally as brine (evaporated)	• water quality impact: generally negligible if the proper buffer zone exists between treated area and water • fresh water aquatic impact: may develop at chloride concentrations as low as 400 ppm for trout, up to 10,000 ppm for other fish species • plant impact: some species susceptible such as pine, hemlock, poplar, ash, spruce, and maple • potential concerns with spills
Water Absorbing: Sodium Chloride (hygroscopic)	• starts to absorb water from the air at 79% relative humidity independent of temperature • increases surface tension slightly less than calcium chloride	• requires minimum humidity level to absorb moisture from the air • moderately corrosive to steel in dilute solutions • tends not to hold up well as a surface application	• generally 1 - 2 treatments per season • higher dosages than calcium treatment	• occurs naturally as rock salt and brines	• same as calcium chloride

Table 1—Road dust suppressants (continued).

Dust Suppressant Category	Attributes	Limitations	Application	Origin	Environmental Impact
Organic Petroleum Products	• binds and/or agglomerates surface particles because of asphalt adhesive properties • serves to waterproof the road	• under dry conditions some products may not maintain resilience • if too many fines in surface and high in asphaltenes, it can form a crust and fragment under traffic and in wet weather • some products are difficult to maintain	• generally 1 to 2 treatments per season • 0.5 to 4.5 L/m^2 (0.1 to 1 g/y^2) depending on road surface condition, dilution, and product • the higher viscosity emulsions are used for the more open-graded surface materials • follow-up: apply at reduced initial dosages	• cutback asphalt: SC-70 • Asphalt emulsion: SS-1, SS-1h, CSS-1, or CSS-1h mixed with 5+ parts water by volume • modified asphalt emulsions • emulsified oils • mineral oils	• wide variety of ingredients in these products • “used” products are toxic • oil in products might be toxic • need product specific analysis • potential concerns with spills and leaching prior to the product “curing”
Organic Nonpetroleum: Lignin Derivatives	• binds surface particles together • greatly increases dry strength of material under dry conditions • retains effectiveness during long dry periods with low humidity • with high amounts of clay, it tends to remain slightly plastic permitting reshaping and additional traffic compaction	• may cause corrosion of aluminum and its alloys • surface binding action may be reduced or completely destroyed by heavy rain, due to solubility of solids in water • becomes slippery when wet, brittle when dry • difficult to maintain as a hard surface, but can be done under adequate moisture conditions	• generally 1 to 2 treatments per season • 10 to 25% residual @ 2.3 to 4.5 L/m^2 (0.5 to 1.0 g/y^2), typical application is 50% residual concentrate applied undiluted @ 2.3 L/m^2 (0.50 g/y^2) or 50% residual concentrate applied diluted 1:1 w/water @ 4.5 L/m^2 (1.0 g/y^2) • may be advantageous to apply in two applications • also comes in powdered form that is mixed 1 kg to 840 liters (1 lb to 100 gallons) of water and then sprayed	• water liquor product of sulfite paper making process, contains lignin in solution • composition depends on raw materials (mainly wood pulp) and chemicals used to extract cellulose; active constituent is neutralized lignin sulfuric acid containing sugar	• water quality impacts: none • fresh water aquatic impacts: BOD may be high upon leaching into a small stream • plant impacts: none • potential concern with spills

Table 1—Road dust suppressants (continued).

Dust Suppressant Category	Attributes	Limitations	Application	Origin	Environmental Impact
Organic Nonpetroleum: Molasses/Sugar Beet Extract	• provides temporary binding of the surface particles	• limited availability	• not researched	• by-product of the sugar beet processing industry	• water quality impact: unknown • fresh water aquatic impact: unknown • plant impact: unknown, none expected
Organic Nonpetroleum: Tall-Oil Derivatives	• adheres surface particles together • greatly increases dry strength of material under dry conditions	• surface binding action may be reduced or completely destroyed by long-term exposure to heavy rain, due to solubility of solids in water • difficult to maintain as a hard surface	• generally 1 treatment every few years • 10 to 20% residual solution @ 1.4 to 4.5 L/m^2 (0.3 to 1.0 g/y^2); typical application is 40 to 50% residual concentrate applied diluted 1:4 w/water @ 2.3 L/m^2 (0.5 gal/y^2)	• distilled product of the kraft (sulfate) paper making process	• water quality impact: unknown • fresh water aquatic impact: unknown • plant impact: unknown
Organic Nonpetroleum: Vegetable oils	• agglomerates the surface particles	• limited availability • oxidizes rapidly, then becomes brittle	• generally 1 treatment per season • application rate varies by product, typically 1.1 to 2.3 L/m^2 (0.25 to 0.50 g/y^2) • the warmer the product, the faster the penetration • follow-up: apply at reduced initial dosages	• some products: canola oil, soybean oil, cotton seed oil, and linseed oil	• water quality impact: unknown • fresh water aquatic impact: some products have been tested and have a low impact • plant impact: unknown, none expected

Table 1—Road dust suppressants (continued).

Dust Suppressant Category	Attributes	Limitations	Application	Origin	Environmental Impact
Electrochemical Derivatives	• changes characteristics of clay-sized particles • generally effective regardless of climatic conditions	• performance dependent on fine-clay mineralogy • needs time to “set-up,” i.e. react with the clay fraction • difficult to maintain if full strengthening reaction occurs • limited life span	• generally diluted 1 part product to anywhere from 100 to 600 parts water • diluted product also used to compact the scarified surface	• typical products: sulfonated oils, ammonium chloride enzymes, ionic products	• need product specific analysis • some products are highly acidic in their undiluted form
Synthetic Polymer Derivatives	• binds surface particles because of polymer’s adhesive properties	• difficult to maintain as a hard surface	• generally 1 treatment every few years • 5 to 15% residual solution @ 1.4 to 4.5 L/m^2 (0.3 to 1.0 g/y^2); typical application is 40 to 50% residual concentrate applied, diluted 1:9 w/water @ 2.3 L/m^2 (0.50 gal/y^2)	• by-product of the adhesive manufacturing process • typically 40 to 60% solids	• water quality impact: none • fresh water aquatic impact: generally low • plant impact: none • need product specific analysis
Clay Additives	• agglomerates with fine dust particles • generally increases dry strength of material under dry conditions	• if high fines content in treated material, the surface may become slippery when wet	• generally 1 treatment every 5 years • typical application rate is at 1 to 3% by dry weight	• mined natural clay deposits	• water quality impact: unknown • fresh water aquatic impact: none • plant impact: none

Table 2—Suppressant manufacturers.

Suppressant Category		Product Name	Manufacturer or Primary Distributor	Phone Number	Web Site
Water Absorbing	Calcium Chloride	Calcium Chloride Liquid	General Chemical	800-668-0433	www.genchem.com
		Calcium Chloride Flakes	General Chemical	800-668-0433	www.genchem.com
		Dowflake	Dow Chemical	800-447-4369	www.dowcalciumchloride.com
		Liquidow	Dow Chemical	800-447-4369	www.dowcalciumchloride.com
	Magnesium Chloride	DustGard	IMC Salt	913-344-9334	
		Dust-Off	Cargill Salt Division	800-553-7879	
		Chlor-tex	Soil-Tech	702-873-2023	www.soil-tech.com
	Blend of Calcium and Magnesium Chloride	Dust Fyghter	Midwestern Industrial Supply, Inc.	800-321-0699	www.midwestind.com
	Sodium Chloride	Morton Salt	Morton International	312-807-2000	
		IMC Salt	IMC Salt	800-323-1641	
Organic Petroleum	Asphalt Emulsion	CSS-1	Any major asphalt supplier		
	Cutback	MC-70	Any major asphalt supplier		
	Dust Oil/Dust Fluids	Fuel Oil	Pacific Northern Industrial Fuels	206-282-4421	
		Duo Prime Oil	Lyondell Petrochemical Co.	800-423-8434	(white mineral oil)
		EnviroKleen	Midwestern Industrial Supply, Inc.	800-321-0699	www.midwestind.com (synthetic iso-alkane)
	Modified Asphalt Emulsion	Asphotac	Actin	219-397-5020	
		Coherex	Witco Corp.	800-494-8287	www.witco.com
		DOPE-30	Morgan Emultech, Inc.	530-241-1364	
		PennzSuppress-D	Pennzoil-Quaker State Co.	713-546-4000	www.pennzsuppress.com
		Penetrating Emulsion Primer (PEP)	Koch Asphalt Co.	909-829-0505	www.kochmaterials.com
		Petro Tac	Syntech Products, Inc.	800-537-0288	www.syntechproducts.com
		Road Pro	Midwestern Industrial Supply, Inc.	800-321-0699	www.midwestind.com
		Sandstill	Energy Systems Associates, Inc.	703-503-7873	
Organic Nonpetroleum	Lignosulfonate	DC-22	Dallas Roadway Products, Inc.	800-317-1968	www.dallasroadway.com
		Dustac	Georgia Pacific West, Inc.	360-733-4410	(was Lignosite)
		Dustac-100	Georgia Pacific West, Inc.	360-733-4410	www.gp.com/chemical/lignosulfonate
		CalBinder	California-Fresno Oil Co.	209-486-0220	www.calfresno.com
		Polybinder	Jim Good Marketing	805-746-3783	
		RB Ultra Plus	Roadbind America Inc.	888-488-4273	www.roadbind.com

Table 2—Suppressant manufacturers (continued).

Suppressant Category		Product Name	Manufacturer or Primary Distributor	Phone Number	Web Site
	Molassas/Sugar Beet	Dust Down	Amalgamated Sugar Co.	208-733-4104	
	Tall Oil Emulsion	Dust Control E	Pacific Chemicals, Inc./ Lyman Dust Control	604-828-0218 or 800-952-6457	
		Dustrol EX	Pacific Chemicals, Inc / Lyman Dust Control	604-828-0218 or 800-952-6457	
		Road Oyl	Soil Stabilization Products Co., Inc.	800-523-9992	www.sspco.org
	Vegetable Oils	Soapstock	Kansas Soybean Association Indiana Soybean Association	800-328-7390 800-735-0195	
		Dust Control Agent SS	Greenland Corp.	888-682-6040	
Electro-chemical	Enzymes	Bio Cat 300-1	Soil Stabilization Products Co., Inc.	800-523-9992	www.sspco.org
		EMCSQUARED	Soil Stabilization Products Co., Inc.	800-523-9992	www.sspco.org
		Perma-Zyme 11X	The Charbon Group, Inc.	714-593-1034	www.natural-industrial.com
		UBIX No. 0010	Enzymes Plus, Div of Anderson Affiliates	800-444-7741	
	Ionic	Road Bond EN-1	C.S.S. Technology, Inc.	800-541-3348	www.csstech.com
		Terrastone	Moorhead Group	831-685-1148	www.terrastone.com
	Sulfonated Oils	CBR Plus	CBR Plus, Inc. (Canada)	604-684-8072	www.cbrplus.com
		Condor SS	Earth Sciences Products Corp.	503-678-1216	www.earthscienceproducts.com
		SA-44 System	Dallas Roadway Products, Inc.	800-317-1968	www.dallasroadway.com
		Settler	Mantex	800-527-9919	
		TerraBond Clay Stabilizer	Fluid Sciences, LLC	888-356-7847 or 318-264-9448	www.fluidsciences.com
Synthetic Polymer Emulsions	Polyvinyl Acetate	Aerospray 70A	Cytec Industries	800-835-9844	www.cytec.com
		Soil Master WR	Enviromental Soil Systems, Inc.	800-368-4115	
	Vinyl Acrylic	Earthbound L	Earth Chem Inc.	970-223-4998	www.earthchem.com
		ECO-110	Chem-crete	972-234-8565	www.chem-crete.com/ soilstabilizer.htm
		PolyPavement	PolyPavement Company	323-954-2240	www.polypavement.com
		Liquid Dust Control	Enviroseal Corp.	561-969-0400	www.enviroseal.com
		Marloc	Reclamare Co.	206-824-2385	
		Soiloc-D	Hercules Soiloc	800-815-7668	
		Soil Seal	Soil Stabilization Products Co., Inc.	800-523-9992	www.sspco.org
		Soil Sement	Midwestern Industrial Supply, Inc.	800-321-0699	www.midwestind.com
		TerraBond PolySeal	Fluid Sciences, LLC	888-356-7847	www.fluidsciences.com
	Combination of Polymers	Top Shield	Base Seal International, Inc.	800-729-6985	www.baseseal.com

Table 2—Suppressant manufacturers (continued).

Suppressant Category		Product Name	Manufacturer or Primary Distributor	Phone Number	Web Site
Clay Additives	Bentonite	Central Oregon Bentonite	Central Oregon Bentonite	541-477-3351	
		Pelbon	American Colloid Co.	800-426-5564 or 847-392-4600	www.colloid.com
		Volclay	American Colloid Co.	708-392-4600	www.colloid.com
	Montmorillonite	Stabilite	Soil Stabilization Products Co., Inc.	800-523-9992	www.sspco.org

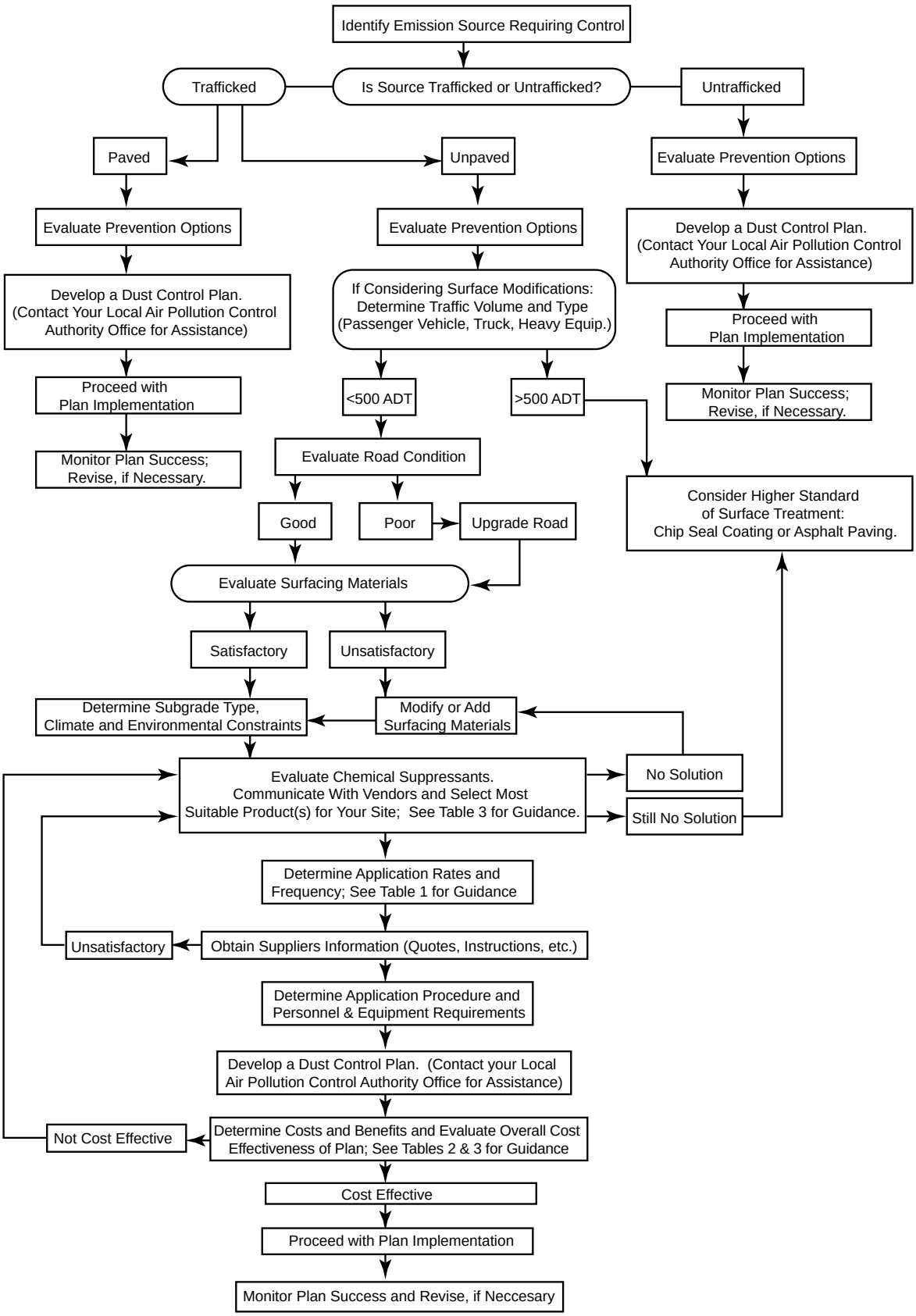

Figure 1—Guidelines for cost-effective selection and use of dust palliatives.

Table 3—Product selection chart.

Dust Palliative	Traffic Volumes, Average Daily Traffic			Surface Material								Climate During Traffic		
				Plasticity Index			Fines (Passing 75μm, No. 200, Sieve)							
	Light <100	Medium 100 to 250	Heavy >250 (1)	<3	3–8	>8	<5	5–10	10–20	20–30	>30	Wet &/or Rainy	Damp to Dry	Dry (2)
Calcium Chloride	✓✓	✓✓	✓	✗	✓	✓✓	✗	✓	✓✓	✓	✗ (3)	✗ (3,4)	✓✓	✗
Magnesium Chloride	✓✓	✓✓	✓	✗	✓	✓✓	✗	✓	✓✓	✓	✗ (3)	✗ (3,4)	✓✓	✓
Petroleum	✓	✓	✓	✓✓	✓	✗	✓ (5)	✓	✓ (6)	✗	✗	✓ (3)	✓✓	✓
Lignin	✓✓	✓✓	✓	✗	✓	✓✓ (6)	✗	✓	✓✓	✓✓	✓ (3,6)	✗ (4)	✓✓	✓✓
Tall Oil	✓✓	✓	✗	✓✓	✓	✗	✗	✓	✓✓ (6)	✓ (6)	✗	✓	✓✓	✓✓
Vegetable Oils	✓	✗	✗	✓	✓	✓	✗	✓	✓	✗	✗	✗	✓	✓
Electro-chemical	✓✓	✓	✓	✗	✓	✓✓	✗	✓	✓✓	✓✓	✓✓	✓ (3,4)	✓	✓
Synthetic Polymers	✓✓	✓	✗	✓✓	✓	✗	✗	✓✓	✓✓ (6)	✗	✗	✓	✓✓	✓✓
Clay Additives (6)	✓✓	✓	✗	✓✓	✓✓	✓	✓✓	✓	✓	✗	✗	✗ (3)	✓	✓✓

Legend

✓✓ = Good ✓ = Fair ✗ = Poor

Notes:

(1) May require higher or more frequent application rates, especially with high truck volumes
(2) Greater than 20 days with less than 40% relative humidity
(3) May become slippery in wet weather
(4) SS-1 or CSS-1 with only clean, open-graded aggregate
(6) Road mix for best results

Forest _____ Date _____

Road Name _____ Estimated ADT _____

Road Number _____ Average Road Width _____

Project Location From _____ To _____ Length _____

Dust Palliative Product _____ First Application Rate _____

Second Application Rate _____

Item	Total Cost	Cost/km
A. Road Improvement Costs • Drainage improvements • Geometric improvements • Repair of failed areas • Addition of gravel surfacing		
B. Surface Preparation Costs • Addition of select material (fines, etc.) • Break up and loosen, watering, shaping, compacting		
C. Product Supply and Application Cost • Material supply • Diluting with water (if necessary) • Transportation & application		
D. Miscellaneous Costs • Traffic control, detours • Inspection, supervision • Other costs		
TOTAL COST OF PROGRAM		
COST EXCLUDING ITEM "A" ABOVE		

Figure 2—Cost record for dust control programs.

Forest _____ Date _____

Road Name _____ Estimated ADT _____

Road Number _____ Average Road Width _____

Project Location From _____ To _____ Length _____

Dust Palliative Product _____ First Application Rate _____

Second Application Rate _____

Benefits	Estimated Savings per Year
A. Reduced Maintenance costs • Estimate 25 to 75% savings over previous blading costs. Use local figures, if available.	
B. Reduced Regravelling • Estimate based on traffic volume and climate. Use local figures, if available.	
C. Other (intangible) • Reduced vehicle accidents • Reduced vehicle damage • Higher quality of life and property values • Reduced cleaning costs • Reduced dust induced respiratory problems • Reduced sedimentation in water bodies • Reduced impact on dust sensitive vegetation • Reduced complaints from public	
TOTAL TANGIBLE BENEFITS OF PROGRAM	

Figure 3—Benefits of dust control programs.

SUPPRESSANT APPLICATION TIPS

Once a suitable product is selected, the next step is to determine the appropriate application rate and frequency. Table 1 lists broad ranges of application rates for various products and can be used as a guideline. Manufacturer's literature, past experience, and field or laboratory test plots over a square meter (1 square yard) can also be used to help determine the appropriate application rate.

Generally, higher application rates or increased frequency is required when the following conditions are present:

- High traffic volumes with high speeds and a larger percentage of truck traffic
- Low humidity conditions, especially when using calcium chloride
- Low fines content in road surface, typically when there is less than 10 percent passing through the 75 μm (No. 200) sieve
- Poorly bladed surface and/or loose wearing surface.

General Application Tips

The performance of any dust suppressant is related to many application factors. Application method, rate, frequency, and product concentration are a few of these factors. A stable, tight surface that readily sheds surface water is another. If properly applied and constructed, a longer life and higher level of service can be expected from the dust abatement efforts (Foley et al. 1996; UMA 1987; Washington Dept. of Ecology 1996; Giummarra, Foley, and Cropley 1997). Since dust suppression and road maintenance efforts are usually combined, it is prudent to include the following practices in the maintenance and rehabilitation of road surfaces prior to applying a dust palliative:

- Repair unstable surfacing and/or subgrade areas
- Adequately drain (crown and crossfall) the road surface
- Remove boney (poorly graded) surface material
- Grade sufficient depth of roadway to remove ruts, potholes, and erosion gullies
- Compact the roadway (depending on treatment and sequence of operations).

Maximum benefits can also be achieved by adequate penetration of the liquid dust suppressant. This penetration should be on the order of 10 to 20 millimeters (3/8 to 3/4 inches). Proper penetration mitigates loss of the palliative resulting from surface wear. Adequate penetration also resists leaching, imparts cohesion, and resists aging (Langdon 1980).

Application tips that apply to all liquid dust suppressant products include:

- Apply suppressants, especially salts, immediately following the wet season.
- If possible, apply after rain so materials are moister (aids mixing) and more workable. If applied just before a rain, the material may wash away.
- Adhere to manufacturers' recommendations on minimum application rate, compaction and curing time prior to allowing traffic.
- If the surface material is dry, dampen, except when using cut-back asphalt products.
- If a hard crust is present, break up and loosen the surface.
- Use a pressure distributor to uniformly distribute the dust suppressant.
- Ensure that the necessary "residual" of the product is obtained. The residual is the amount of product that remains after the evaporation of water from the concentrate, as well as that used to dilute the product prior to application. The residual (sometimes called solids or binder) is the portion of the product that is responsible for the binding and/or agglomeration of the particles.

Water Application Tips

Regular, light watering is more effective than less frequent, heavy watering.

Chloride Application Tips

Light compaction is recommended after a chloride brine application.

Petroleum Application Tips

Soil type and density greatly affect the rate and amount of penetration. In all instances, it is desirable to attain a 12 to 25 millimeter (1/2 to 1 inch) penetration. Most products (with the exception of SS- and CSS-1) will penetrate and coat most soils if they have been loosened by scarification. For surfaces which have not been scarified, only those products with low viscosities will penetrate.

Organic Nonpetroleum Application Tips

Remove loose material prior to application unless the road surface will be mixed and/or compacted after the spray application. When applying vegetable oils, the top 25 to 50 millimeter (1 to 2 inches) of the surface should be loose to improve penetration.

Electrochemical Application Tips

Typically these products are mixed into the road surface.

Polymer Application Tips

Light compaction is recommended after a polymer application, unless the polymer is mixed into the road surface.

Clay Additive Application Tips

Ensure that the clay and the associated water used for compaction is uniformly distributed throughout the surface material. This method requires a minimum of 8 passes with a motor-grader or use of a cross-shaft rotary mixer.

All dust suppressants have a limited lifespan and require regular applications to satisfactorily control dust on a long-term basis. Subsequent applications should be made if and when dust levels exceed acceptable levels. These subsequent applications may be lighter than the initial application.

ENVIRONMENTAL IMPACTS

Any suppressant ingredient may migrate due to carelessness in application, run-off, leaching, dust particle migration, or adhesion to vehicles. Carefully review the product literature, Material Safety Data Sheet, and manufacturer's instructions before purchase and use. Observe all safety precautions and follow manufacturer's directions when handling, mixing, and applying dust suppressants. Application of all dust suppressants must comply with federal, state, and local laws and regulations. These vary by locality and need to be checked prior to implementing the dust abatement program.

The primary environmental concern with dust palliatives is how they impact the groundwater quality, freshwater aquatic environment, and plant community. Take all necessary precautions to keep dust palliative material out of water drainages and roadway ditches leading to streams.

The impact of dust palliatives on groundwater quality is based on how the suppressant migrates to the local groundwater table in conjunction with the chemicals used in the suppressant. Chemical analysis of the suppressant will assist in determining if harmful constituents are present. Knowing the depth to groundwater and the permeability of the native soil will assist in determining how and if the chemicals will leach to the groundwater table. A direct way to evaluate the contamination of harmful constituents to the groundwater is to conduct water quality sampling of the surrounding area before and after dust palliative application.

The impact of dust palliatives on the freshwater aquatic environment is measured by both the toxicity to fish and the availability of oxygen. Each state sets its own standards and they may vary by watershed and the type and age of the fish population. The test to determine toxicity is the LC50 test and the test to determine available oxygen is the BOD (Biochemical Oxygen Demand) test. The LC50 test measures the lethal concentration (LC) of product, expressed in parts per million (ppm), that will produce a 50 percent mortality rate in the test group in 96 hours. The larger the concentration, the less toxic the material. Typically, less than 100 ppm is considered toxic, 1,000 ppm is considered practically nontoxic, and greater than 10,000 ppm is considered nontoxic. The BOD test measures the oxygen used by microbes as it digests (feeds on) the product in water. Typically, the products that are derived from organic nonpetroleum suppressants are the most likely to have high BOD results.

There are no standard tests for measuring how dust palliatives impact the plant community; however, some tests have been performed that simply observe the impact on plant life.

Addo and Sanders (1995) summarize a number of environmental impact studies on the use of various chlorides on water quality, plants, and animals. Heffner (1997) updates the work by Schwendeman (1981) concerning the environmental impacts of some of the most common dust palliatives used by the Forest Service. Based on their efforts, the following is recommended when using these palliatives once or twice a year at their typical application rates:

Lignosulfonate - Determine prior to application if significant migration (water drainage) might occur from the treated area into local streams, ponds, and lakes. Ensure that migration will not impact the oxygen needs of the aquatic community.

Calcium and Magnesium Chlorides - Restrict the use of chlorides within 8 meters (25 feet) of a body of water. In areas of shallow groundwater, determine if significant migration of the chloride would reach the groundwater table. Restrict the use of chlorides if low salt tolerant vegetation is within 8 meters (25 feet) of the treated area. Typical low-tolerant vegetation includes various varieties of alder, hemlock, larch, maple, ornamentals, and pine.

Evaluations of other dust palliatives have not been made. If there is concern regarding the impact of a dust palliative on the environment, then, as a minimum, the LC50 and BOD tests should be performed. Results can be used to estimate the potential impact of the dust palliative in question on the local aquatic and plant communities.

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About the Authors…

Pete Bolander
Pete graduated from Michigan State University with a degree in civil engineering. He has a master's degree in soil mechanics and foundation engineering from Oregon State University. Pete began his career with the Forest Service as a geotechnical engineer on the Willamette NF. After 10 years on the Willamette, Pete moved to the Pacific Northwest Regional Office (Region 6) in Portland, OR as the Regional Pavement Engineer.

Alan Yamada
Alan graduated from the University of Hawaii with a Bachelor of Science in Civil Engineering and is a licensed Professional Engineer in the State of Oregon. He served as a Zone Engineer in Region 2 and on the construction team for the Coldwater Visitor Center and the Johnston Ridge Observatory within the Mount St. Helens National Volcanic Monument in Region 6. Alan joined the Center in December 1996 and serves as a project leader supporting the Engineering Program.

Library Card
Bolander, Peter, ed. 1999. Dust palliative selection and application guide. Project Report. 9977-1207-SDTDC. San Dimas, CA: U.S. Department of Agriculture, Forest Service, San Dimas Technology and Development Center. 20 p.

This publication helps practitioners understand and correctly choose and apply the dust palliative that is appropriate for their particular site, traffic conditions, and climate. Describes the expected performance, limitations, and potential environmental impacts of various palliatives. It is recommended that this guide be used as a starting point for determining which palliative would be most appropriate for a given situation.

Keywords: dust abatement, palliatives, suppressants

Additional single copies of this document may be ordered from:
USDA Forest Service
San Dimas Technology and Development Center
ATTN: Richard Martinez
444 E. Bonita Avenue
San Dimas, CA 91773
Phone: (909) 599-1267 x201
Fax: (909) 592-2309
E-Mail: rmartinez/wo_sdtdc@fs.fed.us
FSNotes: Richard Martinez/WO/USDAFS

For additional technical information, contact Peter Bolander at the following address:
USDA Forest Service
Pacific Northwest Region
333 SW 1st Avenue
P.O. Box 3623
Portland, OR 97204
Phone: (503) 808-2500
Fax: (503) 808-2511

An electronic copy of this document is available on the Forest Service's FSWeb Intranet at:
http://fsweb.sdtdc.wo.fs.fed.us

Appendix B

Emissions Calculation Sheets

Emissions Total Summary

Phase 1 Construction							
Maximum Daily Emissions (pounds)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
Demolition Site Prep and Grading	16.141	15.798	20.900	0.003	4.321	2.459	3107.697
San Diego County Screening Level	**75**	**550**	**250**	**250**	**100**	**55**	-
Average Annual Emissions (tons)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2e (MT)
Demolition Site Prep and Grading	0.786	0.447	0.643	0.001	0.108	0.063	91.596
San Diego County Screening Level	**13.7**	**100**	**40**	**40**	**15**	**10**	-

Phase 1							
Maximum Daily Emissions (pounds)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
Off-Road Equipment Exhaust	1.8	11.3	16.0	0.0	0.6	0.6	4330.9
Mining and Processing Dust	0.0	0.0	0.0	0.0	79.2	15.2	0
On-Road Mobile Emissions	0.5	6.9	19.9	0.1	2.9	0.9	10090.6
Phase 2 Construction	1.2	10.3	11.1	0.0	0.7	0.5	2077.7
Total	**3.5**	**28.5**	**47.0**	**0.1**	**83.4**	**17.2**	**16499.22**
San Diego County Screening Level	**75**	**550**	**250**	**250**	**100**	**55**	-
Average Annual Emissions (tons)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2e (MT)
Off-Road Equipment Exhaust	0.196	1.240	1.794	0.004	0.068	0.063	424.6
Mining and Processing Dust	0	0	0	0	9.935	1.913	0
On-Road Mobile Emissions	0.060	0.882	2.572	0.011	0.369	0.115	1188.0
Electricity	0	0	0	0	0	0	186.1
Solid Waste	0	0	0	0	0	0	4.8
Total	**0.26**	**2.12**	**4.37**	**0.02**	**10.37**	**2.09**	**1803.6**
San Diego County Screening Level	**13.7**	**100**	**40**	**40**	**15**	**10**	-

Phase 2							
Maximum Daily Emissions (pounds)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
Off-Road Equipment Exhaust	1.8	11.3	16.0	0.0	0.6	0.6	4330.9
Mining and Processing Dust	0.0	0.0	0.0	0.0	79.2	15.2	0
On-Road Mobile Emissions	0.4	6.9	19.4	0.1	2.9	0.9	9710.7
Phase 3 Construction	1.1	10.3	10.8	0.0	1.2	0.6	2346.3
Total	**3.4**	**28.5**	**46.2**	**0.1**	**83.8**	**17.3**	**16387.9**
San Diego County Screening Level	**75**	**550**	**250**	**250**	**100**	**55**	-
Average Annual Emissions (tons)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2e (MT)
Off-Road Equipment Exhaust	0.196	1.240	1.794	0.004	0.068	0.063	424.6
Mining and Processing Dust	0	0	0	0	9.935	1.913	0
On-Road Mobile Emissions	0.056	0.898	2.406	0.010	0.020	0.368	1143.3
Electricity	0	0	0	0	0	0	186.1
Solid Waste	0	0	0	0	0	0	4.8
Total	**0.25**	**2.14**	**4.20**	**0.01**	**10.02**	**2.34**	**1758.8**
San Diego County Screening Level	**13.7**	**100**	**40**	**40**	**15**	**10**	-

Phase 3							
Maximum Daily Emissions (pounds)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
Off-Road Equipment Exhaust	1.8	11.3	16.0	0.0	0.6	0.6	4330.937
Mining and Processing Dust	0.0	0.0	0.0	0.0	79.2	15.2	0
On-Road Mobile Emissions	0.8	9.9	23.3	0.1	2.7	0.8	0.77
Total	**2.5**	**21.2**	**39.3**	**0.1**	**82.5**	**16.6**	**4331.7**
San Diego County Screening Level	**75**	**550**	**250**	**250**	**100**	**55**	-
Average Annual Emissions (tons)							
Source	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2e (MT)
Off-Road Equipment Exhaust	0.196	1.240	1.794	0.004	0.068	0.063	424.6
Mining and Processing Dust	0	0	0	0	9.935	1.913	0
On-Road Mobile Emissions	0.056	0.898	2.406	0.010	0.020	0.368	1069.4
Electricity	0	0	0	0	0	0	186.1
Solid Waste	0	0	0	0	0	0	4.8
Total	**0.25**	**2.14**	**4.20**	**0.01**	**10.02**	**2.34**	**1684.9**
San Diego County Screening Level	**13.7**	**100**	**40**	**40**	**15**	**10**	-

Notes:
1. Phase 1 construction would occur prior to commencement of mining operations. Phase 2 construction would occur near the end of phase 1 mining an concurrently with mine operation. Phase 3 construction would occur near the end of phase 2 mining an concurrently with mine operation. Maximum daily emissions for phase 1 and 2 include estimated construction emissions for the next phase.

Construction Emissions

Phase 1							
Source	ROG	CO	NO_X	SO_X	Total PM_{10}	Total $PM_{2.5}$	CO_2e
Maximum Daily Emissions (pounds)							
Willow Glen Drive Improvements, Demolition, Site Prep and Grading	16.141	15.798	20.900	0.003	4.321	2.459	3107.70
Annual Emissions (tons)							
2022	0.786	0.447	0.643	0.001	0.108	0.063	91.60

Phase 2							
Source	ROG	CO	NO_X	SO_X	Total PM_{10}	Total $PM_{2.5}$	CO_2e
Maximum Daily Emissions (pounds)							
Demolition	1.220	10.322	11.086	0.021	0.710	0.516	2077.71
Annual Emissions (tons)							
2024	0.006	0.052	0.055	0.0001	0.004	0.003	9.43

Phase 3							
Source	ROG	CO	NO_X	SO_X	Total PM_{10}	Total $PM_{2.5}$	CO_2e
Maximum Daily Emissions (pounds)							
Demolition	1.146	10.306	10.814	0.024	1.159	0.551	2346.26
Annual Emissions (tons)							
2026	0.011	0.103	0.108	0.0002	0.012	0.006	21.30

Off-Road Equipment Exhaust Emissions - All Phases

Max Daily Equipment Operation Hours	8
Work Days per Year	251

Mining and Processing Heavy Equipment Maximum Daily Exhaust Emissions

Equipment[1]	Load Factor[2]	HP	Max No. Equipment	Usage[3]	Emission Factor (pounds/hp-hr)[4]							Daily Emissions (pounds/day)[5]						
					ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2	ROG	CO	NO_X	SO_X	PM_{10}	$PM_{2.5}$	CO_2
Mine Pit Area																		
Extraction Loader (Cat 988K)	0.36	541	2	100%	1.95E-04	1.12E-03	1.82E-03	3.87E-06	6.82E-05	6.28E-05	4.19E-01	0.608	3.479	5.665	0.012	0.213	0.196	1306.440
Excavator (Cat 349F)	0.38	396	1	80%	1.07E-04	8.86E-04	8.61E-04	4.10E-06	2.90E-05	2.66E-05	4.43E-01	0.103	0.853	0.829	0.004	0.028	0.026	426.883
Dozer (Cat D8T)	0.43	354	1	80%	2.09E-04	1.46E-03	2.25E-03	4.61E-06	8.71E-05	8.01E-05	4.99E-01	0.203	1.424	2.191	0.004	0.085	0.078	485.844
											Subtotal	**0.914**	**5.756**	**8.685**	**0.020**	**0.325**	**0.299**	**2219.167**
Plant Area																		
Highway Truck Loader (Cat 988K)	0.36	541	1	80%	1.95E-04	1.12E-03	1.82E-03	3.87E-06	6.82E-05	6.28E-05	4.19E-01	0.243	1.392	2.266	0.005	0.085	0.078	522.576
Highway Truck Loader (Cat 966M-BR)	0.36	276	1	20%	1.80E-04	9.85E-04	1.85E-03	3.88E-06	6.24E-05	5.74E-05	4.20E-01	0.029	0.157	0.294	0.001	0.010	0.009	66.787
Skid Steer Loader (Cat 246D)	0.37	74	1	50%	1.33E-04	1.77E-03	1.77E-03	3.96E-06	6.46E-05	5.94E-05	4.29E-01	0.015	0.193	0.193	0.000	0.007	0.007	47.003
											Subtotal	**0.286**	**1.742**	**2.753**	**0.006**	**0.102**	**0.094**	**636.365**
On-Site Haul Route																		
Off-Road Haul Truck (Cat 740EJ)	0.38	496	1	40%	1.64E-04	1.04E-03	1.25E-03	4.11E-06	4.54E-05	4.18E-05	4.45E-01	0.099	0.627	0.757	0.002	0.027	0.025	268.273
Supervisor/Maintenance Truck	0.34	450	2	15%	1.64E-04	1.04E-03	1.25E-03	4.11E-06	4.54E-05	4.18E-05	4.45E-01	0.060	0.382	0.461	0.002	0.017	0.015	163.329
Water Truck (Freightliner M2106)	0.38	350	1	75%	1.64E-04	1.04E-03	1.25E-03	4.11E-06	4.54E-05	4.18E-05	4.45E-01	0.131	0.829	1.001	0.003	0.036	0.033	354.947
											Subtotal	**0.290**	**1.838**	**2.219**	**0.007**	**0.080**	**0.074**	**786.549**
											Daily Total	**1.491**	**9.336**	**13.657**	**0.034**	**0.508**	**0.467**	**3642.082**
Ongoing Reclamation																		
Grader (Cat 140K)	0.41	171	1	30%	3.91E-04	3.12E-03	3.66E-03	4.41E-06	2.03E-04	1.87E-04	4.78E-01	0.066	0.525	0.616	0.001	0.034	0.031	80.374
Seeding Truck[6]	0.38	450	1	100%	1.64E-04	1.04E-03	1.25E-03	4.11E-06	4.54E-05	4.18E-05	4.45E-01	0.225	1.422	1.716	0.006	0.062	0.057	608.481
											Subtotal	**0.290**	**1.947**	**2.333**	**0.006**	**0.096**	**0.089**	**688.855**
											Max Daily	**1.782**	**11.283**	**15.989**	**0.040**	**0.604**	**0.556**	**4330.937**

Average Annual Emissions

ROG (tons)	CO (tons)	NO_X (tons)	SO_X (tons)	PM_{10} (tons)	$PM_{2.5}$ (tons)	CO_2 (tons)	CO_2e (MT)
0.196	1.240	1.794	0.004	0.068	0.063	468.081	424.636

Notes:
1. Equipment types, number, and use per project applicant,
2. Load Factor from CARB 20017 Off-road Diesel Emission Factors: Load Factor Look Up Table. https://www.arb.ca.gov/msei/ordiesel/ordas_ef_fcf_2017_v7.xlsx
3. Maximum daily hours for each piece of equipment is assumed to be 9 hours out of the 10 hours of mine operation. Usage per applicant. Equipment hours include reclamation activities.
4. Exhaust Emissions factors from CARB OFFROAD2017- ORION Web Database, for San Diego county, aggregate model years for 2020. https://www.arb.ca.gov/orion/
5. Daily Emissions = Load Factor x Horsepower x Max No. Equipment x Max Hours x Usage% x Emission Factor.

OnSite Fugitive Dust Emissions - All Phases

Daily Material Processing Quantities				
Annual Sales (tons)	Work Days	Daily Sales (tons)	Annual Excavation (tons)	Daily Excavated
570,000	251	2,271	705,000	2,809

Aggregate Mining & Processing Particulate (Fugitive Dust) Emissions - All Phases						
		PM10 EF	PM10		PM2.5	
Source	Activity	(lbs/ton)	Daily (lbs)	Annual (tons)	Daily (lbs)	Annual (tons)
Mining Pit Dust Emissions	Quarry Activity[1]	0.021	58.98	7.40	12.39	1.55
Groundline Conveyor	Conveyor Transfer, up to 9 points[2]	0.000048	1.21	0.15	0.25	0.03
Processing Area	Blade Mill[2]	0.000048	0.13	0.02	0.03	0.00
	Screening[3]	0.0021	5.90	0.74	1.24	0.16
	Radial Stacker[2]	0.000048	0.13	0.02	0.03	0.00
	Loading Delivery Trucks[2]	0.000048	0.13	0.02	0.03	0.00
	Loading Fines/Backfill Trucks[2]	0.000048	0.13	0.02	0.03	0.00

Notes:
1. Emission factors and calculation procedures from https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Misc/EFT/Mineral/Quarry_Activity/APCD_Quarry_Operations_Sand_Mining.pdf.
2. Emission factors and calculation procedures from https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Misc/EFT/Mineral/Aggregate_Transfer_Point/APCD_Transfer_Point_Fines_Material_Wet_Uncontrolled.pdf
3. Emission factors and calculation procedures from https://www.sandiegocounty.gov/content/dam/sdc/apcd/PDF/Misc/EFT/Mineral/Aggregate_Screening/APCD_Screening_Operation_Fines_Material_Wet_Uncontrolled.pdf

Vehicle Movement Particulate (Fugitive Dust) Emissions - All Phases

Vehicle Dust Emissions Factor Input[1]		
	PM10	PM2.5
a, empirical constant	0.9	0.9
b, empirical constant	0.45	0.45
k, empirical constant	1.5	0.15
s, surface material silt content (%)	13.6	13.6
W, average vehicle weight (tons)	-	-

Mining Pit Vehicles on Unpaved Surfaces[2]									
	Vehicle Use					PM10		PM2.5	
Source	Weight (tons)	Average Speed (MPH)	Hours	Miles	% Control Efficiency[4]	Emission Factor (lb/VMT)	Max Daily (lb)	Emission Factor (lb/VMT)	Max Daily (lb)
Loaders	55.70	5.00	16.00	80.00	95%	0.31	2.78	0.03	0.28
Excavator	58.75	5.00	6.40	32.00	95%	0.32	1.14	0.03	0.11
				Subtotal			**3.92**		**0.39**

Processing Area Vehicles on Unpaved Surfaces[2]									
	Vehicle Use					PM10		PM2.5	
Source	Weight (tons)	Average Speed (MPH)	Hours	Miles	% Control Efficiency[4]	Emission Factor (lb/VMT)	Max Daily (lb)	Emission Factor (lb/VMT)	Max Daily (lb)
Primary Loader	55.70	5.00	6.40	32.00	95%	0.31	1.11	0.03	0.11
Backup Loader	25.60	5.00	1.60	8.00	95%	0.22	0.20	0.02	0.02
Skidsteer Loader	3.60	5.00	4.00	20.00	95%	0.09	0.20	0.01	0.02
Highway Delivery Trucks	30.00	15.00	N/A	22.00	95%	0.24	1.73	0.02	0.17
				Subtotal			**3.24**		**0.32**

On-Site Haul Road Vehicles on Unpaved Surfaces[2]									
	Vehicle Use					PM10		PM2.5	
Source	Weight (tons)	Average Speed (MPH)	Hours	Miles	% Control Efficiency[4]	Emission Factor (lb/VMT)	Max Daily (lb)	Emission Factor (lb/VMT)	Max Daily (lb)
Fines/Backfill Haul Truck	39.30	15.00	3.20	48.00	95%	0.27	4.27	0.03	0.43
Supervisor/Maintenance Truck	3.60	15.00	2.40	36.00	95%	0.09	1.09	0.01	0.11
				Subtotal			**5.37**		**0.54**

Notes:
1. Emissions factor equation from EPA AP-42 Fifth Edition: 13.2.2 Unpaved Roads. EF = k * (s/12)^a * (W/3)^b
2. Calculations include reductions for vehicle speeds below 45 mph: Dust control on unpaved roads from Western Regional Air Partnership Fugitive Dust Handbook. 45 MPH = uncontrolled, % emissions reduction below 45 mph = speed/45.
3. Emissions control % for watering from Western Regional Air Partnership Fugitive Dust Handbook.

Controlled Dust Emissions Summary				
	Max Daily (lb)		Average Annual (ton)	
Source	PM10	PM2.5	PM10	PM2.5
Mining Pit Operation	58.984	12.387	7.403	1.555
Groundline Conveyor	1.213	0.255	0.152	0.032
Processing Area Operation	6.438	1.352	0.808	0.170
Mining Pit Vehicles	3.916	0.392	0.492	0.049
Processing Area Vehicles	3.245	0.324	0.407	0.041
On-Site Haul Road	5.368	0.537	0.674	0.067
Maximum Total (pounds)	**79.16**	**15.25**	**9.94**	**1.91**

On-Road Mobile Emissions

Phase 1								
Source	ROG	CO	NO_X	SO_X	Exhaust PM_{10}	Total PM_{10}	Total $PM_{2.5}$	CO_2e
Maximum Daily Emissions (pounds)								
Operational Mobile	0.451	6.863	19.887	0.084	0.1582	2.897	0.899	10090.57
Annual Emissions (tons)								
Operational Mobile	0.060	0.882	2.572	0.011	0.0205	0.369	0.115	1188.01

Phase 1 Diesel PM Distribution						
Segment	Segment Length	Haul Length	% of Haul Length	% of Trips	Daily Exhaust PM10	Annual Exhaust PM10
Willow Glen Drive	1.159479	16	7.25%	100%	0.01146	2.87755
Jamacha Road North	0.965052	16	6.03%	15%	0.00143	0.35925
Jamacha Road Southwest	1.365960	16	8.54%	85%	0.01148	2.88149

Phase 2								
Source	ROG	CO	NO_X	SO_X	Exhaust PM_{10}	Total PM_{10}	Total $PM_{2.5}$	CO_2e
Maximum Daily Emissions (pounds)								
Operational Mobile	0.435	6.902	19.442	0.084	0.1583	2.897	0.900	9710.67
Annual Emissions (tons)								
Operational Mobile	0.058	0.888	2.514	0.011	0.0205	0.369	0.115	1143.25

Phase 2 Diesel PM Distribution						
Segment	Segment Length	Haul Length	% of Haul Length	% of Trips	Daily Exhaust PM10	Annual Exhaust PM10
Willow Glen Drive	1.159479	16	7.25%	100%	0.01147	2.87937
Jamacha Road North	0.965052	16	6.03%	15%	0.00143	0.35948
Jamacha Road Southwest	1.365960	16	8.54%	85%	0.01149	2.88331

Phase 3								
Source	ROG	CO	NO_X	SO_X	Exhaust PM_{10}	Total PM_{10}	Total $PM_{2.5}$	CO_2e
Maximum Daily Emissions (pounds)								
Operational Mobile	0.756	9.909	23.306	0.102	0.0411	2.700	0.766	11362.09
Annual Emissions (tons)								
Operational Mobile	0.056	0.898	2.406	0.0101	0.0199	0.368	0.115	1069.36

Phase 3 Diesel PM Distribution						
Segment	Segment Length	Haul Length	% of Haul Length	% of Trips	Daily Exhaust PM10	Annual Exhaust PM10
Willow Glen Drive	1.159479	16	7.25%	100%	0.00298	0.74758
Jamacha Road North	0.965052	16	6.03%	15%	0.00037	0.09333
Jamacha Road Southwest	1.365960	16	8.54%	85%	0.00298	0.74860

Notes:
1. On-Road operational mobile emissions estimated using CalEEMod version 2020.4.0.
2. Project trip generation per TIA.
3. CalEEMod default trip distances and purpose for worker and vendors, San Diego County
4. Haul Distance per TIA.

Off-Site GHG Emissions from Electricity Use - All Phases

GHG Intensity Factors (lb/MW-hr)			
	CO_2	CH_4	N_20
San Diego Gas & Electric	540	0.033	0.00400

							CO2		CH4		N20		Co2e
Equipment	Quantity	Hours/yr	HP	KW	Power Factor	MW-hr/yr	Intensity Factor	MT/Year	Intensity Factor	MT/Year	Intensity Factor	MT/Year	MT/yr
Feed Hopper	1	1,763	25	18.65	0.86	28.3	540	6.9261	0.029	0.0004	0.00617	0.00008	6.96
Groundline Conveyor 825'	5	1,763	50	37.3	0.86	282.8	540	69.2610	0.029	0.0037	0.00617	0.00079	69.59
Groundline Conveyor 375'	1	1,763	30	22.38	0.86	33.9	540	8.3113	0.029	0.0004	0.00617	0.00009	8.35
Groundline Conveyor 200'	1	1,763	25	18.65	0.86	28.3	540	6.9261	0.029	0.0004	0.00617	0.00008	6.96
Truss Frame Conveyor	1	1,763	50	37.3	0.86	56.6	540	13.8522	0.029	0.0007	0.00617	0.00016	13.92
Triple Deck Screen	1	1,763	50	37.3	0.86	56.6	540	13.8522	0.029	0.0007	0.00617	0.00016	13.92
Blade Mill	1	1,763	100	74.6	0.86	113.1	540	27.7044	0.029	0.0015	0.00617	0.00032	27.84
Fine Material Washer	1	1,763	50	37.3	0.86	56.6	540	13.8522	0.029	0.0007	0.00617	0.00016	13.92
Radial Stacker 80'	1	1,763	25	18.65	0.86	28.3	540	6.9261	0.029	0.0004	0.00617	0.00008	6.96
Radial Stacker 100'	1	1,763	30	22.38	0.86	33.9	540	8.3113	0.029	0.0004	0.00617	0.00009	8.35
Water pumping	-	-	-	-	-	18.4	540	4.4971	0.029	0.0002	0.00617	0.00005	4.52
Office, control room	-	-	-	-	-	10.8	540	2.6453	0.029	0.0001	0.00617	0.00003	2.66
Security lighting	-	-	-	-	-	8.8	540	2.1555	0.029	0.0001	0.00617	0.00002	2.17
												Total	**186.10**

Notes:
1. GHG Intensity Factors from CalEEMod User's Guide Appendix D (May 2021).
2. Per project applicant, the plant processes 400 tons/hour of raw material. Total annual hours = 705,000 tons / 400 tons/hour = 1,763 hours.
3. 1 HP = 0.746 KW. Power factor is typical average for a 3-phase motor operating at 75 percent of rated power. MWhr/year = Hours * HP *0.746 * Power Factor / 1000 KW/MW.
4. Estimated water use = 180 acre-feet/year per applicant. Energy required to lift 1 acre-foot of water 1 foot in elevation = 1.02 KWhr. Assuming a pump depth of 100 feet, electricity use for pumping = 180 * 1.02 *100 = 18,360 KWhr.
5. CalEEMod User's Guide Appendix D, electricity use for general office building (title 24, non-title 24, and lighting) climate zone 13 = 13.44 KWhr/square foot. Assuming 800 square feet, electricity use = 10.8 MWhr/yr.
6. CalEEMod User's Guide Appendix D, electricity for lighting a parking lot = 0.35 KWhr/square foot. Assuming 25,000 square feet of lit processing area, electricity use = 8.8 MWhr/yr.

Off-Site GHG Emissions from Electricity Use - All Phases

GHG Intensity Factors (lb/MW-hr)			
	CO_2	CH_4	N_20
San Diego Gas & Electric	540	0.033	0.00400

							CO2		CH4		N20		Co2e
Equipment	Quantity	Hours/yr	HP	KW	Power Factor	MW-hr/yr	Intensity Factor	MT/Year	Intensity Factor	MT/Year	Intensity Factor	MT/Year	MT/yr
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Fine Material Washer	1	1,763	50	37.3	0.86	56.6	540	13.8522	0.029	0.0007	0.00617	0.00016	13.92
Radial Stacker 80'	1	1,763	25	18.65	0.86	28.3	540	6.9261	0.029	0.0004	0.00617	0.00008	6.96
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Office, control room	-	-	-	-	-	10.8	540	2.6453	0.029	0.0001	0.00617	0.00003	2.66
Security lighting	-	-	-	-	-	8.8	540	2.1555	0.029	0.0001	0.00617	0.00002	2.17
												Total	**186.10**

Notes:
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6. CalEEMod User's Guide Appendix D, electricity for lighting a parking lot = 0.35 KWhr/square foot. Assuming 25,000 square feet of lit processing area, electricity use = 8.8 MWhr/yr.

Off-Road Emissions Factor Calculations

Model Output: OFFROAD2017 (v1.0.1) Emissions Inventory
Region Type: County
Region: San Diego
Calendar Year: 2022
Scenario: All Adopted Rules - Exhaust
Vehicle Classification: OFFROAD2017 Equipment Types
Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	CalYr	VehClass	MdlYr	HP_Bin	Fuel	ROG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2_5_tpd	SOx_tpd	Horsepower_Hours_hhpy
San Diego	2022	ConstMin - Rubber Tired Loaders	Aggregate	600	Diesel	1.72620E-02	9.87535E-02	1.60793E-01	3.70839E+01	6.03689E-03	5.55394E-03	3.42431E-04	64615332.86
				Emission Factor	**lb/hp-hr**	**1.95154E-04**	**1.11644E-03**	**1.81782E-03**	**4.19247E-01**	**6.82493E-05**	**6.27894E-05**	**3.87131E-06**	
San Diego	2022	ConstMin - Rubber Tired Loaders	Aggregate	300	Diesel	1.23049E-02	6.74952E-02	1.26717E-01	2.87776E+01	4.27295E-03	3.93112E-03	2.65758E-04	50039882.29
				Emission Factor	**lb/hp-hr**	**1.79632E-04**	**9.85319E-04**	**1.84987E-03**	**4.20106E-01**	**6.23781E-05**	**5.73878E-05**	**3.87964E-06**	
San Diego	2022	ConstMin - Off-Highway Trucks	Aggregate	600	Diesel	1.34307E-02	8.49843E-02	1.02593E-01	3.63723E+01	3.71328E-03	3.41622E-03	3.35947E-04	59735196.43
				Emission Factor	**lb/hp-hr**	**1.64243E-04**	**1.03927E-03**	**1.25461E-03**	**4.44796E-01**	**4.54096E-05**	**4.17768E-05**	**4.10829E-06**	
San Diego	2022	ConstMin - Excavators	Aggregate	600	Diesel	6.60403E-03	5.46378E-02	5.31064E-02	2.73373E+01	1.78572E-03	1.64286E-03	2.52583E-04	45053213.44
				Emission Factor	**lb/hp-hr**	**1.07079E-04**	**8.85907E-04**	**8.61076E-04**	**4.43251E-01**	**2.89539E-05**	**2.66376E-05**	**4.09542E-06**	
San Diego	2022	ConstMin - Crawler Tractors	Aggregate	600	Diesel	8.12417E-03	5.69584E-02	8.76263E-02	1.94297E+01	3.39352E-03	3.12203E-03	1.79436E-04	28460412.56
				Emission Factor	**lb/hp-hr**	**2.08525E-04**	**1.46196E-03**	**2.24912E-03**	**4.98707E-01**	**8.71022E-05**	**8.01340E-05**	**4.60562E-06**	
San Diego	2022	ConstMin - Skid Steer Loaders	Aggregate	75	Diesel	3.02974E-03	6.06030E-02	4.03346E-02	9.80034E+00	1.47475E-03	1.35677E-03	9.05339E-05	16681372.26
				Emission Factor	**lb/hp-hr**	**1.32676E-04**	**2.65389E-03**	**1.76631E-03**	**4.29170E-01**	**6.45812E-05**	**5.94147E-05**	**3.96460E-06**	
San Diego	2022	ConstMin - Graders	Aggregate	175	Diesel	6.01282E-03	4.80231E-02	5.63761E-02	7.35354E+00	3.12943E-03	2.87907E-03	6.78381E-05	11245830.91
				Emission Factor	**lb/hp-hr**	**3.90578E-04**	**3.11945E-03**	**3.66205E-03**	**4.77667E-01**	**2.03280E-04**	**1.87017E-04**	**4.40658E-06**	

Notes: Emissions Factors (lb/hp-hr) = emissions (tons/day) * 2000 (lb/ton) / hp-hr per year * 365 (days/yr)

OnSite TAC Emissions - All Phases

Operating Days per Year	251
Equipment/Plant Hours per Day	9
Delivery Trucks Hours per Day	9

Controlled Dust Emissions Summary		
	PM10	
Source	lbs/day	TPY
Mine Extraction Area	62.901	7.894
Processing Area	9.682	1.215
Groundline Conveyor	1.213	0.152
On-Site Haul Road	5.368	0.674

Source	AB2588 Toxic Air Contaminant	Ci (ppmw)	Emissions (lb/hr)	Emissions (lb/day)	Emissions (lbs/yr)
Mine Extraction Area	DPM	NA	4.00E-02	3.60E-01	8.18E+01
	Arsenic	6	4.19E-05	3.77E-04	9.47E-02
	Beryllium	1	6.99E-06	6.29E-05	1.58E-02
	Cadmium	1	6.99E-06	6.29E-05	1.58E-02
	Hex-Chromium	-	0.00E+00	0.00E+00	0.00E+00
	Copper	72	5.03E-04	4.53E-03	1.14E+00
	Lead	19	1.33E-04	1.20E-03	3.00E-01
	Manganese	315	2.20E-03	1.98E-02	4.97E+00
	Mercury	-	0.00E+00	0.00E+00	0.00E+00
	Nickle	20	1.40E-04	1.26E-03	3.16E-01
	Selenium	1	6.99E-06	6.29E-05	1.58E-02
	Crytalline Silica	100,000	6.99E-01	6.29E+00	1.58E+03
Processing Area	DPM	NA	1.13E-02	1.02E-01	2.56E+01
	Arsenic	22	2.37E-05	2.13E-04	5.35E-02
	Beryllium	1	1.08E-06	9.68E-06	2.43E-03
	Cadmium	1	1.08E-06	9.68E-06	2.43E-03
	Hex-Chromium	-	0.00E+00	0.00E+00	0.00E+00
	Copper	37	3.98E-05	3.58E-04	8.99E-02
	Lead	50	5.38E-05	4.84E-04	1.22E-01
	Manganese	530	5.70E-04	5.13E-03	1.29E+00
	Mercury	-	0.00E+00	0.00E+00	0.00E+00
	Nickle	28	3.01E-05	2.71E-04	6.80E-02
	Selenium	1	1.08E-06	9.68E-06	2.43E-03
	Crytalline Silica	100,000	1.08E-01	9.68E-01	2.43E+02
Groundline Conveyor	DPM	NA	0.00E+00	0.00E+00	0.00E+00
	Arsenic	6	8.09E-07	7.28E-06	1.83E-03
	Beryllium	1	1.35E-07	1.21E-06	3.05E-04
	Cadmium	1	1.35E-07	1.21E-06	3.05E-04
	Hex-Chromium	-	0.00E+00	0.00E+00	0.00E+00
	Copper	72	9.71E-06	8.74E-05	2.19E-02
	Lead	19	2.56E-06	2.31E-05	5.79E-03
	Manganese	315	4.25E-05	3.82E-04	9.59E-02
	Mercury	-	0.00E+00	0.00E+00	0.00E+00
	Nickle	20	2.70E-06	2.43E-05	6.09E-03
	Selenium	1	1.35E-07	1.21E-06	3.05E-04
	Crytalline Silica	100,000	1.35E-02	1.21E-01	3.05E+01
On Site Haul Road	DPM	NA	8.92E-03	8.03E-02	2.02E+01
	Arsenic	21	1.25E-05	1.13E-04	2.83E-02
	Beryllium	1	5.96E-07	5.37E-06	1.35E-03
	Cadmium	1	5.96E-07	5.37E-06	1.35E-03
	Hex-Chromium	-	0.00E+00	0.00E+00	0.00E+00
	Copper	40	2.39E-05	2.15E-04	5.39E-02
	Lead	30	1.79E-05	1.61E-04	4.04E-02
	Manganese	490	2.92E-04	2.63E-03	6.60E-01
	Mercury	-	0.00E+00	0.00E+00	0.00E+00
	Nickle	19	1.13E-05	1.02E-04	2.56E-02
	Selenium	1	5.96E-07	5.37E-06	1.35E-03
	Crytalline Silica	100,000	5.96E-02	5.37E-01	1.35E+02

OffSite TAC Emissions - By Phase

Operating Days per Year	251
Equipment/Plant Hours per Day	9
Delivery Trucks Hours per Day	9

Phase 1

Source	Source ID	DPM	
		lb/yr	lb/hr
Truck Route Willow Glen Drive	Willow	2.87755	1.274E-03
Truck Route Jamacha Road North Area	JamachaN	0.35925	1.590E-04
Truck Route Jamacha Road Southwest Area	JamachaSW	2.88149	1.276E-03

Phase 2

Source	Source ID	DPM	
		lb/yr	lb/hr
Truck Route Willow Glen Drive	Willow	2.87937	1.275E-03
Truck Route Jamacha Road North Area	JamachaN	0.35948	1.591E-04
Truck Route Jamacha Road Southwest Area	JamachaSW	2.88331	1.276E-03

Phase 3

Source	Source ID	DPM	
		lb/yr	lb/hr
Truck Route Willow Glen Drive	Willow	0.74758	3.309E-04
Truck Route Jamacha Road North Area	JamachaN	0.09333	4.132E-05
Truck Route Jamacha Road Southwest Area	JamachaSW	0.74860	3.314E-04

Appendix C

CalEEMod Output

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SIR-02 Cottonwood Sand Mine 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 Office Building	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	16.00	1000sqft	0.37	16,000.00	0
Other Non-Asphalt Surfaces	8.00	Acre	8.00	348,480.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run v3 - Roadway improvment construction activity added; Updated Phase 1 schedule; Update to CalEEMOd 2020.4.0.

Land Use - No construction for the office building, structure will be mobile/prefabricated units.
Other non-asphlt areas = main entrance, parking/load area, plant area, settling ponds, and 2nd entrance west.
Other ashpalt surfaces = improvements to Willow Glen Dr.

Construction Phase - No building construction, schedule per project applicant.

Off-road Equipment - Demolition of a residential structure, garage, and golf couarse restroom...total approx 3,000 SF.

Off-road Equipment - Equipment for Phase 1 demolition.

Off-road Equipment - Equipment for Phase 1 grading.

Off-road Equipment - Equipment for Phase 1 site preparation.

Off-road Equipment - Equipment for construction of new site access points/roads

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Equipment for Willow Glen Drive Improvements - demolition.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for Willow Glen Drive Improvements - widening.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for Willow Glen Drive Improvements - paving.

Off-road Equipment - Equipment for Willow Glen Drive Improvements - striping.
Off-Highway Truck = striping truck.
Crane for installing light posts.

Trips and VMT - 50 fill haul trips @ 10 CY per trip during grading for wideniing Willow Glen Dr.
8 loads concrete and 8 loads asphalt during paving for Willow Glen improvements.

Demolition -

Grading -

Architectural Coating - Pavement marking coating 100 g/L maximum VOC contentnt per SDAPCD Rule 67.0.1.
10% of Willow Glen Dr. improvment area asuumed to require striping (1,600 SF).

Vehicle Trips - ADT and ATL per project TIA; employee and vendor trips assinged to office (71% employees, 29% vendors); truck trips assigned to non-ashpalt surface.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - Operational mobile emissions only, this model.

Area Coating - Operational mobile emissions only, this model.

Energy Use - Building energy calculated off-model.

Water And Wastewater - Water supplied on-site, no sewer hookup.

Solid Waste - Solid waste calculated off-model.

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Fleet Mix - Fleet mix for trucks = 100% HHD.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	21,869.00	1,600.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaCoating	Area_Parking	21869	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	20.00	2.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.81	0.00
tblEnergyUse	NT24E	4.97	0.00
tblEnergyUse	NT24NG	4.20	0.00
tblEnergyUse	T24E	4.16	0.00
tblEnergyUse	T24NG	15.83	0.00
tblFleetMix	HHD	6.1840e-003	1.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2140e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	5.1640e-003	0.00
tblFleetMix	MHD	8.4930e-003	0.00
tblFleetMix	OBUS	7.1500e-004	0.00
tblFleetMix	SBUS	9.8200e-004	0.00
tblFleetMix	UBUS	5.5600e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.93	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	32.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	29.00
tblVehicleTrips	CW_TL	14.70	16.00
tblVehicleTrips	CW_TTP	33.00	71.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	36.00
tblVehicleTrips	WD_TR	0.00	22.00
tblWater	IndoorWaterUseRate	177,733.75	0.00
tblWater	OutdoorWaterUseRate	108,933.59	0.00

2.0 Emissions Summary

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	0.0786	0.6430	0.4473	1.0300e-003	0.1689	0.0284	0.1973	0.0792	0.0263	0.1055	0.0000	90.7161	90.7161	0.0252	8.4000e-004	91.5961
Maximum	**0.0786**	**0.6430**	**0.4473**	**1.0300e-003**	**0.1689**	**0.0284**	**0.1973**	**0.0792**	**0.0263**	**0.1055**	**0.0000**	**90.7161**	**90.7161**	**0.0252**	**8.4000e-004**	**91.5961**

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					
2022	0.0786	0.6430	0.4473	1.0300e-003	0.0797	0.0284	0.1081	0.0366	0.0263	0.0629	0.0000	90.7160	90.7160	0.0252	8.4000e-004	91.5960
Maximum	**0.0786**	**0.6430**	**0.4473**	**1.0300e-003**	**0.0797**	**0.0284**	**0.1081**	**0.0366**	**0.0263**	**0.0629**	**0.0000**	**90.7160**	**90.7160**	**0.0252**	**8.4000e-004**	**91.5960**

	ROG	NOx	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**	**52.82**	**0.00**	**45.22**	**53.76**	**0.00**	**40.37**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	2-1-2022	4-30-2022	0.4839	0.4839
2	5-1-2022	7-31-2022	0.2413	0.2413
		Highest	0.4839	0.4839

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	2.0000e-005	0.0000	2.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e-004	4.5000e-004	0.0000	0.0000	4.8000e-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	0.0000
Mobile	0.0602	2.5717	0.8822	0.0113	0.3485	0.0205	0.3690	0.0954	0.0196	0.1150	0.0000	1,133.9388	1,133.9388	0.0573	0.1767	1,188.0124
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0602**	**2.5717**	**0.8824**	**0.0113**	**0.3485**	**0.0205**	**0.3690**	**0.0954**	**0.0196**	**0.1150**	**0.0000**	**1,133.9393**	**1,133.9393**	**0.0573**	**0.1767**	**1,188.0129**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	2.0000e-005	0.0000	2.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e-004	4.5000e-004	0.0000	0.0000	4.8000e-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	0.0000
Mobile	0.0602	2.5717	0.8822	0.0113	0.3485	0.0205	0.3690	0.0954	0.0196	0.1150	0.0000	1,133.9388	1,133.9388	0.0573	0.1767	1,188.0124
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0602**	**2.5717**	**0.8824**	**0.0113**	**0.3485**	**0.0205**	**0.3690**	**0.0954**	**0.0196**	**0.1150**	**0.0000**	**1,133.9393**	**1,133.9393**	**0.0573**	**0.1767**	**1,188.0129**

	ROG	NOx	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	Site Access	Site Preparation	2/1/2022	2/21/2022	5	15	
2	Willow Glen Imp. Demolition	Demolition	2/22/2022	2/23/2022	5	2	
3	Willow Glen Imp. Grading	Grading	2/24/2022	3/16/2022	5	15	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4	Willow Glen Imp. Paving	Paving	3/17/2022	3/18/2022	5	2	
5	Willow Glen Imp. Striping	Architectural Coating	3/19/2022	3/22/2022	5	2	
6	Phase 1 Demolition	Demolition	3/23/2022	4/19/2022	5	20	
7	Phase 1 Site Preparation	Site Preparation	4/20/2022	5/3/2022	5	10	
8	Phase 1 Grading	Grading	5/4/2022	5/31/2022	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 8.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 1,600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Access	Graders	1	8.00	187	0.41
Site Access	Rubber Tired Dozers	1	8.00	247	0.40
Site Access	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Willow Glen Imp. Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Willow Glen Imp. Demolition	Graders	1	8.00	187	0.41
Willow Glen Imp. Demolition	Off-Highway Trucks	1	4.00	402	0.38
Willow Glen Imp. Grading	Crawler Tractors	1	8.00	212	0.43
Willow Glen Imp. Grading	Off-Highway Trucks	1	8.00	402	0.38
Willow Glen Imp. Grading	Rollers	1	8.00	80	0.38
Willow Glen Imp. Grading	Skid Steer Loaders	1	8.00	65	0.37
Willow Glen Imp. Paving	Pavers	1	8.00	130	0.42
Willow Glen Imp. Paving	Paving Equipment	1	8.00	132	0.36
Willow Glen Imp. Paving	Rollers	1	8.00	80	0.38
Willow Glen Imp. Striping	Cranes	1	4.00	231	0.29
Willow Glen Imp. Striping	Off-Highway Trucks	1	8.00	402	0.38

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Phase 1 Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Phase 1 Demolition	Excavators	1	8.00	158	0.38
Phase 1 Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Phase 1 Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Phase 1 Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 1 Grading	Excavators	1	8.00	158	0.38
Phase 1 Grading	Graders	1	8.00	187	0.41
Phase 1 Grading	Rubber Tired Dozers	1	8.00	247	0.40
Phase 1 Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Access	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Demolition	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Grading	4	10.00	0.00	100.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Paving	3	8.00	0.00	32.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Striping	2	31.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 Demolition	3	8.00	0.00	14.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Access - 2022

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					0.0531	0.0000	0.0531	0.0257	0.0000	0.0257	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0106	0.1180	0.0566	1.4000e-004		5.0600e-003	5.0600e-003		4.6600e-003	4.6600e-003	0.0000	12.0398	12.0398	3.8900e-003	0.0000	12.1372
Total	**0.0106**	**0.1180**	**0.0566**	**1.4000e-004**	**0.0531**	**5.0600e-003**	**0.0582**	**0.0257**	**4.6600e-003**	**0.0304**	**0.0000**	**12.0398**	**12.0398**	**3.8900e-003**	**0.0000**	**12.1372**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.8000e-004	2.1200e-003	1.0000e-005	7.5000e-004	0.0000	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6095	0.6095	2.0000e-005	2.0000e-005	0.6146
Total	**2.3000e-004**	**1.8000e-004**	**2.1200e-003**	**1.0000e-005**	**7.5000e-004**	**0.0000**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6095**	**0.6095**	**2.0000e-005**	**2.0000e-005**	**0.6146**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Access - 2022

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					0.0239	0.0000	0.0239	0.0116	0.0000	0.0116	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0106	0.1180	0.0566	1.4000e-004		5.0600e-003	5.0600e-003		4.6600e-003	4.6600e-003	0.0000	12.0398	12.0398	3.8900e-003	0.0000	12.1372
Total	**0.0106**	**0.1180**	**0.0566**	**1.4000e-004**	**0.0239**	**5.0600e-003**	**0.0290**	**0.0116**	**4.6600e-003**	**0.0162**	**0.0000**	**12.0398**	**12.0398**	**3.8900e-003**	**0.0000**	**12.1372**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.8000e-004	2.1200e-003	1.0000e-005	7.5000e-004	0.0000	7.5000e-004	2.0000e-004	0.0000	2.0000e-004	0.0000	0.6095	0.6095	2.0000e-005	2.0000e-005	0.6146
Total	**2.3000e-004**	**1.8000e-004**	**2.1200e-003**	**1.0000e-005**	**7.5000e-004**	**0.0000**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**	**0.0000**	**0.6095**	**0.6095**	**2.0000e-005**	**2.0000e-005**	**0.6146**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Willow Glen Imp. Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0400e-003	0.0101	7.0700e-003	2.0000e-005		3.9000e-004	3.9000e-004		3.7000e-004	3.7000e-004	0.0000	1.6996	1.6996	4.1000e-004	0.0000	1.7097
Total	**1.0400e-003**	**0.0101**	**7.0700e-003**	**2.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**1.6996**	**1.6996**	**4.1000e-004**	**0.0000**	**1.7097**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0820
Total	**3.0000e-005**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0813**	**0.0813**	**0.0000**	**0.0000**	**0.0820**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Willow Glen Imp. Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.0400e-003	0.0101	7.0700e-003	2.0000e-005		3.9000e-004	3.9000e-004		3.7000e-004	3.7000e-004	0.0000	1.6996	1.6996	4.1000e-004	0.0000	1.7097
Total	**1.0400e-003**	**0.0101**	**7.0700e-003**	**2.0000e-005**		**3.9000e-004**	**3.9000e-004**		**3.7000e-004**	**3.7000e-004**	**0.0000**	**1.6996**	**1.6996**	**4.1000e-004**	**0.0000**	**1.7097**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0820
Total	**3.0000e-005**	**2.0000e-005**	**2.8000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**0.0000**	**0.0813**	**0.0813**	**0.0000**	**0.0000**	**0.0820**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Willow Glen Imp. Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.9800e-003	0.0000	3.9800e-003	4.3000e-004	0.0000	4.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4200e-003	0.0951	0.0669	1.9000e-004		3.8000e-003	3.8000e-003		3.5000e-003	3.5000e-003	0.0000	16.9588	16.9588	5.4800e-003	0.0000	17.0959
Total	**9.4200e-003**	**0.0951**	**0.0669**	**1.9000e-004**	**3.9800e-003**	**3.8000e-003**	**7.7800e-003**	**4.3000e-004**	**3.5000e-003**	**3.9300e-003**	**0.0000**	**16.9588**	**16.9588**	**5.4800e-003**	**0.0000**	**17.0959**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	8.4200e-003	1.9900e-003	3.0000e-005	8.6000e-004	8.0000e-005	9.3000e-004	2.4000e-004	7.0000e-005	3.1000e-004	0.0000	3.1341	3.1341	1.5000e-004	5.0000e-004	3.2862
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.2000e-004	2.6400e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	0.0000	2.5000e-004	0.0000	0.7619	0.7619	2.0000e-005	2.0000e-005	0.7682
Total	**5.0000e-004**	**8.6400e-003**	**4.6300e-003**	**4.0000e-005**	**1.8000e-003**	**9.0000e-005**	**1.8700e-003**	**4.9000e-004**	**7.0000e-005**	**5.6000e-004**	**0.0000**	**3.8959**	**3.8959**	**1.7000e-004**	**5.2000e-004**	**4.0544**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Willow Glen Imp. Grading - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.7900e-003	0.0000	1.7900e-003	1.9000e-004	0.0000	1.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.4200e-003	0.0951	0.0669	1.9000e-004		3.8000e-003	3.8000e-003		3.5000e-003	3.5000e-003	0.0000	16.9588	16.9588	5.4800e-003	0.0000	17.0959
Total	**9.4200e-003**	**0.0951**	**0.0669**	**1.9000e-004**	**1.7900e-003**	**3.8000e-003**	**5.5900e-003**	**1.9000e-004**	**3.5000e-003**	**3.6900e-003**	**0.0000**	**16.9588**	**16.9588**	**5.4800e-003**	**0.0000**	**17.0959**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.2000e-004	8.4200e-003	1.9900e-003	3.0000e-005	8.6000e-004	8.0000e-005	9.3000e-004	2.4000e-004	7.0000e-005	3.1000e-004	0.0000	3.1341	3.1341	1.5000e-004	5.0000e-004	3.2862
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.8000e-004	2.2000e-004	2.6400e-003	1.0000e-005	9.4000e-004	1.0000e-005	9.4000e-004	2.5000e-004	0.0000	2.5000e-004	0.0000	0.7619	0.7619	2.0000e-005	2.0000e-005	0.7682
Total	**5.0000e-004**	**8.6400e-003**	**4.6300e-003**	**4.0000e-005**	**1.8000e-003**	**9.0000e-005**	**1.8700e-003**	**4.9000e-004**	**7.0000e-005**	**5.6000e-004**	**0.0000**	**3.8959**	**3.8959**	**1.7000e-004**	**5.2000e-004**	**4.0544**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Willow Glen Imp. Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5000e-004	5.5600e-003	7.2900e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.6000e-004	2.6000e-004	0.0000	1.0014	1.0014	3.2000e-004	0.0000	1.0095
Paving	4.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0300e-003**	**5.5600e-003**	**7.2900e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**1.0014**	**1.0014**	**3.2000e-004**	**0.0000**	**1.0095**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.6900e-003	6.4000e-004	1.0000e-005	2.7000e-004	3.0000e-005	3.0000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0029	1.0029	5.0000e-005	1.6000e-004	1.0516
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0820
Total	**1.0000e-004**	**2.7100e-003**	**9.2000e-004**	**1.0000e-005**	**3.7000e-004**	**3.0000e-005**	**4.0000e-004**	**1.1000e-004**	**2.0000e-005**	**1.3000e-004**	**0.0000**	**1.0842**	**1.0842**	**5.0000e-005**	**1.6000e-004**	**1.1335**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Willow Glen Imp. Paving - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5000e-004	5.5600e-003	7.2900e-003	1.0000e-005		2.8000e-004	2.8000e-004		2.6000e-004	2.6000e-004	0.0000	1.0014	1.0014	3.2000e-004	0.0000	1.0095
Paving	4.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**1.0300e-003**	**5.5600e-003**	**7.2900e-003**	**1.0000e-005**		**2.8000e-004**	**2.8000e-004**		**2.6000e-004**	**2.6000e-004**	**0.0000**	**1.0014**	**1.0014**	**3.2000e-004**	**0.0000**	**1.0095**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.0000e-005	2.6900e-003	6.4000e-004	1.0000e-005	2.7000e-004	3.0000e-005	3.0000e-004	8.0000e-005	2.0000e-005	1.0000e-004	0.0000	1.0029	1.0029	5.0000e-005	1.6000e-004	1.0516
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-005	2.0000e-005	2.8000e-004	0.0000	1.0000e-004	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0813	0.0813	0.0000	0.0000	0.0820
Total	**1.0000e-004**	**2.7100e-003**	**9.2000e-004**	**1.0000e-005**	**3.7000e-004**	**3.0000e-005**	**4.0000e-004**	**1.1000e-004**	**2.0000e-005**	**1.3000e-004**	**0.0000**	**1.0842**	**1.0842**	**5.0000e-005**	**1.6000e-004**	**1.1335**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Willow Glen Imp. Striping - 2022

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					
Archit. Coating	0.0153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.1100e-003	4.3000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	1.4138	1.4138	4.6000e-004	0.0000	1.4252
Total	**0.0160**	**6.1100e-003**	**4.3000e-003**	**2.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**1.4138**	**1.4138**	**4.6000e-004**	**0.0000**	**1.4252**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	1.0900e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3149	0.3149	1.0000e-005	1.0000e-005	0.3175
Total	**1.2000e-004**	**9.0000e-005**	**1.0900e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3149**	**0.3149**	**1.0000e-005**	**1.0000e-005**	**0.3175**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Willow Glen Imp. Striping - 2022

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					
Archit. Coating	0.0153					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.1000e-004	6.1100e-003	4.3000e-003	2.0000e-005		2.3000e-004	2.3000e-004		2.1000e-004	2.1000e-004	0.0000	1.4138	1.4138	4.6000e-004	0.0000	1.4252
Total	**0.0160**	**6.1100e-003**	**4.3000e-003**	**2.0000e-005**		**2.3000e-004**	**2.3000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**1.4138**	**1.4138**	**4.6000e-004**	**0.0000**	**1.4252**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	1.0900e-003	0.0000	3.9000e-004	0.0000	3.9000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3149	0.3149	1.0000e-005	1.0000e-005	0.3175
Total	**1.2000e-004**	**9.0000e-005**	**1.0900e-003**	**0.0000**	**3.9000e-004**	**0.0000**	**3.9000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.3149**	**0.3149**	**1.0000e-005**	**1.0000e-005**	**0.3175**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Phase 1 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4900e-003	0.0000	1.4900e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1337	0.1050	2.0000e-004		6.5300e-003	6.5300e-003		6.1300e-003	6.1300e-003	0.0000	17.4154	17.4154	4.1900e-003	0.0000	17.5200
Total	**0.0140**	**0.1337**	**0.1050**	**2.0000e-004**	**1.4900e-003**	**6.5300e-003**	**8.0200e-003**	**2.3000e-004**	**6.1300e-003**	**6.3600e-003**	**0.0000**	**17.4154**	**17.4154**	**4.1900e-003**	**0.0000**	**17.5200**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.1800e-003	2.8000e-004	0.0000	1.2000e-004	1.0000e-005	1.3000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4388	0.4388	2.0000e-005	7.0000e-005	0.4601
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.4000e-004	2.8200e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0000e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8127	0.8127	2.0000e-005	2.0000e-005	0.8195
Total	**3.3000e-004**	**1.4200e-003**	**3.1000e-003**	**1.0000e-005**	**1.1200e-003**	**2.0000e-005**	**1.1300e-003**	**3.0000e-004**	**2.0000e-005**	**3.1000e-004**	**0.0000**	**1.2514**	**1.2514**	**4.0000e-005**	**9.0000e-005**	**1.2795**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Phase 1 Demolition - 2022

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					6.7000e-004	0.0000	6.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0140	0.1337	0.1050	2.0000e-004		6.5300e-003	6.5300e-003		6.1300e-003	6.1300e-003	0.0000	17.4153	17.4153	4.1900e-003	0.0000	17.5200
Total	**0.0140**	**0.1337**	**0.1050**	**2.0000e-004**	**6.7000e-004**	**6.5300e-003**	**7.2000e-003**	**1.0000e-004**	**6.1300e-003**	**6.2300e-003**	**0.0000**	**17.4153**	**17.4153**	**4.1900e-003**	**0.0000**	**17.5200**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.0000e-005	1.1800e-003	2.8000e-004	0.0000	1.2000e-004	1.0000e-005	1.3000e-004	3.0000e-005	1.0000e-005	4.0000e-005	0.0000	0.4388	0.4388	2.0000e-005	7.0000e-005	0.4601
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0000e-004	2.4000e-004	2.8200e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0000e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.8127	0.8127	2.0000e-005	2.0000e-005	0.8195
Total	**3.3000e-004**	**1.4200e-003**	**3.1000e-003**	**1.0000e-005**	**1.1200e-003**	**2.0000e-005**	**1.1300e-003**	**3.0000e-004**	**2.0000e-005**	**3.1000e-004**	**0.0000**	**1.2514**	**1.2514**	**4.0000e-005**	**9.0000e-005**	**1.2795**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Phase 1 Site Preparation - 2022

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					0.0328	0.0000	0.0328	0.0168	0.0000	0.0168	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0100e-003	0.0524	0.0291	6.0000e-005		2.5400e-003	2.5400e-003		2.3300e-003	2.3300e-003	0.0000	5.1178	5.1178	1.6600e-003	0.0000	5.1592
Total	**5.0100e-003**	**0.0524**	**0.0291**	**6.0000e-005**	**0.0328**	**2.5400e-003**	**0.0353**	**0.0168**	**2.3300e-003**	**0.0192**	**0.0000**	**5.1178**	**5.1178**	**1.6600e-003**	**0.0000**	**5.1592**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	8.8000e-004	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2540	0.2540	1.0000e-005	1.0000e-005	0.2561
Total	**9.0000e-005**	**7.0000e-005**	**8.8000e-004**	**0.0000**	**3.1000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2540**	**0.2540**	**1.0000e-005**	**1.0000e-005**	**0.2561**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Phase 1 Site Preparation - 2022

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					0.0147	0.0000	0.0147	7.5800e-003	0.0000	7.5800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.0100e-003	0.0524	0.0291	6.0000e-005		2.5400e-003	2.5400e-003		2.3300e-003	2.3300e-003	0.0000	5.1178	5.1178	1.6600e-003	0.0000	5.1591
Total	**5.0100e-003**	**0.0524**	**0.0291**	**6.0000e-005**	**0.0147**	**2.5400e-003**	**0.0173**	**7.5800e-003**	**2.3300e-003**	**9.9100e-003**	**0.0000**	**5.1178**	**5.1178**	**1.6600e-003**	**0.0000**	**5.1591**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.0000e-005	7.0000e-005	8.8000e-004	0.0000	3.1000e-004	0.0000	3.1000e-004	8.0000e-005	0.0000	8.0000e-005	0.0000	0.2540	0.2540	1.0000e-005	1.0000e-005	0.2561
Total	**9.0000e-005**	**7.0000e-005**	**8.8000e-004**	**0.0000**	**3.1000e-004**	**0.0000**	**3.1000e-004**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**	**0.2540**	**0.2540**	**1.0000e-005**	**1.0000e-005**	**0.2561**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.9 Phase 1 Grading - 2022

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					0.0708	0.0000	0.0708	0.0343	0.0000	0.0343	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0548	26.0548	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0708**	**9.4100e-003**	**0.0802**	**0.0343**	**8.6600e-003**	**0.0429**	**0.0000**	**26.0548**	**26.0548**	**8.4300e-003**	**0.0000**	**26.2654**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.4000e-004	5.2900e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.5237	1.5237	4.0000e-005	4.0000e-005	1.5365
Total	**5.7000e-004**	**4.4000e-004**	**5.2900e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5237**	**1.5237**	**4.0000e-005**	**4.0000e-005**	**1.5365**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.9 Phase 1 Grading - 2022

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					0.0319	0.0000	0.0319	0.0154	0.0000	0.0154	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0195	0.2086	0.1527	3.0000e-004		9.4100e-003	9.4100e-003		8.6600e-003	8.6600e-003	0.0000	26.0547	26.0547	8.4300e-003	0.0000	26.2654
Total	**0.0195**	**0.2086**	**0.1527**	**3.0000e-004**	**0.0319**	**9.4100e-003**	**0.0413**	**0.0154**	**8.6600e-003**	**0.0241**	**0.0000**	**26.0547**	**26.0547**	**8.4300e-003**	**0.0000**	**26.2654**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	5.7000e-004	4.4000e-004	5.2900e-003	2.0000e-005	1.8700e-003	1.0000e-005	1.8800e-003	5.0000e-004	1.0000e-005	5.1000e-004	0.0000	1.5237	1.5237	4.0000e-005	4.0000e-005	1.5365
Total	**5.7000e-004**	**4.4000e-004**	**5.2900e-003**	**2.0000e-005**	**1.8700e-003**	**1.0000e-005**	**1.8800e-003**	**5.0000e-004**	**1.0000e-005**	**5.1000e-004**	**0.0000**	**1.5237**	**1.5237**	**4.0000e-005**	**4.0000e-005**	**1.5365**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0602	2.5717	0.8822	0.0113	0.3485	0.0205	0.3690	0.0954	0.0196	0.1150	0.0000	1,133.9388	1,133.9388	0.0573	0.1767	1,188.0124
Unmitigated	0.0602	2.5717	0.8822	0.0113	0.3485	0.0205	0.3690	0.0954	0.0196	0.1150	0.0000	1,133.9388	1,133.9388	0.0573	0.1767	1,188.0124

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	36.00	0.00	0.00	94,545	94,545
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	176.00	0.00	0.00	732,160	732,160
Total	212.00	0.00	0.00	826,705	826,705

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 Office Building	14.70	6.60	6.60	71.00	0.00	29.00	77	19	4
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.00	0.00	0.00	100.00	0.00	0.00	100	0	0

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Non-Asphalt Surfaces	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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 Office Building	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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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 Office Building	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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	2.0000e-005	0.0000	2.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e-004	4.5000e-004	0.0000	0.0000	4.8000e-004
Unmitigated	2.0000e-005	0.0000	2.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e-004	4.5000e-004	0.0000	0.0000	4.8000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e-004	4.5000e-004	0.0000	0.0000	4.8000e-004
Total	**2.0000e-005**	**0.0000**	**2.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.5000e-004**	**4.5000e-004**	**0.0000**	**0.0000**	**4.8000e-004**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	2.3000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	4.5000e-004	4.5000e-004	0.0000	0.0000	4.8000e-004
Total	**2.0000e-005**	**0.0000**	**2.3000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**4.5000e-004**	**4.5000e-004**	**0.0000**	**0.0000**	**4.8000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SIR-02 Cottonwood Sand Mine 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 Office Building	1.00	1000sqft	0.02	1,000.00	0
Other Asphalt Surfaces	16.00	1000sqft	0.37	16,000.00	0
Other Non-Asphalt Surfaces	8.00	Acre	8.00	348,480.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2023
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run v3 - Roadway improvment construction activity added; Updated Phase 1 schedule; Update to CalEEMOd 2020.4.0.

Land Use - No construction for the office building, structure will be mobile/prefabricated units.
Other non-asphlt areas = main entrance, parking/load area, plant area, settling ponds, and 2nd entrance west.
Other ashpalt surfaces = improvements to Willow Glen Dr.

Construction Phase - No building construction, schedule per project applicant.

Off-road Equipment - Demolition of a residential structure, garage, and golf couarse restroom...total approx 3,000 SF.

Off-road Equipment - Equipment for Phase 1 demolition.

Off-road Equipment - Equipment for Phase 1 grading.

Off-road Equipment - Equipment for Phase 1 site preparation.

Off-road Equipment - Equipment for construction of new site access points/roads

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Off-road Equipment - Equipment for Willow Glen Drive Improvements - demolition.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for Willow Glen Drive Improvements - widening.
Off-Highway Truck = water truck.

Off-road Equipment - Equipment for Willow Glen Drive Improvements - paving.

Off-road Equipment - Equipment for Willow Glen Drive Improvements - striping.
Off-Highway Truck = striping truck.
Crane for installing light posts.

Trips and VMT - 50 fill haul trips @ 10 CY per trip during grading for wideniing Willow Glen Dr.
8 loads concrete and 8 loads asphalt during paving for Willow Glen improvements.

Demolition -

Grading -

Architectural Coating - Pavement marking coating 100 g/L maximum VOC contentnt per SDAPCD Rule 67.0.1.
10% of Willow Glen Dr. improvment area asuumed to require striping (1,600 SF).

Vehicle Trips - ADT and ATL per project TIA; employee and vendor trips assinged to office (71% employees, 29% vendors); truck trips assigned to non-ashpalt surface.

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - Operational mobile emissions only, this model.

Area Coating - Operational mobile emissions only, this model.

Energy Use - Building energy calculated off-model.

Water And Wastewater - Water supplied on-site, no sewer hookup.

Solid Waste - Solid waste calculated off-model.

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Fleet Mix - Fleet mix for trucks = 100% HHD.

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Parking	21,869.00	1,600.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblAreaCoating	Area_Parking	21869	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	15.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	20.00	15.00
tblConstructionPhase	NumDays	20.00	2.00
tblConstructionPhase	NumDays	20.00	2.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblConsumerProducts	ROG_EF_PesticidesFertilizers	5.152E-08	0
tblEnergyUse	LightingElect	3.81	0.00
tblEnergyUse	NT24E	4.97	0.00
tblEnergyUse	NT24NG	4.20	0.00
tblEnergyUse	T24E	4.16	0.00
tblEnergyUse	T24NG	15.83	0.00
tblFleetMix	HHD	6.1840e-003	1.00
tblFleetMix	LDA	0.55	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.2140e-003	0.00
tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	5.1640e-003	0.00
tblFleetMix	MHD	8.4930e-003	0.00
tblFleetMix	OBUS	7.1500e-004	0.00
tblFleetMix	SBUS	9.8200e-004	0.00
tblFleetMix	UBUS	5.5600e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.93	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	100.00
tblTripsAndVMT	HaulingTripNumber	0.00	32.00
tblVehicleTrips	CC_TL	6.60	0.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	29.00
tblVehicleTrips	CW_TL	14.70	16.00
tblVehicleTrips	CW_TTP	33.00	71.00
tblVehicleTrips	CW_TTP	0.00	100.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	36.00
tblVehicleTrips	WD_TR	0.00	22.00
tblWater	IndoorWaterUseRate	177,733.75	0.00
tblWater	OutdoorWaterUseRate	108,933.59	0.00

2.0 Emissions Summary

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2022	16.1405	20.9004	15.7984	0.0313	7.2742	0.9419	8.2161	3.4756	0.8665	4.3421	0.0000	3,064.2323	3,064.2323	0.9331	0.1780	3,107.6975
Maximum	**16.1405**	**20.9004**	**15.7984**	**0.0313**	**7.2742**	**0.9419**	**8.2161**	**3.4756**	**0.8665**	**4.3421**	**0.0000**	**3,064.2323**	**3,064.2323**	**0.9331**	**0.1780**	**3,107.6975**

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					
2022	16.1405	20.9004	15.7984	0.0313	3.3788	0.9419	4.3207	1.5919	0.8665	2.4585	0.0000	3,064.2323	3,064.2323	0.9331	0.1780	3,107.6975
Maximum	**16.1405**	**20.9004**	**15.7984**	**0.0313**	**3.3788**	**0.9419**	**4.3207**	**1.5919**	**0.8665**	**2.4585**	**0.0000**	**3,064.2323**	**3,064.2323**	**0.9331**	**0.1780**	**3,107.6975**

	ROG	NOx	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**	**53.55**	**0.00**	**47.41**	**54.20**	**0.00**	**43.38**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.8300e-003
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	0.4513	19.8867	6.8631	0.0873	2.7383	0.1582	2.8965	0.7482	0.1513	0.8994		9,631.1921	9,631.1921	0.4861	1.5008	10,090.5719
Total	**0.4515**	**19.8867**	**6.8657**	**0.0873**	**2.7383**	**0.1582**	**2.8965**	**0.7482**	**0.1513**	**0.8995**		**9,631.1976**	**9,631.1976**	**0.4861**	**1.5008**	**10,090.5777**

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	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.8300e-003
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	0.4513	19.8867	6.8631	0.0873	2.7383	0.1582	2.8965	0.7482	0.1513	0.8994		9,631.1921	9,631.1921	0.4861	1.5008	10,090.5719
Total	**0.4515**	**19.8867**	**6.8657**	**0.0873**	**2.7383**	**0.1582**	**2.8965**	**0.7482**	**0.1513**	**0.8995**		**9,631.1976**	**9,631.1976**	**0.4861**	**1.5008**	**10,090.5777**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	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	Site Access	Site Preparation	2/1/2022	2/21/2022	5	15	
2	Willow Glen Imp. Demolition	Demolition	2/22/2022	2/23/2022	5	2	
3	Willow Glen Imp. Grading	Grading	2/24/2022	3/16/2022	5	15	
4	Willow Glen Imp. Paving	Paving	3/17/2022	3/18/2022	5	2	
5	Willow Glen Imp. Striping	Architectural Coating	3/19/2022	3/22/2022	5	2	
6	Phase 1 Demolition	Demolition	3/23/2022	4/19/2022	5	20	
7	Phase 1 Site Preparation	Site Preparation	4/20/2022	5/3/2022	5	10	
8	Phase 1 Grading	Grading	5/4/2022	5/31/2022	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 8.37

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 1,500; Non-Residential Outdoor: 500; Striped Parking Area: 1,600 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Access	Graders	1	8.00	187	0.41
Site Access	Rubber Tired Dozers	1	8.00	247	0.40
Site Access	Tractors/Loaders/Backhoes	1	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Willow Glen Imp. Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Willow Glen Imp. Demolition	Graders	1	8.00	187	0.41
Willow Glen Imp. Demolition	Off-Highway Trucks	1	4.00	402	0.38
Willow Glen Imp. Grading	Crawler Tractors	1	8.00	212	0.43
Willow Glen Imp. Grading	Off-Highway Trucks	1	8.00	402	0.38
Willow Glen Imp. Grading	Rollers	1	8.00	80	0.38
Willow Glen Imp. Grading	Skid Steer Loaders	1	8.00	65	0.37
Willow Glen Imp. Paving	Pavers	1	8.00	130	0.42
Willow Glen Imp. Paving	Paving Equipment	1	8.00	132	0.36
Willow Glen Imp. Paving	Rollers	1	8.00	80	0.38
Willow Glen Imp. Striping	Cranes	1	4.00	231	0.29
Willow Glen Imp. Striping	Off-Highway Trucks	1	8.00	402	0.38
Phase 1 Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Phase 1 Demolition	Excavators	1	8.00	158	0.38
Phase 1 Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Phase 1 Site Preparation	Rubber Tired Dozers	1	8.00	247	0.40
Phase 1 Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 1 Grading	Excavators	1	8.00	158	0.38
Phase 1 Grading	Graders	1	8.00	187	0.41
Phase 1 Grading	Rubber Tired Dozers	1	8.00	247	0.40
Phase 1 Grading	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Access	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Demolition	3	8.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Grading	4	10.00	0.00	100.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Willow Glen Imp. Paving	3	8.00	0.00	32.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Willow Glen Imp. Striping	2	31.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 Demolition	3	8.00	0.00	14.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 Site Preparation	2	5.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 1 Grading	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Access - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.4168	15.7269	7.5417	0.0183		0.6747	0.6747		0.6207	0.6207		1,769.5532	1,769.5532	0.5723		1,783.8610
Total	**1.4168**	**15.7269**	**7.5417**	**0.0183**	**7.0826**	**0.6747**	**7.7573**	**3.4247**	**0.6207**	**4.0455**		**1,769.5532**	**1,769.5532**	**0.5723**		**1,783.8610**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Access - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.0336**	**0.0242**	**0.2804**	**8.7000e-004**	**0.1022**	**5.6000e-004**	**0.1027**	**0.0271**	**5.1000e-004**	**0.0276**		**88.7825**	**88.7825**	**2.2600e-003**	**2.3500e-003**	**89.5407**

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					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.4168	15.7269	7.5417	0.0183		0.6747	0.6747		0.6207	0.6207	0.0000	1,769.5532	1,769.5532	0.5723		1,783.8610
Total	**1.4168**	**15.7269**	**7.5417**	**0.0183**	**3.1872**	**0.6747**	**3.8619**	**1.5411**	**0.6207**	**2.1619**	**0.0000**	**1,769.5532**	**1,769.5532**	**0.5723**		**1,783.8610**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Site Access - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.0336**	**0.0242**	**0.2804**	**8.7000e-004**	**0.1022**	**5.6000e-004**	**0.1027**	**0.0271**	**5.1000e-004**	**0.0276**		**88.7825**	**88.7825**	**2.2600e-003**	**2.3500e-003**	**89.5407**

3.3 Willow Glen Imp. Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0369	10.0656	7.0658	0.0195		0.3904	0.3904		0.3711	0.3711		1,873.4362	1,873.4362	0.4466		1,884.6001
Total	**1.0369**	**10.0656**	**7.0658**	**0.0195**		**0.3904**	**0.3904**		**0.3711**	**0.3711**		**1,873.4362**	**1,873.4362**	**0.4466**		**1,884.6001**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Willow Glen Imp. Demolition - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.0336**	**0.0242**	**0.2804**	**8.7000e-004**	**0.1022**	**5.6000e-004**	**0.1027**	**0.0271**	**5.1000e-004**	**0.0276**		**88.7825**	**88.7825**	**2.2600e-003**	**2.3500e-003**	**89.5407**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0369	10.0656	7.0658	0.0195		0.3904	0.3904		0.3711	0.3711	0.0000	1,873.4362	1,873.4362	0.4466		1,884.6001
Total	**1.0369**	**10.0656**	**7.0658**	**0.0195**		**0.3904**	**0.3904**		**0.3711**	**0.3711**	**0.0000**	**1,873.4362**	**1,873.4362**	**0.4466**		**1,884.6001**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Willow Glen Imp. Demolition - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.0336**	**0.0242**	**0.2804**	**8.7000e-004**	**0.1022**	**5.6000e-004**	**0.1027**	**0.0271**	**5.1000e-004**	**0.0276**		**88.7825**	**88.7825**	**2.2600e-003**	**2.3500e-003**	**89.5407**

3.4 Willow Glen Imp. Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	1.2562	12.6761	8.9211	0.0258		0.5066	0.5066		0.4661	0.4661		2,492.5127	2,492.5127	0.8061		2,512.6660
Total	**1.2562**	**12.6761**	**8.9211**	**0.0258**	**0.5303**	**0.5066**	**1.0369**	**0.0573**	**0.4661**	**0.5234**		**2,492.5127**	**2,492.5127**	**0.8061**		**2,512.6660**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Willow Glen Imp. Grading - 2022

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	0.0291	1.1234	0.2672	4.1900e-003	0.1166	0.0105	0.1271	0.0320	0.0100	0.0420		460.7414	460.7414	0.0221	0.0732	483.1057
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0420	0.0302	0.3504	1.0900e-003	0.1277	7.0000e-004	0.1284	0.0339	6.4000e-004	0.0345		110.9782	110.9782	2.8200e-003	2.9400e-003	111.9259
Total	**0.0711**	**1.1536**	**0.6176**	**5.2800e-003**	**0.2443**	**0.0112**	**0.2555**	**0.0658**	**0.0106**	**0.0765**		**571.7195**	**571.7195**	**0.0249**	**0.0761**	**595.0316**

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	1.2562	12.6761	8.9211	0.0258		0.5066	0.5066		0.4661	0.4661	0.0000	2,492.5127	2,492.5127	0.8061		2,512.6660
Total	**1.2562**	**12.6761**	**8.9211**	**0.0258**	**0.2386**	**0.5066**	**0.7453**	**0.0258**	**0.4661**	**0.4919**	**0.0000**	**2,492.5127**	**2,492.5127**	**0.8061**		**2,512.6660**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Willow Glen Imp. Grading - 2022

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	0.0291	1.1234	0.2672	4.1900e-003	0.1166	0.0105	0.1271	0.0320	0.0100	0.0420		460.7414	460.7414	0.0221	0.0732	483.1057
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0420	0.0302	0.3504	1.0900e-003	0.1277	7.0000e-004	0.1284	0.0339	6.4000e-004	0.0345		110.9782	110.9782	2.8200e-003	2.9400e-003	111.9259
Total	**0.0711**	**1.1536**	**0.6176**	**5.2800e-003**	**0.2443**	**0.0112**	**0.2555**	**0.0658**	**0.0106**	**0.0765**		**571.7195**	**571.7195**	**0.0249**	**0.0761**	**595.0316**

3.5 Willow Glen Imp. Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5514	5.5624	7.2902	0.0114		0.2840	0.2840		0.2612	0.2612		1,103.8302	1,103.8302	0.3570		1,112.7552
Paving	0.4847					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0361**	**5.5624**	**7.2902**	**0.0114**		**0.2840**	**0.2840**		**0.2612**	**0.2612**		**1,103.8302**	**1,103.8302**	**0.3570**		**1,112.7552**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Willow Glen Imp. Paving - 2022

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	0.0699	2.6961	0.6413	0.0100	0.2798	0.0251	0.3049	0.0767	0.0240	0.1007		1,105.7793	1,105.7793	0.0531	0.1757	1,159.4537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.1035**	**2.7203**	**0.9216**	**0.0109**	**0.3820**	**0.0256**	**0.4077**	**0.1038**	**0.0245**	**0.1283**		**1,194.5619**	**1,194.5619**	**0.0553**	**0.1780**	**1,248.9944**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.5514	5.5624	7.2902	0.0114		0.2840	0.2840		0.2612	0.2612	0.0000	1,103.8302	1,103.8302	0.3570		1,112.7552
Paving	0.4847					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0361**	**5.5624**	**7.2902**	**0.0114**		**0.2840**	**0.2840**		**0.2612**	**0.2612**	**0.0000**	**1,103.8302**	**1,103.8302**	**0.3570**		**1,112.7552**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Willow Glen Imp. Paving - 2022

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	0.0699	2.6961	0.6413	0.0100	0.2798	0.0251	0.3049	0.0767	0.0240	0.1007		1,105.7793	1,105.7793	0.0531	0.1757	1,159.4537
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.1035**	**2.7203**	**0.9216**	**0.0109**	**0.3820**	**0.0256**	**0.4077**	**0.1038**	**0.0245**	**0.1283**		**1,194.5619**	**1,194.5619**	**0.0553**	**0.1780**	**1,248.9944**

3.6 Willow Glen Imp. Striping - 2022

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					
Archit. Coating	15.2955					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7149	6.1059	4.3049	0.0161		0.2328	0.2328		0.2142	0.2142		1,558.4005	1,558.4005	0.5040		1,571.0009
Total	**16.0104**	**6.1059**	**4.3049**	**0.0161**		**0.2328**	**0.2328**		**0.2142**	**0.2142**		**1,558.4005**	**1,558.4005**	**0.5040**		**1,571.0009**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Willow Glen Imp. Striping - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1301	0.0936	1.0864	3.3800e-003	0.3960	2.1600e-003	0.3981	0.1050	1.9900e-003	0.1070		344.0323	344.0323	8.7400e-003	9.1300e-003	346.9702
Total	**0.1301**	**0.0936**	**1.0864**	**3.3800e-003**	**0.3960**	**2.1600e-003**	**0.3981**	**0.1050**	**1.9900e-003**	**0.1070**		**344.0323**	**344.0323**	**8.7400e-003**	**9.1300e-003**	**346.9702**

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					
Archit. Coating	15.2955					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.7149	6.1059	4.3049	0.0161		0.2328	0.2328		0.2142	0.2142	0.0000	1,558.4005	1,558.4005	0.5040		1,571.0009
Total	**16.0104**	**6.1059**	**4.3049**	**0.0161**		**0.2328**	**0.2328**		**0.2142**	**0.2142**	**0.0000**	**1,558.4005**	**1,558.4005**	**0.5040**		**1,571.0009**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Willow Glen Imp. Striping - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.1301	0.0936	1.0864	3.3800e-003	0.3960	2.1600e-003	0.3981	0.1050	1.9900e-003	0.1070		344.0323	344.0323	8.7400e-003	9.1300e-003	346.9702
Total	**0.1301**	**0.0936**	**1.0864**	**3.3800e-003**	**0.3960**	**2.1600e-003**	**0.3981**	**0.1050**	**1.9900e-003**	**0.1070**		**344.0323**	**344.0323**	**8.7400e-003**	**9.1300e-003**	**346.9702**

3.7 Phase 1 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1495	0.0000	0.1495	0.0226	0.0000	0.0226			0.0000			0.0000
Off-Road	1.3972	13.3718	10.5018	0.0200		0.6535	0.6535		0.6132	0.6132		1,919.7153	1,919.7153	0.4615		1,931.2534
Total	**1.3972**	**13.3718**	**10.5018**	**0.0200**	**0.1495**	**0.6535**	**0.8030**	**0.0226**	**0.6132**	**0.6358**		**1,919.7153**	**1,919.7153**	**0.4615**		**1,931.2534**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Phase 1 Demolition - 2022

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	3.0600e-003	0.1180	0.0281	4.4000e-004	0.0122	1.1000e-003	0.0133	3.3600e-003	1.0500e-003	4.4100e-003		48.3779	48.3779	2.3200e-003	7.6900e-003	50.7261
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.0366**	**0.1421**	**0.3084**	**1.3100e-003**	**0.1144**	**1.6600e-003**	**0.1161**	**0.0305**	**1.5600e-003**	**0.0320**		**137.1604**	**137.1604**	**4.5800e-003**	**0.0100**	**140.2668**

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					0.0673	0.0000	0.0673	0.0102	0.0000	0.0102			0.0000			0.0000
Off-Road	1.3972	13.3718	10.5018	0.0200		0.6535	0.6535		0.6132	0.6132	0.0000	1,919.7153	1,919.7153	0.4615		1,931.2534
Total	**1.3972**	**13.3718**	**10.5018**	**0.0200**	**0.0673**	**0.6535**	**0.7207**	**0.0102**	**0.6132**	**0.6234**	**0.0000**	**1,919.7153**	**1,919.7153**	**0.4615**		**1,931.2534**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Phase 1 Demolition - 2022

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	3.0600e-003	0.1180	0.0281	4.4000e-004	0.0122	1.1000e-003	0.0133	3.3600e-003	1.0500e-003	4.4100e-003		48.3779	48.3779	2.3200e-003	7.6900e-003	50.7261
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0336	0.0242	0.2804	8.7000e-004	0.1022	5.6000e-004	0.1027	0.0271	5.1000e-004	0.0276		88.7825	88.7825	2.2600e-003	2.3500e-003	89.5407
Total	**0.0366**	**0.1421**	**0.3084**	**1.3100e-003**	**0.1144**	**1.6600e-003**	**0.1161**	**0.0305**	**1.5600e-003**	**0.0320**		**137.1604**	**137.1604**	**4.5800e-003**	**0.0100**	**140.2668**

3.8 Phase 1 Site Preparation - 2022

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					6.5523	0.0000	6.5523	3.3675	0.0000	3.3675			0.0000			0.0000
Off-Road	1.0018	10.4693	5.8199	0.0116		0.5075	0.5075		0.4669	0.4669		1,128.2743	1,128.2743	0.3649		1,137.3970
Total	**1.0018**	**10.4693**	**5.8199**	**0.0116**	**6.5523**	**0.5075**	**7.0598**	**3.3675**	**0.4669**	**3.8344**		**1,128.2743**	**1,128.2743**	**0.3649**		**1,137.3970**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Phase 1 Site Preparation - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0210	0.0151	0.1752	5.5000e-004	0.0639	3.5000e-004	0.0642	0.0169	3.2000e-004	0.0173		55.4891	55.4891	1.4100e-003	1.4700e-003	55.9629
Total	**0.0210**	**0.0151**	**0.1752**	**5.5000e-004**	**0.0639**	**3.5000e-004**	**0.0642**	**0.0169**	**3.2000e-004**	**0.0173**		**55.4891**	**55.4891**	**1.4100e-003**	**1.4700e-003**	**55.9629**

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					2.9486	0.0000	2.9486	1.5154	0.0000	1.5154			0.0000			0.0000
Off-Road	1.0018	10.4693	5.8199	0.0116		0.5075	0.5075		0.4669	0.4669	0.0000	1,128.2743	1,128.2743	0.3649		1,137.3970
Total	**1.0018**	**10.4693**	**5.8199**	**0.0116**	**2.9486**	**0.5075**	**3.4560**	**1.5154**	**0.4669**	**1.9823**	**0.0000**	**1,128.2743**	**1,128.2743**	**0.3649**		**1,137.3970**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.8 Phase 1 Site Preparation - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0210	0.0151	0.1752	5.5000e-004	0.0639	3.5000e-004	0.0642	0.0169	3.2000e-004	0.0173		55.4891	55.4891	1.4100e-003	1.4700e-003	55.9629
Total	**0.0210**	**0.0151**	**0.1752**	**5.5000e-004**	**0.0639**	**3.5000e-004**	**0.0642**	**0.0169**	**3.2000e-004**	**0.0173**		**55.4891**	**55.4891**	**1.4100e-003**	**1.4700e-003**	**55.9629**

3.9 Phase 1 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656		2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**7.0826**	**0.9409**	**8.0234**	**3.4247**	**0.8656**	**4.2903**		**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.9 Phase 1 Grading - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0630	0.0453	0.5257	1.6400e-003	0.1916	1.0400e-003	0.1926	0.0508	9.6000e-004	0.0518		166.4672	166.4672	4.2300e-003	4.4200e-003	167.8888
Total	**0.0630**	**0.0453**	**0.5257**	**1.6400e-003**	**0.1916**	**1.0400e-003**	**0.1926**	**0.0508**	**9.6000e-004**	**0.0518**		**166.4672**	**166.4672**	**4.2300e-003**	**4.4200e-003**	**167.8888**

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					3.1872	0.0000	3.1872	1.5411	0.0000	1.5411			0.0000			0.0000
Off-Road	1.9486	20.8551	15.2727	0.0297		0.9409	0.9409		0.8656	0.8656	0.0000	2,872.0464	2,872.0464	0.9289		2,895.2684
Total	**1.9486**	**20.8551**	**15.2727**	**0.0297**	**3.1872**	**0.9409**	**4.1280**	**1.5411**	**0.8656**	**2.4067**	**0.0000**	**2,872.0464**	**2,872.0464**	**0.9289**		**2,895.2684**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.9 Phase 1 Grading - 2022

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	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0630	0.0453	0.5257	1.6400e-003	0.1916	1.0400e-003	0.1926	0.0508	9.6000e-004	0.0518		166.4672	166.4672	4.2300e-003	4.4200e-003	167.8888
Total	**0.0630**	**0.0453**	**0.5257**	**1.6400e-003**	**0.1916**	**1.0400e-003**	**0.1926**	**0.0508**	**9.6000e-004**	**0.0518**		**166.4672**	**166.4672**	**4.2300e-003**	**4.4200e-003**	**167.8888**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.4513	19.8867	6.8631	0.0873	2.7383	0.1582	2.8965	0.7482	0.1513	0.8994		9,631.1921	9,631.1921	0.4861	1.5008	10,090.5719
Unmitigated	0.4513	19.8867	6.8631	0.0873	2.7383	0.1582	2.8965	0.7482	0.1513	0.8994		9,631.1921	9,631.1921	0.4861	1.5008	10,090.5719

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	36.00	0.00	0.00	94,545	94,545
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	176.00	0.00	0.00	732,160	732,160
Total	212.00	0.00	0.00	826,705	826,705

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 Office Building	14.70	6.60	6.60	71.00	0.00	29.00	77	19	4
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.00	0.00	0.00	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164
Other Asphalt Surfaces	0.553514	0.062792	0.181046	0.120736	0.024419	0.006214	0.008493	0.006184	0.000715	0.000556	0.029185	0.000982	0.005164

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Other Non-Asphalt Surfaces	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

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

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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 Office Building	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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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

SIR-02 Cottonwood Sand Mine Phase 1 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.8300e-003
Unmitigated	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.8300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.8300e-003
Total	**2.4000e-004**	**2.0000e-005**	**2.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.4700e-003**	**5.4700e-003**	**1.0000e-005**		**5.8300e-003**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.4000e-004	2.0000e-005	2.5500e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.4700e-003	5.4700e-003	1.0000e-005		5.8300e-003
Total	**2.4000e-004**	**2.0000e-005**	**2.5500e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.4700e-003**	**5.4700e-003**	**1.0000e-005**		**5.8300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SIR-02 Conttonwood Sand Mine Phase 2

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Other Non-Asphalt Surfaces	8.00	Acre	8.00	348,480.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run v3 - Upated Phase 2 schedule; Update to CalEEMod version 2020.4.0.

Land Use - Other non-asphlt areas = main entrance, mine parking, truck load area, plant area, settling ponds, and 2nd entrance west.

Construction Phase - Demolition only for phase 2.

Off-road Equipment - Demolition of a storage structure...total approx 2,000 SF.

Off-road Equipment - Grading for plant pad, parking, truck load area, settling ponds and entrances.

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - ADT and ATL per project TIA; employee and vendor trips assinged to office (71% employees, 29% vendors); truck trips assigned to non-ashpalt surface.

Vehicle Emission Factors -

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Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - Operational mobile emissions only, this model.

Area Coating - Operational mobile emissions only, this model.

Energy Use - Building energy calculated off-model.

Water And Wastewater - Water supplied on-site, no sewer hookup.

Solid Waste - Solid waste calculated off-model.

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Fleet Mix - Fleet mix for trucks = 100% HHD.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	Area_Parking	20909	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.81	0.00
tblEnergyUse	NT24E	4.97	0.00
tblEnergyUse	NT24NG	4.20	0.00
tblEnergyUse	T24E	4.16	0.00
tblEnergyUse	T24NG	15.83	0.00
tblFleetMix	HHD	6.2980e-003	1.00
tblFleetMix	LDA	0.56	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.3170e-003	0.00

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tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	4.7510e-003	0.00
tblFleetMix	MHD	8.9490e-003	0.00
tblFleetMix	OBUS	7.0500e-004	0.00
tblFleetMix	SBUS	9.5500e-004	0.00
tblFleetMix	UBUS	5.7700e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.93	0.00
tblVehicleTrips	CC_TL	6.60	16.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	29.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	33.00	71.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	36.00
tblVehicleTrips	WD_TR	0.00	22.00
tblWater	IndoorWaterUseRate	177,733.75	0.00
tblWater	OutdoorWaterUseRate	108,933.59	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2024	6.0800e-003	0.0554	0.0516	1.1000e-004	1.5700e-003	2.5100e-003	4.0800e-003	3.0000e-004	2.3600e-003	2.6600e-003	0.0000	9.3598	9.3598	2.1000e-003	5.0000e-005	9.4275
Maximum	**6.0800e-003**	**0.0554**	**0.0516**	**1.1000e-004**	**1.5700e-003**	**2.5100e-003**	**4.0800e-003**	**3.0000e-004**	**2.3600e-003**	**2.6600e-003**	**0.0000**	**9.3598**	**9.3598**	**2.1000e-003**	**5.0000e-005**	**9.4275**

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					
2024	6.0800e-003	0.0554	0.0516	1.1000e-004	1.0200e-003	2.5100e-003	3.5400e-003	2.2000e-004	2.3600e-003	2.5800e-003	0.0000	9.3598	9.3598	2.1000e-003	5.0000e-005	9.4275
Maximum	**6.0800e-003**	**0.0554**	**0.0516**	**1.1000e-004**	**1.0200e-003**	**2.5100e-003**	**3.5400e-003**	**2.2000e-004**	**2.3600e-003**	**2.5800e-003**	**0.0000**	**9.3598**	**9.3598**	**2.1000e-003**	**5.0000e-005**	**9.4275**

	ROG	NOx	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**	**35.03**	**0.00**	**13.24**	**26.67**	**0.00**	**3.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2024	8-31-2024	0.0615	0.0615
		Highest	0.0615	0.0615

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	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-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	0.0000
Mobile	0.0581	2.5137	0.8875	0.0109	0.3485	0.0205	0.3690	0.0954	0.0196	0.1151	0.0000	1,091.0091	1,091.0091	0.0607	0.1702	1,143.2547
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0581**	**2.5137**	**0.8876**	**0.0109**	**0.3485**	**0.0205**	**0.3690**	**0.0954**	**0.0196**	**0.1151**	**0.0000**	**1,091.0093**	**1,091.0093**	**0.0607**	**0.1702**	**1,143.2548**

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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	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-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	0.0000
Mobile	0.0581	2.5137	0.8875	0.0109	0.3485	0.0205	0.3690	0.0954	0.0196	0.1151	0.0000	1,091.0091	1,091.0091	0.0607	0.1702	1,143.2547
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0581**	**2.5137**	**0.8876**	**0.0109**	**0.3485**	**0.0205**	**0.3690**	**0.0954**	**0.0196**	**0.1151**	**0.0000**	**1,091.0093**	**1,091.0093**	**0.0607**	**0.1702**	**1,143.2548**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2024	6/14/2024	5	10	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 8

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	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
Demolition	3	8.00	0.00	9.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-003	0.0000	1.0000e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9400e-003	0.0547	0.0502	1.0000e-004		2.5000e-003	2.5000e-003		2.3500e-003	2.3500e-003	0.0000	8.7086	8.7086	2.0700e-003	0.0000	8.7604
Total	**5.9400e-003**	**0.0547**	**0.0502**	**1.0000e-004**	**1.0000e-003**	**2.5000e-003**	**3.5000e-003**	**1.5000e-004**	**2.3500e-003**	**2.5000e-003**	**0.0000**	**8.7086**	**8.7086**	**2.0700e-003**	**0.0000**	**8.7604**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	6.1000e-004	1.6000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2653	0.2653	1.0000e-005	4.0000e-005	0.2783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	9.0000e-005	1.2200e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3859	0.3859	1.0000e-005	1.0000e-005	0.3889
Total	**1.4000e-004**	**7.0000e-004**	**1.3800e-003**	**0.0000**	**5.8000e-004**	**1.0000e-005**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.6512**	**0.6512**	**2.0000e-005**	**5.0000e-005**	**0.6671**

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3.2 Demolition - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					4.5000e-004	0.0000	4.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9400e-003	0.0547	0.0502	1.0000e-004		2.5000e-003	2.5000e-003		2.3500e-003	2.3500e-003	0.0000	8.7086	8.7086	2.0700e-003	0.0000	8.7604
Total	**5.9400e-003**	**0.0547**	**0.0502**	**1.0000e-004**	**4.5000e-004**	**2.5000e-003**	**2.9500e-003**	**7.0000e-005**	**2.3500e-003**	**2.4200e-003**	**0.0000**	**8.7086**	**8.7086**	**2.0700e-003**	**0.0000**	**8.7604**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.0000e-005	6.1000e-004	1.6000e-004	0.0000	8.0000e-005	1.0000e-005	8.0000e-005	2.0000e-005	0.0000	3.0000e-005	0.0000	0.2653	0.2653	1.0000e-005	4.0000e-005	0.2783
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.3000e-004	9.0000e-005	1.2200e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3859	0.3859	1.0000e-005	1.0000e-005	0.3889
Total	**1.4000e-004**	**7.0000e-004**	**1.3800e-003**	**0.0000**	**5.8000e-004**	**1.0000e-005**	**5.8000e-004**	**1.5000e-004**	**0.0000**	**1.6000e-004**	**0.0000**	**0.6512**	**0.6512**	**2.0000e-005**	**5.0000e-005**	**0.6671**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0581	2.5137	0.8875	0.0109	0.3485	0.0205	0.3690	0.0954	0.0196	0.1151	0.0000	1,091.0091	1,091.0091	0.0607	0.1702	1,143.2547
Unmitigated	0.0581	2.5137	0.8875	0.0109	0.3485	0.0205	0.3690	0.0954	0.0196	0.1151	0.0000	1,091.0091	1,091.0091	0.0607	0.1702	1,143.2547

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	36.00	0.00	0.00	94,545	94,545
Other Non-Asphalt Surfaces	176.00	0.00	0.00	732,160	732,160
Total	212.00	0.00	0.00	826,705	826,705

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 Office Building	14.70	6.60	6.60	71.00	0.00	29.00	77	19	4
Other Non-Asphalt Surfaces	0.00	16.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Other Non-Asphalt Surfaces	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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

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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 Office Building	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
Other Non-Asphalt Surfaces	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**

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 Office Building	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
Other Non-Asphalt Surfaces	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**

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5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004
Unmitigated	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004
Total	**1.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.0000**	**1.7000e-004**

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004
Total	**1.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.0000**	**1.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SIR-02 Conttonwood Sand Mine Phase 2

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Other Non-Asphalt Surfaces	8.00	Acre	8.00	348,480.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run v3 - Upated Phase 2 schedule; Update to CalEEMod version 2020.4.0.

Land Use - Other non-asphlt areas = main entrance, mine parking, truck load area, plant area, settling ponds, and 2nd entrance west.

Construction Phase - Demolition only for phase 2.

Off-road Equipment - Demolition of a storage structure...total approx 2,000 SF.

Off-road Equipment - Grading for plant pad, parking, truck load area, settling ponds and entrances.

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - ADT and ATL per project TIA; employee and vendor trips assinged to office (71% employees, 29% vendors); truck trips assigned to non-ashpalt surface.

Vehicle Emission Factors -

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - Operational mobile emissions only, this model.

Area Coating - Operational mobile emissions only, this model.

Energy Use - Building energy calculated off-model.

Water And Wastewater - Water supplied on-site, no sewer hookup.

Solid Waste - Solid waste calculated off-model.

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Fleet Mix - Fleet mix for trucks = 100% HHD.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	Area_Parking	20909	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	20.00	10.00
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.81	0.00
tblEnergyUse	NT24E	4.97	0.00
tblEnergyUse	NT24NG	4.20	0.00
tblEnergyUse	T24E	4.16	0.00
tblEnergyUse	T24NG	15.83	0.00
tblFleetMix	HHD	6.2980e-003	1.00
tblFleetMix	LDA	0.56	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.18	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.3170e-003	0.00

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MCY	0.03	0.00
tblFleetMix	MDV	0.12	0.00
tblFleetMix	MH	4.7510e-003	0.00
tblFleetMix	MHD	8.9490e-003	0.00
tblFleetMix	OBUS	7.0500e-004	0.00
tblFleetMix	SBUS	9.5500e-004	0.00
tblFleetMix	UBUS	5.7700e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.93	0.00
tblVehicleTrips	CC_TL	6.60	16.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	29.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	33.00	71.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	36.00
tblVehicleTrips	WD_TR	0.00	22.00
tblWater	IndoorWaterUseRate	177,733.75	0.00
tblWater	OutdoorWaterUseRate	108,933.59	0.00

2.0 Emissions Summary

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2024	1.2199	11.0855	10.3219	0.0213	0.3173	0.5023	0.8196	0.0616	0.4710	0.5326	0.0000	2,062.7659	2,062.7659	0.4624	0.0113	2,077.7066
Maximum	**1.2199**	**11.0855**	**10.3219**	**0.0213**	**0.3173**	**0.5023**	**0.8196**	**0.0616**	**0.4710**	**0.5326**	**0.0000**	**2,062.7659**	**2,062.7659**	**0.4624**	**0.0113**	**2,077.7066**

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					
2024	1.2199	11.0855	10.3219	0.0213	0.2076	0.5023	0.7099	0.0450	0.4710	0.5160	0.0000	2,062.7659	2,062.7659	0.4624	0.0113	2,077.7066
Maximum	**1.2199**	**11.0855**	**10.3219**	**0.0213**	**0.2076**	**0.5023**	**0.7099**	**0.0450**	**0.4710**	**0.5160**	**0.0000**	**2,062.7659**	**2,062.7659**	**0.4624**	**0.0113**	**2,077.7066**

	ROG	NOx	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**	**34.56**	**0.00**	**13.38**	**26.96**	**0.00**	**3.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
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	0.4347	19.4417	6.9022	0.0836	2.7384	0.1583	2.8967	0.7482	0.1514	0.8996		9,266.8147	9,266.8147	0.5145	1.4463	9,710.6696
Total	**0.4348**	**19.4417**	**6.9031**	**0.0836**	**2.7384**	**0.1583**	**2.8967**	**0.7482**	**0.1514**	**0.8996**		**9,266.8167**	**9,266.8167**	**0.5145**	**1.4463**	**9,710.6717**

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	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
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	0.4347	19.4417	6.9022	0.0836	2.7384	0.1583	2.8967	0.7482	0.1514	0.8996		9,266.8147	9,266.8147	0.5145	1.4463	9,710.6696
Total	**0.4348**	**19.4417**	**6.9031**	**0.0836**	**2.7384**	**0.1583**	**2.8967**	**0.7482**	**0.1514**	**0.8996**		**9,266.8167**	**9,266.8167**	**0.5145**	**1.4463**	**9,710.6717**

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2024	6/14/2024	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 8

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	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
Demolition	3	8.00	0.00	9.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.1993	0.0000	0.1993	0.0302	0.0000	0.0302			0.0000			0.0000
Off-Road	1.1882	10.9448	10.0462	0.0200		0.5008	0.5008		0.4696	0.4696		1,919.9110	1,919.9110	0.4574		1,931.3464
Total	**1.1882**	**10.9448**	**10.0462**	**0.0200**	**0.1993**	**0.5008**	**0.7001**	**0.0302**	**0.4696**	**0.4998**		**1,919.9110**	**1,919.9110**	**0.4574**		**1,931.3464**

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8900e-003	0.1214	0.0332	5.3000e-004	0.0157	1.0100e-003	0.0168	4.3100e-003	9.6000e-004	5.2800e-003		58.5251	58.5251	3.0800e-003	9.3100e-003	61.3779
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0193	0.2426	8.2000e-004	0.1022	5.0000e-004	0.1027	0.0271	4.6000e-004	0.0276		84.3298	84.3298	1.8600e-003	2.0300e-003	84.9823
Total	**0.0317**	**0.1407**	**0.2758**	**1.3500e-003**	**0.1179**	**1.5100e-003**	**0.1194**	**0.0314**	**1.4200e-003**	**0.0328**		**142.8549**	**142.8549**	**4.9400e-003**	**0.0113**	**146.3602**

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					0.0897	0.0000	0.0897	0.0136	0.0000	0.0136			0.0000			0.0000
Off-Road	1.1882	10.9448	10.0462	0.0200		0.5008	0.5008		0.4696	0.4696	0.0000	1,919.9110	1,919.9110	0.4574		1,931.3464
Total	**1.1882**	**10.9448**	**10.0462**	**0.0200**	**0.0897**	**0.5008**	**0.5905**	**0.0136**	**0.4696**	**0.4832**	**0.0000**	**1,919.9110**	**1,919.9110**	**0.4574**		**1,931.3464**

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.8900e-003	0.1214	0.0332	5.3000e-004	0.0157	1.0100e-003	0.0168	4.3100e-003	9.6000e-004	5.2800e-003		58.5251	58.5251	3.0800e-003	9.3100e-003	61.3779
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0298	0.0193	0.2426	8.2000e-004	0.1022	5.0000e-004	0.1027	0.0271	4.6000e-004	0.0276		84.3298	84.3298	1.8600e-003	2.0300e-003	84.9823
Total	**0.0317**	**0.1407**	**0.2758**	**1.3500e-003**	**0.1179**	**1.5100e-003**	**0.1194**	**0.0314**	**1.4200e-003**	**0.0328**		**142.8549**	**142.8549**	**4.9400e-003**	**0.0113**	**146.3602**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.4347	19.4417	6.9022	0.0836	2.7384	0.1583	2.8967	0.7482	0.1514	0.8996		9,266.8147	9,266.8147	0.5145	1.4463	9,710.6696
Unmitigated	0.4347	19.4417	6.9022	0.0836	2.7384	0.1583	2.8967	0.7482	0.1514	0.8996		9,266.8147	9,266.8147	0.5145	1.4463	9,710.6696

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	36.00	0.00	0.00	94,545	94,545
Other Non-Asphalt Surfaces	176.00	0.00	0.00	732,160	732,160
Total	212.00	0.00	0.00	826,705	826,705

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 Office Building	14.70	6.60	6.60	71.00	0.00	29.00	77	19	4
Other Non-Asphalt Surfaces	0.00	16.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Other Non-Asphalt Surfaces	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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 Office Building	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
Other Non-Asphalt Surfaces	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**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	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
Other Non-Asphalt Surfaces	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	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Unmitigated	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Total	**8.0000e-005**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**		**2.1000e-003**

SIR-02 Conttonwood Sand Mine Phase 2 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Total	**8.0000e-005**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**		**2.1000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SIR-02 Conttonwood Sand Mine Phase 3

San Diego County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Other Non-Asphalt Surfaces	8.00	Acre	8.00	348,480.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2028
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run v3 - Updated Phase 3 schedule; Update to CalEEMod 2020.4.0.

Land Use - Other non-asphlt areas = main entrance, mine parking, truck load area, plant area, settling ponds, and 2nd entrance west.

Construction Phase - Demolition only for phase 3.

Off-road Equipment - Demolition of a golf club house and related structure...total approx 23,000 SF.

Off-road Equipment - Grading for plant pad, parking, truck load area, settling ponds and entrances.

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - ADT and ATL per project TIA; employee and vendor trips assinged to office (71% employees, 29% vendors); truck trips assigned to non-ashpalt surface.

Vehicle Emission Factors -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - Operational mobile emissions only, this model.

Area Coating - Operational mobile emissions only, this model.

Energy Use - Building energy calculated off-model.

Water And Wastewater - Water supplied on-site, no sewer hookup.

Solid Waste - Solid waste calculated off-model.

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Fleet Mix - Fleet mix for trucks = 100% HHD.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	Area_Parking	20909	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.81	0.00
tblEnergyUse	NT24E	4.97	0.00
tblEnergyUse	NT24NG	4.20	0.00
tblEnergyUse	T24E	4.16	0.00
tblEnergyUse	T24NG	15.83	0.00
tblFleetMix	HHD	6.3030e-003	1.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.4400e-003	0.00
tblFleetMix	MCY	0.03	0.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MDV	0.11	0.00
tblFleetMix	MH	4.2180e-003	0.00
tblFleetMix	MHD	9.5210e-003	0.00
tblFleetMix	OBUS	6.8900e-004	0.00
tblFleetMix	SBUS	8.9900e-004	0.00
tblFleetMix	UBUS	6.0500e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.93	0.00
tblVehicleTrips	CC_TL	6.60	16.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	29.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	33.00	71.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	36.00
tblVehicleTrips	WD_TR	0.00	22.00
tblWater	IndoorWaterUseRate	177,733.75	0.00
tblWater	OutdoorWaterUseRate	108,933.59	0.00

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2027	0.0114	0.1081	0.1031	2.4000e-004	0.0134	4.4900e-003	0.0179	2.2500e-003	4.2100e-003	6.4500e-003	0.0000	21.0389	21.0389	4.3200e-003	4.8000e-004	21.2894
Maximum	**0.0114**	**0.1081**	**0.1031**	**2.4000e-004**	**0.0134**	**4.4900e-003**	**0.0179**	**2.2500e-003**	**4.2100e-003**	**6.4500e-003**	**0.0000**	**21.0389**	**21.0389**	**4.3200e-003**	**4.8000e-004**	**21.2894**

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					
2027	0.0114	0.1081	0.1031	2.4000e-004	7.0500e-003	4.4900e-003	0.0115	1.2900e-003	4.2100e-003	5.5000e-003	0.0000	21.0389	21.0389	4.3200e-003	4.8000e-004	21.2894
Maximum	**0.0114**	**0.1081**	**0.1031**	**2.4000e-004**	**7.0500e-003**	**4.4900e-003**	**0.0115**	**1.2900e-003**	**4.2100e-003**	**5.5000e-003**	**0.0000**	**21.0389**	**21.0389**	**4.3200e-003**	**4.8000e-004**	**21.2894**

	ROG	NOx	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**	**47.23**	**0.00**	**35.35**	**42.67**	**0.00**	**14.73**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2027	8-31-2027	0.1193	0.1193
		Highest	0.1193	0.1193

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	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-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	0.0000
Mobile	0.0554	2.4057	0.8976	0.0101	0.3485	0.0199	0.3684	0.0954	0.0191	0.1145	0.0000	1,020.1939	1,020.1939	0.0654	0.1595	1,069.3613
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0554**	**2.4057**	**0.8977**	**0.0101**	**0.3485**	**0.0199**	**0.3684**	**0.0954**	**0.0191**	**0.1145**	**0.0000**	**1,020.1940**	**1,020.1940**	**0.0654**	**0.1595**	**1,069.3614**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-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	0.0000
Mobile	0.0554	2.4057	0.8976	0.0101	0.3485	0.0199	0.3684	0.0954	0.0191	0.1145	0.0000	1,020.1939	1,020.1939	0.0654	0.1595	1,069.3613
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0554**	**2.4057**	**0.8977**	**0.0101**	**0.3485**	**0.0199**	**0.3684**	**0.0954**	**0.0191**	**0.1145**	**0.0000**	**1,020.1940**	**1,020.1940**	**0.0654**	**0.1595**	**1,069.3614**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2027	6/28/2027	5	20	

Acres of Grading (Site Preparation Phase): 0

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Acres of Grading (Grading Phase): 0

Acres of Paving: 8

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	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
Demolition	3	8.00	0.00	105.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2027

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					0.0115	0.0000	0.0115	1.7400e-003	0.0000	1.7400e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.1012	0.0990	2.0000e-004		4.4300e-003	4.4300e-003		4.1500e-003	4.1500e-003	0.0000	17.4176	17.4176	4.1300e-003	0.0000	17.5209
Total	**0.0111**	**0.1012**	**0.0990**	**2.0000e-004**	**0.0115**	**4.4300e-003**	**0.0159**	**1.7400e-003**	**4.1500e-003**	**5.8900e-003**	**0.0000**	**17.4176**	**17.4176**	**4.1300e-003**	**0.0000**	**17.5209**

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	1.1000e-004	6.7600e-003	2.0000e-003	3.0000e-005	9.0000e-004	6.0000e-005	9.6000e-004	2.5000e-004	5.0000e-005	3.0000e-004	0.0000	2.9017	2.9017	1.8000e-004	4.6000e-004	3.0441
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.4000e-004	2.0400e-003	1.0000e-005	1.0000e-003	0.0000	1.0000e-003	2.7000e-004	0.0000	2.7000e-004	0.0000	0.7196	0.7196	1.0000e-005	2.0000e-005	0.7244
Total	**3.4000e-004**	**6.9000e-003**	**4.0400e-003**	**4.0000e-005**	**1.9000e-003**	**6.0000e-005**	**1.9600e-003**	**5.2000e-004**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**3.6213**	**3.6213**	**1.9000e-004**	**4.8000e-004**	**3.7685**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2027

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					5.1600e-003	0.0000	5.1600e-003	7.8000e-004	0.0000	7.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0111	0.1012	0.0990	2.0000e-004		4.4300e-003	4.4300e-003		4.1500e-003	4.1500e-003	0.0000	17.4176	17.4176	4.1300e-003	0.0000	17.5209
Total	**0.0111**	**0.1012**	**0.0990**	**2.0000e-004**	**5.1600e-003**	**4.4300e-003**	**9.5900e-003**	**7.8000e-004**	**4.1500e-003**	**4.9300e-003**	**0.0000**	**17.4176**	**17.4176**	**4.1300e-003**	**0.0000**	**17.5209**

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	1.1000e-004	6.7600e-003	2.0000e-003	3.0000e-005	9.0000e-004	6.0000e-005	9.6000e-004	2.5000e-004	5.0000e-005	3.0000e-004	0.0000	2.9017	2.9017	1.8000e-004	4.6000e-004	3.0441
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.4000e-004	2.0400e-003	1.0000e-005	1.0000e-003	0.0000	1.0000e-003	2.7000e-004	0.0000	2.7000e-004	0.0000	0.7196	0.7196	1.0000e-005	2.0000e-005	0.7244
Total	**3.4000e-004**	**6.9000e-003**	**4.0400e-003**	**4.0000e-005**	**1.9000e-003**	**6.0000e-005**	**1.9600e-003**	**5.2000e-004**	**5.0000e-005**	**5.7000e-004**	**0.0000**	**3.6213**	**3.6213**	**1.9000e-004**	**4.8000e-004**	**3.7685**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0554	2.4057	0.8976	0.0101	0.3485	0.0199	0.3684	0.0954	0.0191	0.1145	0.0000	1,020.1939	1,020.1939	0.0654	0.1595	1,069.3613
Unmitigated	0.0554	2.4057	0.8976	0.0101	0.3485	0.0199	0.3684	0.0954	0.0191	0.1145	0.0000	1,020.1939	1,020.1939	0.0654	0.1595	1,069.3613

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	36.00	0.00	0.00	94,545	94,545
Other Non-Asphalt Surfaces	176.00	0.00	0.00	732,160	732,160
Total	212.00	0.00	0.00	826,705	826,705

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 Office Building	14.70	6.60	6.60	71.00	0.00	29.00	77	19	4
Other Non-Asphalt Surfaces	0.00	16.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.571163	0.061971	0.173016	0.114025	0.023169	0.006440	0.009521	0.006303	0.000689	0.000605	0.027981	0.000899	0.004218
Other Non-Asphalt Surfaces	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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 Office Building	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
Other Non-Asphalt Surfaces	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**

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 Office Building	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
Other Non-Asphalt Surfaces	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**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004
Unmitigated	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004
Total	**1.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.0000**	**1.7000e-004**

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	8.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.6000e-004	1.6000e-004	0.0000	0.0000	1.7000e-004
Total	**1.0000e-005**	**0.0000**	**8.0000e-005**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**1.6000e-004**	**1.6000e-004**	**0.0000**	**0.0000**	**1.7000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

SIR-02 Conttonwood Sand Mine Phase 3

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	1.00	1000sqft	0.02	1,000.00	0
Other Non-Asphalt Surfaces	8.00	Acre	8.00	348,480.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2028
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Run v3 - Updated Phase 3 schedule; Update to CalEEMod 2020.4.0.

Land Use - Other non-asphlt areas = main entrance, mine parking, truck load area, plant area, settling ponds, and 2nd entrance west.

Construction Phase - Demolition only for phase 3.

Off-road Equipment - Demolition of a golf club house and related structure...total approx 23,000 SF.

Off-road Equipment - Grading for plant pad, parking, truck load area, settling ponds and entrances.

Trips and VMT -

Demolition -

Grading -

Vehicle Trips - ADT and ATL per project TIA; employee and vendor trips assinged to office (71% employees, 29% vendors); truck trips assigned to non-ashpalt surface.

Vehicle Emission Factors -

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Vehicle Emission Factors -

Vehicle Emission Factors -

Consumer Products - Operational mobile emissions only, this model.

Area Coating - Operational mobile emissions only, this model.

Energy Use - Building energy calculated off-model.

Water And Wastewater - Water supplied on-site, no sewer hookup.

Solid Waste - Solid waste calculated off-model.

Construction Off-road Equipment Mitigation - Dust mitigation to comply with SDAPCD Rule 55.

Fleet Mix - Fleet mix for trucks = 100% HHD.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	500	0
tblAreaCoating	Area_Nonresidential_Interior	1500	0
tblAreaCoating	Area_Parking	20909	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConsumerProducts	ROG_EF	2.14E-05	0
tblConsumerProducts	ROG_EF_Degreaser	3.542E-07	0
tblEnergyUse	LightingElect	3.81	0.00
tblEnergyUse	NT24E	4.97	0.00
tblEnergyUse	NT24NG	4.20	0.00
tblEnergyUse	T24E	4.16	0.00
tblEnergyUse	T24NG	15.83	0.00
tblFleetMix	HHD	6.3030e-003	1.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.06	0.00
tblFleetMix	LDT2	0.17	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	6.4400e-003	0.00
tblFleetMix	MCY	0.03	0.00

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblFleetMix	MDV	0.11	0.00
tblFleetMix	MH	4.2180e-003	0.00
tblFleetMix	MHD	9.5210e-003	0.00
tblFleetMix	OBUS	6.8900e-004	0.00
tblFleetMix	SBUS	8.9900e-004	0.00
tblFleetMix	UBUS	6.0500e-004	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblSolidWaste	SolidWasteGenerationRate	0.93	0.00
tblVehicleTrips	CC_TL	6.60	16.00
tblVehicleTrips	CC_TTP	48.00	0.00
tblVehicleTrips	CC_TTP	0.00	100.00
tblVehicleTrips	CNW_TL	6.60	0.00
tblVehicleTrips	CNW_TTP	19.00	29.00
tblVehicleTrips	CW_TL	14.70	0.00
tblVehicleTrips	CW_TTP	33.00	71.00
tblVehicleTrips	PR_TP	0.00	100.00
tblVehicleTrips	ST_TR	2.21	0.00
tblVehicleTrips	SU_TR	0.70	0.00
tblVehicleTrips	WD_TR	9.74	36.00
tblVehicleTrips	WD_TR	0.00	22.00
tblWater	IndoorWaterUseRate	177,733.75	0.00
tblWater	OutdoorWaterUseRate	108,933.59	0.00

2.0 Emissions Summary

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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					
2027	1.1464	10.8143	10.3061	0.0236	1.3401	0.4490	1.7892	0.2258	0.4207	0.6466	0.0000	2,318.6331	2,318.6331	0.4764	0.0528	2,346.2639
Maximum	**1.1464**	**10.8143**	**10.3061**	**0.0236**	**1.3401**	**0.4490**	**1.7892**	**0.2258**	**0.4207**	**0.6466**	**0.0000**	**2,318.6331**	**2,318.6331**	**0.4764**	**0.0528**	**2,346.2639**

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					
2027	1.1464	10.8143	10.3061	0.0236	0.7098	0.4490	1.1588	0.1304	0.4207	0.5511	0.0000	2,318.6331	2,318.6331	0.4764	0.0528	2,346.2639
Maximum	**1.1464**	**10.8143**	**10.3061**	**0.0236**	**0.7098**	**0.4490**	**1.1588**	**0.1304**	**0.4207**	**0.5511**	**0.0000**	**2,318.6331**	**2,318.6331**	**0.4764**	**0.0528**	**2,346.2639**

	ROG	NOx	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**	**47.04**	**0.00**	**35.23**	**42.27**	**0.00**	**14.76**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
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	0.4137	18.6132	6.9772	0.0775	2.7385	0.1536	2.8920	0.7482	0.1469	0.8951		8,665.5902	8,665.5902	0.5547	1.3552	9,083.2995
Total	**0.4137**	**18.6132**	**6.9781**	**0.0775**	**2.7385**	**0.1536**	**2.8920**	**0.7482**	**0.1469**	**0.8951**		**8,665.5922**	**8,665.5922**	**0.5547**	**1.3552**	**9,083.3016**

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	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
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	0.4137	18.6132	6.9772	0.0775	2.7385	0.1536	2.8920	0.7482	0.1469	0.8951		8,665.5902	8,665.5902	0.5547	1.3552	9,083.2995
Total	**0.4137**	**18.6132**	**6.9781**	**0.0775**	**2.7385**	**0.1536**	**2.8920**	**0.7482**	**0.1469**	**0.8951**		**8,665.5922**	**8,665.5922**	**0.5547**	**1.3552**	**9,083.3016**

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2027	6/28/2027	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 8

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	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
Demolition	3	8.00	0.00	105.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2027

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					1.1461	0.0000	1.1461	0.1736	0.0000	0.1736			0.0000			0.0000
Off-Road	1.1103	10.1221	9.9019	0.0200		0.4428	0.4428		0.4148	0.4148		1,919.9637	1,919.9637	0.4554		1,931.3474
Total	**1.1103**	**10.1221**	**9.9019**	**0.0200**	**1.1461**	**0.4428**	**1.5890**	**0.1736**	**0.4148**	**0.5884**		**1,919.9637**	**1,919.9637**	**0.4554**		**1,931.3474**

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2027

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	0.0106	0.6777	0.2010	2.8700e-003	0.0918	5.7400e-003	0.0976	0.0252	5.4900e-003	0.0307		320.0504	320.0504	0.0196	0.0511	335.7538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0255	0.0145	0.2032	7.4000e-004	0.1022	4.3000e-004	0.1026	0.0271	4.0000e-004	0.0275		78.6191	78.6191	1.4100e-003	1.7100e-003	79.1627
Total	**0.0361**	**0.6922**	**0.4042**	**3.6100e-003**	**0.1940**	**6.1700e-003**	**0.2002**	**0.0523**	**5.8900e-003**	**0.0582**		**398.6695**	**398.6695**	**0.0210**	**0.0528**	**414.9165**

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					0.5158	0.0000	0.5158	0.0781	0.0000	0.0781			0.0000			0.0000
Off-Road	1.1103	10.1221	9.9019	0.0200		0.4428	0.4428		0.4148	0.4148	0.0000	1,919.9637	1,919.9637	0.4554		1,931.3474
Total	**1.1103**	**10.1221**	**9.9019**	**0.0200**	**0.5158**	**0.4428**	**0.9586**	**0.0781**	**0.4148**	**0.4929**	**0.0000**	**1,919.9637**	**1,919.9637**	**0.4554**		**1,931.3474**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2027

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	0.0106	0.6777	0.2010	2.8700e-003	0.0918	5.7400e-003	0.0976	0.0252	5.4900e-003	0.0307		320.0504	320.0504	0.0196	0.0511	335.7538
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0255	0.0145	0.2032	7.4000e-004	0.1022	4.3000e-004	0.1026	0.0271	4.0000e-004	0.0275		78.6191	78.6191	1.4100e-003	1.7100e-003	79.1627
Total	**0.0361**	**0.6922**	**0.4042**	**3.6100e-003**	**0.1940**	**6.1700e-003**	**0.2002**	**0.0523**	**5.8900e-003**	**0.0582**		**398.6695**	**398.6695**	**0.0210**	**0.0528**	**414.9165**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	ROG	NOx	CO	SO2	Fugitive 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	0.4137	18.6132	6.9772	0.0775	2.7385	0.1536	2.8920	0.7482	0.1469	0.8951		8,665.5902	8,665.5902	0.5547	1.3552	9,083.2995
Unmitigated	0.4137	18.6132	6.9772	0.0775	2.7385	0.1536	2.8920	0.7482	0.1469	0.8951		8,665.5902	8,665.5902	0.5547	1.3552	9,083.2995

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	36.00	0.00	0.00	94,545	94,545
Other Non-Asphalt Surfaces	176.00	0.00	0.00	732,160	732,160
Total	212.00	0.00	0.00	826,705	826,705

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 Office Building	14.70	6.60	6.60	71.00	0.00	29.00	77	19	4
Other Non-Asphalt Surfaces	0.00	16.00	0.00	0.00	100.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.571163	0.061971	0.173016	0.114025	0.023169	0.006440	0.009521	0.006303	0.000689	0.000605	0.027981	0.000899	0.004218
Other Non-Asphalt Surfaces	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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 Office Building	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
Other Non-Asphalt Surfaces	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**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
General Office Building	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
Other Non-Asphalt Surfaces	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	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Unmitigated	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Total	**8.0000e-005**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**		**2.1000e-003**

SIR-02 Conttonwood Sand Mine Phase 3 - San Diego County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.0000e-005	1.0000e-005	9.2000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.9700e-003	1.9700e-003	1.0000e-005		2.1000e-003
Total	**8.0000e-005**	**1.0000e-005**	**9.2000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**1.9700e-003**	**1.9700e-003**	**1.0000e-005**		**2.1000e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D

Health Risk Assessment

Control Pathway

Dispersion Options

Titles

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Rural

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

LEAD

Averaging Time Options

Hours ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☐ 8 ☐ 12 ☐ 24

☑ Month ☑ Period ☐ Annual

Exponential Decay

Option not available

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☑ Yes ☐ No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: SIR02_Phase1_AERMOD.err

Source Pathway - Source Inputs

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	P1AEXTRACT	507642.95	3622759.45	104.31	3.00	1.00000	50.00	Surface-Based	11.63	1.05
		Phase 1-A Extraction								
VOLUME	PROCESS	508317.38	3623323.54	109.92	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Processing Area								
VOLUME	P1BEXTACT	507060.85	3622564.77	101.58	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 1-B Extraction								
VOLUME	P1CEXTRACT	507219.95	3622702.66	102.49	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 1-C Extraction								

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: FCONV (Final Conveyor)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508280.92	3623353.74	112.41	10.73
			508313.10	3623329.17	109.91	10.73

Source Type: LINE VOLUME

Source: HRT1 (Haul Route 1 Willow Glen)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
21.24	1.00000		508295.91	3623410.45	116.37	2.55
			508224.91	3623337.84	112.76	2.55
			508079.69	3623244.25	111.69	2.55
			507992.56	3623192.62	110.61	2.55
			507842.50	3623139.37	111.46	2.55
			507777.96	3623107.10	111.18	2.55
			507736.01	3623068.37	108.25	2.55
			507627.90	3622961.88	107.44	2.55
			507595.63	3622937.67	107.02	2.55
			507318.10	3622821.50	109.93	2.55
			507243.87	3622802.14	107.83	2.55
			507084.13	3622821.50	113.74	2.55
			506919.55	3622853.77	113.66	2.55
			506819.51	3622897.34	105.79	2.55
			506709.79	3622957.04	104.94	2.55
			506661.38	3623007.06	105.54	2.55

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: HRT2 (Haul Route 2 Jamacha N)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
24.90	1.00000		506662.38	3623030.07	104.77	2.55
			506737.60	3623073.38	106.64	2.55
			506808.26	3623169.12	109.72	2.55
			506840.17	3623294.48	113.20	2.55
			506837.89	3623625.00	116.39	2.55
			506824.22	3623818.75	118.01	2.55
			506833.34	3624137.87	129.51	2.55
			506826.50	3624511.70	146.39	2.55

Source Type: LINE VOLUME
Source: HRT3 (Haul Route 3 Jamacha SW)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
24.90	1.00000		506638.96	3623027.47	104.28	2.55
			506454.47	3622950.05	102.55	2.55
			506233.73	3622851.22	101.74	2.55
			506088.77	3622772.15	101.33	2.55
			505912.52	3622670.02	101.71	2.55
			505653.89	3622511.88	104.82	2.55
			505573.18	3622465.75	106.06	2.55
			505471.05	3622452.57	107.71	2.55
			505191.01	3622436.10	113.50	2.55
			504952.15	3622416.33	123.16	2.55
			504817.08	3622422.92	131.63	2.55
			504701.77	3622449.28	137.29	2.55
			504594.70	3622490.46	133.87	2.55

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: MCONV (Main Conveyor)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508280.93	3623353.72	112.41	0.00
			508260.69	3623331.50	111.28	0.00
			508287.26	3623276.19	108.57	0.00
			507808.86	3622966.90	104.01	0.00
			507484.82	3622744.23	102.58	0.00
			507318.69	3622592.01	102.64	0.00

Source Type: LINE VOLUME
Source: P1HRD (Haul Road Phase 1)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.50	1.00000		508296.07	3623262.54	108.47	3.19
			507806.20	3622940.99	104.30	3.19
			507637.00	3622759.24	104.13	3.19
			507218.35	3622698.33	102.54	3.19
			507057.72	3622558.61	103.10	3.19

Source Type: LINE VOLUME
Source: RSTACK1 (Radial Stacker 1)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508310.44	3623330.07	110.04	8.29
			508300.25	3623309.85	109.92	8.29

Source Type: LINE VOLUME
Source: RSTACK2 (Radial Stacker 2)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508311.27	3623330.63	110.03	10.27
			508327.81	3623308.01	109.55	10.27

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000524	508288.48	3623402.85	116.04	2.55	0.01136	21.24		9.88	2.37
	L0000525	508273.64	3623387.67	116.60	2.55	0.01136	21.24		9.88	2.37
	L0000526	508258.79	3623372.48	115.77	2.55	0.01136	21.24		9.88	2.37
	L0000527	508243.94	3623357.29	113.95	2.55	0.01136	21.24		9.88	2.37
	L0000528	508229.09	3623342.11	112.91	2.55	0.01136	21.24		9.88	2.37
	L0000529	508212.08	3623329.56	113.15	2.55	0.01136	21.24		9.88	2.37
	L0000530	508194.22	3623318.06	113.04	2.55	0.01136	21.24		9.88	2.37
	L0000531	508176.37	3623306.55	113.63	2.55	0.01136	21.24		9.88	2.37
	L0000532	508158.52	3623295.05	113.85	2.55	0.01136	21.24		9.88	2.37
	L0000533	508140.66	3623283.54	113.24	2.55	0.01136	21.24		9.88	2.37
	L0000534	508122.81	3623272.04	113.19	2.55	0.01136	21.24		9.88	2.37
	L0000535	508104.96	3623260.53	113.09	2.55	0.01136	21.24		9.88	2.37
	L0000536	508087.10	3623249.02	112.68	2.55	0.01136	21.24		9.88	2.37
	L0000537	508069.00	3623237.92	112.51	2.55	0.01136	21.24		9.88	2.37
	L0000538	508050.73	3623227.09	112.32	2.55	0.01136	21.24		9.88	2.37
	L0000539	508032.46	3623216.26	112.33	2.55	0.01136	21.24		9.88	2.37
	L0000540	508014.19	3623205.43	112.27	2.55	0.01136	21.24		9.88	2.37
	L0000541	507995.91	3623194.60	112.04	2.55	0.01136	21.24		9.88	2.37
	L0000542	507976.22	3623186.82	113.04	2.55	0.01136	21.24		9.88	2.37
	L0000543	507956.20	3623179.71	113.53	2.55	0.01136	21.24		9.88	2.37
	L0000544	507936.18	3623172.61	112.66	2.55	0.01136	21.24		9.88	2.37
	L0000545	507916.16	3623165.51	112.44	2.55	0.01136	21.24		9.88	2.37
	L0000546	507896.15	3623158.40	112.47	2.55	0.01136	21.24		9.88	2.37
	L0000547	507876.13	3623151.30	111.94	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000548	507856.11	3623144.20	112.06	2.55	0.01136	21.24		9.88	2.37
	L0000549	507836.42	3623136.33	111.94	2.55	0.01136	21.24		9.88	2.37
	L0000550	507817.42	3623126.83	111.14	2.55	0.01136	21.24		9.88	2.37
	L0000551	507798.43	3623117.33	110.57	2.55	0.01136	21.24		9.88	2.37
	L0000552	507779.43	3623107.83	110.64	2.55	0.01136	21.24		9.88	2.37
	L0000553	507763.56	3623093.81	109.41	2.55	0.01136	21.24		9.88	2.37
	L0000554	507747.95	3623079.40	108.67	2.55	0.01136	21.24		9.88	2.37
	L0000555	507732.46	3623064.88	108.21	2.55	0.01136	21.24		9.88	2.37
	L0000556	507717.33	3623049.97	107.98	2.55	0.01136	21.24		9.88	2.37
	L0000557	507702.19	3623035.06	107.75	2.55	0.01136	21.24		9.88	2.37
	L0000558	507687.06	3623020.16	107.66	2.55	0.01136	21.24		9.88	2.37
	L0000559	507671.93	3623005.25	107.41	2.55	0.01136	21.24		9.88	2.37
	L0000560	507656.80	3622990.35	107.29	2.55	0.01136	21.24		9.88	2.37
	L0000561	507641.67	3622975.44	107.27	2.55	0.01136	21.24		9.88	2.37
	L0000562	507626.37	3622960.73	107.27	2.55	0.01136	21.24		9.88	2.37
	L0000563	507609.38	3622947.99	107.33	2.55	0.01136	21.24		9.88	2.37
	L0000564	507591.89	3622936.11	107.51	2.55	0.01136	21.24		9.88	2.37
	L0000565	507572.30	3622927.91	108.74	2.55	0.01136	21.24		9.88	2.37
	L0000566	507552.70	3622919.71	109.91	2.55	0.01136	21.24		9.88	2.37
	L0000567	507533.11	3622911.51	110.14	2.55	0.01136	21.24		9.88	2.37
	L0000568	507513.52	3622903.30	110.64	2.55	0.01136	21.24		9.88	2.37
	L0000569	507493.93	3622895.10	111.16	2.55	0.01136	21.24		9.88	2.37
	L0000570	507474.33	3622886.90	111.27	2.55	0.01136	21.24		9.88	2.37
	L0000571	507454.74	3622878.70	110.61	2.55	0.01136	21.24		9.88	2.37
	L0000572	507435.15	3622870.50	110.72	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000573	507415.55	3622862.30	110.81	2.55	0.01136	21.24		9.88	2.37
	L0000574	507395.96	3622854.09	110.53	2.55	0.01136	21.24		9.88	2.37
	L0000575	507376.37	3622845.89	110.77	2.55	0.01136	21.24		9.88	2.37
	L0000576	507356.78	3622837.69	110.73	2.55	0.01136	21.24		9.88	2.37
	L0000577	507337.18	3622829.49	110.66	2.55	0.01136	21.24		9.88	2.37
	L0000578	507317.57	3622821.36	110.13	2.55	0.01136	21.24		9.88	2.37
	L0000579	507297.01	3622816.00	110.47	2.55	0.01136	21.24		9.88	2.37
	L0000580	507276.46	3622810.64	110.76	2.55	0.01136	21.24		9.88	2.37
	L0000581	507255.91	3622805.28	109.76	2.55	0.01136	21.24		9.88	2.37
	L0000582	507235.14	3622803.19	109.55	2.55	0.01136	21.24		9.88	2.37
	L0000583	507214.05	3622805.75	111.04	2.55	0.01136	21.24		9.88	2.37
	L0000584	507192.97	3622808.31	113.12	2.55	0.01136	21.24		9.88	2.37
	L0000585	507171.88	3622810.86	114.04	2.55	0.01136	21.24		9.88	2.37
	L0000586	507150.79	3622813.42	107.99	2.55	0.01136	21.24		9.88	2.37
	L0000587	507129.71	3622815.97	108.59	2.55	0.01136	21.24		9.88	2.37
	L0000588	507108.62	3622818.53	114.66	2.55	0.01136	21.24		9.88	2.37
	L0000589	507087.54	3622821.09	114.33	2.55	0.01136	21.24		9.88	2.37
	L0000590	507066.66	3622824.93	113.71	2.55	0.01136	21.24		9.88	2.37
	L0000591	507045.81	3622829.01	114.46	2.55	0.01136	21.24		9.88	2.37
	L0000592	507024.97	3622833.10	113.96	2.55	0.01136	21.24		9.88	2.37
	L0000593	507004.13	3622837.19	114.02	2.55	0.01136	21.24		9.88	2.37
	L0000594	506983.28	3622841.27	114.81	2.55	0.01136	21.24		9.88	2.37
	L0000595	506962.44	3622845.36	113.90	2.55	0.01136	21.24		9.88	2.37
	L0000596	506941.60	3622849.45	114.45	2.55	0.01136	21.24		9.88	2.37
	L0000597	506920.75	3622853.53	114.31	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000598	506901.20	3622861.76	115.01	2.55	0.01136	21.24		9.88	2.37
	L0000599	506881.73	3622870.24	113.75	2.55	0.01136	21.24		9.88	2.37
	L0000600	506862.25	3622878.72	114.15	2.55	0.01136	21.24		9.88	2.37
	L0000601	506842.78	3622887.20	109.05	2.55	0.01136	21.24		9.88	2.37
	L0000602	506823.31	3622895.68	105.83	2.55	0.01136	21.24		9.88	2.37
	L0000603	506804.49	3622905.51	105.66	2.55	0.01136	21.24		9.88	2.37
	L0000604	506785.83	3622915.66	105.57	2.55	0.01136	21.24		9.88	2.37
	L0000605	506767.18	3622925.81	105.31	2.55	0.01136	21.24		9.88	2.37
	L0000606	506748.52	3622935.96	104.24	2.55	0.01136	21.24		9.88	2.37
	L0000607	506729.86	3622946.11	105.72	2.55	0.01136	21.24		9.88	2.37
	L0000608	506711.21	3622956.26	104.92	2.55	0.01136	21.24		9.88	2.37
	L0000609	506696.14	3622971.14	106.11	2.55	0.01136	21.24		9.88	2.37
	L0000610	506681.37	3622986.40	106.50	2.55	0.01136	21.24		9.88	2.37
	L0000611	506666.60	3623001.67	105.91	2.55	0.01136	21.24		9.88	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000612	506627.48	3623022.66	104.21	2.55	0.01136	24.90		11.58	2.37
	L0000613	506604.53	3623013.02	104.26	2.55	0.01136	24.90		11.58	2.37
	L0000614	506581.57	3623003.39	104.07	2.55	0.01136	24.90		11.58	2.37
	L0000615	506558.61	3622993.75	103.82	2.55	0.01136	24.90		11.58	2.37
	L0000616	506535.65	3622984.12	103.44	2.55	0.01136	24.90		11.58	2.37
	L0000617	506512.69	3622974.49	103.18	2.55	0.01136	24.90		11.58	2.37
	L0000618	506489.74	3622964.85	102.98	2.55	0.01136	24.90		11.58	2.37
	L0000619	506466.78	3622955.22	102.78	2.55	0.01136	24.90		11.58	2.37
	L0000620	506443.93	3622945.33	102.41	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000621	506421.20	3622935.16	102.35	2.55	0.01136	24.90		11.58	2.37
	L0000622	506398.48	3622924.98	102.22	2.55	0.01136	24.90		11.58	2.37
	L0000623	506375.76	3622914.81	102.04	2.55	0.01136	24.90		11.58	2.37
	L0000624	506353.03	3622904.63	101.96	2.55	0.01136	24.90		11.58	2.37
	L0000625	506330.31	3622894.46	101.82	2.55	0.01136	24.90		11.58	2.37
	L0000626	506307.59	3622884.28	101.87	2.55	0.01136	24.90		11.58	2.37
	L0000627	506284.86	3622874.11	101.75	2.55	0.01136	24.90		11.58	2.37
	L0000628	506262.14	3622863.93	101.81	2.55	0.01136	24.90		11.58	2.37
	L0000629	506239.42	3622853.76	101.87	2.55	0.01136	24.90		11.58	2.37
	L0000630	506217.34	3622842.27	101.82	2.55	0.01136	24.90		11.58	2.37
	L0000631	506195.48	3622830.35	101.62	2.55	0.01136	24.90		11.58	2.37
	L0000632	506173.63	3622818.43	101.50	2.55	0.01136	24.90		11.58	2.37
	L0000633	506151.77	3622806.51	101.46	2.55	0.01136	24.90		11.58	2.37
	L0000634	506129.91	3622794.58	101.39	2.55	0.01136	24.90		11.58	2.37
	L0000635	506108.05	3622782.66	101.32	2.55	0.01136	24.90		11.58	2.37
	L0000636	506086.23	3622770.67	101.26	2.55	0.01136	24.90		11.58	2.37
	L0000637	506064.69	3622758.19	101.18	2.55	0.01136	24.90		11.58	2.37
	L0000638	506043.15	3622745.71	101.14	2.55	0.01136	24.90		11.58	2.37
	L0000639	506021.61	3622733.23	101.13	2.55	0.01136	24.90		11.58	2.37
	L0000640	506000.06	3622720.74	101.18	2.55	0.01136	24.90		11.58	2.37
	L0000641	505978.52	3622708.26	101.26	2.55	0.01136	24.90		11.58	2.37
	L0000642	505956.98	3622695.78	101.36	2.55	0.01136	24.90		11.58	2.37
	L0000643	505935.44	3622683.30	101.49	2.55	0.01136	24.90		11.58	2.37
	L0000644	505913.89	3622670.81	101.66	2.55	0.01136	24.90		11.58	2.37
	L0000645	505892.63	3622657.86	101.87	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000646	505871.39	3622644.87	102.07	2.55	0.01136	24.90		11.58	2.37
	L0000647	505850.15	3622631.88	102.40	2.55	0.01136	24.90		11.58	2.37
	L0000648	505828.91	3622618.89	102.82	2.55	0.01136	24.90		11.58	2.37
	L0000649	505807.67	3622605.90	103.19	2.55	0.01136	24.90		11.58	2.37
	L0000650	505786.43	3622592.92	103.53	2.55	0.01136	24.90		11.58	2.37
	L0000651	505765.19	3622579.93	103.76	2.55	0.01136	24.90		11.58	2.37
	L0000652	505743.94	3622566.94	103.96	2.55	0.01136	24.90		11.58	2.37
	L0000653	505722.70	3622553.95	104.17	2.55	0.01136	24.90		11.58	2.37
	L0000654	505701.46	3622540.96	104.43	2.55	0.01136	24.90		11.58	2.37
	L0000655	505680.22	3622527.97	104.64	2.55	0.01136	24.90		11.58	2.37
	L0000656	505658.98	3622514.99	104.76	2.55	0.01136	24.90		11.58	2.37
	L0000657	505637.45	3622502.48	104.89	2.55	0.01136	24.90		11.58	2.37
	L0000658	505615.83	3622490.13	105.14	2.55	0.01136	24.90		11.58	2.37
	L0000659	505594.22	3622477.78	105.50	2.55	0.01136	24.90		11.58	2.37
	L0000660	505572.52	3622465.67	105.88	2.55	0.01136	24.90		11.58	2.37
	L0000661	505547.82	3622462.48	106.27	2.55	0.01136	24.90		11.58	2.37
	L0000662	505523.13	3622459.30	106.94	2.55	0.01136	24.90		11.58	2.37
	L0000663	505498.44	3622456.11	107.39	2.55	0.01136	24.90		11.58	2.37
	L0000664	505473.75	3622452.92	107.75	2.55	0.01136	24.90		11.58	2.37
	L0000665	505448.91	3622451.27	107.77	2.55	0.01136	24.90		11.58	2.37
	L0000666	505424.05	3622449.81	108.41	2.55	0.01136	24.90		11.58	2.37
	L0000667	505399.20	3622448.35	108.13	2.55	0.01136	24.90		11.58	2.37
	L0000668	505374.35	3622446.89	107.52	2.55	0.01136	24.90		11.58	2.37
	L0000669	505349.49	3622445.42	107.78	2.55	0.01136	24.90		11.58	2.37
	L0000670	505324.64	3622443.96	108.01	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000671	505299.78	3622442.50	109.09	2.55	0.01136	24.90		11.58	2.37
	L0000672	505274.93	3622441.04	110.20	2.55	0.01136	24.90		11.58	2.37
	L0000673	505250.07	3622439.58	111.13	2.55	0.01136	24.90		11.58	2.37
	L0000674	505225.22	3622438.11	111.98	2.55	0.01136	24.90		11.58	2.37
	L0000675	505200.36	3622436.65	113.14	2.55	0.01136	24.90		11.58	2.37
	L0000676	505175.53	3622434.82	113.70	2.55	0.01136	24.90		11.58	2.37
	L0000677	505150.72	3622432.77	114.23	2.55	0.01136	24.90		11.58	2.37
	L0000678	505125.91	3622430.71	114.69	2.55	0.01136	24.90		11.58	2.37
	L0000679	505101.10	3622428.66	114.21	2.55	0.01136	24.90		11.58	2.37
	L0000680	505076.28	3622426.61	115.00	2.55	0.01136	24.90		11.58	2.37
	L0000681	505051.47	3622424.55	115.46	2.55	0.01136	24.90		11.58	2.37
	L0000682	505026.66	3622422.50	117.53	2.55	0.01136	24.90		11.58	2.37
	L0000683	505001.85	3622420.45	121.45	2.55	0.01136	24.90		11.58	2.37
	L0000684	504977.03	3622418.39	121.57	2.55	0.01136	24.90		11.58	2.37
	L0000685	504952.22	3622416.34	123.10	2.55	0.01136	24.90		11.58	2.37
	L0000686	504927.35	3622417.54	125.18	2.55	0.01136	24.90		11.58	2.37
	L0000687	504902.48	3622418.76	126.83	2.55	0.01136	24.90		11.58	2.37
	L0000688	504877.62	3622419.97	128.08	2.55	0.01136	24.90		11.58	2.37
	L0000689	504852.75	3622421.18	129.48	2.55	0.01136	24.90		11.58	2.37
	L0000690	504827.88	3622422.40	130.97	2.55	0.01136	24.90		11.58	2.37
	L0000691	504803.35	3622426.06	132.52	2.55	0.01136	24.90		11.58	2.37
	L0000692	504779.08	3622431.61	134.65	2.55	0.01136	24.90		11.58	2.37
	L0000693	504754.81	3622437.16	135.95	2.55	0.01136	24.90		11.58	2.37
	L0000694	504730.53	3622442.71	136.89	2.55	0.01136	24.90		11.58	2.37
	L0000695	504706.26	3622448.25	137.39	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000696	504682.83	3622456.56	137.67	2.55	0.01136	24.90		11.58	2.37
	L0000697	504659.59	3622465.50	137.70	2.55	0.01136	24.90		11.58	2.37
	L0000698	504636.36	3622474.44	136.36	2.55	0.01136	24.90		11.58	2.37
	L0000699	504613.12	3622483.38	135.62	2.55	0.01136	24.90		11.58	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000700	506673.17	3623036.28	104.92	2.55	0.01613	24.90		11.58	2.37
	L0000701	506694.74	3623048.70	105.38	2.55	0.01613	24.90		11.58	2.37
	L0000702	506716.32	3623061.13	106.06	2.55	0.01613	24.90		11.58	2.37
	L0000703	506737.80	3623073.66	106.71	2.55	0.01613	24.90		11.58	2.37
	L0000704	506752.59	3623093.69	107.16	2.55	0.01613	24.90		11.58	2.37
	L0000705	506767.37	3623113.72	107.74	2.55	0.01613	24.90		11.58	2.37
	L0000706	506782.16	3623133.75	108.40	2.55	0.01613	24.90		11.58	2.37
	L0000707	506796.95	3623153.78	109.11	2.55	0.01613	24.90		11.58	2.37
	L0000708	506809.70	3623174.78	110.05	2.55	0.01613	24.90		11.58	2.37
	L0000709	506815.84	3623198.90	110.58	2.55	0.01613	24.90		11.58	2.37
	L0000710	506821.99	3623223.03	110.82	2.55	0.01613	24.90		11.58	2.37
	L0000711	506828.13	3623247.16	112.29	2.55	0.01613	24.90		11.58	2.37
	L0000712	506834.27	3623271.29	113.71	2.55	0.01613	24.90		11.58	2.37
	L0000713	506840.17	3623295.45	112.90	2.55	0.01613	24.90		11.58	2.37
	L0000714	506840.00	3623320.34	112.68	2.55	0.01613	24.90		11.58	2.37
	L0000715	506839.82	3623345.24	112.87	2.55	0.01613	24.90		11.58	2.37
	L0000716	506839.65	3623370.14	114.11	2.55	0.01613	24.90		11.58	2.37
	L0000717	506839.48	3623395.03	115.60	2.55	0.01613	24.90		11.58	2.37
	L0000718	506839.31	3623419.93	115.38	2.55	0.01613	24.90		11.58	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000719	506839.14	3623444.83	115.36	2.55	0.01613	24.90		11.58	2.37
	L0000720	506838.97	3623469.73	114.72	2.55	0.01613	24.90		11.58	2.37
	L0000721	506838.79	3623494.62	119.07	2.55	0.01613	24.90		11.58	2.37
	L0000722	506838.62	3623519.52	119.70	2.55	0.01613	24.90		11.58	2.37
	L0000723	506838.45	3623544.42	119.89	2.55	0.01613	24.90		11.58	2.37
	L0000724	506838.28	3623569.31	115.87	2.55	0.01613	24.90		11.58	2.37
	L0000725	506838.11	3623594.21	116.31	2.55	0.01613	24.90		11.58	2.37
	L0000726	506837.94	3623619.11	116.57	2.55	0.01613	24.90		11.58	2.37
	L0000727	506836.56	3623643.96	113.69	2.55	0.01613	24.90		11.58	2.37
	L0000728	506834.80	3623668.79	115.36	2.55	0.01613	24.90		11.58	2.37
	L0000729	506833.05	3623693.63	115.32	2.55	0.01613	24.90		11.58	2.37
	L0000730	506831.30	3623718.47	116.42	2.55	0.01613	24.90		11.58	2.37
	L0000731	506829.54	3623743.30	116.38	2.55	0.01613	24.90		11.58	2.37
	L0000732	506827.79	3623768.14	117.28	2.55	0.01613	24.90		11.58	2.37
	L0000733	506826.04	3623792.97	117.17	2.55	0.01613	24.90		11.58	2.37
	L0000734	506824.28	3623817.81	117.88	2.55	0.01613	24.90		11.58	2.37
	L0000735	506824.90	3623842.69	119.08	2.55	0.01613	24.90		11.58	2.37
	L0000736	506825.61	3623867.58	120.72	2.55	0.01613	24.90		11.58	2.37
	L0000737	506826.32	3623892.47	121.80	2.55	0.01613	24.90		11.58	2.37
	L0000738	506827.04	3623917.36	122.63	2.55	0.01613	24.90		11.58	2.37
	L0000739	506827.75	3623942.24	123.39	2.55	0.01613	24.90		11.58	2.37
	L0000740	506828.46	3623967.13	124.02	2.55	0.01613	24.90		11.58	2.37
	L0000741	506829.17	3623992.02	124.63	2.55	0.01613	24.90		11.58	2.37
	L0000742	506829.88	3624016.91	126.20	2.55	0.01613	24.90		11.58	2.37
	L0000743	506830.59	3624041.79	126.61	2.55	0.01613	24.90		11.58	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000744	506831.30	3624066.68	127.28	2.55	0.01613	24.90		11.58	2.37
	L0000745	506832.01	3624091.57	127.99	2.55	0.01613	24.90		11.58	2.37
	L0000746	506832.72	3624116.46	129.25	2.55	0.01613	24.90		11.58	2.37
	L0000747	506833.27	3624141.34	129.79	2.55	0.01613	24.90		11.58	2.37
	L0000748	506832.82	3624166.24	130.85	2.55	0.01613	24.90		11.58	2.37
	L0000749	506832.36	3624191.13	131.50	2.55	0.01613	24.90		11.58	2.37
	L0000750	506831.91	3624216.02	131.87	2.55	0.01613	24.90		11.58	2.37
	L0000751	506831.45	3624240.92	132.66	2.55	0.01613	24.90		11.58	2.37
	L0000752	506831.00	3624265.81	134.14	2.55	0.01613	24.90		11.58	2.37
	L0000753	506830.54	3624290.71	135.44	2.55	0.01613	24.90		11.58	2.37
	L0000754	506830.08	3624315.60	137.20	2.55	0.01613	24.90		11.58	2.37
	L0000755	506829.63	3624340.49	138.98	2.55	0.01613	24.90		11.58	2.37
	L0000756	506829.17	3624365.39	140.06	2.55	0.01613	24.90		11.58	2.37
	L0000757	506828.72	3624390.28	140.81	2.55	0.01613	24.90		11.58	2.37
	L0000758	506828.26	3624415.17	141.39	2.55	0.01613	24.90		11.58	2.37
	L0000759	506827.81	3624440.07	142.78	2.55	0.01613	24.90		11.58	2.37
	L0000760	506827.35	3624464.96	144.03	2.55	0.01613	24.90		11.58	2.37
	L0000761	506826.90	3624489.85	145.02	2.55	0.01613	24.90		11.58	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
FCONV	L0002171	508281.65	3623353.18	112.09	10.73	0.04545	1.83		0.85	3.74
	L0002172	508283.10	3623352.07	112.12	10.73	0.04545	1.83		0.85	3.74
	L0002173	508284.55	3623350.96	112.12	10.73	0.04545	1.83		0.85	3.74
	L0002174	508286.01	3623349.85	112.08	10.73	0.04545	1.83		0.85	3.74
	L0002175	508287.46	3623348.74	112.00	10.73	0.04545	1.83		0.85	3.74

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
FCONV	L0002176	508288.91	3623347.63	111.83	10.73	0.04545	1.83		0.85	3.74
	L0002177	508290.37	3623346.52	111.63	10.73	0.04545	1.83		0.85	3.74
	L0002178	508291.82	3623345.41	111.47	10.73	0.04545	1.83		0.85	3.74
	L0002179	508293.28	3623344.30	111.32	10.73	0.04545	1.83		0.85	3.74
	L0002180	508294.73	3623343.19	111.14	10.73	0.04545	1.83		0.85	3.74
	L0002181	508296.18	3623342.09	110.96	10.73	0.04545	1.83		0.85	3.74
	L0002182	508297.64	3623340.98	110.80	10.73	0.04545	1.83		0.85	3.74
	L0002183	508299.09	3623339.87	110.67	10.73	0.04545	1.83		0.85	3.74
	L0002184	508300.55	3623338.76	110.56	10.73	0.04545	1.83		0.85	3.74
	L0002185	508302.00	3623337.65	110.46	10.73	0.04545	1.83		0.85	3.74
	L0002186	508303.45	3623336.54	110.38	10.73	0.04545	1.83		0.85	3.74
	L0002187	508304.91	3623335.43	110.31	10.73	0.04545	1.83		0.85	3.74
	L0002188	508306.36	3623334.32	110.22	10.73	0.04545	1.83		0.85	3.74
	L0002189	508307.81	3623333.21	110.14	10.73	0.04545	1.83		0.85	3.74
	L0002190	508309.27	3623332.10	110.07	10.73	0.04545	1.83		0.85	3.74
	L0002191	508310.72	3623330.99	110.01	10.73	0.04545	1.83		0.85	3.74
	L0002192	508312.18	3623329.88	109.97	10.73	0.04545	1.83		0.85	3.74

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK1	L0002622	508310.03	3623329.25	109.97	8.29	0.08333	1.83		0.85	3.52
	L0002623	508309.20	3623327.62	109.93	8.29	0.08333	1.83		0.85	3.52
	L0002624	508308.38	3623325.99	109.87	8.29	0.08333	1.83		0.85	3.52
	L0002625	508307.56	3623324.35	109.81	8.29	0.08333	1.83		0.85	3.52
	L0002626	508306.73	3623322.72	109.91	8.29	0.08333	1.83		0.85	3.52
	L0002627	508305.91	3623321.09	110.00	8.29	0.08333	1.83		0.85	3.52

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK1	L0002628	508305.09	3623319.45	110.09	8.29	0.08333	1.83		0.85	3.52
	L0002629	508304.27	3623317.82	110.19	8.29	0.08333	1.83		0.85	3.52
	L0002630	508303.44	3623316.19	110.30	8.29	0.08333	1.83		0.85	3.52
	L0002631	508302.62	3623314.56	110.41	8.29	0.08333	1.83		0.85	3.52
	L0002632	508301.80	3623312.92	110.37	8.29	0.08333	1.83		0.85	3.52
	L0002633	508300.97	3623311.29	110.28	8.29	0.08333	1.83		0.85	3.52

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK2	L0002650	508311.81	3623329.89	109.97	10.27	0.06667	1.83		0.85	3.59
	L0002651	508312.89	3623328.41	109.94	10.27	0.06667	1.83		0.85	3.59
	L0002652	508313.97	3623326.94	109.92	10.27	0.06667	1.83		0.85	3.59
	L0002653	508315.05	3623325.46	109.90	10.27	0.06667	1.83		0.85	3.59
	L0002654	508316.13	3623323.98	109.91	10.27	0.06667	1.83		0.85	3.59
	L0002655	508317.21	3623322.51	109.97	10.27	0.06667	1.83		0.85	3.59
	L0002656	508318.29	3623321.03	110.01	10.27	0.06667	1.83		0.85	3.59
	L0002657	508319.37	3623319.55	110.03	10.27	0.06667	1.83		0.85	3.59
	L0002658	508320.45	3623318.08	110.03	10.27	0.06667	1.83		0.85	3.59
	L0002659	508321.53	3623316.60	110.02	10.27	0.06667	1.83		0.85	3.59
	L0002660	508322.61	3623315.13	109.98	10.27	0.06667	1.83		0.85	3.59
	L0002661	508323.69	3623313.65	109.93	10.27	0.06667	1.83		0.85	3.59
	L0002662	508324.77	3623312.17	109.85	10.27	0.06667	1.83		0.85	3.59
	L0002663	508325.85	3623310.70	109.77	10.27	0.06667	1.83		0.85	3.59
	L0002664	508326.93	3623309.22	109.69	10.27	0.06667	1.83		0.85	3.59

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0005980	508280.32	3623353.04	111.97	0.00	0.00143	1.83		0.85	0.66
	L0005981	508279.09	3623351.69	111.85	0.00	0.00143	1.83		0.85	0.66
	L0005982	508277.85	3623350.34	111.84	0.00	0.00143	1.83		0.85	0.66
	L0005983	508276.62	3623348.99	111.80	0.00	0.00143	1.83		0.85	0.66
	L0005984	508275.39	3623347.64	111.73	0.00	0.00143	1.83		0.85	0.66
	L0005985	508274.16	3623346.28	111.63	0.00	0.00143	1.83		0.85	0.66
	L0005986	508272.93	3623344.93	111.51	0.00	0.00143	1.83		0.85	0.66
	L0005987	508271.70	3623343.58	111.46	0.00	0.00143	1.83		0.85	0.66
	L0005988	508270.47	3623342.23	111.44	0.00	0.00143	1.83		0.85	0.66
	L0005989	508269.23	3623340.88	111.48	0.00	0.00143	1.83		0.85	0.66
	L0005990	508268.00	3623339.52	111.48	0.00	0.00143	1.83		0.85	0.66
	L0005991	508266.77	3623338.17	111.45	0.00	0.00143	1.83		0.85	0.66
	L0005992	508265.54	3623336.82	111.39	0.00	0.00143	1.83		0.85	0.66
	L0005993	508264.31	3623335.47	111.29	0.00	0.00143	1.83		0.85	0.66
	L0005994	508263.08	3623334.12	111.22	0.00	0.00143	1.83		0.85	0.66
	L0005995	508261.84	3623332.76	111.22	0.00	0.00143	1.83		0.85	0.66
	L0005996	508260.75	3623331.39	111.24	0.00	0.00143	1.83		0.85	0.66
	L0005997	508261.54	3623329.74	111.17	0.00	0.00143	1.83		0.85	0.66
	L0005998	508262.33	3623328.10	111.12	0.00	0.00143	1.83		0.85	0.66
	L0005999	508263.12	3623326.45	111.07	0.00	0.00143	1.83		0.85	0.66
	L0006000	508263.91	3623324.80	111.02	0.00	0.00143	1.83		0.85	0.66
	L0006001	508264.71	3623323.15	110.95	0.00	0.00143	1.83		0.85	0.66
	L0006002	508265.50	3623321.50	110.83	0.00	0.00143	1.83		0.85	0.66
	L0006003	508266.29	3623319.85	110.67	0.00	0.00143	1.83		0.85	0.66
	L0006004	508267.08	3623318.20	110.47	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006005	508267.87	3623316.56	110.23	0.00	0.00143	1.83		0.85	0.66
	L0006006	508268.66	3623314.91	109.95	0.00	0.00143	1.83		0.85	0.66
	L0006007	508269.46	3623313.26	109.69	0.00	0.00143	1.83		0.85	0.66
	L0006008	508270.25	3623311.61	109.52	0.00	0.00143	1.83		0.85	0.66
	L0006009	508271.04	3623309.96	109.43	0.00	0.00143	1.83		0.85	0.66
	L0006010	508271.83	3623308.31	109.43	0.00	0.00143	1.83		0.85	0.66
	L0006011	508272.62	3623306.66	109.45	0.00	0.00143	1.83		0.85	0.66
	L0006012	508273.42	3623305.02	109.49	0.00	0.00143	1.83		0.85	0.66
	L0006013	508274.21	3623303.37	109.51	0.00	0.00143	1.83		0.85	0.66
	L0006014	508275.00	3623301.72	109.51	0.00	0.00143	1.83		0.85	0.66
	L0006015	508275.79	3623300.07	109.49	0.00	0.00143	1.83		0.85	0.66
	L0006016	508276.58	3623298.42	109.47	0.00	0.00143	1.83		0.85	0.66
	L0006017	508277.37	3623296.77	109.44	0.00	0.00143	1.83		0.85	0.66
	L0006018	508278.17	3623295.13	109.40	0.00	0.00143	1.83		0.85	0.66
	L0006019	508278.96	3623293.48	109.35	0.00	0.00143	1.83		0.85	0.66
	L0006020	508279.75	3623291.83	109.30	0.00	0.00143	1.83		0.85	0.66
	L0006021	508280.54	3623290.18	109.25	0.00	0.00143	1.83		0.85	0.66
	L0006022	508281.33	3623288.53	109.20	0.00	0.00143	1.83		0.85	0.66
	L0006023	508282.13	3623286.88	109.15	0.00	0.00143	1.83		0.85	0.66
	L0006024	508282.92	3623285.23	109.10	0.00	0.00143	1.83		0.85	0.66
	L0006025	508283.71	3623283.59	109.05	0.00	0.00143	1.83		0.85	0.66
	L0006026	508284.50	3623281.94	109.00	0.00	0.00143	1.83		0.85	0.66
	L0006027	508285.29	3623280.29	108.93	0.00	0.00143	1.83		0.85	0.66
	L0006028	508286.08	3623278.64	108.86	0.00	0.00143	1.83		0.85	0.66
	L0006029	508286.88	3623276.99	108.77	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006030	508286.48	3623275.68	108.71	0.00	0.00143	1.83		0.85	0.66
	L0006031	508284.94	3623274.69	108.69	0.00	0.00143	1.83		0.85	0.66
	L0006032	508283.41	3623273.69	108.68	0.00	0.00143	1.83		0.85	0.66
	L0006033	508281.87	3623272.70	108.68	0.00	0.00143	1.83		0.85	0.66
	L0006034	508280.34	3623271.71	108.68	0.00	0.00143	1.83		0.85	0.66
	L0006035	508278.80	3623270.71	108.67	0.00	0.00143	1.83		0.85	0.66
	L0006036	508277.26	3623269.72	108.66	0.00	0.00143	1.83		0.85	0.66
	L0006037	508275.73	3623268.73	108.63	0.00	0.00143	1.83		0.85	0.66
	L0006038	508274.19	3623267.73	108.60	0.00	0.00143	1.83		0.85	0.66
	L0006039	508272.66	3623266.74	108.56	0.00	0.00143	1.83		0.85	0.66
	L0006040	508271.12	3623265.75	108.51	0.00	0.00143	1.83		0.85	0.66
	L0006041	508269.58	3623264.76	108.39	0.00	0.00143	1.83		0.85	0.66
	L0006042	508268.05	3623263.76	108.27	0.00	0.00143	1.83		0.85	0.66
	L0006043	508266.51	3623262.77	108.18	0.00	0.00143	1.83		0.85	0.66
	L0006044	508264.98	3623261.78	108.14	0.00	0.00143	1.83		0.85	0.66
	L0006045	508263.44	3623260.78	108.11	0.00	0.00143	1.83		0.85	0.66
	L0006046	508261.91	3623259.79	108.10	0.00	0.00143	1.83		0.85	0.66
	L0006047	508260.37	3623258.80	108.10	0.00	0.00143	1.83		0.85	0.66
	L0006048	508258.83	3623257.81	108.10	0.00	0.00143	1.83		0.85	0.66
	L0006049	508257.30	3623256.81	108.08	0.00	0.00143	1.83		0.85	0.66
	L0006050	508255.76	3623255.82	108.05	0.00	0.00143	1.83		0.85	0.66
	L0006051	508254.23	3623254.83	108.01	0.00	0.00143	1.83		0.85	0.66
	L0006052	508252.69	3623253.83	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006053	508251.16	3623252.84	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006054	508249.62	3623251.85	108.00	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006055	508248.08	3623250.86	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006056	508246.55	3623249.86	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006057	508245.01	3623248.87	107.98	0.00	0.00143	1.83		0.85	0.66
	L0006058	508243.48	3623247.88	107.98	0.00	0.00143	1.83		0.85	0.66
	L0006059	508241.94	3623246.88	107.98	0.00	0.00143	1.83		0.85	0.66
	L0006060	508240.40	3623245.89	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006061	508238.87	3623244.90	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006062	508237.33	3623243.91	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006063	508235.80	3623242.91	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006064	508234.26	3623241.92	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006065	508232.73	3623240.93	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006066	508231.19	3623239.93	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006067	508229.65	3623238.94	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006068	508228.12	3623237.95	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006069	508226.58	3623236.96	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006070	508225.05	3623235.96	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006071	508223.51	3623234.97	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006072	508221.97	3623233.98	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006073	508220.44	3623232.98	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006074	508218.90	3623231.99	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006075	508217.37	3623231.00	108.01	0.00	0.00143	1.83		0.85	0.66
	L0006076	508215.83	3623230.00	108.03	0.00	0.00143	1.83		0.85	0.66
	L0006077	508214.30	3623229.01	108.05	0.00	0.00143	1.83		0.85	0.66
	L0006078	508212.76	3623228.02	108.07	0.00	0.00143	1.83		0.85	0.66
	L0006079	508211.22	3623227.03	108.10	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006080	508209.69	3623226.03	108.12	0.00	0.00143	1.83		0.85	0.66
	L0006081	508208.15	3623225.04	108.10	0.00	0.00143	1.83		0.85	0.66
	L0006082	508206.62	3623224.05	108.08	0.00	0.00143	1.83		0.85	0.66
	L0006083	508205.08	3623223.05	108.06	0.00	0.00143	1.83		0.85	0.66
	L0006084	508203.55	3623222.06	108.02	0.00	0.00143	1.83		0.85	0.66
	L0006085	508202.01	3623221.07	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006086	508200.47	3623220.08	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006087	508198.94	3623219.08	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006088	508197.40	3623218.09	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006089	508195.87	3623217.10	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006090	508194.33	3623216.10	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006091	508192.79	3623215.11	107.97	0.00	0.00143	1.83		0.85	0.66
	L0006092	508191.26	3623214.12	107.98	0.00	0.00143	1.83		0.85	0.66
	L0006093	508189.72	3623213.13	107.98	0.00	0.00143	1.83		0.85	0.66
	L0006094	508188.19	3623212.13	107.99	0.00	0.00143	1.83		0.85	0.66
	L0006095	508186.65	3623211.14	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006096	508185.12	3623210.15	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006097	508183.58	3623209.15	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006098	508182.04	3623208.16	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006099	508180.51	3623207.17	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006100	508178.97	3623206.18	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006101	508177.44	3623205.18	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006102	508175.90	3623204.19	108.00	0.00	0.00143	1.83		0.85	0.66
	L0006103	508174.37	3623203.20	108.01	0.00	0.00143	1.83		0.85	0.66
	L0006104	508172.83	3623202.20	108.02	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0006105	508171.29	3623201.21	108.03	0.00	0.00143	1.83		0.85	0.66
	L0006106	508169.76	3623200.22	108.04	0.00	0.00143	1.83		0.85	0.66
	L0006107	508168.22	3623199.23	108.05	0.00	0.00143	1.83		0.85	0.66
	L0006108	508166.69	3623198.23	108.05	0.00	0.00143	1.83		0.85	0.66
	L0006109	508165.15	3623197.24	108.05	0.00	0.00143	1.83		0.85	0.66
	L0006110	508163.61	3623196.25	108.06	0.00	0.00143	1.83		0.85	0.66
	L0006111	508162.08	3623195.25	108.06	0.00	0.00143	1.83		0.85	0.66
	L0006112	508160.54	3623194.26	108.07	0.00	0.00143	1.83		0.85	0.66
	L0006113	508159.01	3623193.27	108.09	0.00	0.00143	1.83		0.85	0.66
	L0006114	508157.47	3623192.27	108.10	0.00	0.00143	1.83		0.85	0.66
	L0006115	508155.94	3623191.28	108.11	0.00	0.00143	1.83		0.85	0.66
	L0006116	508154.40	3623190.29	108.10	0.00	0.00143	1.83		0.85	0.66
	L0006117	508152.86	3623189.30	108.06	0.00	0.00143	1.83		0.85	0.66
	L0006118	508151.33	3623188.30	108.03	0.00	0.00143	1.83		0.85	0.66
	L0006119	508149.79	3623187.31	107.98	0.00	0.00143	1.83		0.85	0.66
	L0006120	508148.26	3623186.32	107.93	0.00	0.00143	1.83		0.85	0.66
	L0006121	508146.72	3623185.32	107.87	0.00	0.00143	1.83		0.85	0.66
	L0006122	508145.19	3623184.33	107.80	0.00	0.00143	1.83		0.85	0.66
	L0006123	508143.65	3623183.34	107.73	0.00	0.00143	1.83		0.85	0.66
	L0006124	508142.11	3623182.35	107.66	0.00	0.00143	1.83		0.85	0.66
	L0006125	508140.58	3623181.35	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006126	508139.04	3623180.36	107.54	0.00	0.00143	1.83		0.85	0.66
	L0006127	508137.51	3623179.37	107.52	0.00	0.00143	1.83		0.85	0.66
	L0006128	508135.97	3623178.37	107.51	0.00	0.00143	1.83		0.85	0.66
	L0006129	508134.43	3623177.38	107.49	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0006130	508132.90	3623176.39	107.47	0.00	0.00143	1.83		0.85	0.66
	L0006131	508131.36	3623175.40	107.46	0.00	0.00143	1.83		0.85	0.66
	L0006132	508129.83	3623174.40	107.47	0.00	0.00143	1.83		0.85	0.66
	L0006133	508128.29	3623173.41	107.47	0.00	0.00143	1.83		0.85	0.66
	L0006134	508126.76	3623172.42	107.48	0.00	0.00143	1.83		0.85	0.66
	L0006135	508125.22	3623171.42	107.49	0.00	0.00143	1.83		0.85	0.66
	L0006136	508123.68	3623170.43	107.51	0.00	0.00143	1.83		0.85	0.66
	L0006137	508122.15	3623169.44	107.55	0.00	0.00143	1.83		0.85	0.66
	L0006138	508120.61	3623168.45	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006139	508119.08	3623167.45	107.60	0.00	0.00143	1.83		0.85	0.66
	L0006140	508117.54	3623166.46	107.61	0.00	0.00143	1.83		0.85	0.66
	L0006141	508116.01	3623165.47	107.59	0.00	0.00143	1.83		0.85	0.66
	L0006142	508114.47	3623164.47	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006143	508112.93	3623163.48	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006144	508111.40	3623162.49	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006145	508109.86	3623161.50	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006146	508108.33	3623160.50	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006147	508106.79	3623159.51	107.61	0.00	0.00143	1.83		0.85	0.66
	L0006148	508105.25	3623158.52	107.63	0.00	0.00143	1.83		0.85	0.66
	L0006149	508103.72	3623157.52	107.63	0.00	0.00143	1.83		0.85	0.66
	L0006150	508102.18	3623156.53	107.62	0.00	0.00143	1.83		0.85	0.66
	L0006151	508100.65	3623155.54	107.61	0.00	0.00143	1.83		0.85	0.66
	L0006152	508099.11	3623154.54	107.60	0.00	0.00143	1.83		0.85	0.66
	L0006153	508097.58	3623153.55	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006154	508096.04	3623152.56	107.58	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

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MCONV	L0006155	508094.50	3623151.57	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006156	508092.97	3623150.57	107.57	0.00	0.00143	1.83		0.85	0.66
	L0006157	508091.43	3623149.58	107.56	0.00	0.00143	1.83		0.85	0.66
	L0006158	508089.90	3623148.59	107.55	0.00	0.00143	1.83		0.85	0.66
	L0006159	508088.36	3623147.59	107.55	0.00	0.00143	1.83		0.85	0.66
	L0006160	508086.82	3623146.60	107.56	0.00	0.00143	1.83		0.85	0.66
	L0006161	508085.29	3623145.61	107.57	0.00	0.00143	1.83		0.85	0.66
	L0006162	508083.75	3623144.62	107.57	0.00	0.00143	1.83		0.85	0.66
	L0006163	508082.22	3623143.62	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006164	508080.68	3623142.63	107.58	0.00	0.00143	1.83		0.85	0.66
	L0006165	508079.15	3623141.64	107.57	0.00	0.00143	1.83		0.85	0.66
	L0006166	508077.61	3623140.64	107.56	0.00	0.00143	1.83		0.85	0.66
	L0006167	508076.07	3623139.65	107.54	0.00	0.00143	1.83		0.85	0.66
	L0006168	508074.54	3623138.66	107.49	0.00	0.00143	1.83		0.85	0.66
	L0006169	508073.00	3623137.67	107.43	0.00	0.00143	1.83		0.85	0.66
	L0006170	508071.47	3623136.67	107.39	0.00	0.00143	1.83		0.85	0.66
	L0006171	508069.93	3623135.68	107.37	0.00	0.00143	1.83		0.85	0.66
	L0006172	508068.40	3623134.69	107.36	0.00	0.00143	1.83		0.85	0.66
	L0006173	508066.86	3623133.69	107.36	0.00	0.00143	1.83		0.85	0.66
	L0006174	508065.32	3623132.70	107.36	0.00	0.00143	1.83		0.85	0.66
	L0006175	508063.79	3623131.71	107.37	0.00	0.00143	1.83		0.85	0.66
	L0006176	508062.25	3623130.72	107.37	0.00	0.00143	1.83		0.85	0.66
	L0006177	508060.72	3623129.72	107.36	0.00	0.00143	1.83		0.85	0.66
	L0006178	508059.18	3623128.73	107.33	0.00	0.00143	1.83		0.85	0.66
	L0006179	508057.64	3623127.74	107.29	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006180	508056.11	3623126.74	107.27	0.00	0.00143	1.83		0.85	0.66
	L0006181	508054.57	3623125.75	107.24	0.00	0.00143	1.83		0.85	0.66
	L0006182	508053.04	3623124.76	107.25	0.00	0.00143	1.83		0.85	0.66
	L0006183	508051.50	3623123.77	107.26	0.00	0.00143	1.83		0.85	0.66
	L0006184	508049.97	3623122.77	107.26	0.00	0.00143	1.83		0.85	0.66
	L0006185	508048.43	3623121.78	107.25	0.00	0.00143	1.83		0.85	0.66
	L0006186	508046.89	3623120.79	107.23	0.00	0.00143	1.83		0.85	0.66
	L0006187	508045.36	3623119.79	107.21	0.00	0.00143	1.83		0.85	0.66
	L0006188	508043.82	3623118.80	107.18	0.00	0.00143	1.83		0.85	0.66
	L0006189	508042.29	3623117.81	107.18	0.00	0.00143	1.83		0.85	0.66
	L0006190	508040.75	3623116.81	107.18	0.00	0.00143	1.83		0.85	0.66
	L0006191	508039.22	3623115.82	107.19	0.00	0.00143	1.83		0.85	0.66
	L0006192	508037.68	3623114.83	107.20	0.00	0.00143	1.83		0.85	0.66
	L0006193	508036.14	3623113.84	107.21	0.00	0.00143	1.83		0.85	0.66
	L0006194	508034.61	3623112.84	107.20	0.00	0.00143	1.83		0.85	0.66
	L0006195	508033.07	3623111.85	107.18	0.00	0.00143	1.83		0.85	0.66
	L0006196	508031.54	3623110.86	107.15	0.00	0.00143	1.83		0.85	0.66
	L0006197	508030.00	3623109.86	107.12	0.00	0.00143	1.83		0.85	0.66
	L0006198	508028.46	3623108.87	107.07	0.00	0.00143	1.83		0.85	0.66
	L0006199	508026.93	3623107.88	107.07	0.00	0.00143	1.83		0.85	0.66
	L0006200	508025.39	3623106.89	107.09	0.00	0.00143	1.83		0.85	0.66
	L0006201	508023.86	3623105.89	107.11	0.00	0.00143	1.83		0.85	0.66
	L0006202	508022.32	3623104.90	107.14	0.00	0.00143	1.83		0.85	0.66
	L0006203	508020.79	3623103.91	107.17	0.00	0.00143	1.83		0.85	0.66
	L0006204	508019.25	3623102.91	107.21	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006205	508017.71	3623101.92	107.22	0.00	0.00143	1.83		0.85	0.66
	L0006206	508016.18	3623100.93	107.23	0.00	0.00143	1.83		0.85	0.66
	L0006207	508014.64	3623099.94	107.22	0.00	0.00143	1.83		0.85	0.66
	L0006208	508013.11	3623098.94	107.20	0.00	0.00143	1.83		0.85	0.66
	L0006209	508011.57	3623097.95	107.17	0.00	0.00143	1.83		0.85	0.66
	L0006210	508010.04	3623096.96	107.15	0.00	0.00143	1.83		0.85	0.66
	L0006211	508008.50	3623095.96	107.15	0.00	0.00143	1.83		0.85	0.66
	L0006212	508006.96	3623094.97	107.15	0.00	0.00143	1.83		0.85	0.66
	L0006213	508005.43	3623093.98	107.15	0.00	0.00143	1.83		0.85	0.66
	L0006214	508003.89	3623092.99	107.17	0.00	0.00143	1.83		0.85	0.66
	L0006215	508002.36	3623091.99	107.19	0.00	0.00143	1.83		0.85	0.66
	L0006216	508000.82	3623091.00	107.14	0.00	0.00143	1.83		0.85	0.66
	L0006217	507999.28	3623090.01	107.05	0.00	0.00143	1.83		0.85	0.66
	L0006218	507997.75	3623089.01	106.93	0.00	0.00143	1.83		0.85	0.66
	L0006219	507996.21	3623088.02	106.76	0.00	0.00143	1.83		0.85	0.66
	L0006220	507994.68	3623087.03	106.44	0.00	0.00143	1.83		0.85	0.66
	L0006221	507993.14	3623086.04	106.18	0.00	0.00143	1.83		0.85	0.66
	L0006222	507991.61	3623085.04	106.07	0.00	0.00143	1.83		0.85	0.66
	L0006223	507990.07	3623084.05	105.96	0.00	0.00143	1.83		0.85	0.66
	L0006224	507988.53	3623083.06	105.86	0.00	0.00143	1.83		0.85	0.66
	L0006225	507987.00	3623082.06	105.75	0.00	0.00143	1.83		0.85	0.66
	L0006226	507985.46	3623081.07	105.65	0.00	0.00143	1.83		0.85	0.66
	L0006227	507983.93	3623080.08	105.54	0.00	0.00143	1.83		0.85	0.66
	L0006228	507982.39	3623079.08	105.40	0.00	0.00143	1.83		0.85	0.66
	L0006229	507980.86	3623078.09	105.27	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006230	507979.32	3623077.10	105.21	0.00	0.00143	1.83		0.85	0.66
	L0006231	507977.78	3623076.11	105.20	0.00	0.00143	1.83		0.85	0.66
	L0006232	507976.25	3623075.11	105.19	0.00	0.00143	1.83		0.85	0.66
	L0006233	507974.71	3623074.12	105.20	0.00	0.00143	1.83		0.85	0.66
	L0006234	507973.18	3623073.13	105.21	0.00	0.00143	1.83		0.85	0.66
	L0006235	507971.64	3623072.13	105.21	0.00	0.00143	1.83		0.85	0.66
	L0006236	507970.10	3623071.14	105.20	0.00	0.00143	1.83		0.85	0.66
	L0006237	507968.57	3623070.15	105.18	0.00	0.00143	1.83		0.85	0.66
	L0006238	507967.03	3623069.16	105.15	0.00	0.00143	1.83		0.85	0.66
	L0006239	507965.50	3623068.16	105.09	0.00	0.00143	1.83		0.85	0.66
	L0006240	507963.96	3623067.17	105.04	0.00	0.00143	1.83		0.85	0.66
	L0006241	507962.43	3623066.18	105.00	0.00	0.00143	1.83		0.85	0.66
	L0006242	507960.89	3623065.18	104.98	0.00	0.00143	1.83		0.85	0.66
	L0006243	507959.35	3623064.19	104.97	0.00	0.00143	1.83		0.85	0.66
	L0006244	507957.82	3623063.20	104.97	0.00	0.00143	1.83		0.85	0.66
	L0006245	507956.28	3623062.21	104.96	0.00	0.00143	1.83		0.85	0.66
	L0006246	507954.75	3623061.21	104.97	0.00	0.00143	1.83		0.85	0.66
	L0006247	507953.21	3623060.22	104.99	0.00	0.00143	1.83		0.85	0.66
	L0006248	507951.67	3623059.23	105.02	0.00	0.00143	1.83		0.85	0.66
	L0006249	507950.14	3623058.23	105.05	0.00	0.00143	1.83		0.85	0.66
	L0006250	507948.60	3623057.24	105.06	0.00	0.00143	1.83		0.85	0.66
	L0006251	507947.07	3623056.25	105.00	0.00	0.00143	1.83		0.85	0.66
	L0006252	507945.53	3623055.26	104.94	0.00	0.00143	1.83		0.85	0.66
	L0006253	507944.00	3623054.26	104.89	0.00	0.00143	1.83		0.85	0.66
	L0006254	507942.46	3623053.27	104.84	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006255	507940.92	3623052.28	104.81	0.00	0.00143	1.83		0.85	0.66
	L0006256	507939.39	3623051.28	104.80	0.00	0.00143	1.83		0.85	0.66
	L0006257	507937.85	3623050.29	104.80	0.00	0.00143	1.83		0.85	0.66
	L0006258	507936.32	3623049.30	104.83	0.00	0.00143	1.83		0.85	0.66
	L0006259	507934.78	3623048.31	104.86	0.00	0.00143	1.83		0.85	0.66
	L0006260	507933.25	3623047.31	104.92	0.00	0.00143	1.83		0.85	0.66
	L0006261	507931.71	3623046.32	104.89	0.00	0.00143	1.83		0.85	0.66
	L0006262	507930.17	3623045.33	104.82	0.00	0.00143	1.83		0.85	0.66
	L0006263	507928.64	3623044.33	104.75	0.00	0.00143	1.83		0.85	0.66
	L0006264	507927.10	3623043.34	104.68	0.00	0.00143	1.83		0.85	0.66
	L0006265	507925.57	3623042.35	104.61	0.00	0.00143	1.83		0.85	0.66
	L0006266	507924.03	3623041.35	104.53	0.00	0.00143	1.83		0.85	0.66
	L0006267	507922.49	3623040.36	104.47	0.00	0.00143	1.83		0.85	0.66
	L0006268	507920.96	3623039.37	104.41	0.00	0.00143	1.83		0.85	0.66
	L0006269	507919.42	3623038.38	104.35	0.00	0.00143	1.83		0.85	0.66
	L0006270	507917.89	3623037.38	104.30	0.00	0.00143	1.83		0.85	0.66
	L0006271	507916.35	3623036.39	104.28	0.00	0.00143	1.83		0.85	0.66
	L0006272	507914.82	3623035.40	104.31	0.00	0.00143	1.83		0.85	0.66
	L0006273	507913.28	3623034.40	104.35	0.00	0.00143	1.83		0.85	0.66
	L0006274	507911.74	3623033.41	104.37	0.00	0.00143	1.83		0.85	0.66
	L0006275	507910.21	3623032.42	104.36	0.00	0.00143	1.83		0.85	0.66
	L0006276	507908.67	3623031.43	104.34	0.00	0.00143	1.83		0.85	0.66
	L0006277	507907.14	3623030.43	104.30	0.00	0.00143	1.83		0.85	0.66
	L0006278	507905.60	3623029.44	104.25	0.00	0.00143	1.83		0.85	0.66
	L0006279	507904.07	3623028.45	104.20	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006280	507902.53	3623027.45	104.13	0.00	0.00143	1.83		0.85	0.66
	L0006281	507900.99	3623026.46	104.06	0.00	0.00143	1.83		0.85	0.66
	L0006282	507899.46	3623025.47	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006283	507897.92	3623024.48	104.14	0.00	0.00143	1.83		0.85	0.66
	L0006284	507896.39	3623023.48	104.21	0.00	0.00143	1.83		0.85	0.66
	L0006285	507894.85	3623022.49	104.25	0.00	0.00143	1.83		0.85	0.66
	L0006286	507893.31	3623021.50	104.26	0.00	0.00143	1.83		0.85	0.66
	L0006287	507891.78	3623020.50	104.25	0.00	0.00143	1.83		0.85	0.66
	L0006288	507890.24	3623019.51	104.21	0.00	0.00143	1.83		0.85	0.66
	L0006289	507888.71	3623018.52	104.15	0.00	0.00143	1.83		0.85	0.66
	L0006290	507887.17	3623017.53	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006291	507885.64	3623016.53	104.03	0.00	0.00143	1.83		0.85	0.66
	L0006292	507884.10	3623015.54	104.02	0.00	0.00143	1.83		0.85	0.66
	L0006293	507882.56	3623014.55	104.04	0.00	0.00143	1.83		0.85	0.66
	L0006294	507881.03	3623013.55	104.07	0.00	0.00143	1.83		0.85	0.66
	L0006295	507879.49	3623012.56	104.11	0.00	0.00143	1.83		0.85	0.66
	L0006296	507877.96	3623011.57	104.13	0.00	0.00143	1.83		0.85	0.66
	L0006297	507876.42	3623010.58	104.13	0.00	0.00143	1.83		0.85	0.66
	L0006298	507874.89	3623009.58	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006299	507873.35	3623008.59	104.04	0.00	0.00143	1.83		0.85	0.66
	L0006300	507871.81	3623007.60	103.97	0.00	0.00143	1.83		0.85	0.66
	L0006301	507870.28	3623006.60	103.94	0.00	0.00143	1.83		0.85	0.66
	L0006302	507868.74	3623005.61	103.93	0.00	0.00143	1.83		0.85	0.66
	L0006303	507867.21	3623004.62	103.97	0.00	0.00143	1.83		0.85	0.66
	L0006304	507865.67	3623003.62	104.02	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006305	507864.13	3623002.63	104.06	0.00	0.00143	1.83		0.85	0.66
	L0006306	507862.60	3623001.64	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006307	507861.06	3623000.65	104.14	0.00	0.00143	1.83		0.85	0.66
	L0006308	507859.53	3622999.65	104.15	0.00	0.00143	1.83		0.85	0.66
	L0006309	507857.99	3622998.66	104.15	0.00	0.00143	1.83		0.85	0.66
	L0006310	507856.46	3622997.67	104.13	0.00	0.00143	1.83		0.85	0.66
	L0006311	507854.92	3622996.67	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006312	507853.38	3622995.68	104.06	0.00	0.00143	1.83		0.85	0.66
	L0006313	507851.85	3622994.69	104.05	0.00	0.00143	1.83		0.85	0.66
	L0006314	507850.31	3622993.70	104.05	0.00	0.00143	1.83		0.85	0.66
	L0006315	507848.78	3622992.70	104.05	0.00	0.00143	1.83		0.85	0.66
	L0006316	507847.24	3622991.71	104.05	0.00	0.00143	1.83		0.85	0.66
	L0006317	507845.70	3622990.72	104.06	0.00	0.00143	1.83		0.85	0.66
	L0006318	507844.17	3622989.72	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006319	507842.63	3622988.73	104.14	0.00	0.00143	1.83		0.85	0.66
	L0006320	507841.10	3622987.74	104.18	0.00	0.00143	1.83		0.85	0.66
	L0006321	507839.56	3622986.75	104.21	0.00	0.00143	1.83		0.85	0.66
	L0006322	507838.03	3622985.75	104.24	0.00	0.00143	1.83		0.85	0.66
	L0006323	507836.49	3622984.76	104.27	0.00	0.00143	1.83		0.85	0.66
	L0006324	507834.95	3622983.77	104.29	0.00	0.00143	1.83		0.85	0.66
	L0006325	507833.42	3622982.77	104.29	0.00	0.00143	1.83		0.85	0.66
	L0006326	507831.88	3622981.78	104.27	0.00	0.00143	1.83		0.85	0.66
	L0006327	507830.35	3622980.79	104.22	0.00	0.00143	1.83		0.85	0.66
	L0006328	507828.81	3622979.80	104.16	0.00	0.00143	1.83		0.85	0.66
	L0006329	507827.28	3622978.80	104.17	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006330	507825.74	3622977.81	104.18	0.00	0.00143	1.83		0.85	0.66
	L0006331	507824.20	3622976.82	104.20	0.00	0.00143	1.83		0.85	0.66
	L0006332	507822.67	3622975.82	104.23	0.00	0.00143	1.83		0.85	0.66
	L0006333	507821.13	3622974.83	104.24	0.00	0.00143	1.83		0.85	0.66
	L0006334	507819.60	3622973.84	104.21	0.00	0.00143	1.83		0.85	0.66
	L0006335	507818.06	3622972.85	104.18	0.00	0.00143	1.83		0.85	0.66
	L0006336	507816.52	3622971.85	104.14	0.00	0.00143	1.83		0.85	0.66
	L0006337	507814.99	3622970.86	104.11	0.00	0.00143	1.83		0.85	0.66
	L0006338	507813.45	3622969.87	104.08	0.00	0.00143	1.83		0.85	0.66
	L0006339	507811.92	3622968.87	104.05	0.00	0.00143	1.83		0.85	0.66
	L0006340	507810.38	3622967.88	104.00	0.00	0.00143	1.83		0.85	0.66
	L0006341	507808.85	3622966.89	103.95	0.00	0.00143	1.83		0.85	0.66
	L0006342	507807.34	3622965.85	103.93	0.00	0.00143	1.83		0.85	0.66
	L0006343	507805.83	3622964.82	103.92	0.00	0.00143	1.83		0.85	0.66
	L0006344	507804.32	3622963.78	103.91	0.00	0.00143	1.83		0.85	0.66
	L0006345	507802.82	3622962.74	103.91	0.00	0.00143	1.83		0.85	0.66
	L0006346	507801.31	3622961.71	103.90	0.00	0.00143	1.83		0.85	0.66
	L0006347	507799.80	3622960.67	103.90	0.00	0.00143	1.83		0.85	0.66
	L0006348	507798.30	3622959.64	103.92	0.00	0.00143	1.83		0.85	0.66
	L0006349	507796.79	3622958.60	103.96	0.00	0.00143	1.83		0.85	0.66
	L0006350	507795.28	3622957.57	104.01	0.00	0.00143	1.83		0.85	0.66
	L0006351	507793.77	3622956.53	104.07	0.00	0.00143	1.83		0.85	0.66
	L0006352	507792.27	3622955.49	104.10	0.00	0.00143	1.83		0.85	0.66
	L0006353	507790.76	3622954.46	104.14	0.00	0.00143	1.83		0.85	0.66
	L0006354	507789.25	3622953.42	104.15	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006355	507787.74	3622952.39	104.17	0.00	0.00143	1.83		0.85	0.66
	L0006356	507786.24	3622951.35	104.20	0.00	0.00143	1.83		0.85	0.66
	L0006357	507784.73	3622950.32	104.22	0.00	0.00143	1.83		0.85	0.66
	L0006358	507783.22	3622949.28	104.20	0.00	0.00143	1.83		0.85	0.66
	L0006359	507781.72	3622948.24	104.18	0.00	0.00143	1.83		0.85	0.66
	L0006360	507780.21	3622947.21	104.17	0.00	0.00143	1.83		0.85	0.66
	L0006361	507778.70	3622946.17	104.16	0.00	0.00143	1.83		0.85	0.66
	L0006362	507777.19	3622945.14	104.15	0.00	0.00143	1.83		0.85	0.66
	L0006363	507775.69	3622944.10	104.12	0.00	0.00143	1.83		0.85	0.66
	L0006364	507774.18	3622943.07	104.02	0.00	0.00143	1.83		0.85	0.66
	L0006365	507772.67	3622942.03	103.94	0.00	0.00143	1.83		0.85	0.66
	L0006366	507771.16	3622940.99	103.89	0.00	0.00143	1.83		0.85	0.66
	L0006367	507769.66	3622939.96	103.85	0.00	0.00143	1.83		0.85	0.66
	L0006368	507768.15	3622938.92	103.84	0.00	0.00143	1.83		0.85	0.66
	L0006369	507766.64	3622937.89	103.87	0.00	0.00143	1.83		0.85	0.66
	L0006370	507765.14	3622936.85	103.90	0.00	0.00143	1.83		0.85	0.66
	L0006371	507763.63	3622935.82	103.94	0.00	0.00143	1.83		0.85	0.66
	L0006372	507762.12	3622934.78	103.99	0.00	0.00143	1.83		0.85	0.66
	L0006373	507760.61	3622933.74	104.02	0.00	0.00143	1.83		0.85	0.66
	L0006374	507759.11	3622932.71	104.01	0.00	0.00143	1.83		0.85	0.66
	L0006375	507757.60	3622931.67	103.95	0.00	0.00143	1.83		0.85	0.66
	L0006376	507756.09	3622930.64	103.91	0.00	0.00143	1.83		0.85	0.66
	L0006377	507754.58	3622929.60	103.88	0.00	0.00143	1.83		0.85	0.66
	L0006378	507753.08	3622928.57	103.85	0.00	0.00143	1.83		0.85	0.66
	L0006379	507751.57	3622927.53	103.83	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006380	507750.06	3622926.49	103.82	0.00	0.00143	1.83		0.85	0.66
	L0006381	507748.56	3622925.46	103.83	0.00	0.00143	1.83		0.85	0.66
	L0006382	507747.05	3622924.42	103.85	0.00	0.00143	1.83		0.85	0.66
	L0006383	507745.54	3622923.39	103.85	0.00	0.00143	1.83		0.85	0.66
	L0006384	507744.03	3622922.35	103.84	0.00	0.00143	1.83		0.85	0.66
	L0006385	507742.53	3622921.32	103.82	0.00	0.00143	1.83		0.85	0.66
	L0006386	507741.02	3622920.28	103.81	0.00	0.00143	1.83		0.85	0.66
	L0006387	507739.51	3622919.25	103.79	0.00	0.00143	1.83		0.85	0.66
	L0006388	507738.00	3622918.21	103.78	0.00	0.00143	1.83		0.85	0.66
	L0006389	507736.50	3622917.17	103.78	0.00	0.00143	1.83		0.85	0.66
	L0006390	507734.99	3622916.14	103.78	0.00	0.00143	1.83		0.85	0.66
	L0006391	507733.48	3622915.10	103.78	0.00	0.00143	1.83		0.85	0.66
	L0006392	507731.98	3622914.07	103.77	0.00	0.00143	1.83		0.85	0.66
	L0006393	507730.47	3622913.03	103.77	0.00	0.00143	1.83		0.85	0.66
	L0006394	507728.96	3622912.00	103.76	0.00	0.00143	1.83		0.85	0.66
	L0006395	507727.45	3622910.96	103.74	0.00	0.00143	1.83		0.85	0.66
	L0006396	507725.95	3622909.92	103.72	0.00	0.00143	1.83		0.85	0.66
	L0006397	507724.44	3622908.89	103.71	0.00	0.00143	1.83		0.85	0.66
	L0006398	507722.93	3622907.85	103.68	0.00	0.00143	1.83		0.85	0.66
	L0006399	507721.43	3622906.82	103.66	0.00	0.00143	1.83		0.85	0.66
	L0006400	507719.92	3622905.78	103.65	0.00	0.00143	1.83		0.85	0.66
	L0006401	507718.41	3622904.75	103.64	0.00	0.00143	1.83		0.85	0.66
	L0006402	507716.90	3622903.71	103.63	0.00	0.00143	1.83		0.85	0.66
	L0006403	507715.40	3622902.67	103.63	0.00	0.00143	1.83		0.85	0.66
	L0006404	507713.89	3622901.64	103.62	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006405	507712.38	3622900.60	103.61	0.00	0.00143	1.83		0.85	0.66
	L0006406	507710.87	3622899.57	103.60	0.00	0.00143	1.83		0.85	0.66
	L0006407	507709.37	3622898.53	103.59	0.00	0.00143	1.83		0.85	0.66
	L0006408	507707.86	3622897.50	103.58	0.00	0.00143	1.83		0.85	0.66
	L0006409	507706.35	3622896.46	103.56	0.00	0.00143	1.83		0.85	0.66
	L0006410	507704.85	3622895.42	103.54	0.00	0.00143	1.83		0.85	0.66
	L0006411	507703.34	3622894.39	103.53	0.00	0.00143	1.83		0.85	0.66
	L0006412	507701.83	3622893.35	103.51	0.00	0.00143	1.83		0.85	0.66
	L0006413	507700.32	3622892.32	103.50	0.00	0.00143	1.83		0.85	0.66
	L0006414	507698.82	3622891.28	103.48	0.00	0.00143	1.83		0.85	0.66
	L0006415	507697.31	3622890.25	103.48	0.00	0.00143	1.83		0.85	0.66
	L0006416	507695.80	3622889.21	103.47	0.00	0.00143	1.83		0.85	0.66
	L0006417	507694.29	3622888.17	103.46	0.00	0.00143	1.83		0.85	0.66
	L0006418	507692.79	3622887.14	103.45	0.00	0.00143	1.83		0.85	0.66
	L0006419	507691.28	3622886.10	103.44	0.00	0.00143	1.83		0.85	0.66
	L0006420	507689.77	3622885.07	103.42	0.00	0.00143	1.83		0.85	0.66
	L0006421	507688.27	3622884.03	103.41	0.00	0.00143	1.83		0.85	0.66
	L0006422	507686.76	3622883.00	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006423	507685.25	3622881.96	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006424	507683.74	3622880.92	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006425	507682.24	3622879.89	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006426	507680.73	3622878.85	103.39	0.00	0.00143	1.83		0.85	0.66
	L0006427	507679.22	3622877.82	103.39	0.00	0.00143	1.83		0.85	0.66
	L0006428	507677.71	3622876.78	103.39	0.00	0.00143	1.83		0.85	0.66
	L0006429	507676.21	3622875.75	103.39	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006430	507674.70	3622874.71	103.39	0.00	0.00143	1.83		0.85	0.66
	L0006431	507673.19	3622873.67	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006432	507671.69	3622872.64	103.41	0.00	0.00143	1.83		0.85	0.66
	L0006433	507670.18	3622871.60	103.41	0.00	0.00143	1.83		0.85	0.66
	L0006434	507668.67	3622870.57	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006435	507667.16	3622869.53	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006436	507665.66	3622868.50	103.39	0.00	0.00143	1.83		0.85	0.66
	L0006437	507664.15	3622867.46	103.38	0.00	0.00143	1.83		0.85	0.66
	L0006438	507662.64	3622866.42	103.37	0.00	0.00143	1.83		0.85	0.66
	L0006439	507661.13	3622865.39	103.35	0.00	0.00143	1.83		0.85	0.66
	L0006440	507659.63	3622864.35	103.34	0.00	0.00143	1.83		0.85	0.66
	L0006441	507658.12	3622863.32	103.33	0.00	0.00143	1.83		0.85	0.66
	L0006442	507656.61	3622862.28	103.33	0.00	0.00143	1.83		0.85	0.66
	L0006443	507655.11	3622861.25	103.32	0.00	0.00143	1.83		0.85	0.66
	L0006444	507653.60	3622860.21	103.31	0.00	0.00143	1.83		0.85	0.66
	L0006445	507652.09	3622859.17	103.30	0.00	0.00143	1.83		0.85	0.66
	L0006446	507650.58	3622858.14	103.29	0.00	0.00143	1.83		0.85	0.66
	L0006447	507649.08	3622857.10	103.28	0.00	0.00143	1.83		0.85	0.66
	L0006448	507647.57	3622856.07	103.27	0.00	0.00143	1.83		0.85	0.66
	L0006449	507646.06	3622855.03	103.25	0.00	0.00143	1.83		0.85	0.66
	L0006450	507644.55	3622854.00	103.22	0.00	0.00143	1.83		0.85	0.66
	L0006451	507643.05	3622852.96	103.20	0.00	0.00143	1.83		0.85	0.66
	L0006452	507641.54	3622851.92	103.20	0.00	0.00143	1.83		0.85	0.66
	L0006453	507640.03	3622850.89	103.18	0.00	0.00143	1.83		0.85	0.66
	L0006454	507638.53	3622849.85	103.17	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006455	507637.02	3622848.82	103.13	0.00	0.00143	1.83		0.85	0.66
	L0006456	507635.51	3622847.78	103.09	0.00	0.00143	1.83		0.85	0.66
	L0006457	507634.00	3622846.75	103.05	0.00	0.00143	1.83		0.85	0.66
	L0006458	507632.50	3622845.71	103.02	0.00	0.00143	1.83		0.85	0.66
	L0006459	507630.99	3622844.67	103.00	0.00	0.00143	1.83		0.85	0.66
	L0006460	507629.48	3622843.64	102.99	0.00	0.00143	1.83		0.85	0.66
	L0006461	507627.97	3622842.60	102.98	0.00	0.00143	1.83		0.85	0.66
	L0006462	507626.47	3622841.57	102.99	0.00	0.00143	1.83		0.85	0.66
	L0006463	507624.96	3622840.53	102.96	0.00	0.00143	1.83		0.85	0.66
	L0006464	507623.45	3622839.50	102.93	0.00	0.00143	1.83		0.85	0.66
	L0006465	507621.95	3622838.46	102.90	0.00	0.00143	1.83		0.85	0.66
	L0006466	507620.44	3622837.42	102.86	0.00	0.00143	1.83		0.85	0.66
	L0006467	507618.93	3622836.39	102.80	0.00	0.00143	1.83		0.85	0.66
	L0006468	507617.42	3622835.35	102.75	0.00	0.00143	1.83		0.85	0.66
	L0006469	507615.92	3622834.32	102.71	0.00	0.00143	1.83		0.85	0.66
	L0006470	507614.41	3622833.28	102.68	0.00	0.00143	1.83		0.85	0.66
	L0006471	507612.90	3622832.25	102.65	0.00	0.00143	1.83		0.85	0.66
	L0006472	507611.40	3622831.21	102.64	0.00	0.00143	1.83		0.85	0.66
	L0006473	507609.89	3622830.17	102.66	0.00	0.00143	1.83		0.85	0.66
	L0006474	507608.38	3622829.14	102.66	0.00	0.00143	1.83		0.85	0.66
	L0006475	507606.87	3622828.10	102.66	0.00	0.00143	1.83		0.85	0.66
	L0006476	507605.37	3622827.07	102.65	0.00	0.00143	1.83		0.85	0.66
	L0006477	507603.86	3622826.03	102.63	0.00	0.00143	1.83		0.85	0.66
	L0006478	507602.35	3622825.00	102.60	0.00	0.00143	1.83		0.85	0.66
	L0006479	507600.84	3622823.96	102.57	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006480	507599.34	3622822.92	102.55	0.00	0.00143	1.83		0.85	0.66
	L0006481	507597.83	3622821.89	102.54	0.00	0.00143	1.83		0.85	0.66
	L0006482	507596.32	3622820.85	102.53	0.00	0.00143	1.83		0.85	0.66
	L0006483	507594.82	3622819.82	102.56	0.00	0.00143	1.83		0.85	0.66
	L0006484	507593.31	3622818.78	102.57	0.00	0.00143	1.83		0.85	0.66
	L0006485	507591.80	3622817.75	102.57	0.00	0.00143	1.83		0.85	0.66
	L0006486	507590.29	3622816.71	102.56	0.00	0.00143	1.83		0.85	0.66
	L0006487	507588.79	3622815.68	102.54	0.00	0.00143	1.83		0.85	0.66
	L0006488	507587.28	3622814.64	102.51	0.00	0.00143	1.83		0.85	0.66
	L0006489	507585.77	3622813.60	102.48	0.00	0.00143	1.83		0.85	0.66
	L0006490	507584.26	3622812.57	102.46	0.00	0.00143	1.83		0.85	0.66
	L0006491	507582.76	3622811.53	102.43	0.00	0.00143	1.83		0.85	0.66
	L0006492	507581.25	3622810.50	102.41	0.00	0.00143	1.83		0.85	0.66
	L0006493	507579.74	3622809.46	102.47	0.00	0.00143	1.83		0.85	0.66
	L0006494	507578.24	3622808.43	102.51	0.00	0.00143	1.83		0.85	0.66
	L0006495	507576.73	3622807.39	102.56	0.00	0.00143	1.83		0.85	0.66
	L0006496	507575.22	3622806.35	102.61	0.00	0.00143	1.83		0.85	0.66
	L0006497	507573.71	3622805.32	102.64	0.00	0.00143	1.83		0.85	0.66
	L0006498	507572.21	3622804.28	102.65	0.00	0.00143	1.83		0.85	0.66
	L0006499	507570.70	3622803.25	102.63	0.00	0.00143	1.83		0.85	0.66
	L0006500	507569.19	3622802.21	102.59	0.00	0.00143	1.83		0.85	0.66
	L0006501	507567.68	3622801.18	102.54	0.00	0.00143	1.83		0.85	0.66
	L0006502	507566.18	3622800.14	102.52	0.00	0.00143	1.83		0.85	0.66
	L0006503	507564.67	3622799.10	102.62	0.00	0.00143	1.83		0.85	0.66
	L0006504	507563.16	3622798.07	102.72	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006505	507561.66	3622797.03	102.82	0.00	0.00143	1.83		0.85	0.66
	L0006506	507560.15	3622796.00	102.93	0.00	0.00143	1.83		0.85	0.66
	L0006507	507558.64	3622794.96	103.03	0.00	0.00143	1.83		0.85	0.66
	L0006508	507557.13	3622793.93	103.10	0.00	0.00143	1.83		0.85	0.66
	L0006509	507555.63	3622792.89	103.13	0.00	0.00143	1.83		0.85	0.66
	L0006510	507554.12	3622791.85	103.13	0.00	0.00143	1.83		0.85	0.66
	L0006511	507552.61	3622790.82	103.10	0.00	0.00143	1.83		0.85	0.66
	L0006512	507551.10	3622789.78	103.05	0.00	0.00143	1.83		0.85	0.66
	L0006513	507549.60	3622788.75	103.05	0.00	0.00143	1.83		0.85	0.66
	L0006514	507548.09	3622787.71	103.06	0.00	0.00143	1.83		0.85	0.66
	L0006515	507546.58	3622786.68	103.10	0.00	0.00143	1.83		0.85	0.66
	L0006516	507545.08	3622785.64	103.15	0.00	0.00143	1.83		0.85	0.66
	L0006517	507543.57	3622784.60	103.21	0.00	0.00143	1.83		0.85	0.66
	L0006518	507542.06	3622783.57	103.29	0.00	0.00143	1.83		0.85	0.66
	L0006519	507540.55	3622782.53	103.35	0.00	0.00143	1.83		0.85	0.66
	L0006520	507539.05	3622781.50	103.40	0.00	0.00143	1.83		0.85	0.66
	L0006521	507537.54	3622780.46	103.45	0.00	0.00143	1.83		0.85	0.66
	L0006522	507536.03	3622779.43	103.45	0.00	0.00143	1.83		0.85	0.66
	L0006523	507534.52	3622778.39	103.42	0.00	0.00143	1.83		0.85	0.66
	L0006524	507533.02	3622777.35	103.41	0.00	0.00143	1.83		0.85	0.66
	L0006525	507531.51	3622776.32	103.42	0.00	0.00143	1.83		0.85	0.66
	L0006526	507530.00	3622775.28	103.45	0.00	0.00143	1.83		0.85	0.66
	L0006527	507528.50	3622774.25	103.49	0.00	0.00143	1.83		0.85	0.66
	L0006528	507526.99	3622773.21	103.55	0.00	0.00143	1.83		0.85	0.66
	L0006529	507525.48	3622772.18	103.63	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006530	507523.97	3622771.14	103.69	0.00	0.00143	1.83		0.85	0.66
	L0006531	507522.47	3622770.10	103.77	0.00	0.00143	1.83		0.85	0.66
	L0006532	507520.96	3622769.07	103.79	0.00	0.00143	1.83		0.85	0.66
	L0006533	507519.45	3622768.03	103.77	0.00	0.00143	1.83		0.85	0.66
	L0006534	507517.94	3622767.00	103.76	0.00	0.00143	1.83		0.85	0.66
	L0006535	507516.44	3622765.96	103.74	0.00	0.00143	1.83		0.85	0.66
	L0006536	507514.93	3622764.93	103.69	0.00	0.00143	1.83		0.85	0.66
	L0006537	507513.42	3622763.89	103.68	0.00	0.00143	1.83		0.85	0.66
	L0006538	507511.92	3622762.85	103.71	0.00	0.00143	1.83		0.85	0.66
	L0006539	507510.41	3622761.82	103.78	0.00	0.00143	1.83		0.85	0.66
	L0006540	507508.90	3622760.78	103.90	0.00	0.00143	1.83		0.85	0.66
	L0006541	507507.39	3622759.75	103.98	0.00	0.00143	1.83		0.85	0.66
	L0006542	507505.89	3622758.71	103.88	0.00	0.00143	1.83		0.85	0.66
	L0006543	507504.38	3622757.68	103.74	0.00	0.00143	1.83		0.85	0.66
	L0006544	507502.87	3622756.64	103.65	0.00	0.00143	1.83		0.85	0.66
	L0006545	507501.37	3622755.60	103.60	0.00	0.00143	1.83		0.85	0.66
	L0006546	507499.86	3622754.57	103.60	0.00	0.00143	1.83		0.85	0.66
	L0006547	507498.35	3622753.53	103.57	0.00	0.00143	1.83		0.85	0.66
	L0006548	507496.84	3622752.50	103.51	0.00	0.00143	1.83		0.85	0.66
	L0006549	507495.34	3622751.46	103.47	0.00	0.00143	1.83		0.85	0.66
	L0006550	507493.83	3622750.43	103.43	0.00	0.00143	1.83		0.85	0.66
	L0006551	507492.32	3622749.39	103.41	0.00	0.00143	1.83		0.85	0.66
	L0006552	507490.81	3622748.35	103.36	0.00	0.00143	1.83		0.85	0.66
	L0006553	507489.31	3622747.32	103.24	0.00	0.00143	1.83		0.85	0.66
	L0006554	507487.80	3622746.28	103.12	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006555	507486.29	3622745.25	103.01	0.00	0.00143	1.83		0.85	0.66
	L0006556	507484.79	3622744.21	102.91	0.00	0.00143	1.83		0.85	0.66
	L0006557	507483.44	3622742.97	102.86	0.00	0.00143	1.83		0.85	0.66
	L0006558	507482.09	3622741.74	102.82	0.00	0.00143	1.83		0.85	0.66
	L0006559	507480.74	3622740.50	102.76	0.00	0.00143	1.83		0.85	0.66
	L0006560	507479.39	3622739.27	102.67	0.00	0.00143	1.83		0.85	0.66
	L0006561	507478.05	3622738.03	102.57	0.00	0.00143	1.83		0.85	0.66
	L0006562	507476.70	3622736.79	102.46	0.00	0.00143	1.83		0.85	0.66
	L0006563	507475.35	3622735.56	102.37	0.00	0.00143	1.83		0.85	0.66
	L0006564	507474.00	3622734.32	102.27	0.00	0.00143	1.83		0.85	0.66
	L0006565	507472.65	3622733.09	102.21	0.00	0.00143	1.83		0.85	0.66
	L0006566	507471.30	3622731.85	102.18	0.00	0.00143	1.83		0.85	0.66
	L0006567	507469.96	3622730.62	102.12	0.00	0.00143	1.83		0.85	0.66
	L0006568	507468.61	3622729.38	102.04	0.00	0.00143	1.83		0.85	0.66
	L0006569	507467.26	3622728.15	101.93	0.00	0.00143	1.83		0.85	0.66
	L0006570	507465.91	3622726.91	101.81	0.00	0.00143	1.83		0.85	0.66
	L0006571	507464.56	3622725.68	101.68	0.00	0.00143	1.83		0.85	0.66
	L0006572	507463.21	3622724.44	101.66	0.00	0.00143	1.83		0.85	0.66
	L0006573	507461.87	3622723.20	101.63	0.00	0.00143	1.83		0.85	0.66
	L0006574	507460.52	3622721.97	101.60	0.00	0.00143	1.83		0.85	0.66
	L0006575	507459.17	3622720.73	101.56	0.00	0.00143	1.83		0.85	0.66
	L0006576	507457.82	3622719.50	101.51	0.00	0.00143	1.83		0.85	0.66
	L0006577	507456.47	3622718.26	101.45	0.00	0.00143	1.83		0.85	0.66
	L0006578	507455.12	3622717.03	101.42	0.00	0.00143	1.83		0.85	0.66
	L0006579	507453.78	3622715.79	101.41	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006580	507452.43	3622714.56	101.40	0.00	0.00143	1.83		0.85	0.66
	L0006581	507451.08	3622713.32	101.38	0.00	0.00143	1.83		0.85	0.66
	L0006582	507449.73	3622712.09	101.36	0.00	0.00143	1.83		0.85	0.66
	L0006583	507448.38	3622710.85	101.34	0.00	0.00143	1.83		0.85	0.66
	L0006584	507447.03	3622709.61	101.32	0.00	0.00143	1.83		0.85	0.66
	L0006585	507445.69	3622708.38	101.40	0.00	0.00143	1.83		0.85	0.66
	L0006586	507444.34	3622707.14	101.48	0.00	0.00143	1.83		0.85	0.66
	L0006587	507442.99	3622705.91	101.53	0.00	0.00143	1.83		0.85	0.66
	L0006588	507441.64	3622704.67	101.56	0.00	0.00143	1.83		0.85	0.66
	L0006589	507440.29	3622703.44	101.57	0.00	0.00143	1.83		0.85	0.66
	L0006590	507438.94	3622702.20	101.56	0.00	0.00143	1.83		0.85	0.66
	L0006591	507437.60	3622700.97	101.69	0.00	0.00143	1.83		0.85	0.66
	L0006592	507436.25	3622699.73	101.87	0.00	0.00143	1.83		0.85	0.66
	L0006593	507434.90	3622698.49	102.05	0.00	0.00143	1.83		0.85	0.66
	L0006594	507433.55	3622697.26	102.24	0.00	0.00143	1.83		0.85	0.66
	L0006595	507432.20	3622696.02	102.43	0.00	0.00143	1.83		0.85	0.66
	L0006596	507430.85	3622694.79	102.60	0.00	0.00143	1.83		0.85	0.66
	L0006597	507429.51	3622693.55	102.74	0.00	0.00143	1.83		0.85	0.66
	L0006598	507428.16	3622692.32	102.88	0.00	0.00143	1.83		0.85	0.66
	L0006599	507426.81	3622691.08	103.02	0.00	0.00143	1.83		0.85	0.66
	L0006600	507425.46	3622689.85	103.18	0.00	0.00143	1.83		0.85	0.66
	L0006601	507424.11	3622688.61	103.35	0.00	0.00143	1.83		0.85	0.66
	L0006602	507422.76	3622687.38	103.53	0.00	0.00143	1.83		0.85	0.66
	L0006603	507421.42	3622686.14	103.72	0.00	0.00143	1.83		0.85	0.66
	L0006604	507420.07	3622684.90	103.74	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0006605	507418.72	3622683.67	103.74	0.00	0.00143	1.83		0.85	0.66
	L0006606	507417.37	3622682.43	103.75	0.00	0.00143	1.83		0.85	0.66
	L0006607	507416.02	3622681.20	103.77	0.00	0.00143	1.83		0.85	0.66
	L0006608	507414.67	3622679.96	103.81	0.00	0.00143	1.83		0.85	0.66
	L0006609	507413.32	3622678.73	103.86	0.00	0.00143	1.83		0.85	0.66
	L0006610	507411.98	3622677.49	103.89	0.00	0.00143	1.83		0.85	0.66
	L0006611	507410.63	3622676.26	103.90	0.00	0.00143	1.83		0.85	0.66
	L0006612	507409.28	3622675.02	103.93	0.00	0.00143	1.83		0.85	0.66
	L0006613	507407.93	3622673.79	103.98	0.00	0.00143	1.83		0.85	0.66
	L0006614	507406.58	3622672.55	104.02	0.00	0.00143	1.83		0.85	0.66
	L0006615	507405.23	3622671.31	104.08	0.00	0.00143	1.83		0.85	0.66
	L0006616	507403.89	3622670.08	104.15	0.00	0.00143	1.83		0.85	0.66
	L0006617	507402.54	3622668.84	104.16	0.00	0.00143	1.83		0.85	0.66
	L0006618	507401.19	3622667.61	104.15	0.00	0.00143	1.83		0.85	0.66
	L0006619	507399.84	3622666.37	104.09	0.00	0.00143	1.83		0.85	0.66
	L0006620	507398.49	3622665.14	103.97	0.00	0.00143	1.83		0.85	0.66
	L0006621	507397.14	3622663.90	103.86	0.00	0.00143	1.83		0.85	0.66
	L0006622	507395.80	3622662.67	103.75	0.00	0.00143	1.83		0.85	0.66
	L0006623	507394.45	3622661.43	103.69	0.00	0.00143	1.83		0.85	0.66
	L0006624	507393.10	3622660.19	103.66	0.00	0.00143	1.83		0.85	0.66
	L0006625	507391.75	3622658.96	103.62	0.00	0.00143	1.83		0.85	0.66
	L0006626	507390.40	3622657.72	103.57	0.00	0.00143	1.83		0.85	0.66
	L0006627	507389.05	3622656.49	103.51	0.00	0.00143	1.83		0.85	0.66
	L0006628	507387.71	3622655.25	103.47	0.00	0.00143	1.83		0.85	0.66
	L0006629	507386.36	3622654.02	103.45	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0006630	507385.01	3622652.78	103.54	0.00	0.00143	1.83		0.85	0.66
	L0006631	507383.66	3622651.55	103.57	0.00	0.00143	1.83		0.85	0.66
	L0006632	507382.31	3622650.31	103.55	0.00	0.00143	1.83		0.85	0.66
	L0006633	507380.96	3622649.08	103.48	0.00	0.00143	1.83		0.85	0.66
	L0006634	507379.62	3622647.84	103.35	0.00	0.00143	1.83		0.85	0.66
	L0006635	507378.27	3622646.60	103.17	0.00	0.00143	1.83		0.85	0.66
	L0006636	507376.92	3622645.37	103.12	0.00	0.00143	1.83		0.85	0.66
	L0006637	507375.57	3622644.13	103.11	0.00	0.00143	1.83		0.85	0.66
	L0006638	507374.22	3622642.90	103.11	0.00	0.00143	1.83		0.85	0.66
	L0006639	507372.87	3622641.66	103.10	0.00	0.00143	1.83		0.85	0.66
	L0006640	507371.53	3622640.43	103.10	0.00	0.00143	1.83		0.85	0.66
	L0006641	507370.18	3622639.19	103.08	0.00	0.00143	1.83		0.85	0.66
	L0006642	507368.83	3622637.96	103.07	0.00	0.00143	1.83		0.85	0.66
	L0006643	507367.48	3622636.72	103.04	0.00	0.00143	1.83		0.85	0.66
	L0006644	507366.13	3622635.49	103.01	0.00	0.00143	1.83		0.85	0.66
	L0006645	507364.78	3622634.25	103.00	0.00	0.00143	1.83		0.85	0.66
	L0006646	507363.44	3622633.01	102.98	0.00	0.00143	1.83		0.85	0.66
	L0006647	507362.09	3622631.78	102.97	0.00	0.00143	1.83		0.85	0.66
	L0006648	507360.74	3622630.54	102.96	0.00	0.00143	1.83		0.85	0.66
	L0006649	507359.39	3622629.31	102.93	0.00	0.00143	1.83		0.85	0.66
	L0006650	507358.04	3622628.07	102.91	0.00	0.00143	1.83		0.85	0.66
	L0006651	507356.69	3622626.84	102.88	0.00	0.00143	1.83		0.85	0.66
	L0006652	507355.34	3622625.60	102.84	0.00	0.00143	1.83		0.85	0.66
	L0006653	507354.00	3622624.37	102.81	0.00	0.00143	1.83		0.85	0.66
	L0006654	507352.65	3622623.13	102.79	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0006655	507351.30	3622621.90	102.77	0.00	0.00143	1.83		0.85	0.66
	L0006656	507349.95	3622620.66	102.75	0.00	0.00143	1.83		0.85	0.66
	L0006657	507348.60	3622619.42	102.74	0.00	0.00143	1.83		0.85	0.66
	L0006658	507347.25	3622618.19	102.73	0.00	0.00143	1.83		0.85	0.66
	L0006659	507345.91	3622616.95	102.72	0.00	0.00143	1.83		0.85	0.66
	L0006660	507344.56	3622615.72	102.71	0.00	0.00143	1.83		0.85	0.66
	L0006661	507343.21	3622614.48	102.69	0.00	0.00143	1.83		0.85	0.66
	L0006662	507341.86	3622613.25	102.69	0.00	0.00143	1.83		0.85	0.66
	L0006663	507340.51	3622612.01	102.69	0.00	0.00143	1.83		0.85	0.66
	L0006664	507339.16	3622610.78	102.69	0.00	0.00143	1.83		0.85	0.66
	L0006665	507337.82	3622609.54	102.70	0.00	0.00143	1.83		0.85	0.66
	L0006666	507336.47	3622608.30	102.70	0.00	0.00143	1.83		0.85	0.66
	L0006667	507335.12	3622607.07	102.71	0.00	0.00143	1.83		0.85	0.66
	L0006668	507333.77	3622605.83	102.72	0.00	0.00143	1.83		0.85	0.66
	L0006669	507332.42	3622604.60	102.72	0.00	0.00143	1.83		0.85	0.66
	L0006670	507331.07	3622603.36	102.71	0.00	0.00143	1.83		0.85	0.66
	L0006671	507329.73	3622602.13	102.70	0.00	0.00143	1.83		0.85	0.66
	L0006672	507328.38	3622600.89	102.69	0.00	0.00143	1.83		0.85	0.66
	L0006673	507327.03	3622599.66	102.69	0.00	0.00143	1.83		0.85	0.66
	L0006674	507325.68	3622598.42	102.68	0.00	0.00143	1.83		0.85	0.66
	L0006675	507324.33	3622597.19	102.67	0.00	0.00143	1.83		0.85	0.66
	L0006676	507322.98	3622595.95	102.66	0.00	0.00143	1.83		0.85	0.66
	L0006677	507321.64	3622594.71	102.65	0.00	0.00143	1.83		0.85	0.66
	L0006678	507320.29	3622593.48	102.65	0.00	0.00143	1.83		0.85	0.66
	L0006679	507318.94	3622592.24	102.65	0.00	0.00143	1.83		0.85	0.66

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007478	508292.10	3623259.94	108.38	3.19	0.00645	9.50		4.42	2.97
	L0007479	508284.16	3623254.72	108.30	3.19	0.00645	9.50		4.42	2.97
	L0007480	508276.22	3623249.51	108.30	3.19	0.00645	9.50		4.42	2.97
	L0007481	508268.28	3623244.30	108.31	3.19	0.00645	9.50		4.42	2.97
	L0007482	508260.34	3623239.08	108.29	3.19	0.00645	9.50		4.42	2.97
	L0007483	508252.39	3623233.87	108.18	3.19	0.00645	9.50		4.42	2.97
	L0007484	508244.45	3623228.66	108.10	3.19	0.00645	9.50		4.42	2.97
	L0007485	508236.51	3623223.44	107.97	3.19	0.00645	9.50		4.42	2.97
	L0007486	508228.57	3623218.23	107.98	3.19	0.00645	9.50		4.42	2.97
	L0007487	508220.63	3623213.02	107.87	3.19	0.00645	9.50		4.42	2.97
	L0007488	508212.68	3623207.81	107.77	3.19	0.00645	9.50		4.42	2.97
	L0007489	508204.74	3623202.59	107.74	3.19	0.00645	9.50		4.42	2.97
	L0007490	508196.80	3623197.38	107.81	3.19	0.00645	9.50		4.42	2.97
	L0007491	508188.86	3623192.17	107.83	3.19	0.00645	9.50		4.42	2.97
	L0007492	508180.92	3623186.95	107.91	3.19	0.00645	9.50		4.42	2.97
	L0007493	508172.97	3623181.74	107.82	3.19	0.00645	9.50		4.42	2.97
	L0007494	508165.03	3623176.53	107.78	3.19	0.00645	9.50		4.42	2.97
	L0007495	508157.09	3623171.31	107.47	3.19	0.00645	9.50		4.42	2.97
	L0007496	508149.15	3623166.10	107.44	3.19	0.00645	9.50		4.42	2.97
	L0007497	508141.21	3623160.89	107.87	3.19	0.00645	9.50		4.42	2.97
	L0007498	508133.26	3623155.67	107.84	3.19	0.00645	9.50		4.42	2.97
	L0007499	508125.32	3623150.46	108.11	3.19	0.00645	9.50		4.42	2.97
	L0007500	508117.38	3623145.25	108.09	3.19	0.00645	9.50		4.42	2.97
	L0007501	508109.44	3623140.04	107.79	3.19	0.00645	9.50		4.42	2.97
	L0007502	508101.50	3623134.82	107.61	3.19	0.00645	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007503	508093.55	3623129.61	107.32	3.19	0.00645	9.50		4.42	2.97
	L0007504	508085.61	3623124.40	107.29	3.19	0.00645	9.50		4.42	2.97
	L0007505	508077.67	3623119.18	107.25	3.19	0.00645	9.50		4.42	2.97
	L0007506	508069.73	3623113.97	107.29	3.19	0.00645	9.50		4.42	2.97
	L0007507	508061.79	3623108.76	107.30	3.19	0.00645	9.50		4.42	2.97
	L0007508	508053.85	3623103.54	106.48	3.19	0.00645	9.50		4.42	2.97
	L0007509	508045.90	3623098.33	106.07	3.19	0.00645	9.50		4.42	2.97
	L0007510	508037.96	3623093.12	105.86	3.19	0.00645	9.50		4.42	2.97
	L0007511	508030.02	3623087.90	105.03	3.19	0.00645	9.50		4.42	2.97
	L0007512	508022.08	3623082.69	105.10	3.19	0.00645	9.50		4.42	2.97
	L0007513	508014.14	3623077.48	104.52	3.19	0.00645	9.50		4.42	2.97
	L0007514	508006.19	3623072.27	104.53	3.19	0.00645	9.50		4.42	2.97
	L0007515	507998.25	3623067.05	104.49	3.19	0.00645	9.50		4.42	2.97
	L0007516	507990.31	3623061.84	104.56	3.19	0.00645	9.50		4.42	2.97
	L0007517	507982.37	3623056.63	104.50	3.19	0.00645	9.50		4.42	2.97
	L0007518	507974.43	3623051.41	104.69	3.19	0.00645	9.50		4.42	2.97
	L0007519	507966.48	3623046.20	104.61	3.19	0.00645	9.50		4.42	2.97
	L0007520	507958.54	3623040.99	104.74	3.19	0.00645	9.50		4.42	2.97
	L0007521	507950.60	3623035.77	104.75	3.19	0.00645	9.50		4.42	2.97
	L0007522	507942.66	3623030.56	104.79	3.19	0.00645	9.50		4.42	2.97
	L0007523	507934.72	3623025.35	104.95	3.19	0.00645	9.50		4.42	2.97
	L0007524	507926.77	3623020.14	104.86	3.19	0.00645	9.50		4.42	2.97
	L0007525	507918.83	3623014.92	104.83	3.19	0.00645	9.50		4.42	2.97
	L0007526	507910.89	3623009.71	104.78	3.19	0.00645	9.50		4.42	2.97
	L0007527	507902.95	3623004.50	104.74	3.19	0.00645	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007528	507895.01	3622999.28	104.75	3.19	0.00645	9.50		4.42	2.97
	L0007529	507887.06	3622994.07	104.79	3.19	0.00645	9.50		4.42	2.97
	L0007530	507879.12	3622988.86	104.99	3.19	0.00645	9.50		4.42	2.97
	L0007531	507871.18	3622983.64	105.15	3.19	0.00645	9.50		4.42	2.97
	L0007532	507863.24	3622978.43	105.99	3.19	0.00645	9.50		4.42	2.97
	L0007533	507855.30	3622973.22	106.45	3.19	0.00645	9.50		4.42	2.97
	L0007534	507847.36	3622968.00	106.60	3.19	0.00645	9.50		4.42	2.97
	L0007535	507839.41	3622962.79	107.16	3.19	0.00645	9.50		4.42	2.97
	L0007536	507831.47	3622957.58	105.84	3.19	0.00645	9.50		4.42	2.97
	L0007537	507823.53	3622952.37	104.46	3.19	0.00645	9.50		4.42	2.97
	L0007538	507815.59	3622947.15	104.22	3.19	0.00645	9.50		4.42	2.97
	L0007539	507807.65	3622941.94	104.27	3.19	0.00645	9.50		4.42	2.97
	L0007540	507800.90	3622935.30	104.42	3.19	0.00645	9.50		4.42	2.97
	L0007541	507794.43	3622928.35	104.73	3.19	0.00645	9.50		4.42	2.97
	L0007542	507787.96	3622921.40	104.38	3.19	0.00645	9.50		4.42	2.97
	L0007543	507781.48	3622914.44	104.21	3.19	0.00645	9.50		4.42	2.97
	L0007544	507775.01	3622907.49	104.12	3.19	0.00645	9.50		4.42	2.97
	L0007545	507768.54	3622900.54	104.06	3.19	0.00645	9.50		4.42	2.97
	L0007546	507762.07	3622893.58	104.03	3.19	0.00645	9.50		4.42	2.97
	L0007547	507755.59	3622886.63	103.94	3.19	0.00645	9.50		4.42	2.97
	L0007548	507749.12	3622879.68	103.88	3.19	0.00645	9.50		4.42	2.97
	L0007549	507742.65	3622872.72	103.85	3.19	0.00645	9.50		4.42	2.97
	L0007550	507736.17	3622865.77	103.88	3.19	0.00645	9.50		4.42	2.97
	L0007551	507729.70	3622858.82	104.28	3.19	0.00645	9.50		4.42	2.97
	L0007552	507723.23	3622851.86	105.08	3.19	0.00645	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007553	507716.75	3622844.91	104.15	3.19	0.00645	9.50		4.42	2.97
	L0007554	507710.28	3622837.96	104.43	3.19	0.00645	9.50		4.42	2.97
	L0007555	507703.81	3622831.00	104.77	3.19	0.00645	9.50		4.42	2.97
	L0007556	507697.33	3622824.05	105.06	3.19	0.00645	9.50		4.42	2.97
	L0007557	507690.86	3622817.10	105.51	3.19	0.00645	9.50		4.42	2.97
	L0007558	507684.39	3622810.14	104.78	3.19	0.00645	9.50		4.42	2.97
	L0007559	507677.91	3622803.19	104.90	3.19	0.00645	9.50		4.42	2.97
	L0007560	507671.44	3622796.24	104.67	3.19	0.00645	9.50		4.42	2.97
	L0007561	507664.97	3622789.28	104.46	3.19	0.00645	9.50		4.42	2.97
	L0007562	507658.50	3622782.33	104.44	3.19	0.00645	9.50		4.42	2.97
	L0007563	507652.02	3622775.38	104.33	3.19	0.00645	9.50		4.42	2.97
	L0007564	507645.55	3622768.42	104.21	3.19	0.00645	9.50		4.42	2.97
	L0007565	507639.08	3622761.47	104.15	3.19	0.00645	9.50		4.42	2.97
	L0007566	507630.61	3622758.31	104.05	3.19	0.00645	9.50		4.42	2.97
	L0007567	507621.21	3622756.94	104.09	3.19	0.00645	9.50		4.42	2.97
	L0007568	507611.81	3622755.58	103.99	3.19	0.00645	9.50		4.42	2.97
	L0007569	507602.41	3622754.21	104.07	3.19	0.00645	9.50		4.42	2.97
	L0007570	507593.01	3622752.84	104.13	3.19	0.00645	9.50		4.42	2.97
	L0007571	507583.61	3622751.47	104.17	3.19	0.00645	9.50		4.42	2.97
	L0007572	507574.21	3622750.11	104.20	3.19	0.00645	9.50		4.42	2.97
	L0007573	507564.81	3622748.74	104.11	3.19	0.00645	9.50		4.42	2.97
	L0007574	507555.41	3622747.37	104.01	3.19	0.00645	9.50		4.42	2.97
	L0007575	507546.00	3622746.00	103.85	3.19	0.00645	9.50		4.42	2.97
	L0007576	507536.60	3622744.63	103.72	3.19	0.00645	9.50		4.42	2.97
	L0007577	507527.20	3622743.27	103.73	3.19	0.00645	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007578	507517.80	3622741.90	103.75	3.19	0.00645	9.50		4.42	2.97
	L0007579	507508.40	3622740.53	103.73	3.19	0.00645	9.50		4.42	2.97
	L0007580	507499.00	3622739.16	103.77	3.19	0.00645	9.50		4.42	2.97
	L0007581	507489.60	3622737.80	103.89	3.19	0.00645	9.50		4.42	2.97
	L0007582	507480.20	3622736.43	103.00	3.19	0.00645	9.50		4.42	2.97
	L0007583	507470.80	3622735.06	101.93	3.19	0.00645	9.50		4.42	2.97
	L0007584	507461.40	3622733.69	101.48	3.19	0.00645	9.50		4.42	2.97
	L0007585	507451.99	3622732.32	101.52	3.19	0.00645	9.50		4.42	2.97
	L0007586	507442.59	3622730.96	102.38	3.19	0.00645	9.50		4.42	2.97
	L0007587	507433.19	3622729.59	103.63	3.19	0.00645	9.50		4.42	2.97
	L0007588	507423.79	3622728.22	103.87	3.19	0.00645	9.50		4.42	2.97
	L0007589	507414.39	3622726.85	103.71	3.19	0.00645	9.50		4.42	2.97
	L0007590	507404.99	3622725.49	103.69	3.19	0.00645	9.50		4.42	2.97
	L0007591	507395.59	3622724.12	103.67	3.19	0.00645	9.50		4.42	2.97
	L0007592	507386.19	3622722.75	103.50	3.19	0.00645	9.50		4.42	2.97
	L0007593	507376.79	3622721.38	103.27	3.19	0.00645	9.50		4.42	2.97
	L0007594	507367.39	3622720.01	103.15	3.19	0.00645	9.50		4.42	2.97
	L0007595	507357.98	3622718.65	103.17	3.19	0.00645	9.50		4.42	2.97
	L0007596	507348.58	3622717.28	103.15	3.19	0.00645	9.50		4.42	2.97
	L0007597	507339.18	3622715.91	103.10	3.19	0.00645	9.50		4.42	2.97
	L0007598	507329.78	3622714.54	102.98	3.19	0.00645	9.50		4.42	2.97
	L0007599	507320.38	3622713.18	102.91	3.19	0.00645	9.50		4.42	2.97
	L0007600	507310.98	3622711.81	102.84	3.19	0.00645	9.50		4.42	2.97
	L0007601	507301.58	3622710.44	102.74	3.19	0.00645	9.50		4.42	2.97
	L0007602	507292.18	3622709.07	102.55	3.19	0.00645	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007603	507282.78	3622707.71	102.45	3.19	0.00645	9.50		4.42	2.97
	L0007604	507273.37	3622706.34	103.10	3.19	0.00645	9.50		4.42	2.97
	L0007605	507263.97	3622704.97	103.44	3.19	0.00645	9.50		4.42	2.97
	L0007606	507254.57	3622703.60	103.58	3.19	0.00645	9.50		4.42	2.97
	L0007607	507245.17	3622702.23	103.31	3.19	0.00645	9.50		4.42	2.97
	L0007608	507235.77	3622700.87	102.65	3.19	0.00645	9.50		4.42	2.97
	L0007609	507226.37	3622699.50	102.52	3.19	0.00645	9.50		4.42	2.97
	L0007610	507217.30	3622697.42	102.51	3.19	0.00645	9.50		4.42	2.97
	L0007611	507210.13	3622691.18	102.82	3.19	0.00645	9.50		4.42	2.97
	L0007612	507202.96	3622684.95	103.38	3.19	0.00645	9.50		4.42	2.97
	L0007613	507195.79	3622678.71	103.26	3.19	0.00645	9.50		4.42	2.97
	L0007614	507188.63	3622672.48	103.05	3.19	0.00645	9.50		4.42	2.97
	L0007615	507181.46	3622666.24	102.86	3.19	0.00645	9.50		4.42	2.97
	L0007616	507174.29	3622660.01	102.45	3.19	0.00645	9.50		4.42	2.97
	L0007617	507167.12	3622653.77	102.30	3.19	0.00645	9.50		4.42	2.97
	L0007618	507159.95	3622647.54	102.26	3.19	0.00645	9.50		4.42	2.97
	L0007619	507152.79	3622641.30	102.33	3.19	0.00645	9.50		4.42	2.97
	L0007620	507145.62	3622635.07	102.15	3.19	0.00645	9.50		4.42	2.97
	L0007621	507138.45	3622628.83	102.21	3.19	0.00645	9.50		4.42	2.97
	L0007622	507131.28	3622622.60	102.40	3.19	0.00645	9.50		4.42	2.97
	L0007623	507124.12	3622616.36	102.18	3.19	0.00645	9.50		4.42	2.97
	L0007624	507116.95	3622610.13	101.79	3.19	0.00645	9.50		4.42	2.97
	L0007625	507109.78	3622603.89	102.01	3.19	0.00645	9.50		4.42	2.97
	L0007626	507102.61	3622597.66	101.69	3.19	0.00645	9.50		4.42	2.97
	L0007627	507095.44	3622591.42	101.60	3.19	0.00645	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P1HRD	L0007628	507088.28	3622585.19	101.53	3.19	0.00645	9.50		4.42	2.97
	L0007629	507081.11	3622578.95	101.60	3.19	0.00645	9.50		4.42	2.97
	L0007630	507073.94	3622572.72	101.62	3.19	0.00645	9.50		4.42	2.97
	L0007631	507066.77	3622566.49	101.61	3.19	0.00645	9.50		4.42	2.97
	L0007632	507059.61	3622560.25	102.13	3.19	0.00645	9.50		4.42	2.97

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Variable Emissions

Hour-of-Day / Day-of-Week Emission Rate Variation

Scenario: Scenario 1

Source ID:	**FCONV**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**MCONV**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P1AEXTRACT**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P1BEXTACT**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00

Scenario: Scenario 1

Source ID:	**P1BEXTACT**							
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P1CEXTRACT**							
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P1HRD**							
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**PROCESS**							
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 1

Source ID: PROCESS

Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: RSTACK2

Weekdays							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: RSTACK1

Weekdays							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Scenario: Scenario 2

Source ID: HRT1

Weekdays							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	0.50	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 2

Source ID:	**HRT1**							
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**HRT2**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	0.50	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**HRT3**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	0.50	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	504500.00	3621700.00	55	30	100.00	100.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	507580.81	3622577.05		101.29	
2	507634.55	3622614.60		101.74	
3	507681.66	3622633.00		103.37	
4	507723.62	3622649.19		103.54	
5	507783.24	3622669.80		103.49	
6	507839.92	3622670.54		104.03	
7	507898.81	3622678.64		104.29	
8	507988.61	3622701.46		106.91	
9	508100.50	3622721.33		107.75	
10	508252.14	3622738.26		111.47	
11	508274.96	3622762.55		111.53	
12	508270.54	3622789.05		111.43	
13	508272.75	3622822.91		109.73	
14	508282.32	3622851.62		109.37	
15	508302.19	3622882.54		107.33	
16	508325.01	3622917.14		107.30	
17	508348.57	3622925.23		108.65	
18	508374.33	3622925.23		109.95	
19	508389.79	3622921.55		109.97	
20	508410.40	3622914.19		110.32	
21	508429.54	3622906.09		110.35	
22	508450.89	3622892.84		110.08	
23	508463.40	3622878.86		110.24	
24	508474.44	3622867.08		111.65	
25	508490.64	3622854.57		112.54	
26	508539.96	3622846.47		114.28	

27	508572.35	3622891.37	115.79
28	508636.39	3622918.61	116.62
29	508794.57	3623262.05	113.43
30	508842.91	3623256.49	114.27
31	508873.61	3623236.24	116.16
32	509004.19	3623442.79	116.36
33	509022.69	3623510.97	116.18
34	509011.39	3623529.06	115.41
35	509090.50	3623601.26	115.51
36	509168.48	3623726.89	116.23
37	509315.56	3623943.46	115.94
38	508880.25	3624121.01	125.53
39	508844.97	3624057.24	118.77
40	508783.91	3624009.75	119.90
41	508746.82	3623951.85	118.60
42	508670.83	3623903.91	120.76
43	508594.85	3623863.20	127.80
44	508569.14	3623802.34	125.38
45	508562.36	3623740.37	118.33
46	508335.05	3623519.25	130.80
47	507959.93	3623225.12	123.76
48	507937.33	3623204.57	119.13
49	507912.67	3623191.01	118.90
50	507896.64	3623185.67	118.67
51	507881.85	3623175.81	118.28
52	507868.29	3623170.05	117.88
53	507849.80	3623163.07	117.24
54	507838.29	3623158.14	116.71
55	507823.09	3623151.15	116.36
56	507807.88	3623144.99	115.87
57	507793.09	3623136.36	115.20
58	507779.53	3623126.49	114.85
59	507763.91	3623121.56	114.28
60	507751.58	3623114.99	113.94
61	507723.23	3623084.17	109.22
62	507707.61	3623074.31	111.26
63	507696.93	3623064.03	112.76
64	507682.55	3623054.58	113.58

65	507668.99	3623044.72	114.67
66	507657.89	3623031.16	115.30
67	507645.56	3623022.12	116.36
68	507629.54	3623009.38	117.67
69	507616.80	3623002.39	118.44
70	507593.79	3622984.31	119.48
71	507571.59	3622976.09	119.80
72	507563.79	3622959.66	120.10
73	507550.64	3622947.74	117.71
74	507530.91	3622934.18	114.78
75	507506.67	3622924.73	114.64
76	507457.77	3622924.31	115.68
77	507453.66	3622897.60	115.51
78	507423.25	3622884.87	113.22
79	507408.04	3622879.11	112.64
80	507391.20	3622869.66	112.46
81	507374.35	3622863.09	112.33
82	507359.96	3622858.57	112.41
83	507345.99	3622855.28	112.74
84	507330.79	3622849.11	113.16
85	507317.64	3622846.65	113.46
86	507304.49	3622841.72	113.88
87	507288.05	3622839.25	114.25
88	507269.15	3622837.61	114.43
89	507252.71	3622836.79	114.65
90	507235.86	3622834.32	114.80
91	507222.71	3622833.50	114.60
92	507207.92	3622832.27	114.39
93	507191.07	3622831.03	113.90
94	507120.39	3622850.35	114.80
95	507101.90	3622847.47	115.13
96	507087.93	3622849.11	114.69
97	507077.24	3622850.76	114.83
98	507067.79	3622853.63	115.09
99	507057.52	3622855.28	115.22
100	507047.65	3622856.51	115.20
101	507036.56	3622858.15	115.27
102	507026.70	3622861.03	115.35

103	507015.19	3622863.09	115.31
104	507004.92	3622865.55	115.14
105	506995.88	3622865.14	115.09
106	506983.96	3622868.02	115.05
107	506975.74	3622868.43	115.05
108	506965.47	3622871.72	115.05
109	506955.19	3622875.00	114.87
110	506943.28	3622875.41	114.71
111	506930.54	3622880.76	114.57
112	506907.94	3622889.80	114.40
113	506892.32	3622907.06	114.68
114	506852.87	3623197.59	115.42
115	506861.09	3623235.80	115.69
116	506864.38	3623257.99	115.82
117	506868.08	3623296.62	113.65
118	506882.46	3623517.70	124.02
119	506876.71	3623532.91	124.05
120	506877.53	3623567.43	122.25
121	506896.96	3623639.34	123.44
122	506886.73	3623659.81	123.47
123	506883.58	3623681.85	123.53
124	506878.07	3623706.26	123.67
125	506882.01	3623729.09	123.89
126	506882.01	3623751.92	124.10
127	506888.30	3623773.17	124.32
128	506894.60	3623794.43	125.10
129	506904.05	3623815.68	126.24
130	506919.01	3623836.94	127.19
131	506930.82	3623854.26	127.88
132	506941.05	3623877.87	128.23
133	506947.35	3623893.62	126.57
134	506856.86	3623962.53	122.85
135	506856.29	3624303.98	135.49
136	506805.89	3624199.89	131.96
137	506808.57	3624149.04	129.97
138	506801.88	3624080.78	127.11
139	506805.89	3624047.99	126.16
140	506803.89	3623987.76	124.70

141	506791.17	3623955.64	124.15
142	506777.79	3623863.96	121.98
143	506756.37	3623821.13	121.93
144	506754.37	3623803.07	121.61
145	506767.75	3623780.98	121.25
146	506781.80	3623746.85	118.86
147	506795.19	3623704.03	117.07
148	506795.86	3623691.31	116.78
149	506797.86	3623681.27	116.53
150	506799.87	3623667.22	116.28
151	506801.88	3623651.83	116.11
152	506797.19	3623631.08	115.67
153	506791.84	3623576.21	115.16
154	506798.53	3623554.80	115.03
155	506797.86	3623535.39	114.83
156	506797.19	3623513.98	114.52
157	506797.86	3623489.89	114.17
158	506798.53	3623466.46	113.85
159	506797.86	3623443.71	113.50
160	506810.58	3623403.56	113.12
161	506815.26	3623374.78	112.62
162	506140.72	3622834.08	101.86
163	506097.89	3622814.01	102.79
164	506056.40	3622790.58	102.54
165	506010.90	3622766.49	102.41
166	505964.72	3622742.40	102.26
167	505905.84	3622704.93	102.45
168	505842.26	3622664.78	102.62
169	505800.77	3622637.34	103.73
170	505252.04	3622475.40	112.05
171	505410.76	3622390.74	106.51
172	505493.57	3622420.16	107.30
173	505605.81	3622446.32	104.98
174	505652.67	3622475.74	104.20
175	505758.36	3622541.12	103.87
176	505824.83	3622587.97	102.13
177	505873.87	3622621.75	101.92
178	505962.13	3622634.83	100.14

179	506647.54	3622965.00	104.50
180	506771.23	3622894.35	103.82
181	506778.84	3622941.54	105.58
182	506744.71	3622957.61	105.59
183	506696.52	3623003.12	106.26
184	506759.43	3623036.59	107.52
185	506799.59	3623087.46	109.15
186	506825.03	3623132.30	109.97
187	506884.60	3623439.52	117.86
188	506885.59	3624060.64	125.65
189	506865.33	3624127.94	129.39
190	506807.16	3623335.84	111.82
191	506662.43	3623064.93	105.91
192	506611.20	3623040.95	104.80
193	506564.33	3623018.06	104.87
194	506375.75	3622947.21	102.45
195	506333.24	3622925.40	103.07
196	506282.01	3622899.24	103.08
197	506247.13	3622880.71	103.27
198	505744.44	3622604.96	104.62
199	505710.97	3622588.89	104.92
200	505680.85	3622576.17	105.66
201	505658.75	3622556.76	105.78
202	505633.32	3622540.02	105.84
203	505590.47	3622507.89	106.09
204	505534.24	3622493.83	107.37
205	505471.98	3622482.45	107.97
206	505392.99	3622480.45	108.76
207	505309.98	3622472.41	109.66
208	504871.97	3622447.16	128.92
209	505117.07	3622465.66	116.19
210	504958.41	3622477.71	130.50
211	508353.65	3622554.75	117.19
212	506457.68	3623382.05	110.89
213	506367.01	3624009.61	164.05

Plant Boundary Receptors

Meteorology Pathway

AERMOD

Met Input Data

Surface Met Data

Filename: 722907.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: 722907.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 118.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			
Upper Air		2009			

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	❑	❑	❑	❑	❑	❑	❑	❑	❑		No
MONTH	■	❑	❑	❑	❑	❑	❑	❑	❑	❑		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: SIR02_PHASE1_AERMOD.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Month	ALL	1st	MOH1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

Cottonwood Sand Mine All Phases

POLLUTANT HEALTH INFORMATION
Health Database: C:\HARP2\Tables\HEALTH17320.mdb
Health Table Version: HEALTH21221
Official: True

PolID	PolAbbrev	InhCancer	OralCancer	AcuteREL	InhChronicREL	OralChronicREL	InhChronic8HRREL
9901	DieselExhPM	1.1			5		
7429905	Aluminum						
7440382	Arsenic	12	1.5	0.2	0.015	3.50E-06	0.015
7440393	Barium						
7440417	Beryllium	8.4			0.007	0.002	
7440439	Cadmium	15			0.02	0.005	
18540299	Cr(VI)	510	0.5		0.2	0.02	
7440473	Chromium						
7440484	Cobalt	27					
7440508	Copper			100			
7439921	Lead	0.042	0.0085				
7439965	Manganese				0.09		0.17
7439976	Mercury			0.6	0.03	0.00016	0.06
7440020	Nickel	0.91		0.2	0.014	0.011	0.06
7782492	Selenium				20	0.005	
1175	Silica, Crystln				3		
7440666	Zinc						

Cottonwood Sand Mine Phase 1 Emission Inventory

HARP Project Summary Report 11/5/2021

PROJECT INFORMATION
HARP Version: 21081
Project Name: SIR02_PHASE1_HARP
HARP Database: NA

EMISSION INVENTORY
No. of Pollutants:156
No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
HRT1	0	0	9901	DieselExhPM	1	2.879370434	0.00176486	1
HRT2	0	0	9901	DieselExhPM	1	0.359481568	0.00022034	1
HRT3	0	0	9901	DieselExhPM	1	2.883311481	0.00176728	1
PROCESS	0	0	9901	DieselExhPM	1	28.81914942	0.01148173	1
PROCESS	0	0	7429905	Aluminum	1	36.55913337	0.01441996	1
PROCESS	0	0	7440382	Arsenic	1	0.053620062	2.11E-05	1
PROCESS	0	0	7440393	Barium	1	0.548387001	0.0002163	1
PROCESS	0	0	7440417	Beryllium	1	0.002437276	9.61E-07	1
PROCESS	0	0	7440439	Cadmium	1	0.002437276	9.61E-07	1
PROCESS	0	0	18540299	Cr(VI)	1	0	0	1
PROCESS	0	0	7440473	Chromium	1	0.068243716	2.69E-05	1
PROCESS	0	0	7440484	Cobalt	1	0.026810031	1.06E-05	1
PROCESS	0	0	7440508	Copper	1	0.090179196	3.56E-05	1
PROCESS	0	0	7439921	Lead	1	0.121863778	4.81E-05	1
PROCESS	0	0	7439965	Manganese	1	1.291756046	0.00050951	1
PROCESS	0	0	7439976	Mercury	1	0	0	1
PROCESS	0	0	7440020	Nickel	1	0.068243716	2.69E-05	1
PROCESS	0	0	7782492	Selenium	1	0.002437276	9.61E-07	1
PROCESS	0	0	1175	Silica, Cryst	1	243.7275558	0.09613305	1
PROCESS	0	0	7440666	Zinc	1	0.24129028	9.52E-05	1
RSTACK1	0	0	9901	DieselExhPM	1	0	0	1
RSTACK1	0	0	7429905	Aluminum	1	3.5532	0.00141562	1
RSTACK1	0	0	7440382	Arsenic	1	0.00497448	1.98E-06	1
RSTACK1	0	0	7440393	Barium	1	0.0343476	1.37E-05	1
RSTACK1	0	0	7440417	Beryllium	1	0.00023688	9.44E-08	1
RSTACK1	0	0	7440439	Cadmium	1	0.00023688	9.44E-08	1
RSTACK1	0	0	18540299	Cr(VI)	1	0	0	1
RSTACK1	0	0	7440473	Chromium	1	0.005922	2.36E-06	1
RSTACK1	0	0	7440484	Cobalt	1	0	0	1
RSTACK1	0	0	7440508	Copper	1	0.0094752	3.77E-06	1
RSTACK1	0	0	7439921	Lead	1	0.0071064	2.83E-06	1
RSTACK1	0	0	7439965	Manganese	1	0.1160712	4.62E-05	1
RSTACK1	0	0	7439976	Mercury	1	0	0	1
RSTACK1	0	0	7440020	Nickel	1	0.00450072	1.79E-06	1
RSTACK1	0	0	7782492	Selenium	1	0.00023688	9.44E-08	1
RSTACK1	0	0	1175	Silica, Cryst	1	23.688	0.00943745	1
RSTACK1	0	0	7440666	Zinc	1	0.02653056	1.06E-05	1
RSTACK2	0	0	9901	DieselExhPM	1	0	0	1
RSTACK2	0	0	7429905	Aluminum	1	3.5532	0.00141562	1
RSTACK2	0	0	7440382	Arsenic	1	0.00497448	1.98E-06	1
RSTACK2	0	0	7440393	Barium	1	0.0343476	1.37E-05	1
RSTACK2	0	0	7440417	Beryllium	1	0.00023688	9.44E-08	1
RSTACK2	0	0	7440439	Cadmium	1	0.00023688	9.44E-08	1
RSTACK2	0	0	18540299	Cr(VI)	1	0	0	1
RSTACK2	0	0	7440473	Chromium	1	0.005922	2.36E-06	1
RSTACK2	0	0	7440484	Cobalt	1	0	0	1

Cottonwood Sand Mine Phase 1 Emission Inventory

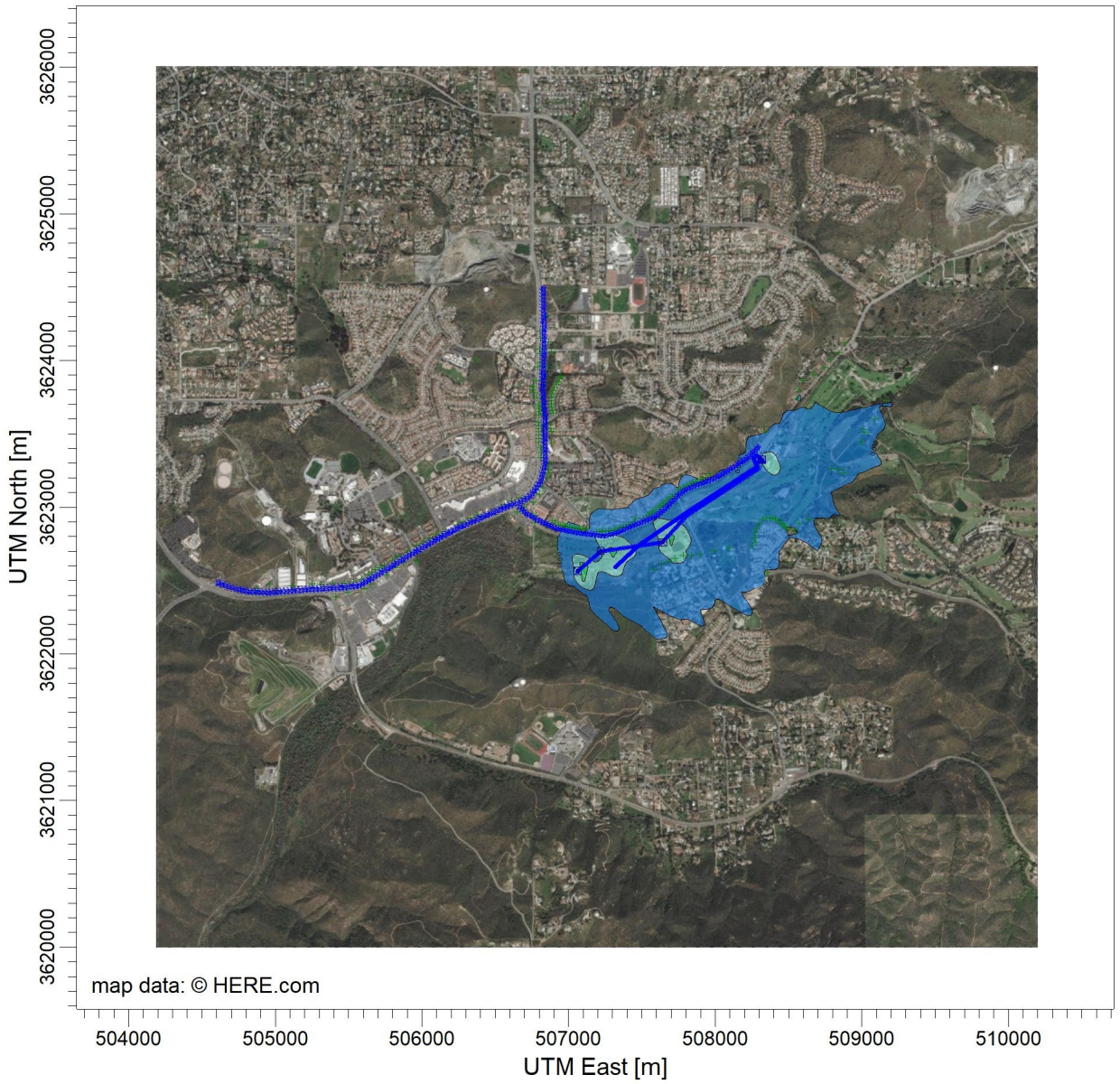
RSTACK2	0	0	7440508	Copper	1	0.0094752	3.77E-06	1
RSTACK2	0	0	7439921	Lead	1	0.0071064	2.83E-06	1
RSTACK2	0	0	7439965	Manganese	1	0.1160712	4.62E-05	1
RSTACK2	0	0	7439976	Mercury	1	0	0	1
RSTACK2	0	0	7440020	Nickel	1	0.00450072	1.79E-06	1
RSTACK2	0	0	7782492	Selenium	1	0.00023688	9.44E-08	1
RSTACK2	0	0	1175	Silica, Crystln	1	23.688	0.00943745	1
RSTACK2	0	0	7440666	Zinc	1	0.02653056	1.06E-05	1
FCONV	0	0	9901	DieselExhPM	1	0	0	1
FCONV	0	0	7429905	Aluminum	1	0.6768	0.00026964	1
FCONV	0	0	7440382	Arsenic	1	0.00020304	8.09E-08	1
FCONV	0	0	7440393	Barium	1	0.0054144	2.16E-06	1
FCONV	0	0	7440417	Beryllium	1	3.38E-05	1.35E-08	1
FCONV	0	0	7440439	Cadmium	1	3.38E-05	1.35E-08	1
FCONV	0	0	18540299	Cr(VI)	1	0	0	1
FCONV	0	0	7440473	Chromium	1	0.00115056	4.58E-07	1
FCONV	0	0	7440484	Cobalt	1	0	0	1
FCONV	0	0	7440508	Copper	1	0.00243648	9.71E-07	1
FCONV	0	0	7439921	Lead	1	0.00064296	2.56E-07	1
FCONV	0	0	7439965	Manganese	1	0.0106596	4.25E-06	1
FCONV	0	0	7439976	Mercury	1	0	0	1
FCONV	0	0	7440020	Nickel	1	0.0006768	2.70E-07	1
FCONV	0	0	7782492	Selenium	1	3.38E-05	1.35E-08	1
FCONV	0	0	1175	Silica, Crystln	1	3.384	0.00134821	1
FCONV	0	0	7440666	Zinc	1	0.0028764	1.15E-06	1
MCONV	0	0	9901	DieselExhPM	1	0	0	1
MCONV	0	0	7429905	Aluminum	1	4.7376	0.00188749	1
MCONV	0	0	7440382	Arsenic	1	0.00142128	5.66E-07	1
MCONV	0	0	7440393	Barium	1	0.0379008	1.51E-05	1
MCONV	0	0	7440417	Beryllium	1	0.00023688	9.44E-08	1
MCONV	0	0	7440439	Cadmium	1	0.00023688	9.44E-08	1
MCONV	0	0	18540299	Cr(VI)	1	0	0	1
MCONV	0	0	7440473	Chromium	1	0.00805392	3.21E-06	1
MCONV	0	0	7440484	Cobalt	1	0	0	1
MCONV	0	0	7440508	Copper	1	0.01705536	6.79E-06	1
MCONV	0	0	7439921	Lead	1	0.00450072	1.79E-06	1
MCONV	0	0	7439965	Manganese	1	0.0746172	2.97E-05	1
MCONV	0	0	7439976	Mercury	1	0	0	1
MCONV	0	0	7440020	Nickel	1	0.0047376	1.89E-06	1
MCONV	0	0	7782492	Selenium	1	0.00023688	9.44E-08	1
MCONV	0	0	1175	Silica, Crystln	1	23.688	0.00943745	1
MCONV	0	0	7440666	Zinc	1	0.0201348	8.02E-06	1
P1AEXTRACT	0	0	9901	DieselExhPM	1	30.62979095	0.0122031	1
P1AEXTRACT	0	0	7429905	Aluminum	1	106.0726955	0.04226004	1
P1AEXTRACT	0	0	7440382	Arsenic	1	0.031821809	1.27E-05	1
P1AEXTRACT	0	0	7440393	Barium	1	0.848581564	0.00033808	1
P1AEXTRACT	0	0	7440417	Beryllium	1	0.005303635	2.11E-06	1
P1AEXTRACT	0	0	7440439	Cadmium	1	0.005303635	2.11E-06	1
P1AEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P1AEXTRACT	0	0	7440473	Chromium	1	0.180323582	7.18E-05	1
P1AEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P1AEXTRACT	0	0	7440508	Copper	1	0.381861704	0.000152	1
P1AEXTRACT	0	0	7439921	Lead	1	0.100769061	4.01E-05	1
P1AEXTRACT	0	0	7439965	Manganese	1	1.670644953	0.0006656	1
P1AEXTRACT	0	0	7439976	Mercury	1	0	0	1
P1AEXTRACT	0	0	7440020	Nickel	1	0.106072695	4.23E-05	1
P1AEXTRACT	0	0	7782492	Selenium	1	0.005303635	2.11E-06	1
P1AEXTRACT	0	0	1175	Silica, Crystln	1	530.3634773	0.21130019	1
P1AEXTRACT	0	0	7440666	Zinc	1	0.450808956	0.00017961	1
P1BEXTRACT	0	0	9901	DieselExhPM	1	30.62979095	0.0122031	1
P1BEXTRACT	0	0	7429905	Aluminum	1	106.0726955	0.04226004	1
P1BEXTRACT	0	0	7440382	Arsenic	1	0.031821809	1.27E-05	1

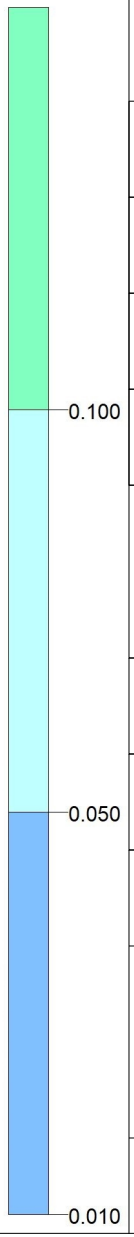
Cottonwood Sand Mine Phase 1 Emission Inventory

P1BEXTRACT	0	0	7440393	Barium	1	0.848581564	0.00033808	1
P1BEXTRACT	0	0	7440417	Beryllium	1	0.005303635	2.11E-06	1
P1BEXTRACT	0	0	7440439	Cadmium	1	0.005303635	2.11E-06	1
P1BEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P1BEXTRACT	0	0	7440473	Chromium	1	0.180323582	7.18E-05	1
P1BEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P1BEXTRACT	0	0	7440508	Copper	1	0.381861704	0.000152	1
P1BEXTRACT	0	0	7439921	Lead	1	0.100769061	4.01E-05	1
P1BEXTRACT	0	0	7439965	Manganese	1	1.670644953	0.0006656	1
P1BEXTRACT	0	0	7439976	Mercury	1	0	0	1
P1BEXTRACT	0	0	7440020	Nickel	1	0.106072695	4.23E-05	1
P1BEXTRACT	0	0	7782492	Selenium	1	0.005303635	2.11E-06	1
P1BEXTRACT	0	0	1175	Silica, Crystln	1	530.3634773	0.21130019	1
P1BEXTRACT	0	0	7440666	Zinc	1	0.450808956	0.00017961	1
P1CEXTRACT	0	0	9901	DieselExhPM	1	30.62979095	0.0122031	1
P1CEXTRACT	0	0	7429905	Aluminum	1	106.0726955	0.04226004	1
P1CEXTRACT	0	0	7440382	Arsenic	1	0.031821809	1.27E-05	1
P1CEXTRACT	0	0	7440393	Barium	1	0.848581564	0.00033808	1
P1CEXTRACT	0	0	7440417	Beryllium	1	0.005303635	2.11E-06	1
P1CEXTRACT	0	0	7440439	Cadmium	1	0.005303635	2.11E-06	1
P1CEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P1CEXTRACT	0	0	7440473	Chromium	1	0.180323582	7.18E-05	1
P1CEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P1CEXTRACT	0	0	7440508	Copper	1	0.381861704	0.000152	1
P1CEXTRACT	0	0	7439921	Lead	1	0.100769061	4.01E-05	1
P1CEXTRACT	0	0	7439965	Manganese	1	1.670644953	0.0006656	1
P1CEXTRACT	0	0	7439976	Mercury	1	0	0	1
P1CEXTRACT	0	0	7440020	Nickel	1	0.106072695	4.23E-05	1
P1CEXTRACT	0	0	7782492	Selenium	1	0.005303635	2.11E-06	1
P1CEXTRACT	0	0	1175	Silica, Crystln	1	530.3634773	0.21130019	1
P1CEXTRACT	0	0	7440666	Zinc	1	0.450808956	0.00017961	1
P1HRD	0	0	9901	DieselExhPM	1	22.674552	0.00903369	1
P1HRD	0	0	7429905	Aluminum	1	22.73617073	0.00905824	1
P1HRD	0	0	7440382	Arsenic	1	0.031830639	1.27E-05	1
P1HRD	0	0	7440393	Barium	1	0.219782984	8.76E-05	1
P1HRD	0	0	7440417	Beryllium	1	0.001515745	6.04E-07	1
P1HRD	0	0	7440439	Cadmium	1	0.001515745	6.04E-07	1
P1HRD	0	0	18540299	Cr(VI)	1	0	0	1
P1HRD	0	0	7440473	Chromium	1	0.037893618	1.51E-05	1
P1HRD	0	0	7440484	Cobalt	1	0	0	1
P1HRD	0	0	7440508	Copper	1	0.060629789	2.42E-05	1
P1HRD	0	0	7439921	Lead	1	0.045472341	1.81E-05	1
P1HRD	0	0	7439965	Manganese	1	0.742714911	0.0002959	1
P1HRD	0	0	7439976	Mercury	1	0	0	1
P1HRD	0	0	7440020	Nickel	1	0.02879915	1.15E-05	1
P1HRD	0	0	7782492	Selenium	1	0.001515745	6.04E-07	1
P1HRD	0	0	1175	Silica, Crystln	1	151.5744715	0.06038824	1
P1HRD	0	0	7440666	Zinc	1	0.169763408	6.76E-05	1

PROJECT TITLE:

Cottonwood Sand Mine Phase 1
Acute Hazard Index





COMMENTS:

Maximum Hazard Index

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

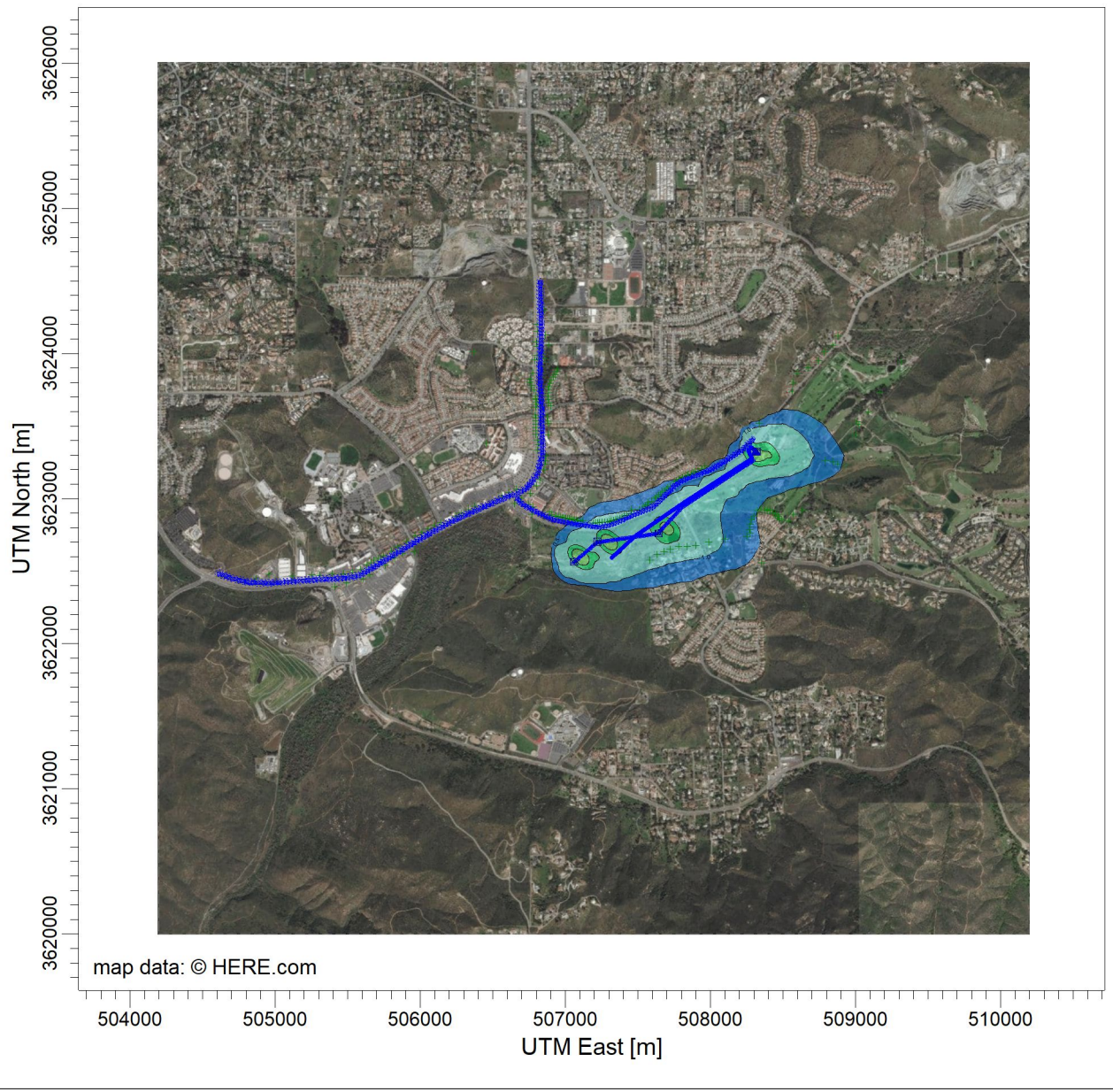
SCALE: 1:46,583

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 1
Residential Cancer Risk



COMMENTS:

Risk in chances per million

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

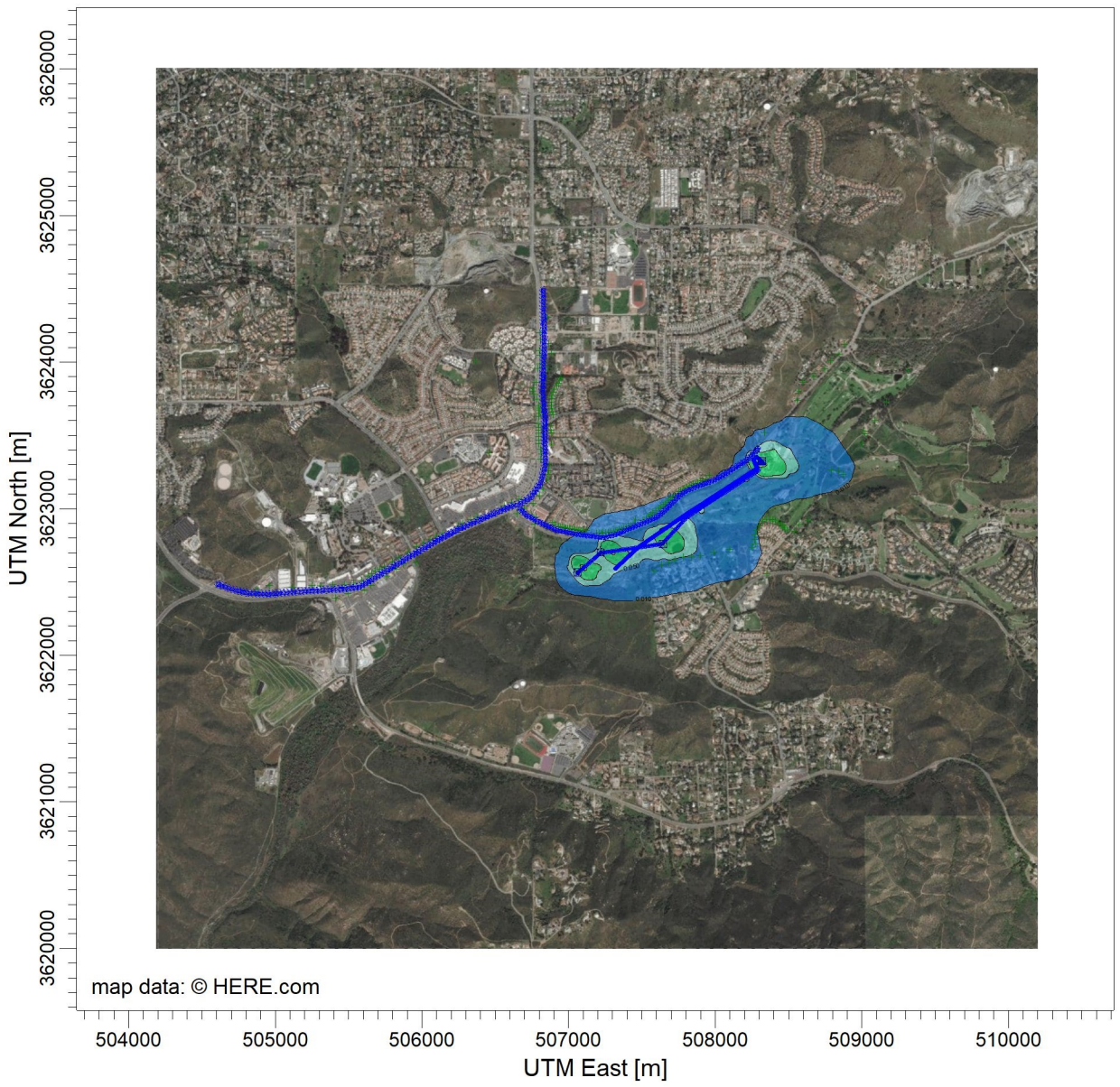
SCALE: 1:46,120

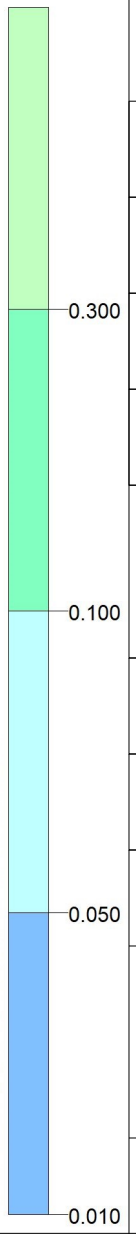
0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 1
Residential Chronic Hazard Index





COMMENTS:

Maximum Hazard Index

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

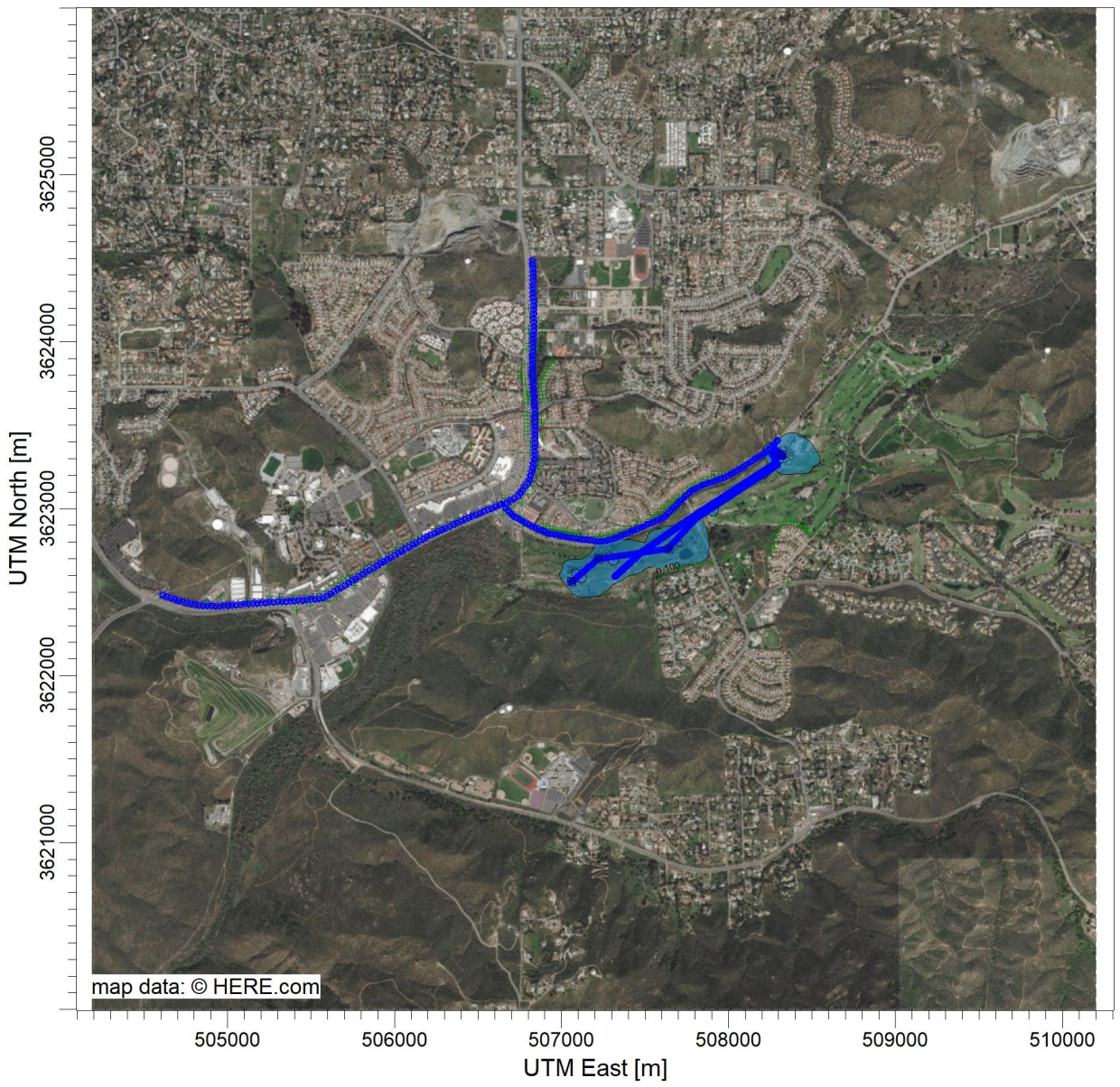
SCALE: 1:46,583

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 1
Off-Site Worker Cancer Risk



COMMENTS:

Risk in chances per million

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

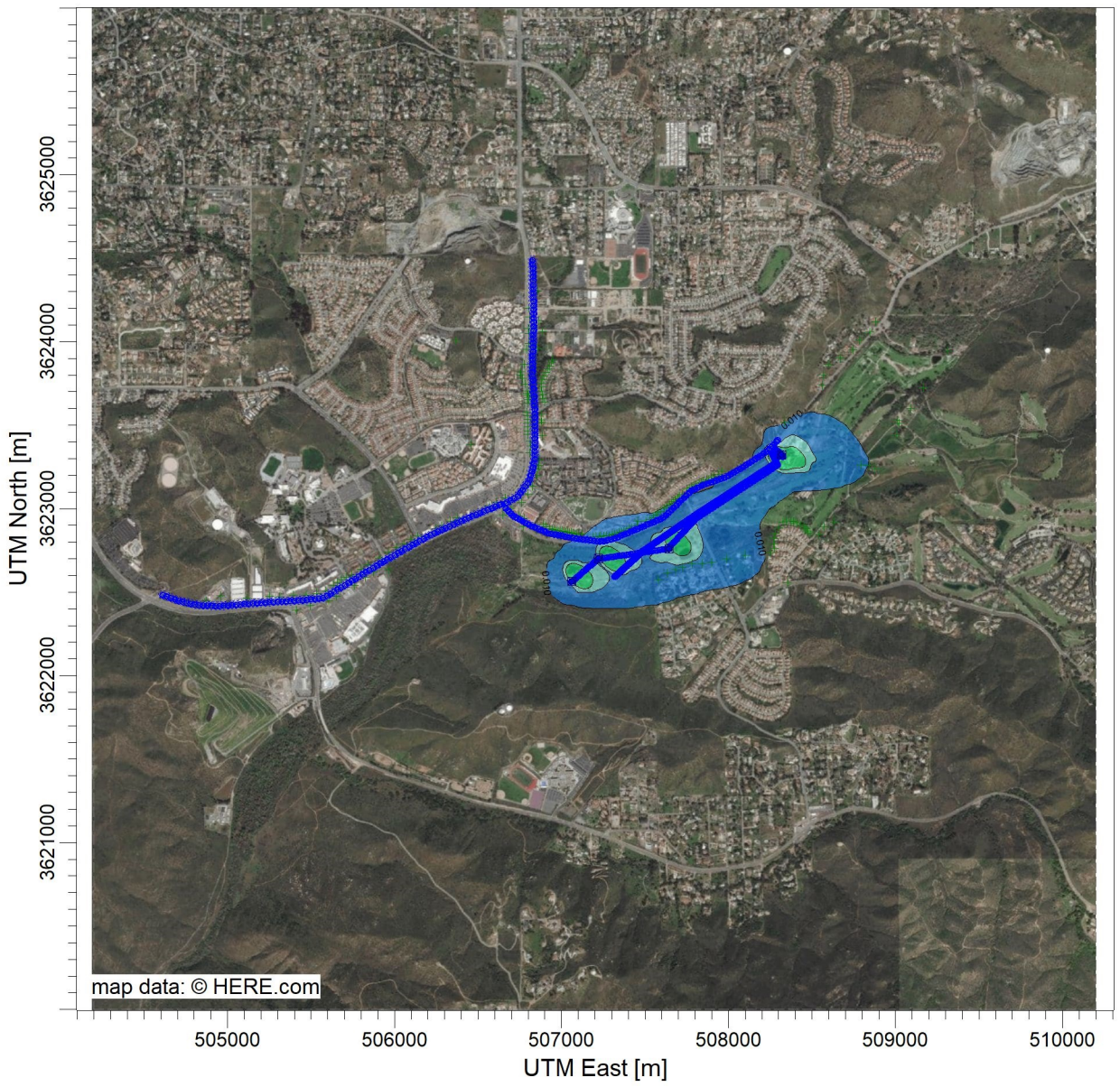
SCALE: 1:40,910

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 1
Off-Site Worker Chronic Hazard Index



COMMENTS:

Maximum Hazard Index

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

SCALE: 1:40,910

0 1 km

PROJECT NO.:

Control Pathway

Dispersion Options

Titles

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Rural

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

OTHER - MULTIPLE

Averaging Time Options

Hours ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☐ 8 ☐ 12 ☐ 24

☐ Month ☑ Period ☐ Annual

Exponential Decay

Option not available

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☑ Yes ☐ No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: SIR02_Phase2_AERMOD.err

Source Pathway - Source Inputs

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	P2AEXTRACT	507975.00	3623022.00	106.96	3.00	1.00000	50.00	Surface-Based	11.63	1.05
		Phase 2-A Extraction								
VOLUME	PROCESS	508317.38	3623323.54	109.92	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Processing Area								
VOLUME	P2BEXTACT	508335.00	3623003.00	107.44	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 2-B Extraction								
VOLUME	P2CEXTRACT	508540.00	3623189.00	110.10	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 2-C Extraction								

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: FCONV (Final Conveyor)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508280.92	3623353.74	112.41	10.73
			508313.10	3623329.17	109.91	10.73

Source Type: LINE VOLUME

Source: HRT1 (Haul Route 1 Willow Glen)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
21.24	1.00000		508295.91	3623410.45	116.37	2.55
			508224.91	3623337.84	112.76	2.55
			508079.69	3623244.25	111.69	2.55
			507992.56	3623192.62	110.61	2.55
			507842.50	3623139.37	111.46	2.55
			507777.96	3623107.10	111.18	2.55
			507736.01	3623068.37	108.25	2.55
			507627.90	3622961.88	107.44	2.55
			507595.63	3622937.67	107.02	2.55
			507318.10	3622821.50	109.93	2.55
			507243.87	3622802.14	107.83	2.55
			507084.13	3622821.50	113.74	2.55
			506919.55	3622853.77	113.66	2.55
			506819.51	3622897.34	105.79	2.55
			506709.79	3622957.04	104.94	2.55
			506661.38	3623007.06	105.54	2.55

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: HRT2 (Haul Route 2 Jamacha N)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
24.90	1.00000		506662.38	3623030.07	104.77	2.55
			506737.60	3623073.38	106.64	2.55
			506808.26	3623169.12	109.72	2.55
			506840.17	3623294.48	113.20	2.55
			506837.89	3623625.00	116.39	2.55
			506824.22	3623818.75	118.01	2.55
			506833.34	3624137.87	129.51	2.55
			506826.50	3624511.70	146.39	2.55

Source Type: LINE VOLUME
Source: HRT3 (Haul Route 3 Jamacha SW)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
24.90	1.00000		506638.96	3623027.47	104.28	2.55
			506454.47	3622950.05	102.55	2.55
			506233.73	3622851.22	101.74	2.55
			506088.77	3622772.15	101.33	2.55
			505912.52	3622670.02	101.71	2.55
			505653.89	3622511.88	104.82	2.55
			505573.18	3622465.75	106.06	2.55
			505471.05	3622452.57	107.71	2.55
			505191.01	3622436.10	113.50	2.55
			504952.15	3622416.33	123.16	2.55
			504817.08	3622422.92	131.63	2.55
			504701.77	3622449.28	137.29	2.55
			504594.70	3622490.46	133.87	2.55

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: MCONV (Main Conveyor)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508280.93	3623353.72	112.41	2.83
			508260.69	3623331.50	111.28	2.83
			508287.26	3623276.19	108.57	2.83
			508065.86	3623123.67	107.30	2.85
			508334.48	3623002.55	107.34	2.85

Source Type: LINE VOLUME
Source: P2HRD (Haul Road Phase 2)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.50	1.00000		508296.07	3623262.54	108.47	3.19
			508115.16	3623128.30	107.76	3.19
			507984.59	3623021.86	107.13	3.19
			508334.49	3622999.57	107.30	3.19
			508538.83	3623192.00	109.97	3.19

Source Type: LINE VOLUME
Source: RSTACK1 (Radial Stacker 1)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508310.44	3623330.07	110.04	8.29
			508300.25	3623309.85	109.92	8.29

Source Type: LINE VOLUME
Source: RSTACK2 (Radial Stacker 2)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508311.27	3623330.63	110.03	10.27
			508327.81	3623308.01	109.55	10.27

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000524	508288.48	3623402.85	116.04	2.55	0.01136	21.24		9.88	2.37
	L0000525	508273.64	3623387.67	116.60	2.55	0.01136	21.24		9.88	2.37
	L0000526	508258.79	3623372.48	115.77	2.55	0.01136	21.24		9.88	2.37
	L0000527	508243.94	3623357.29	113.95	2.55	0.01136	21.24		9.88	2.37
	L0000528	508229.09	3623342.11	112.91	2.55	0.01136	21.24		9.88	2.37
	L0000529	508212.08	3623329.56	113.15	2.55	0.01136	21.24		9.88	2.37
	L0000530	508194.22	3623318.06	113.04	2.55	0.01136	21.24		9.88	2.37
	L0000531	508176.37	3623306.55	113.63	2.55	0.01136	21.24		9.88	2.37
	L0000532	508158.52	3623295.05	113.85	2.55	0.01136	21.24		9.88	2.37
	L0000533	508140.66	3623283.54	113.24	2.55	0.01136	21.24		9.88	2.37
	L0000534	508122.81	3623272.04	113.19	2.55	0.01136	21.24		9.88	2.37
	L0000535	508104.96	3623260.53	113.09	2.55	0.01136	21.24		9.88	2.37
	L0000536	508087.10	3623249.02	112.68	2.55	0.01136	21.24		9.88	2.37
	L0000537	508069.00	3623237.92	112.51	2.55	0.01136	21.24		9.88	2.37
	L0000538	508050.73	3623227.09	112.32	2.55	0.01136	21.24		9.88	2.37
	L0000539	508032.46	3623216.26	112.33	2.55	0.01136	21.24		9.88	2.37
	L0000540	508014.19	3623205.43	112.27	2.55	0.01136	21.24		9.88	2.37
	L0000541	507995.91	3623194.60	112.04	2.55	0.01136	21.24		9.88	2.37
	L0000542	507976.22	3623186.82	113.04	2.55	0.01136	21.24		9.88	2.37
	L0000543	507956.20	3623179.71	113.53	2.55	0.01136	21.24		9.88	2.37
	L0000544	507936.18	3623172.61	112.66	2.55	0.01136	21.24		9.88	2.37
	L0000545	507916.16	3623165.51	112.44	2.55	0.01136	21.24		9.88	2.37
	L0000546	507896.15	3623158.40	112.47	2.55	0.01136	21.24		9.88	2.37
	L0000547	507876.13	3623151.30	111.94	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000548	507856.11	3623144.20	112.06	2.55	0.01136	21.24		9.88	2.37
	L0000549	507836.42	3623136.33	111.94	2.55	0.01136	21.24		9.88	2.37
	L0000550	507817.42	3623126.83	111.14	2.55	0.01136	21.24		9.88	2.37
	L0000551	507798.43	3623117.33	110.57	2.55	0.01136	21.24		9.88	2.37
	L0000552	507779.43	3623107.83	110.64	2.55	0.01136	21.24		9.88	2.37
	L0000553	507763.56	3623093.81	109.41	2.55	0.01136	21.24		9.88	2.37
	L0000554	507747.95	3623079.40	108.67	2.55	0.01136	21.24		9.88	2.37
	L0000555	507732.46	3623064.88	108.21	2.55	0.01136	21.24		9.88	2.37
	L0000556	507717.33	3623049.97	107.98	2.55	0.01136	21.24		9.88	2.37
	L0000557	507702.19	3623035.06	107.75	2.55	0.01136	21.24		9.88	2.37
	L0000558	507687.06	3623020.16	107.66	2.55	0.01136	21.24		9.88	2.37
	L0000559	507671.93	3623005.25	107.41	2.55	0.01136	21.24		9.88	2.37
	L0000560	507656.80	3622990.35	107.29	2.55	0.01136	21.24		9.88	2.37
	L0000561	507641.67	3622975.44	107.27	2.55	0.01136	21.24		9.88	2.37
	L0000562	507626.37	3622960.73	107.27	2.55	0.01136	21.24		9.88	2.37
	L0000563	507609.38	3622947.99	107.33	2.55	0.01136	21.24		9.88	2.37
	L0000564	507591.89	3622936.11	107.51	2.55	0.01136	21.24		9.88	2.37
	L0000565	507572.30	3622927.91	108.74	2.55	0.01136	21.24		9.88	2.37
	L0000566	507552.70	3622919.71	109.91	2.55	0.01136	21.24		9.88	2.37
	L0000567	507533.11	3622911.51	110.14	2.55	0.01136	21.24		9.88	2.37
	L0000568	507513.52	3622903.30	110.64	2.55	0.01136	21.24		9.88	2.37
	L0000569	507493.93	3622895.10	111.16	2.55	0.01136	21.24		9.88	2.37
	L0000570	507474.33	3622886.90	111.27	2.55	0.01136	21.24		9.88	2.37
	L0000571	507454.74	3622878.70	110.61	2.55	0.01136	21.24		9.88	2.37
	L0000572	507435.15	3622870.50	110.72	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000573	507415.55	3622862.30	110.81	2.55	0.01136	21.24		9.88	2.37
	L0000574	507395.96	3622854.09	110.53	2.55	0.01136	21.24		9.88	2.37
	L0000575	507376.37	3622845.89	110.77	2.55	0.01136	21.24		9.88	2.37
	L0000576	507356.78	3622837.69	110.73	2.55	0.01136	21.24		9.88	2.37
	L0000577	507337.18	3622829.49	110.66	2.55	0.01136	21.24		9.88	2.37
	L0000578	507317.57	3622821.36	110.13	2.55	0.01136	21.24		9.88	2.37
	L0000579	507297.01	3622816.00	110.47	2.55	0.01136	21.24		9.88	2.37
	L0000580	507276.46	3622810.64	110.76	2.55	0.01136	21.24		9.88	2.37
	L0000581	507255.91	3622805.28	109.76	2.55	0.01136	21.24		9.88	2.37
	L0000582	507235.14	3622803.19	109.55	2.55	0.01136	21.24		9.88	2.37
	L0000583	507214.05	3622805.75	111.04	2.55	0.01136	21.24		9.88	2.37
	L0000584	507192.97	3622808.31	113.12	2.55	0.01136	21.24		9.88	2.37
	L0000585	507171.88	3622810.86	114.04	2.55	0.01136	21.24		9.88	2.37
	L0000586	507150.79	3622813.42	107.99	2.55	0.01136	21.24		9.88	2.37
	L0000587	507129.71	3622815.97	108.59	2.55	0.01136	21.24		9.88	2.37
	L0000588	507108.62	3622818.53	114.66	2.55	0.01136	21.24		9.88	2.37
	L0000589	507087.54	3622821.09	114.33	2.55	0.01136	21.24		9.88	2.37
	L0000590	507066.66	3622824.93	113.71	2.55	0.01136	21.24		9.88	2.37
	L0000591	507045.81	3622829.01	114.46	2.55	0.01136	21.24		9.88	2.37
	L0000592	507024.97	3622833.10	113.96	2.55	0.01136	21.24		9.88	2.37
	L0000593	507004.13	3622837.19	114.02	2.55	0.01136	21.24		9.88	2.37
	L0000594	506983.28	3622841.27	114.81	2.55	0.01136	21.24		9.88	2.37
	L0000595	506962.44	3622845.36	113.90	2.55	0.01136	21.24		9.88	2.37
	L0000596	506941.60	3622849.45	114.45	2.55	0.01136	21.24		9.88	2.37
	L0000597	506920.75	3622853.53	114.31	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000598	506901.20	3622861.76	115.01	2.55	0.01136	21.24		9.88	2.37
	L0000599	506881.73	3622870.24	113.75	2.55	0.01136	21.24		9.88	2.37
	L0000600	506862.25	3622878.72	114.15	2.55	0.01136	21.24		9.88	2.37
	L0000601	506842.78	3622887.20	109.05	2.55	0.01136	21.24		9.88	2.37
	L0000602	506823.31	3622895.68	105.83	2.55	0.01136	21.24		9.88	2.37
	L0000603	506804.49	3622905.51	105.66	2.55	0.01136	21.24		9.88	2.37
	L0000604	506785.83	3622915.66	105.57	2.55	0.01136	21.24		9.88	2.37
	L0000605	506767.18	3622925.81	105.31	2.55	0.01136	21.24		9.88	2.37
	L0000606	506748.52	3622935.96	104.24	2.55	0.01136	21.24		9.88	2.37
	L0000607	506729.86	3622946.11	105.72	2.55	0.01136	21.24		9.88	2.37
	L0000608	506711.21	3622956.26	104.92	2.55	0.01136	21.24		9.88	2.37
	L0000609	506696.14	3622971.14	106.11	2.55	0.01136	21.24		9.88	2.37
	L0000610	506681.37	3622986.40	106.50	2.55	0.01136	21.24		9.88	2.37
	L0000611	506666.60	3623001.67	105.91	2.55	0.01136	21.24		9.88	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000612	506627.48	3623022.66	104.21	2.55	0.01136	24.90		11.58	2.37
	L0000613	506604.53	3623013.02	104.26	2.55	0.01136	24.90		11.58	2.37
	L0000614	506581.57	3623003.39	104.07	2.55	0.01136	24.90		11.58	2.37
	L0000615	506558.61	3622993.75	103.82	2.55	0.01136	24.90		11.58	2.37
	L0000616	506535.65	3622984.12	103.44	2.55	0.01136	24.90		11.58	2.37
	L0000617	506512.69	3622974.49	103.18	2.55	0.01136	24.90		11.58	2.37
	L0000618	506489.74	3622964.85	102.98	2.55	0.01136	24.90		11.58	2.37
	L0000619	506466.78	3622955.22	102.78	2.55	0.01136	24.90		11.58	2.37
	L0000620	506443.93	3622945.33	102.41	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000621	506421.20	3622935.16	102.35	2.55	0.01136	24.90		11.58	2.37
	L0000622	506398.48	3622924.98	102.22	2.55	0.01136	24.90		11.58	2.37
	L0000623	506375.76	3622914.81	102.04	2.55	0.01136	24.90		11.58	2.37
	L0000624	506353.03	3622904.63	101.96	2.55	0.01136	24.90		11.58	2.37
	L0000625	506330.31	3622894.46	101.82	2.55	0.01136	24.90		11.58	2.37
	L0000626	506307.59	3622884.28	101.87	2.55	0.01136	24.90		11.58	2.37
	L0000627	506284.86	3622874.11	101.75	2.55	0.01136	24.90		11.58	2.37
	L0000628	506262.14	3622863.93	101.81	2.55	0.01136	24.90		11.58	2.37
	L0000629	506239.42	3622853.76	101.87	2.55	0.01136	24.90		11.58	2.37
	L0000630	506217.34	3622842.27	101.82	2.55	0.01136	24.90		11.58	2.37
	L0000631	506195.48	3622830.35	101.62	2.55	0.01136	24.90		11.58	2.37
	L0000632	506173.63	3622818.43	101.50	2.55	0.01136	24.90		11.58	2.37
	L0000633	506151.77	3622806.51	101.46	2.55	0.01136	24.90		11.58	2.37
	L0000634	506129.91	3622794.58	101.39	2.55	0.01136	24.90		11.58	2.37
	L0000635	506108.05	3622782.66	101.32	2.55	0.01136	24.90		11.58	2.37
	L0000636	506086.23	3622770.67	101.26	2.55	0.01136	24.90		11.58	2.37
	L0000637	506064.69	3622758.19	101.18	2.55	0.01136	24.90		11.58	2.37
	L0000638	506043.15	3622745.71	101.14	2.55	0.01136	24.90		11.58	2.37
	L0000639	506021.61	3622733.23	101.13	2.55	0.01136	24.90		11.58	2.37
	L0000640	506000.06	3622720.74	101.18	2.55	0.01136	24.90		11.58	2.37
	L0000641	505978.52	3622708.26	101.26	2.55	0.01136	24.90		11.58	2.37
	L0000642	505956.98	3622695.78	101.36	2.55	0.01136	24.90		11.58	2.37
	L0000643	505935.44	3622683.30	101.49	2.55	0.01136	24.90		11.58	2.37
	L0000644	505913.89	3622670.81	101.66	2.55	0.01136	24.90		11.58	2.37
	L0000645	505892.63	3622657.86	101.87	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000646	505871.39	3622644.87	102.07	2.55	0.01136	24.90		11.58	2.37
	L0000647	505850.15	3622631.88	102.40	2.55	0.01136	24.90		11.58	2.37
	L0000648	505828.91	3622618.89	102.82	2.55	0.01136	24.90		11.58	2.37
	L0000649	505807.67	3622605.90	103.19	2.55	0.01136	24.90		11.58	2.37
	L0000650	505786.43	3622592.92	103.53	2.55	0.01136	24.90		11.58	2.37
	L0000651	505765.19	3622579.93	103.76	2.55	0.01136	24.90		11.58	2.37
	L0000652	505743.94	3622566.94	103.96	2.55	0.01136	24.90		11.58	2.37
	L0000653	505722.70	3622553.95	104.17	2.55	0.01136	24.90		11.58	2.37
	L0000654	505701.46	3622540.96	104.43	2.55	0.01136	24.90		11.58	2.37
	L0000655	505680.22	3622527.97	104.64	2.55	0.01136	24.90		11.58	2.37
	L0000656	505658.98	3622514.99	104.76	2.55	0.01136	24.90		11.58	2.37
	L0000657	505637.45	3622502.48	104.89	2.55	0.01136	24.90		11.58	2.37
	L0000658	505615.83	3622490.13	105.14	2.55	0.01136	24.90		11.58	2.37
	L0000659	505594.22	3622477.78	105.50	2.55	0.01136	24.90		11.58	2.37
	L0000660	505572.52	3622465.67	105.88	2.55	0.01136	24.90		11.58	2.37
	L0000661	505547.82	3622462.48	106.27	2.55	0.01136	24.90		11.58	2.37
	L0000662	505523.13	3622459.30	106.94	2.55	0.01136	24.90		11.58	2.37
	L0000663	505498.44	3622456.11	107.39	2.55	0.01136	24.90		11.58	2.37
	L0000664	505473.75	3622452.92	107.75	2.55	0.01136	24.90		11.58	2.37
	L0000665	505448.91	3622451.27	107.77	2.55	0.01136	24.90		11.58	2.37
	L0000666	505424.05	3622449.81	108.41	2.55	0.01136	24.90		11.58	2.37
	L0000667	505399.20	3622448.35	108.13	2.55	0.01136	24.90		11.58	2.37
	L0000668	505374.35	3622446.89	107.52	2.55	0.01136	24.90		11.58	2.37
	L0000669	505349.49	3622445.42	107.78	2.55	0.01136	24.90		11.58	2.37
	L0000670	505324.64	3622443.96	108.01	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000671	505299.78	3622442.50	109.09	2.55	0.01136	24.90		11.58	2.37
	L0000672	505274.93	3622441.04	110.20	2.55	0.01136	24.90		11.58	2.37
	L0000673	505250.07	3622439.58	111.13	2.55	0.01136	24.90		11.58	2.37
	L0000674	505225.22	3622438.11	111.98	2.55	0.01136	24.90		11.58	2.37
	L0000675	505200.36	3622436.65	113.14	2.55	0.01136	24.90		11.58	2.37
	L0000676	505175.53	3622434.82	113.70	2.55	0.01136	24.90		11.58	2.37
	L0000677	505150.72	3622432.77	114.23	2.55	0.01136	24.90		11.58	2.37
	L0000678	505125.91	3622430.71	114.69	2.55	0.01136	24.90		11.58	2.37
	L0000679	505101.10	3622428.66	114.21	2.55	0.01136	24.90		11.58	2.37
	L0000680	505076.28	3622426.61	115.00	2.55	0.01136	24.90		11.58	2.37
	L0000681	505051.47	3622424.55	115.46	2.55	0.01136	24.90		11.58	2.37
	L0000682	505026.66	3622422.50	117.53	2.55	0.01136	24.90		11.58	2.37
	L0000683	505001.85	3622420.45	121.45	2.55	0.01136	24.90		11.58	2.37
	L0000684	504977.03	3622418.39	121.57	2.55	0.01136	24.90		11.58	2.37
	L0000685	504952.22	3622416.34	123.10	2.55	0.01136	24.90		11.58	2.37
	L0000686	504927.35	3622417.54	125.18	2.55	0.01136	24.90		11.58	2.37
	L0000687	504902.48	3622418.76	126.83	2.55	0.01136	24.90		11.58	2.37
	L0000688	504877.62	3622419.97	128.08	2.55	0.01136	24.90		11.58	2.37
	L0000689	504852.75	3622421.18	129.48	2.55	0.01136	24.90		11.58	2.37
	L0000690	504827.88	3622422.40	130.97	2.55	0.01136	24.90		11.58	2.37
	L0000691	504803.35	3622426.06	132.52	2.55	0.01136	24.90		11.58	2.37
	L0000692	504779.08	3622431.61	134.65	2.55	0.01136	24.90		11.58	2.37
	L0000693	504754.81	3622437.16	135.95	2.55	0.01136	24.90		11.58	2.37
	L0000694	504730.53	3622442.71	136.89	2.55	0.01136	24.90		11.58	2.37
	L0000695	504706.26	3622448.25	137.39	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000696	504682.83	3622456.56	137.67	2.55	0.01136	24.90		11.58	2.37
	L0000697	504659.59	3622465.50	137.70	2.55	0.01136	24.90		11.58	2.37
	L0000698	504636.36	3622474.44	136.36	2.55	0.01136	24.90		11.58	2.37
	L0000699	504613.12	3622483.38	135.62	2.55	0.01136	24.90		11.58	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000700	506673.17	3623036.28	104.92	2.55	0.01613	24.90		11.58	2.37
	L0000701	506694.74	3623048.70	105.38	2.55	0.01613	24.90		11.58	2.37
	L0000702	506716.32	3623061.13	106.06	2.55	0.01613	24.90		11.58	2.37
	L0000703	506737.80	3623073.66	106.71	2.55	0.01613	24.90		11.58	2.37
	L0000704	506752.59	3623093.69	107.16	2.55	0.01613	24.90		11.58	2.37
	L0000705	506767.37	3623113.72	107.74	2.55	0.01613	24.90		11.58	2.37
	L0000706	506782.16	3623133.75	108.40	2.55	0.01613	24.90		11.58	2.37
	L0000707	506796.95	3623153.78	109.11	2.55	0.01613	24.90		11.58	2.37
	L0000708	506809.70	3623174.78	110.05	2.55	0.01613	24.90		11.58	2.37
	L0000709	506815.84	3623198.90	110.58	2.55	0.01613	24.90		11.58	2.37
	L0000710	506821.99	3623223.03	110.82	2.55	0.01613	24.90		11.58	2.37
	L0000711	506828.13	3623247.16	112.29	2.55	0.01613	24.90		11.58	2.37
	L0000712	506834.27	3623271.29	113.71	2.55	0.01613	24.90		11.58	2.37
	L0000713	506840.17	3623295.45	112.90	2.55	0.01613	24.90		11.58	2.37
	L0000714	506840.00	3623320.34	112.68	2.55	0.01613	24.90		11.58	2.37
	L0000715	506839.82	3623345.24	112.87	2.55	0.01613	24.90		11.58	2.37
	L0000716	506839.65	3623370.14	114.11	2.55	0.01613	24.90		11.58	2.37
	L0000717	506839.48	3623395.03	115.60	2.55	0.01613	24.90		11.58	2.37
	L0000718	506839.31	3623419.93	115.38	2.55	0.01613	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000719	506839.14	3623444.83	115.36	2.55	0.01613	24.90		11.58	2.37
	L0000720	506838.97	3623469.73	114.72	2.55	0.01613	24.90		11.58	2.37
	L0000721	506838.79	3623494.62	119.07	2.55	0.01613	24.90		11.58	2.37
	L0000722	506838.62	3623519.52	119.70	2.55	0.01613	24.90		11.58	2.37
	L0000723	506838.45	3623544.42	119.89	2.55	0.01613	24.90		11.58	2.37
	L0000724	506838.28	3623569.31	115.87	2.55	0.01613	24.90		11.58	2.37
	L0000725	506838.11	3623594.21	116.31	2.55	0.01613	24.90		11.58	2.37
	L0000726	506837.94	3623619.11	116.57	2.55	0.01613	24.90		11.58	2.37
	L0000727	506836.56	3623643.96	113.69	2.55	0.01613	24.90		11.58	2.37
	L0000728	506834.80	3623668.79	115.36	2.55	0.01613	24.90		11.58	2.37
	L0000729	506833.05	3623693.63	115.32	2.55	0.01613	24.90		11.58	2.37
	L0000730	506831.30	3623718.47	116.42	2.55	0.01613	24.90		11.58	2.37
	L0000731	506829.54	3623743.30	116.38	2.55	0.01613	24.90		11.58	2.37
	L0000732	506827.79	3623768.14	117.28	2.55	0.01613	24.90		11.58	2.37
	L0000733	506826.04	3623792.97	117.17	2.55	0.01613	24.90		11.58	2.37
	L0000734	506824.28	3623817.81	117.88	2.55	0.01613	24.90		11.58	2.37
	L0000735	506824.90	3623842.69	119.08	2.55	0.01613	24.90		11.58	2.37
	L0000736	506825.61	3623867.58	120.72	2.55	0.01613	24.90		11.58	2.37
	L0000737	506826.32	3623892.47	121.80	2.55	0.01613	24.90		11.58	2.37
	L0000738	506827.04	3623917.36	122.63	2.55	0.01613	24.90		11.58	2.37
	L0000739	506827.75	3623942.24	123.39	2.55	0.01613	24.90		11.58	2.37
	L0000740	506828.46	3623967.13	124.02	2.55	0.01613	24.90		11.58	2.37
	L0000741	506829.17	3623992.02	124.63	2.55	0.01613	24.90		11.58	2.37
	L0000742	506829.88	3624016.91	126.20	2.55	0.01613	24.90		11.58	2.37
	L0000743	506830.59	3624041.79	126.61	2.55	0.01613	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000744	506831.30	3624066.68	127.28	2.55	0.01613	24.90		11.58	2.37
	L0000745	506832.01	3624091.57	127.99	2.55	0.01613	24.90		11.58	2.37
	L0000746	506832.72	3624116.46	129.25	2.55	0.01613	24.90		11.58	2.37
	L0000747	506833.27	3624141.34	129.79	2.55	0.01613	24.90		11.58	2.37
	L0000748	506832.82	3624166.24	130.85	2.55	0.01613	24.90		11.58	2.37
	L0000749	506832.36	3624191.13	131.50	2.55	0.01613	24.90		11.58	2.37
	L0000750	506831.91	3624216.02	131.87	2.55	0.01613	24.90		11.58	2.37
	L0000751	506831.45	3624240.92	132.66	2.55	0.01613	24.90		11.58	2.37
	L0000752	506831.00	3624265.81	134.14	2.55	0.01613	24.90		11.58	2.37
	L0000753	506830.54	3624290.71	135.44	2.55	0.01613	24.90		11.58	2.37
	L0000754	506830.08	3624315.60	137.20	2.55	0.01613	24.90		11.58	2.37
	L0000755	506829.63	3624340.49	138.98	2.55	0.01613	24.90		11.58	2.37
	L0000756	506829.17	3624365.39	140.06	2.55	0.01613	24.90		11.58	2.37
	L0000757	506828.72	3624390.28	140.81	2.55	0.01613	24.90		11.58	2.37
	L0000758	506828.26	3624415.17	141.39	2.55	0.01613	24.90		11.58	2.37
	L0000759	506827.81	3624440.07	142.78	2.55	0.01613	24.90		11.58	2.37
	L0000760	506827.35	3624464.96	144.03	2.55	0.01613	24.90		11.58	2.37
	L0000761	506826.90	3624489.85	145.02	2.55	0.01613	24.90		11.58	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P2HRD	L0001789	508292.26	3623259.71	108.38	3.19	0.00926	9.50		4.42	2.97
	L0001790	508284.63	3623254.05	108.30	3.19	0.00926	9.50		4.42	2.97
	L0001791	508277.00	3623248.39	108.30	3.19	0.00926	9.50		4.42	2.97
	L0001792	508269.37	3623242.73	108.30	3.19	0.00926	9.50		4.42	2.97
	L0001793	508261.74	3623237.07	108.30	3.19	0.00926	9.50		4.42	2.97

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P2HRD	L0001794	508254.11	3623231.41	108.18	3.19	0.00926	9.50		4.42	2.97
	L0001795	508246.48	3623225.75	108.05	3.19	0.00926	9.50		4.42	2.97
	L0001796	508238.86	3623220.08	107.97	3.19	0.00926	9.50		4.42	2.97
	L0001797	508231.23	3623214.42	107.94	3.19	0.00926	9.50		4.42	2.97
	L0001798	508223.60	3623208.76	107.86	3.19	0.00926	9.50		4.42	2.97
	L0001799	508215.97	3623203.10	107.80	3.19	0.00926	9.50		4.42	2.97
	L0001800	508208.34	3623197.44	107.69	3.19	0.00926	9.50		4.42	2.97
	L0001801	508200.71	3623191.78	107.62	3.19	0.00926	9.50		4.42	2.97
	L0001802	508193.08	3623186.12	107.60	3.19	0.00926	9.50		4.42	2.97
	L0001803	508185.45	3623180.46	107.57	3.19	0.00926	9.50		4.42	2.97
	L0001804	508177.82	3623174.80	107.57	3.19	0.00926	9.50		4.42	2.97
	L0001805	508170.19	3623169.13	107.52	3.19	0.00926	9.50		4.42	2.97
	L0001806	508162.57	3623163.47	107.51	3.19	0.00926	9.50		4.42	2.97
	L0001807	508154.94	3623157.81	107.54	3.19	0.00926	9.50		4.42	2.97
	L0001808	508147.31	3623152.15	107.56	3.19	0.00926	9.50		4.42	2.97
	L0001809	508139.68	3623146.49	107.61	3.19	0.00926	9.50		4.42	2.97
	L0001810	508132.05	3623140.83	107.73	3.19	0.00926	9.50		4.42	2.97
	L0001811	508124.42	3623135.17	107.76	3.19	0.00926	9.50		4.42	2.97
	L0001812	508116.79	3623129.51	107.75	3.19	0.00926	9.50		4.42	2.97
	L0001813	508109.37	3623123.58	107.69	3.19	0.00926	9.50		4.42	2.97
	L0001814	508102.01	3623117.58	107.39	3.19	0.00926	9.50		4.42	2.97
	L0001815	508094.64	3623111.57	106.98	3.19	0.00926	9.50		4.42	2.97
	L0001816	508087.28	3623105.57	106.52	3.19	0.00926	9.50		4.42	2.97
	L0001817	508079.92	3623099.57	105.64	3.19	0.00926	9.50		4.42	2.97
	L0001818	508072.55	3623093.57	105.11	3.19	0.00926	9.50		4.42	2.97

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P2HRD	L0001819	508065.19	3623087.56	104.80	3.19	0.00926	9.50		4.42	2.97
	L0001820	508057.83	3623081.56	104.74	3.19	0.00926	9.50		4.42	2.97
	L0001821	508050.46	3623075.56	104.76	3.19	0.00926	9.50		4.42	2.97
	L0001822	508043.10	3623069.56	104.87	3.19	0.00926	9.50		4.42	2.97
	L0001823	508035.73	3623063.55	105.26	3.19	0.00926	9.50		4.42	2.97
	L0001824	508028.37	3623057.55	105.46	3.19	0.00926	9.50		4.42	2.97
	L0001825	508021.01	3623051.55	106.19	3.19	0.00926	9.50		4.42	2.97
	L0001826	508013.64	3623045.55	106.47	3.19	0.00926	9.50		4.42	2.97
	L0001827	508006.28	3623039.55	106.82	3.19	0.00926	9.50		4.42	2.97
	L0001828	507998.92	3623033.54	107.05	3.19	0.00926	9.50		4.42	2.97
	L0001829	507991.55	3623027.54	107.10	3.19	0.00926	9.50		4.42	2.97
	L0001830	507985.10	3623021.83	107.13	3.19	0.00926	9.50		4.42	2.97
	L0001831	507994.58	3623021.23	107.13	3.19	0.00926	9.50		4.42	2.97
	L0001832	508004.06	3623020.62	107.06	3.19	0.00926	9.50		4.42	2.97
	L0001833	508013.54	3623020.02	106.96	3.19	0.00926	9.50		4.42	2.97
	L0001834	508023.02	3623019.41	106.96	3.19	0.00926	9.50		4.42	2.97
	L0001835	508032.50	3623018.81	107.12	3.19	0.00926	9.50		4.42	2.97
	L0001836	508041.98	3623018.21	107.31	3.19	0.00926	9.50		4.42	2.97
	L0001837	508051.46	3623017.60	107.37	3.19	0.00926	9.50		4.42	2.97
	L0001838	508060.94	3623017.00	107.45	3.19	0.00926	9.50		4.42	2.97
	L0001839	508070.43	3623016.40	107.37	3.19	0.00926	9.50		4.42	2.97
	L0001840	508079.91	3623015.79	107.43	3.19	0.00926	9.50		4.42	2.97
	L0001841	508089.39	3623015.19	107.61	3.19	0.00926	9.50		4.42	2.97
	L0001842	508098.87	3623014.58	107.74	3.19	0.00926	9.50		4.42	2.97
	L0001843	508108.35	3623013.98	107.62	3.19	0.00926	9.50		4.42	2.97

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P2HRD	L0001844	508117.83	3623013.38	107.51	3.19	0.00926	9.50		4.42	2.97
	L0001845	508127.31	3623012.77	107.55	3.19	0.00926	9.50		4.42	2.97
	L0001846	508136.79	3623012.17	107.77	3.19	0.00926	9.50		4.42	2.97
	L0001847	508146.27	3623011.56	108.00	3.19	0.00926	9.50		4.42	2.97
	L0001848	508155.75	3623010.96	108.22	3.19	0.00926	9.50		4.42	2.97
	L0001849	508165.23	3623010.36	108.25	3.19	0.00926	9.50		4.42	2.97
	L0001850	508174.71	3623009.75	108.08	3.19	0.00926	9.50		4.42	2.97
	L0001851	508184.19	3623009.15	108.05	3.19	0.00926	9.50		4.42	2.97
	L0001852	508193.68	3623008.54	108.04	3.19	0.00926	9.50		4.42	2.97
	L0001853	508203.16	3623007.94	108.00	3.19	0.00926	9.50		4.42	2.97
	L0001854	508212.64	3623007.34	107.61	3.19	0.00926	9.50		4.42	2.97
	L0001855	508222.12	3623006.73	107.50	3.19	0.00926	9.50		4.42	2.97
	L0001856	508231.60	3623006.13	107.60	3.19	0.00926	9.50		4.42	2.97
	L0001857	508241.08	3623005.53	107.77	3.19	0.00926	9.50		4.42	2.97
	L0001858	508250.56	3623004.92	107.84	3.19	0.00926	9.50		4.42	2.97
	L0001859	508260.04	3623004.32	107.83	3.19	0.00926	9.50		4.42	2.97
	L0001860	508269.52	3623003.71	107.82	3.19	0.00926	9.50		4.42	2.97
	L0001861	508279.00	3623003.11	107.81	3.19	0.00926	9.50		4.42	2.97
	L0001862	508288.48	3623002.51	107.78	3.19	0.00926	9.50		4.42	2.97
	L0001863	508297.96	3623001.90	107.54	3.19	0.00926	9.50		4.42	2.97
	L0001864	508307.44	3623001.30	107.49	3.19	0.00926	9.50		4.42	2.97
	L0001865	508316.93	3623000.69	107.46	3.19	0.00926	9.50		4.42	2.97
	L0001866	508326.41	3623000.09	107.32	3.19	0.00926	9.50		4.42	2.97
	L0001867	508335.51	3623000.53	107.44	3.19	0.00926	9.50		4.42	2.97
	L0001868	508342.43	3623007.04	107.63	3.19	0.00926	9.50		4.42	2.97

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P2HRD	L0001869	508349.34	3623013.56	107.38	3.19	0.00926	9.50		4.42	2.97
	L0001870	508356.26	3623020.07	107.43	3.19	0.00926	9.50		4.42	2.97
	L0001871	508363.18	3623026.58	107.53	3.19	0.00926	9.50		4.42	2.97
	L0001872	508370.09	3623033.10	107.63	3.19	0.00926	9.50		4.42	2.97
	L0001873	508377.01	3623039.61	107.74	3.19	0.00926	9.50		4.42	2.97
	L0001874	508383.92	3623046.12	107.81	3.19	0.00926	9.50		4.42	2.97
	L0001875	508390.84	3623052.63	107.91	3.19	0.00926	9.50		4.42	2.97
	L0001876	508397.76	3623059.15	108.08	3.19	0.00926	9.50		4.42	2.97
	L0001877	508404.67	3623065.66	108.58	3.19	0.00926	9.50		4.42	2.97
	L0001878	508411.59	3623072.17	108.21	3.19	0.00926	9.50		4.42	2.97
	L0001879	508418.50	3623078.68	108.37	3.19	0.00926	9.50		4.42	2.97
	L0001880	508425.42	3623085.20	108.63	3.19	0.00926	9.50		4.42	2.97
	L0001881	508432.34	3623091.71	108.67	3.19	0.00926	9.50		4.42	2.97
	L0001882	508439.25	3623098.22	108.46	3.19	0.00926	9.50		4.42	2.97
	L0001883	508446.17	3623104.74	108.68	3.19	0.00926	9.50		4.42	2.97
	L0001884	508453.09	3623111.25	108.84	3.19	0.00926	9.50		4.42	2.97
	L0001885	508460.00	3623117.76	108.86	3.19	0.00926	9.50		4.42	2.97
	L0001886	508466.92	3623124.27	109.41	3.19	0.00926	9.50		4.42	2.97
	L0001887	508473.83	3623130.79	110.19	3.19	0.00926	9.50		4.42	2.97
	L0001888	508480.75	3623137.30	110.26	3.19	0.00926	9.50		4.42	2.97
	L0001889	508487.67	3623143.81	110.00	3.19	0.00926	9.50		4.42	2.97
	L0001890	508494.58	3623150.33	109.31	3.19	0.00926	9.50		4.42	2.97
	L0001891	508501.50	3623156.84	109.32	3.19	0.00926	9.50		4.42	2.97
	L0001892	508508.42	3623163.35	109.28	3.19	0.00926	9.50		4.42	2.97
	L0001893	508515.33	3623169.86	109.36	3.19	0.00926	9.50		4.42	2.97

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P2HRD	L0001894	508522.25	3623176.38	109.84	3.19	0.00926	9.50		4.42	2.97
	L0001895	508529.16	3623182.89	109.86	3.19	0.00926	9.50		4.42	2.97
	L0001896	508536.08	3623189.40	109.95	3.19	0.00926	9.50		4.42	2.97

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
FCONV	L0002171	508281.65	3623353.18	112.09	10.73	0.04545	1.83		0.85	3.74
	L0002172	508283.10	3623352.07	112.12	10.73	0.04545	1.83		0.85	3.74
	L0002173	508284.55	3623350.96	112.12	10.73	0.04545	1.83		0.85	3.74
	L0002174	508286.01	3623349.85	112.08	10.73	0.04545	1.83		0.85	3.74
	L0002175	508287.46	3623348.74	112.00	10.73	0.04545	1.83		0.85	3.74
	L0002176	508288.91	3623347.63	111.83	10.73	0.04545	1.83		0.85	3.74
	L0002177	508290.37	3623346.52	111.63	10.73	0.04545	1.83		0.85	3.74
	L0002178	508291.82	3623345.41	111.47	10.73	0.04545	1.83		0.85	3.74
	L0002179	508293.28	3623344.30	111.32	10.73	0.04545	1.83		0.85	3.74
	L0002180	508294.73	3623343.19	111.14	10.73	0.04545	1.83		0.85	3.74
	L0002181	508296.18	3623342.09	110.96	10.73	0.04545	1.83		0.85	3.74
	L0002182	508297.64	3623340.98	110.80	10.73	0.04545	1.83		0.85	3.74
	L0002183	508299.09	3623339.87	110.67	10.73	0.04545	1.83		0.85	3.74
	L0002184	508300.55	3623338.76	110.56	10.73	0.04545	1.83		0.85	3.74
	L0002185	508302.00	3623337.65	110.46	10.73	0.04545	1.83		0.85	3.74
	L0002186	508303.45	3623336.54	110.38	10.73	0.04545	1.83		0.85	3.74
	L0002187	508304.91	3623335.43	110.31	10.73	0.04545	1.83		0.85	3.74
	L0002188	508306.36	3623334.32	110.22	10.73	0.04545	1.83		0.85	3.74
	L0002189	508307.81	3623333.21	110.14	10.73	0.04545	1.83		0.85	3.74
	L0002190	508309.27	3623332.10	110.07	10.73	0.04545	1.83		0.85	3.74

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
FCONV	L0002191	508310.72	3623330.99	110.01	10.73	0.04545	1.83		0.85	3.74
	L0002192	508312.18	3623329.88	109.97	10.73	0.04545	1.83		0.85	3.74

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002198	508280.32	3623353.04	111.97	2.83	0.00279	1.83		0.85	0.66
	L0002199	508279.09	3623351.69	111.85	2.83	0.00279	1.83		0.85	0.66
	L0002200	508277.85	3623350.34	111.84	2.83	0.00279	1.83		0.85	0.66
	L0002201	508276.62	3623348.99	111.80	2.83	0.00279	1.83		0.85	0.66
	L0002202	508275.39	3623347.64	111.73	2.83	0.00279	1.83		0.85	0.66
	L0002203	508274.16	3623346.28	111.63	2.83	0.00279	1.83		0.85	0.66
	L0002204	508272.93	3623344.93	111.51	2.83	0.00279	1.83		0.85	0.66
	L0002205	508271.70	3623343.58	111.46	2.83	0.00279	1.83		0.85	0.66
	L0002206	508270.47	3623342.23	111.44	2.83	0.00279	1.83		0.85	0.66
	L0002207	508269.23	3623340.88	111.48	2.83	0.00279	1.83		0.85	0.66
	L0002208	508268.00	3623339.52	111.48	2.83	0.00279	1.83		0.85	0.66
	L0002209	508266.77	3623338.17	111.45	2.83	0.00279	1.83		0.85	0.66
	L0002210	508265.54	3623336.82	111.39	2.83	0.00279	1.83		0.85	0.66
	L0002211	508264.31	3623335.47	111.29	2.83	0.00279	1.83		0.85	0.66
	L0002212	508263.08	3623334.12	111.22	2.83	0.00279	1.83		0.85	0.66
	L0002213	508261.84	3623332.76	111.22	2.83	0.00279	1.83		0.85	0.66
	L0002214	508260.75	3623331.39	111.24	2.83	0.00279	1.83		0.85	0.66
	L0002215	508261.54	3623329.74	111.17	2.83	0.00279	1.83		0.85	0.66
	L0002216	508262.33	3623328.10	111.12	2.83	0.00279	1.83		0.85	0.66
	L0002217	508263.12	3623326.45	111.07	2.83	0.00279	1.83		0.85	0.66
	L0002218	508263.91	3623324.80	111.02	2.83	0.00279	1.83		0.85	0.66

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002219	508264.71	3623323.15	110.95	2.83	0.00279	1.83		0.85	0.66
	L0002220	508265.50	3623321.50	110.83	2.83	0.00279	1.83		0.85	0.66
	L0002221	508266.29	3623319.85	110.67	2.83	0.00279	1.83		0.85	0.66
	L0002222	508267.08	3623318.20	110.47	2.83	0.00279	1.83		0.85	0.66
	L0002223	508267.87	3623316.56	110.23	2.83	0.00279	1.83		0.85	0.66
	L0002224	508268.66	3623314.91	109.95	2.83	0.00279	1.83		0.85	0.66
	L0002225	508269.46	3623313.26	109.69	2.83	0.00279	1.83		0.85	0.66
	L0002226	508270.25	3623311.61	109.52	2.83	0.00279	1.83		0.85	0.66
	L0002227	508271.04	3623309.96	109.43	2.83	0.00279	1.83		0.85	0.66
	L0002228	508271.83	3623308.31	109.43	2.83	0.00279	1.83		0.85	0.66
	L0002229	508272.62	3623306.66	109.45	2.83	0.00279	1.83		0.85	0.66
	L0002230	508273.42	3623305.02	109.49	2.83	0.00279	1.83		0.85	0.66
	L0002231	508274.21	3623303.37	109.51	2.83	0.00279	1.83		0.85	0.66
	L0002232	508275.00	3623301.72	109.51	2.83	0.00279	1.83		0.85	0.66
	L0002233	508275.79	3623300.07	109.49	2.83	0.00279	1.83		0.85	0.66
	L0002234	508276.58	3623298.42	109.47	2.83	0.00279	1.83		0.85	0.66
	L0002235	508277.37	3623296.77	109.44	2.83	0.00279	1.83		0.85	0.66
	L0002236	508278.17	3623295.13	109.40	2.83	0.00279	1.83		0.85	0.66
	L0002237	508278.96	3623293.48	109.35	2.83	0.00279	1.83		0.85	0.66
	L0002238	508279.75	3623291.83	109.30	2.83	0.00279	1.83		0.85	0.66
	L0002239	508280.54	3623290.18	109.25	2.83	0.00279	1.83		0.85	0.66
	L0002240	508281.33	3623288.53	109.20	2.83	0.00279	1.83		0.85	0.66
	L0002241	508282.13	3623286.88	109.15	2.83	0.00279	1.83		0.85	0.66
	L0002242	508282.92	3623285.23	109.10	2.83	0.00279	1.83		0.85	0.66
	L0002243	508283.71	3623283.59	109.05	2.83	0.00279	1.83		0.85	0.66

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002244	508284.50	3623281.94	109.00	2.83	0.00279	1.83		0.85	0.66
	L0002245	508285.29	3623280.29	108.93	2.83	0.00279	1.83		0.85	0.66
	L0002246	508286.08	3623278.64	108.86	2.83	0.00279	1.83		0.85	0.66
	L0002247	508286.88	3623276.99	108.77	2.83	0.00279	1.83		0.85	0.66
	L0002248	508286.49	3623275.66	108.71	2.83	0.00279	1.83		0.85	0.66
	L0002249	508284.99	3623274.62	108.69	2.83	0.00279	1.83		0.85	0.66
	L0002250	508283.48	3623273.58	108.67	2.83	0.00279	1.83		0.85	0.66
	L0002251	508281.98	3623272.54	108.67	2.84	0.00279	1.83		0.85	0.66
	L0002252	508280.47	3623271.51	108.67	2.84	0.00279	1.83		0.85	0.66
	L0002253	508278.96	3623270.47	108.66	2.84	0.00279	1.83		0.85	0.66
	L0002254	508277.46	3623269.43	108.64	2.84	0.00279	1.83		0.85	0.66
	L0002255	508275.95	3623268.39	108.61	2.84	0.00279	1.83		0.85	0.66
	L0002256	508274.45	3623267.36	108.58	2.84	0.00279	1.83		0.85	0.66
	L0002257	508272.94	3623266.32	108.54	2.84	0.00279	1.83		0.85	0.66
	L0002258	508271.43	3623265.28	108.49	2.84	0.00279	1.83		0.85	0.66
	L0002259	508269.93	3623264.24	108.38	2.84	0.00279	1.83		0.85	0.66
	L0002260	508268.42	3623263.21	108.27	2.84	0.00279	1.83		0.85	0.66
	L0002261	508266.92	3623262.17	108.20	2.84	0.00279	1.83		0.85	0.66
	L0002262	508265.41	3623261.13	108.17	2.84	0.00279	1.83		0.85	0.66
	L0002263	508263.90	3623260.09	108.15	2.84	0.00279	1.83		0.85	0.66
	L0002264	508262.40	3623259.06	108.13	2.84	0.00279	1.83		0.85	0.66
	L0002265	508260.89	3623258.02	108.13	2.84	0.00279	1.83		0.85	0.66
	L0002266	508259.38	3623256.98	108.13	2.84	0.00279	1.83		0.85	0.66
	L0002267	508257.88	3623255.94	108.11	2.84	0.00279	1.83		0.85	0.66
	L0002268	508256.37	3623254.91	108.08	2.84	0.00279	1.83		0.85	0.66

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002269	508254.87	3623253.87	108.04	2.84	0.00279	1.83		0.85	0.66
	L0002270	508253.36	3623252.83	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002271	508251.85	3623251.79	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002272	508250.35	3623250.76	108.01	2.84	0.00279	1.83		0.85	0.66
	L0002273	508248.84	3623249.72	108.01	2.84	0.00279	1.83		0.85	0.66
	L0002274	508247.34	3623248.68	108.01	2.84	0.00279	1.83		0.85	0.66
	L0002275	508245.83	3623247.64	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002276	508244.32	3623246.61	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002277	508242.82	3623245.57	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002278	508241.31	3623244.53	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002279	508239.81	3623243.49	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002280	508238.30	3623242.46	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002281	508236.79	3623241.42	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002282	508235.29	3623240.38	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002283	508233.78	3623239.34	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002284	508232.28	3623238.31	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002285	508230.77	3623237.27	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002286	508229.26	3623236.23	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002287	508227.76	3623235.19	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002288	508226.25	3623234.16	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002289	508224.75	3623233.12	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002290	508223.24	3623232.08	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002291	508221.73	3623231.04	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002292	508220.23	3623230.01	108.02	2.84	0.00279	1.83		0.85	0.66
	L0002293	508218.72	3623228.97	108.04	2.84	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002294	508217.22	3623227.93	108.06	2.84	0.00279	1.83		0.85	0.66
	L0002295	508215.71	3623226.89	108.09	2.84	0.00279	1.83		0.85	0.66
	L0002296	508214.20	3623225.86	108.11	2.84	0.00279	1.83		0.85	0.66
	L0002297	508212.70	3623224.82	108.14	2.84	0.00279	1.83		0.85	0.66
	L0002298	508211.19	3623223.78	108.17	2.84	0.00279	1.83		0.85	0.66
	L0002299	508209.69	3623222.74	108.18	2.84	0.00279	1.83		0.85	0.66
	L0002300	508208.18	3623221.71	108.16	2.84	0.00279	1.83		0.85	0.66
	L0002301	508206.67	3623220.67	108.09	2.84	0.00279	1.83		0.85	0.66
	L0002302	508205.17	3623219.63	108.05	2.84	0.00279	1.83		0.85	0.66
	L0002303	508203.66	3623218.59	108.03	2.84	0.00279	1.83		0.85	0.66
	L0002304	508202.16	3623217.56	108.03	2.84	0.00279	1.83		0.85	0.66
	L0002305	508200.65	3623216.52	108.04	2.84	0.00279	1.83		0.85	0.66
	L0002306	508199.14	3623215.48	108.04	2.84	0.00279	1.83		0.85	0.66
	L0002307	508197.64	3623214.44	108.03	2.84	0.00279	1.83		0.85	0.66
	L0002308	508196.13	3623213.41	108.02	2.84	0.00279	1.83		0.85	0.66
	L0002309	508194.63	3623212.37	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002310	508193.12	3623211.33	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002311	508191.61	3623210.29	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002312	508190.11	3623209.26	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002313	508188.60	3623208.22	108.01	2.84	0.00279	1.83		0.85	0.66
	L0002314	508187.09	3623207.18	108.00	2.84	0.00279	1.83		0.85	0.66
	L0002315	508185.59	3623206.14	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002316	508184.08	3623205.11	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002317	508182.58	3623204.07	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002318	508181.07	3623203.03	107.98	2.84	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0002319	508179.56	3623201.99	107.98	2.84	0.00279	1.83		0.85	0.66
	L0002320	508178.06	3623200.96	107.99	2.84	0.00279	1.83		0.85	0.66
	L0002321	508176.55	3623199.92	108.02	2.84	0.00279	1.83		0.85	0.66
	L0002322	508175.05	3623198.88	108.04	2.84	0.00279	1.83		0.85	0.66
	L0002323	508173.54	3623197.84	108.06	2.84	0.00279	1.83		0.85	0.66
	L0002324	508172.03	3623196.81	108.06	2.84	0.00279	1.83		0.85	0.66
	L0002325	508170.53	3623195.77	108.07	2.84	0.00279	1.83		0.85	0.66
	L0002326	508169.02	3623194.73	108.06	2.84	0.00279	1.83		0.85	0.66
	L0002327	508167.52	3623193.70	108.05	2.84	0.00279	1.83		0.85	0.66
	L0002328	508166.01	3623192.66	108.05	2.84	0.00279	1.83		0.85	0.66
	L0002329	508164.50	3623191.62	108.06	2.84	0.00279	1.83		0.85	0.66
	L0002330	508163.00	3623190.58	108.07	2.84	0.00279	1.83		0.85	0.66
	L0002331	508161.49	3623189.55	108.07	2.84	0.00279	1.83		0.85	0.66
	L0002332	508159.99	3623188.51	108.06	2.84	0.00279	1.83		0.85	0.66
	L0002333	508158.48	3623187.47	108.04	2.84	0.00279	1.83		0.85	0.66
	L0002334	508156.97	3623186.43	108.01	2.84	0.00279	1.83		0.85	0.66
	L0002335	508155.47	3623185.40	107.97	2.84	0.00279	1.83		0.85	0.66
	L0002336	508153.96	3623184.36	107.93	2.84	0.00279	1.83		0.85	0.66
	L0002337	508152.46	3623183.32	107.88	2.84	0.00279	1.83		0.85	0.66
	L0002338	508150.95	3623182.28	107.82	2.84	0.00279	1.83		0.85	0.66
	L0002339	508149.44	3623181.25	107.77	2.84	0.00279	1.83		0.85	0.66
	L0002340	508147.94	3623180.21	107.70	2.84	0.00279	1.83		0.85	0.66
	L0002341	508146.43	3623179.17	107.64	2.84	0.00279	1.83		0.85	0.66
	L0002342	508144.93	3623178.13	107.58	2.84	0.00279	1.83		0.85	0.66
	L0002343	508143.42	3623177.10	107.54	2.84	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

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MCONV	L0002344	508141.91	3623176.06	107.50	2.84	0.00279	1.83		0.85	0.66
	L0002345	508140.41	3623175.02	107.47	2.84	0.00279	1.83		0.85	0.66
	L0002346	508138.90	3623173.98	107.46	2.84	0.00279	1.83		0.85	0.66
	L0002347	508137.40	3623172.95	107.44	2.84	0.00279	1.83		0.85	0.66
	L0002348	508135.89	3623171.91	107.42	2.85	0.00279	1.83		0.85	0.66
	L0002349	508134.38	3623170.87	107.40	2.85	0.00279	1.83		0.85	0.66
	L0002350	508132.88	3623169.83	107.42	2.85	0.00279	1.83		0.85	0.66
	L0002351	508131.37	3623168.80	107.48	2.85	0.00279	1.83		0.85	0.66
	L0002352	508129.87	3623167.76	107.55	2.85	0.00279	1.83		0.85	0.66
	L0002353	508128.36	3623166.72	107.61	2.85	0.00279	1.83		0.85	0.66
	L0002354	508126.85	3623165.68	107.67	2.85	0.00279	1.83		0.85	0.66
	L0002355	508125.35	3623164.65	107.72	2.85	0.00279	1.83		0.85	0.66
	L0002356	508123.84	3623163.61	107.77	2.85	0.00279	1.83		0.85	0.66
	L0002357	508122.34	3623162.57	107.78	2.85	0.00279	1.83		0.85	0.66
	L0002358	508120.83	3623161.53	107.77	2.85	0.00279	1.83		0.85	0.66
	L0002359	508119.32	3623160.50	107.74	2.85	0.00279	1.83		0.85	0.66
	L0002360	508117.82	3623159.46	107.73	2.85	0.00279	1.83		0.85	0.66
	L0002361	508116.31	3623158.42	107.74	2.85	0.00279	1.83		0.85	0.66
	L0002362	508114.80	3623157.38	107.78	2.85	0.00279	1.83		0.85	0.66
	L0002363	508113.30	3623156.35	107.84	2.85	0.00279	1.83		0.85	0.66
	L0002364	508111.79	3623155.31	107.88	2.85	0.00279	1.83		0.85	0.66
	L0002365	508110.29	3623154.27	107.92	2.85	0.00279	1.83		0.85	0.66
	L0002366	508108.78	3623153.23	107.94	2.85	0.00279	1.83		0.85	0.66
	L0002367	508107.27	3623152.20	107.94	2.85	0.00279	1.83		0.85	0.66
	L0002368	508105.77	3623151.16	107.94	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002369	508104.26	3623150.12	107.92	2.85	0.00279	1.83		0.85	0.66
	L0002370	508102.76	3623149.08	107.87	2.85	0.00279	1.83		0.85	0.66
	L0002371	508101.25	3623148.05	107.81	2.85	0.00279	1.83		0.85	0.66
	L0002372	508099.74	3623147.01	107.76	2.85	0.00279	1.83		0.85	0.66
	L0002373	508098.24	3623145.97	107.72	2.85	0.00279	1.83		0.85	0.66
	L0002374	508096.73	3623144.93	107.71	2.85	0.00279	1.83		0.85	0.66
	L0002375	508095.23	3623143.90	107.71	2.85	0.00279	1.83		0.85	0.66
	L0002376	508093.72	3623142.86	107.72	2.85	0.00279	1.83		0.85	0.66
	L0002377	508092.21	3623141.82	107.73	2.85	0.00279	1.83		0.85	0.66
	L0002378	508090.71	3623140.78	107.76	2.85	0.00279	1.83		0.85	0.66
	L0002379	508089.20	3623139.75	107.80	2.85	0.00279	1.83		0.85	0.66
	L0002380	508087.70	3623138.71	107.75	2.85	0.00279	1.83		0.85	0.66
	L0002381	508086.19	3623137.67	107.67	2.85	0.00279	1.83		0.85	0.66
	L0002382	508084.68	3623136.63	107.60	2.85	0.00279	1.83		0.85	0.66
	L0002383	508083.18	3623135.60	107.53	2.85	0.00279	1.83		0.85	0.66
	L0002384	508081.67	3623134.56	107.47	2.85	0.00279	1.83		0.85	0.66
	L0002385	508080.17	3623133.52	107.41	2.85	0.00279	1.83		0.85	0.66
	L0002386	508078.66	3623132.48	107.37	2.85	0.00279	1.83		0.85	0.66
	L0002387	508077.15	3623131.45	107.33	2.85	0.00279	1.83		0.85	0.66
	L0002388	508075.65	3623130.41	107.31	2.85	0.00279	1.83		0.85	0.66
	L0002389	508074.14	3623129.37	107.30	2.85	0.00279	1.83		0.85	0.66
	L0002390	508072.64	3623128.33	107.30	2.85	0.00279	1.83		0.85	0.66
	L0002391	508071.13	3623127.30	107.30	2.85	0.00279	1.83		0.85	0.66
	L0002392	508069.62	3623126.26	107.30	2.85	0.00279	1.83		0.85	0.66
	L0002393	508068.12	3623125.22	107.30	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0002394	508066.61	3623124.18	107.29	2.85	0.00279	1.83		0.85	0.66
	L0002395	508066.69	3623123.29	107.28	2.85	0.00279	1.83		0.85	0.66
	L0002396	508068.36	3623122.54	107.26	2.85	0.00279	1.83		0.85	0.66
	L0002397	508070.03	3623121.79	107.25	2.85	0.00279	1.83		0.85	0.66
	L0002398	508071.70	3623121.03	107.24	2.85	0.00279	1.83		0.85	0.66
	L0002399	508073.36	3623120.28	107.24	2.85	0.00279	1.83		0.85	0.66
	L0002400	508075.03	3623119.53	107.24	2.85	0.00279	1.83		0.85	0.66
	L0002401	508076.70	3623118.78	107.25	2.85	0.00279	1.83		0.85	0.66
	L0002402	508078.37	3623118.03	107.26	2.85	0.00279	1.83		0.85	0.66
	L0002403	508080.03	3623117.28	107.28	2.85	0.00279	1.83		0.85	0.66
	L0002404	508081.70	3623116.52	107.29	2.85	0.00279	1.83		0.85	0.66
	L0002405	508083.37	3623115.77	107.28	2.85	0.00279	1.83		0.85	0.66
	L0002406	508085.03	3623115.02	107.26	2.85	0.00279	1.83		0.85	0.66
	L0002407	508086.70	3623114.27	107.23	2.85	0.00279	1.83		0.85	0.66
	L0002408	508088.37	3623113.52	107.18	2.85	0.00279	1.83		0.85	0.66
	L0002409	508090.04	3623112.77	107.13	2.85	0.00279	1.83		0.85	0.66
	L0002410	508091.70	3623112.01	107.06	2.85	0.00279	1.83		0.85	0.66
	L0002411	508093.37	3623111.26	106.99	2.85	0.00279	1.83		0.85	0.66
	L0002412	508095.04	3623110.51	106.91	2.85	0.00279	1.83		0.85	0.66
	L0002413	508096.70	3623109.76	106.81	2.85	0.00279	1.83		0.85	0.66
	L0002414	508098.37	3623109.01	106.69	2.85	0.00279	1.83		0.85	0.66
	L0002415	508100.04	3623108.26	106.50	2.85	0.00279	1.83		0.85	0.66
	L0002416	508101.71	3623107.50	106.30	2.85	0.00279	1.83		0.85	0.66
	L0002417	508103.37	3623106.75	106.11	2.85	0.00279	1.83		0.85	0.66
	L0002418	508105.04	3623106.00	105.93	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

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MCONV	L0002419	508106.71	3623105.25	105.76	2.85	0.00279	1.83		0.85	0.66
	L0002420	508108.37	3623104.50	105.62	2.85	0.00279	1.83		0.85	0.66
	L0002421	508110.04	3623103.75	105.48	2.85	0.00279	1.83		0.85	0.66
	L0002422	508111.71	3623102.99	105.36	2.85	0.00279	1.83		0.85	0.66
	L0002423	508113.38	3623102.24	105.24	2.85	0.00279	1.83		0.85	0.66
	L0002424	508115.04	3623101.49	105.13	2.85	0.00279	1.83		0.85	0.66
	L0002425	508116.71	3623100.74	105.03	2.85	0.00279	1.83		0.85	0.66
	L0002426	508118.38	3623099.99	104.94	2.85	0.00279	1.83		0.85	0.66
	L0002427	508120.04	3623099.24	104.86	2.85	0.00279	1.83		0.85	0.66
	L0002428	508121.71	3623098.48	104.77	2.85	0.00279	1.83		0.85	0.66
	L0002429	508123.38	3623097.73	104.78	2.85	0.00279	1.83		0.85	0.66
	L0002430	508125.05	3623096.98	104.79	2.85	0.00279	1.83		0.85	0.66
	L0002431	508126.71	3623096.23	104.80	2.85	0.00279	1.83		0.85	0.66
	L0002432	508128.38	3623095.48	104.82	2.85	0.00279	1.83		0.85	0.66
	L0002433	508130.05	3623094.72	104.85	2.85	0.00279	1.83		0.85	0.66
	L0002434	508131.71	3623093.97	104.88	2.85	0.00279	1.83		0.85	0.66
	L0002435	508133.38	3623093.22	104.93	2.85	0.00279	1.83		0.85	0.66
	L0002436	508135.05	3623092.47	104.99	2.85	0.00279	1.83		0.85	0.66
	L0002437	508136.72	3623091.72	105.06	2.85	0.00279	1.83		0.85	0.66
	L0002438	508138.38	3623090.97	105.14	2.85	0.00279	1.83		0.85	0.66
	L0002439	508140.05	3623090.21	105.22	2.85	0.00279	1.83		0.85	0.66
	L0002440	508141.72	3623089.46	105.32	2.85	0.00279	1.83		0.85	0.66
	L0002441	508143.38	3623088.71	105.46	2.85	0.00279	1.83		0.85	0.66
	L0002442	508145.05	3623087.96	105.64	2.85	0.00279	1.83		0.85	0.66
	L0002443	508146.72	3623087.21	105.87	2.85	0.00279	1.83		0.85	0.66

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MCONV	L0002444	508148.39	3623086.46	106.09	2.85	0.00279	1.83		0.85	0.66
	L0002445	508150.05	3623085.70	106.31	2.85	0.00279	1.83		0.85	0.66
	L0002446	508151.72	3623084.95	106.53	2.85	0.00279	1.83		0.85	0.66
	L0002447	508153.39	3623084.20	106.75	2.85	0.00279	1.83		0.85	0.66
	L0002448	508155.05	3623083.45	106.96	2.85	0.00279	1.83		0.85	0.66
	L0002449	508156.72	3623082.70	107.16	2.85	0.00279	1.83		0.85	0.66
	L0002450	508158.39	3623081.95	107.36	2.85	0.00279	1.83		0.85	0.66
	L0002451	508160.06	3623081.19	107.59	2.85	0.00279	1.83		0.85	0.66
	L0002452	508161.72	3623080.44	107.81	2.85	0.00279	1.83		0.85	0.66
	L0002453	508163.39	3623079.69	108.02	2.85	0.00279	1.83		0.85	0.66
	L0002454	508165.06	3623078.94	108.23	2.85	0.00279	1.83		0.85	0.66
	L0002455	508166.72	3623078.19	108.43	2.85	0.00279	1.83		0.85	0.66
	L0002456	508168.39	3623077.44	108.51	2.85	0.00279	1.83		0.85	0.66
	L0002457	508170.06	3623076.68	108.55	2.85	0.00279	1.83		0.85	0.66
	L0002458	508171.73	3623075.93	108.58	2.85	0.00279	1.83		0.85	0.66
	L0002459	508173.39	3623075.18	108.61	2.85	0.00279	1.83		0.85	0.66
	L0002460	508175.06	3623074.43	108.63	2.85	0.00279	1.83		0.85	0.66
	L0002461	508176.73	3623073.68	108.64	2.85	0.00279	1.83		0.85	0.66
	L0002462	508178.39	3623072.93	108.63	2.85	0.00279	1.83		0.85	0.66
	L0002463	508180.06	3623072.17	108.62	2.85	0.00279	1.83		0.85	0.66
	L0002464	508181.73	3623071.42	108.59	2.85	0.00279	1.83		0.85	0.66
	L0002465	508183.40	3623070.67	108.55	2.85	0.00279	1.83		0.85	0.66
	L0002466	508185.06	3623069.92	108.54	2.85	0.00279	1.83		0.85	0.66
	L0002467	508186.73	3623069.17	108.55	2.85	0.00279	1.83		0.85	0.66
	L0002468	508188.40	3623068.42	108.56	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002469	508190.07	3623067.66	108.56	2.85	0.00279	1.83		0.85	0.66
	L0002470	508191.73	3623066.91	108.56	2.85	0.00279	1.83		0.85	0.66
	L0002471	508193.40	3623066.16	108.58	2.85	0.00279	1.83		0.85	0.66
	L0002472	508195.07	3623065.41	108.62	2.85	0.00279	1.83		0.85	0.66
	L0002473	508196.73	3623064.66	108.66	2.85	0.00279	1.83		0.85	0.66
	L0002474	508198.40	3623063.90	108.70	2.85	0.00279	1.83		0.85	0.66
	L0002475	508200.07	3623063.15	108.73	2.85	0.00279	1.83		0.85	0.66
	L0002476	508201.74	3623062.40	108.75	2.85	0.00279	1.83		0.85	0.66
	L0002477	508203.40	3623061.65	108.74	2.85	0.00279	1.83		0.85	0.66
	L0002478	508205.07	3623060.90	108.73	2.85	0.00279	1.83		0.85	0.66
	L0002479	508206.74	3623060.15	108.70	2.85	0.00279	1.83		0.85	0.66
	L0002480	508208.40	3623059.39	108.67	2.85	0.00279	1.83		0.85	0.66
	L0002481	508210.07	3623058.64	108.62	2.85	0.00279	1.83		0.85	0.66
	L0002482	508211.74	3623057.89	108.62	2.85	0.00279	1.83		0.85	0.66
	L0002483	508213.41	3623057.14	108.63	2.85	0.00279	1.83		0.85	0.66
	L0002484	508215.07	3623056.39	108.64	2.85	0.00279	1.83		0.85	0.66
	L0002485	508216.74	3623055.64	108.65	2.85	0.00279	1.83		0.85	0.66
	L0002486	508218.41	3623054.88	108.65	2.85	0.00279	1.83		0.85	0.66
	L0002487	508220.07	3623054.13	108.67	2.85	0.00279	1.83		0.85	0.66
	L0002488	508221.74	3623053.38	108.69	2.85	0.00279	1.83		0.85	0.66
	L0002489	508223.41	3623052.63	108.68	2.85	0.00279	1.83		0.85	0.66
	L0002490	508225.08	3623051.88	108.67	2.85	0.00279	1.83		0.85	0.66
	L0002491	508226.74	3623051.13	108.63	2.85	0.00279	1.83		0.85	0.66
	L0002492	508228.41	3623050.37	108.55	2.85	0.00279	1.83		0.85	0.66
	L0002493	508230.08	3623049.62	108.42	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002494	508231.74	3623048.87	108.27	2.85	0.00279	1.83		0.85	0.66
	L0002495	508233.41	3623048.12	108.10	2.85	0.00279	1.83		0.85	0.66
	L0002496	508235.08	3623047.37	107.90	2.85	0.00279	1.83		0.85	0.66
	L0002497	508236.75	3623046.62	107.79	2.85	0.00279	1.83		0.85	0.66
	L0002498	508238.41	3623045.86	107.77	2.85	0.00279	1.83		0.85	0.66
	L0002499	508240.08	3623045.11	107.76	2.85	0.00279	1.83		0.85	0.66
	L0002500	508241.75	3623044.36	107.75	2.85	0.00279	1.83		0.85	0.66
	L0002501	508243.41	3623043.61	107.75	2.85	0.00279	1.83		0.85	0.66
	L0002502	508245.08	3623042.86	107.76	2.85	0.00279	1.83		0.85	0.66
	L0002503	508246.75	3623042.11	107.79	2.85	0.00279	1.83		0.85	0.66
	L0002504	508248.42	3623041.35	107.83	2.85	0.00279	1.83		0.85	0.66
	L0002505	508250.08	3623040.60	107.86	2.85	0.00279	1.83		0.85	0.66
	L0002506	508251.75	3623039.85	107.90	2.85	0.00279	1.83		0.85	0.66
	L0002507	508253.42	3623039.10	107.94	2.85	0.00279	1.83		0.85	0.66
	L0002508	508255.08	3623038.35	107.97	2.85	0.00279	1.83		0.85	0.66
	L0002509	508256.75	3623037.59	107.99	2.85	0.00279	1.83		0.85	0.66
	L0002510	508258.42	3623036.84	108.01	2.85	0.00279	1.83		0.85	0.66
	L0002511	508260.09	3623036.09	108.02	2.85	0.00279	1.83		0.85	0.66
	L0002512	508261.75	3623035.34	108.02	2.85	0.00279	1.83		0.85	0.66
	L0002513	508263.42	3623034.59	108.03	2.85	0.00279	1.83		0.85	0.66
	L0002514	508265.09	3623033.84	108.03	2.85	0.00279	1.83		0.85	0.66
	L0002515	508266.75	3623033.08	108.03	2.85	0.00279	1.83		0.85	0.66
	L0002516	508268.42	3623032.33	108.04	2.85	0.00279	1.83		0.85	0.66
	L0002517	508270.09	3623031.58	108.04	2.85	0.00279	1.83		0.85	0.66
	L0002518	508271.76	3623030.83	108.05	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002519	508273.42	3623030.08	108.07	2.85	0.00279	1.83		0.85	0.66
	L0002520	508275.09	3623029.33	108.09	2.85	0.00279	1.83		0.85	0.66
	L0002521	508276.76	3623028.57	108.11	2.85	0.00279	1.83		0.85	0.66
	L0002522	508278.42	3623027.82	108.13	2.85	0.00279	1.83		0.85	0.66
	L0002523	508280.09	3623027.07	108.15	2.85	0.00279	1.83		0.85	0.66
	L0002524	508281.76	3623026.32	108.14	2.85	0.00279	1.83		0.85	0.66
	L0002525	508283.43	3623025.57	108.13	2.85	0.00279	1.83		0.85	0.66
	L0002526	508285.09	3623024.82	108.12	2.85	0.00279	1.83		0.85	0.66
	L0002527	508286.76	3623024.06	108.10	2.85	0.00279	1.83		0.85	0.66
	L0002528	508288.43	3623023.31	108.09	2.85	0.00279	1.83		0.85	0.66
	L0002529	508290.09	3623022.56	108.05	2.85	0.00279	1.83		0.85	0.66
	L0002530	508291.76	3623021.81	108.03	2.85	0.00279	1.83		0.85	0.66
	L0002531	508293.43	3623021.06	108.00	2.85	0.00279	1.83		0.85	0.66
	L0002532	508295.10	3623020.31	107.99	2.85	0.00279	1.83		0.85	0.66
	L0002533	508296.76	3623019.55	107.98	2.85	0.00279	1.83		0.85	0.66
	L0002534	508298.43	3623018.80	107.94	2.85	0.00279	1.83		0.85	0.66
	L0002535	508300.10	3623018.05	107.88	2.85	0.00279	1.83		0.85	0.66
	L0002536	508301.77	3623017.30	107.82	2.85	0.00279	1.83		0.85	0.66
	L0002537	508303.43	3623016.55	107.75	2.85	0.00279	1.83		0.85	0.66
	L0002538	508305.10	3623015.80	107.68	2.85	0.00279	1.83		0.85	0.66
	L0002539	508306.77	3623015.04	107.64	2.85	0.00279	1.83		0.85	0.66
	L0002540	508308.43	3623014.29	107.64	2.85	0.00279	1.83		0.85	0.66
	L0002541	508310.10	3623013.54	107.64	2.85	0.00279	1.83		0.85	0.66
	L0002542	508311.77	3623012.79	107.65	2.85	0.00279	1.83		0.85	0.66
	L0002543	508313.44	3623012.04	107.68	2.85	0.00279	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0002544	508315.10	3623011.28	107.67	2.85	0.00279	1.83		0.85	0.66
	L0002545	508316.77	3623010.53	107.61	2.85	0.00279	1.83		0.85	0.66
	L0002546	508318.44	3623009.78	107.55	2.85	0.00279	1.83		0.85	0.66
	L0002547	508320.10	3623009.03	107.49	2.85	0.00279	1.83		0.85	0.66
	L0002548	508321.77	3623008.28	107.42	2.85	0.00279	1.83		0.85	0.66
	L0002549	508323.44	3623007.53	107.37	2.85	0.00279	1.83		0.85	0.66
	L0002550	508325.11	3623006.77	107.36	2.85	0.00279	1.83		0.85	0.66
	L0002551	508326.77	3623006.02	107.35	2.85	0.00279	1.83		0.85	0.66
	L0002552	508328.44	3623005.27	107.34	2.85	0.00279	1.83		0.85	0.66
	L0002553	508330.11	3623004.52	107.33	2.85	0.00279	1.83		0.85	0.66
	L0002554	508331.77	3623003.77	107.32	2.85	0.00279	1.83		0.85	0.66
	L0002555	508333.44	3623003.02	107.38	2.85	0.00279	1.83		0.85	0.66

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK1	L0002622	508310.03	3623329.25	109.97	8.29	0.08333	1.83		0.85	3.52
	L0002623	508309.20	3623327.62	109.93	8.29	0.08333	1.83		0.85	3.52
	L0002624	508308.38	3623325.99	109.87	8.29	0.08333	1.83		0.85	3.52
	L0002625	508307.56	3623324.35	109.81	8.29	0.08333	1.83		0.85	3.52
	L0002626	508306.73	3623322.72	109.91	8.29	0.08333	1.83		0.85	3.52
	L0002627	508305.91	3623321.09	110.00	8.29	0.08333	1.83		0.85	3.52
	L0002628	508305.09	3623319.45	110.09	8.29	0.08333	1.83		0.85	3.52
	L0002629	508304.27	3623317.82	110.19	8.29	0.08333	1.83		0.85	3.52
	L0002630	508303.44	3623316.19	110.30	8.29	0.08333	1.83		0.85	3.52
	L0002631	508302.62	3623314.56	110.41	8.29	0.08333	1.83		0.85	3.52
	L0002632	508301.80	3623312.92	110.37	8.29	0.08333	1.83		0.85	3.52

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK1	L0002633	508300.97	3623311.29	110.28	8.29	0.08333	1.83		0.85	3.52

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK2	L0002650	508311.81	3623329.89	109.97	10.27	0.06667	1.83		0.85	3.59
	L0002651	508312.89	3623328.41	109.94	10.27	0.06667	1.83		0.85	3.59
	L0002652	508313.97	3623326.94	109.92	10.27	0.06667	1.83		0.85	3.59
	L0002653	508315.05	3623325.46	109.90	10.27	0.06667	1.83		0.85	3.59
	L0002654	508316.13	3623323.98	109.91	10.27	0.06667	1.83		0.85	3.59
	L0002655	508317.21	3623322.51	109.97	10.27	0.06667	1.83		0.85	3.59
	L0002656	508318.29	3623321.03	110.01	10.27	0.06667	1.83		0.85	3.59
	L0002657	508319.37	3623319.55	110.03	10.27	0.06667	1.83		0.85	3.59
	L0002658	508320.45	3623318.08	110.03	10.27	0.06667	1.83		0.85	3.59
	L0002659	508321.53	3623316.60	110.02	10.27	0.06667	1.83		0.85	3.59
	L0002660	508322.61	3623315.13	109.98	10.27	0.06667	1.83		0.85	3.59
	L0002661	508323.69	3623313.65	109.93	10.27	0.06667	1.83		0.85	3.59
	L0002662	508324.77	3623312.17	109.85	10.27	0.06667	1.83		0.85	3.59
	L0002663	508325.85	3623310.70	109.77	10.27	0.06667	1.83		0.85	3.59
	L0002664	508326.93	3623309.22	109.69	10.27	0.06667	1.83		0.85	3.59

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Variable Emissions

Hour-of-Day / Day-of-Week Emission Rate Variation

Scenario: Scenario 1

Source ID:	**FCONV**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**MCONV**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P2AEXTRACT**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P2BEXTACT**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00

Scenario: Scenario 1

Source ID: P2BEXTACT

	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: P2CEXTRACT

Weekdays							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: P2HRD

Weekdays							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: PROCESS

Weekdays							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 1

Source ID: PROCESS

Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: RSTACK2

Weekdays							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source ID: RSTACK1

Weekdays							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Scenario: Scenario 2

Source ID: HRT1

Weekdays							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
	13 - 18	1.00	0.50	1.00	1.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday							
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 2

Source ID:	**HRT1**							
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**HRT2**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
Day	13 - 18	1.00	0.50	1.00	1.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**HRT3**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
Day	13 - 18	1.00	0.50	1.00	1.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	504500.00	3621700.00	55	30	100.00	100.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	507580.81	3622577.05		101.29	
2	507634.55	3622614.60		101.74	
3	507681.66	3622633.00		103.37	
4	507723.62	3622649.19		103.54	
5	507783.24	3622669.80		103.49	
6	507839.92	3622670.54		104.03	
7	507898.81	3622678.64		104.29	
8	507988.61	3622701.46		106.91	
9	508100.50	3622721.33		107.75	
10	508252.14	3622738.26		111.47	
11	508274.96	3622762.55		111.53	
12	508270.54	3622789.05		111.43	
13	508272.75	3622822.91		109.73	
14	508282.32	3622851.62		109.37	
15	508302.19	3622882.54		107.33	
16	508325.01	3622917.14		107.30	
17	508348.57	3622925.23		108.65	
18	508374.33	3622925.23		109.95	
19	508389.79	3622921.55		109.97	
20	508410.40	3622914.19		110.32	
21	508429.54	3622906.09		110.35	
22	508450.89	3622892.84		110.08	
23	508463.40	3622878.86		110.24	
24	508474.44	3622867.08		111.65	
25	508490.64	3622854.57		112.54	
26	508539.96	3622846.47		114.28	

27	508572.35	3622891.37	115.79
28	508636.39	3622918.61	116.62
29	508794.57	3623262.05	113.43
30	508842.91	3623256.49	114.27
31	508873.61	3623236.24	116.16
32	509004.19	3623442.79	116.36
33	509022.69	3623510.97	116.18
34	509011.39	3623529.06	115.41
35	509090.50	3623601.26	115.51
36	509168.48	3623726.89	116.23
37	509315.56	3623943.46	115.94
38	508880.25	3624121.01	125.53
39	508844.97	3624057.24	118.77
40	508783.91	3624009.75	119.90
41	508746.82	3623951.85	118.60
42	508670.83	3623903.91	120.76
43	508594.85	3623863.20	127.80
44	508569.14	3623802.34	125.38
45	508562.36	3623740.37	118.33
46	508335.05	3623519.25	130.80
47	507959.93	3623225.12	123.76
48	507937.33	3623204.57	119.13
49	507912.67	3623191.01	118.90
50	507896.64	3623185.67	118.67
51	507881.85	3623175.81	118.28
52	507868.29	3623170.05	117.88
53	507849.80	3623163.07	117.24
54	507838.29	3623158.14	116.71
55	507823.09	3623151.15	116.36
56	507807.88	3623144.99	115.87
57	507793.09	3623136.36	115.20
58	507779.53	3623126.49	114.85
59	507763.91	3623121.56	114.28
60	507751.58	3623114.99	113.94
61	507723.23	3623084.17	109.22
62	507707.61	3623074.31	111.26
63	507696.93	3623064.03	112.76
64	507682.55	3623054.58	113.58

65	507668.99	3623044.72	114.67
66	507657.89	3623031.16	115.30
67	507645.56	3623022.12	116.36
68	507629.54	3623009.38	117.67
69	507616.80	3623002.39	118.44
70	507593.79	3622984.31	119.48
71	507571.59	3622976.09	119.80
72	507563.79	3622959.66	120.10
73	507550.64	3622947.74	117.71
74	507530.91	3622934.18	114.78
75	507506.67	3622924.73	114.64
76	507457.77	3622924.31	115.68
77	507453.66	3622897.60	115.51
78	507423.25	3622884.87	113.22
79	507408.04	3622879.11	112.64
80	507391.20	3622869.66	112.46
81	507374.35	3622863.09	112.33
82	507359.96	3622858.57	112.41
83	507345.99	3622855.28	112.74
84	507330.79	3622849.11	113.16
85	507317.64	3622846.65	113.46
86	507304.49	3622841.72	113.88
87	507288.05	3622839.25	114.25
88	507269.15	3622837.61	114.43
89	507252.71	3622836.79	114.65
90	507235.86	3622834.32	114.80
91	507222.71	3622833.50	114.60
92	507207.92	3622832.27	114.39
93	507191.07	3622831.03	113.90
94	507120.39	3622850.35	114.80
95	507101.90	3622847.47	115.13
96	507087.93	3622849.11	114.69
97	507077.24	3622850.76	114.83
98	507067.79	3622853.63	115.09
99	507057.52	3622855.28	115.22
100	507047.65	3622856.51	115.20
101	507036.56	3622858.15	115.27
102	507026.70	3622861.03	115.35

103	507015.19	3622863.09	115.31
104	507004.92	3622865.55	115.14
105	506995.88	3622865.14	115.09
106	506983.96	3622868.02	115.05
107	506975.74	3622868.43	115.05
108	506965.47	3622871.72	115.05
109	506955.19	3622875.00	114.87
110	506943.28	3622875.41	114.71
111	506930.54	3622880.76	114.57
112	506907.94	3622889.80	114.40
113	506892.32	3622907.06	114.68
114	506852.87	3623197.59	115.42
115	506861.09	3623235.80	115.69
116	506864.38	3623257.99	115.82
117	506868.08	3623296.62	113.65
118	506882.46	3623517.70	124.02
119	506876.71	3623532.91	124.05
120	506877.53	3623567.43	122.25
121	506896.96	3623639.34	123.44
122	506886.73	3623659.81	123.47
123	506883.58	3623681.85	123.53
124	506878.07	3623706.26	123.67
125	506882.01	3623729.09	123.89
126	506882.01	3623751.92	124.10
127	506888.30	3623773.17	124.32
128	506894.60	3623794.43	125.10
129	506904.05	3623815.68	126.24
130	506919.01	3623836.94	127.19
131	506930.82	3623854.26	127.88
132	506941.05	3623877.87	128.23
133	506947.35	3623893.62	126.57
134	506856.86	3623962.53	122.85
135	506856.29	3624303.98	135.49
136	506805.89	3624199.89	131.96
137	506808.57	3624149.04	129.97
138	506801.88	3624080.78	127.11
139	506805.89	3624047.99	126.16
140	506803.89	3623987.76	124.70

141	506791.17	3623955.64	124.15
142	506777.79	3623863.96	121.98
143	506756.37	3623821.13	121.93
144	506754.37	3623803.07	121.61
145	506767.75	3623780.98	121.25
146	506781.80	3623746.85	118.86
147	506795.19	3623704.03	117.07
148	506795.86	3623691.31	116.78
149	506797.86	3623681.27	116.53
150	506799.87	3623667.22	116.28
151	506801.88	3623651.83	116.11
152	506797.19	3623631.08	115.67
153	506791.84	3623576.21	115.16
154	506798.53	3623554.80	115.03
155	506797.86	3623535.39	114.83
156	506797.19	3623513.98	114.52
157	506797.86	3623489.89	114.17
158	506798.53	3623466.46	113.85
159	506797.86	3623443.71	113.50
160	506810.58	3623403.56	113.12
161	506815.26	3623374.78	112.62
162	506140.72	3622834.08	101.86
163	506097.89	3622814.01	102.79
164	506056.40	3622790.58	102.54
165	506010.90	3622766.49	102.41
166	505964.72	3622742.40	102.26
167	505905.84	3622704.93	102.45
168	505842.26	3622664.78	102.62
169	505800.77	3622637.34	103.73
170	505252.04	3622475.40	112.05
171	505410.76	3622390.74	106.51
172	505493.57	3622420.16	107.30
173	505605.81	3622446.32	104.98
174	505652.67	3622475.74	104.20
175	505758.36	3622541.12	103.87
176	505824.83	3622587.97	102.13
177	505873.87	3622621.75	101.92
178	505962.13	3622634.83	100.14

179	506647.54	3622965.00	104.50
180	506771.23	3622894.35	103.82
181	506778.84	3622941.54	105.58
182	506744.71	3622957.61	105.59
183	506696.52	3623003.12	106.26
184	506759.43	3623036.59	107.52
185	506799.59	3623087.46	109.15
186	506825.03	3623132.30	109.97
187	506884.60	3623439.52	117.86
188	506885.59	3624060.64	125.65
189	506865.33	3624127.94	129.39
190	506807.16	3623335.84	111.82
191	506662.43	3623064.93	105.91
192	506611.20	3623040.95	104.80
193	506564.33	3623018.06	104.87
194	506375.75	3622947.21	102.45
195	506333.24	3622925.40	103.07
196	506282.01	3622899.24	103.08
197	506247.13	3622880.71	103.27
198	505744.44	3622604.96	104.62
199	505710.97	3622588.89	104.92
200	505680.85	3622576.17	105.66
201	505658.75	3622556.76	105.78
202	505633.32	3622540.02	105.84
203	505590.47	3622507.89	106.09
204	505534.24	3622493.83	107.37
205	505471.98	3622482.45	107.97
206	505392.99	3622480.45	108.76
207	505309.98	3622472.41	109.66
208	504871.97	3622447.16	128.92
209	505117.07	3622465.66	116.19
210	504958.41	3622477.71	130.50
211	508353.65	3622554.75	117.19
212	506457.68	3623382.05	110.89
213	506367.01	3624009.61	164.05

Plant Boundary Receptors

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: 722907.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: 722907.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 118.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			
Upper Air		2009			

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: SIR02_PHASE2_AERMOD.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

Cottonwood Sand Mine Phase 2 Emissions Inventory

HARP Project Summary Report 11/5

PROJECT INFORMATION
HARP Version: 21081
Project Name: SIR02_PHASE2_HARP
HARP Database: NA

EMISSION INVENTORY
No. of Pollutants:156
No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi	Annual Ems (lbs/yr)	MaxHr Ems (lbs/hr)	MWAF
HRT1	0	0	9901	DieselExhPM	1	2.879370434	0.001764861	1
HRT2	0	0	9901	DieselExhPM	1	0.359481568	0.000220338	1
HRT3	0	0	9901	DieselExhPM	1	2.883311481	0.001767276	1
PROCESS	0	0	9901	DieselExhPM	1	28.81914942	0.011481733	1
PROCESS	0	0	7429905	Aluminum	1	36.55913337	0.014419958	1
PROCESS	0	0	7440382	Arsenic	1	0.053620062	2.11E-05	1
PROCESS	0	0	7440393	Barium	1	0.548387001	0.000216299	1
PROCESS	0	0	7440417	Beryllium	1	0.002437276	9.61E-07	1
PROCESS	0	0	7440439	Cadmium	1	0.002437276	9.61E-07	1
PROCESS	0	0	18540299	Cr(VI)	1	0	0	1
PROCESS	0	0	7440473	Chromium	1	0.068243716	2.69E-05	1
PROCESS	0	0	7440484	Cobalt	1	0.026810031	1.06E-05	1
PROCESS	0	0	7440508	Copper	1	0.090179196	3.56E-05	1
PROCESS	0	0	7439921	Lead	1	0.121863778	4.81E-05	1
PROCESS	0	0	7439965	Manganese	1	1.291756046	0.000509505	1
PROCESS	0	0	7439976	Mercury	1	0	0	1
PROCESS	0	0	7440020	Nickel	1	0.068243716	2.69E-05	1
PROCESS	0	0	7782492	Selenium	1	0.002437276	9.61E-07	1
PROCESS	0	0	1175	Silica, Cryst	1	243.7275558	0.096133052	1
PROCESS	0	0	7440666	Zinc	1	0.24129028	9.52E-05	1
RSTACK1	0	0	9901	DieselExhPM	1	0	0	1
RSTACK1	0	0	7429905	Aluminum	1	3.5532	0.001415618	1
RSTACK1	0	0	7440382	Arsenic	1	0.00497448	1.98E-06	1
RSTACK1	0	0	7440393	Barium	1	0.0343476	1.37E-05	1
RSTACK1	0	0	7440417	Beryllium	1	0.00023688	9.44E-08	1
RSTACK1	0	0	7440439	Cadmium	1	0.00023688	9.44E-08	1
RSTACK1	0	0	18540299	Cr(VI)	1	0	0	1
RSTACK1	0	0	7440473	Chromium	1	0.005922	2.36E-06	1
RSTACK1	0	0	7440484	Cobalt	1	0	0	1
RSTACK1	0	0	7440508	Copper	1	0.0094752	3.77E-06	1
RSTACK1	0	0	7439921	Lead	1	0.0071064	2.83E-06	1
RSTACK1	0	0	7439965	Manganese	1	0.1160712	4.62E-05	1
RSTACK1	0	0	7439976	Mercury	1	0	0	1
RSTACK1	0	0	7440020	Nickel	1	0.00450072	1.79E-06	1
RSTACK1	0	0	7782492	Selenium	1	0.00023688	9.44E-08	1
RSTACK1	0	0	1175	Silica, Cryst	1	23.688	0.00943745	1
RSTACK1	0	0	7440666	Zinc	1	0.02653056	1.06E-05	1

Cottonwood Sand Mine Phase 2 Emissions Inventory

RSTACK2	0	0	9901	DieselExhPM	1	0	0	1
RSTACK2	0	0	7429905	Aluminum	1	3.5532	0.001415618	1
RSTACK2	0	0	7440382	Arsenic	1	0.00497448	1.98E-06	1
RSTACK2	0	0	7440393	Barium	1	0.0343476	1.37E-05	1
RSTACK2	0	0	7440417	Beryllium	1	0.00023688	9.44E-08	1
RSTACK2	0	0	7440439	Cadmium	1	0.00023688	9.44E-08	1
RSTACK2	0	0	18540299	Cr(VI)	1	0	0	1
RSTACK2	0	0	7440473	Chromium	1	0.005922	2.36E-06	1
RSTACK2	0	0	7440484	Cobalt	1	0	0	1
RSTACK2	0	0	7440508	Copper	1	0.0094752	3.77E-06	1
RSTACK2	0	0	7439921	Lead	1	0.0071064	2.83E-06	1
RSTACK2	0	0	7439965	Manganese	1	0.1160712	4.62E-05	1
RSTACK2	0	0	7439976	Mercury	1	0	0	1
RSTACK2	0	0	7440020	Nickel	1	0.00450072	1.79E-06	1
RSTACK2	0	0	7782492	Selenium	1	0.00023688	9.44E-08	1
RSTACK2	0	0	1175	Silica, Cryst	1	23.688	0.00943745	1
RSTACK2	0	0	7440666	Zinc	1	0.02653056	1.06E-05	1
FCONV	0	0	9901	DieselExhPM	1	0	0	1
FCONV	0	0	7429905	Aluminum	1	0.6768	0.000269641	1
FCONV	0	0	7440382	Arsenic	1	0.00020304	8.09E-08	1
FCONV	0	0	7440393	Barium	1	0.0054144	2.16E-06	1
FCONV	0	0	7440417	Beryllium	1	3.38E-05	1.35E-08	1
FCONV	0	0	7440439	Cadmium	1	3.38E-05	1.35E-08	1
FCONV	0	0	18540299	Cr(VI)	1	0	0	1
FCONV	0	0	7440473	Chromium	1	0.00115056	4.58E-07	1
FCONV	0	0	7440484	Cobalt	1	0	0	1
FCONV	0	0	7440508	Copper	1	0.00243648	9.71E-07	1
FCONV	0	0	7439921	Lead	1	0.00064296	2.56E-07	1
FCONV	0	0	7439965	Manganese	1	0.0106596	4.25E-06	1
FCONV	0	0	7439976	Mercury	1	0	0	1
FCONV	0	0	7440020	Nickel	1	0.0006768	2.70E-07	1
FCONV	0	0	7782492	Selenium	1	3.38E-05	1.35E-08	1
FCONV	0	0	1175	Silica, Cryst	1	3.384	0.001348207	1
FCONV	0	0	7440666	Zinc	1	0.0028764	1.15E-06	1
MCONV	0	0	9901	DieselExhPM	1	0	0	1
MCONV	0	0	7429905	Aluminum	1	4.7376	0.00188749	1
MCONV	0	0	7440382	Arsenic	1	0.00142128	5.66E-07	1
MCONV	0	0	7440393	Barium	1	0.0379008	1.51E-05	1
MCONV	0	0	7440417	Beryllium	1	0.00023688	9.44E-08	1
MCONV	0	0	7440439	Cadmium	1	0.00023688	9.44E-08	1
MCONV	0	0	18540299	Cr(VI)	1	0	0	1
MCONV	0	0	7440473	Chromium	1	0.00805392	3.21E-06	1
MCONV	0	0	7440484	Cobalt	1	0	0	1
MCONV	0	0	7440508	Copper	1	0.01705536	6.79E-06	1
MCONV	0	0	7439921	Lead	1	0.00450072	1.79E-06	1
MCONV	0	0	7439965	Manganese	1	0.0746172	2.97E-05	1
MCONV	0	0	7439976	Mercury	1	0	0	1
MCONV	0	0	7440020	Nickel	1	0.0047376	1.89E-06	1
MCONV	0	0	7782492	Selenium	1	0.00023688	9.44E-08	1
MCONV	0	0	1175	Silica, Cryst	1	23.688	0.00943745	1
MCONV	0	0	7440666	Zinc	1	0.0201348	8.02E-06	1
P2AEXTRACT	0	0	9901	DieselExhPM	1	30.62979095	0.012203104	1
P2AEXTRACT	0	0	7429905	Aluminum	1	106.0726955	0.042260038	1

Cottonwood Sand Mine Phase 2 Emissions Inventory

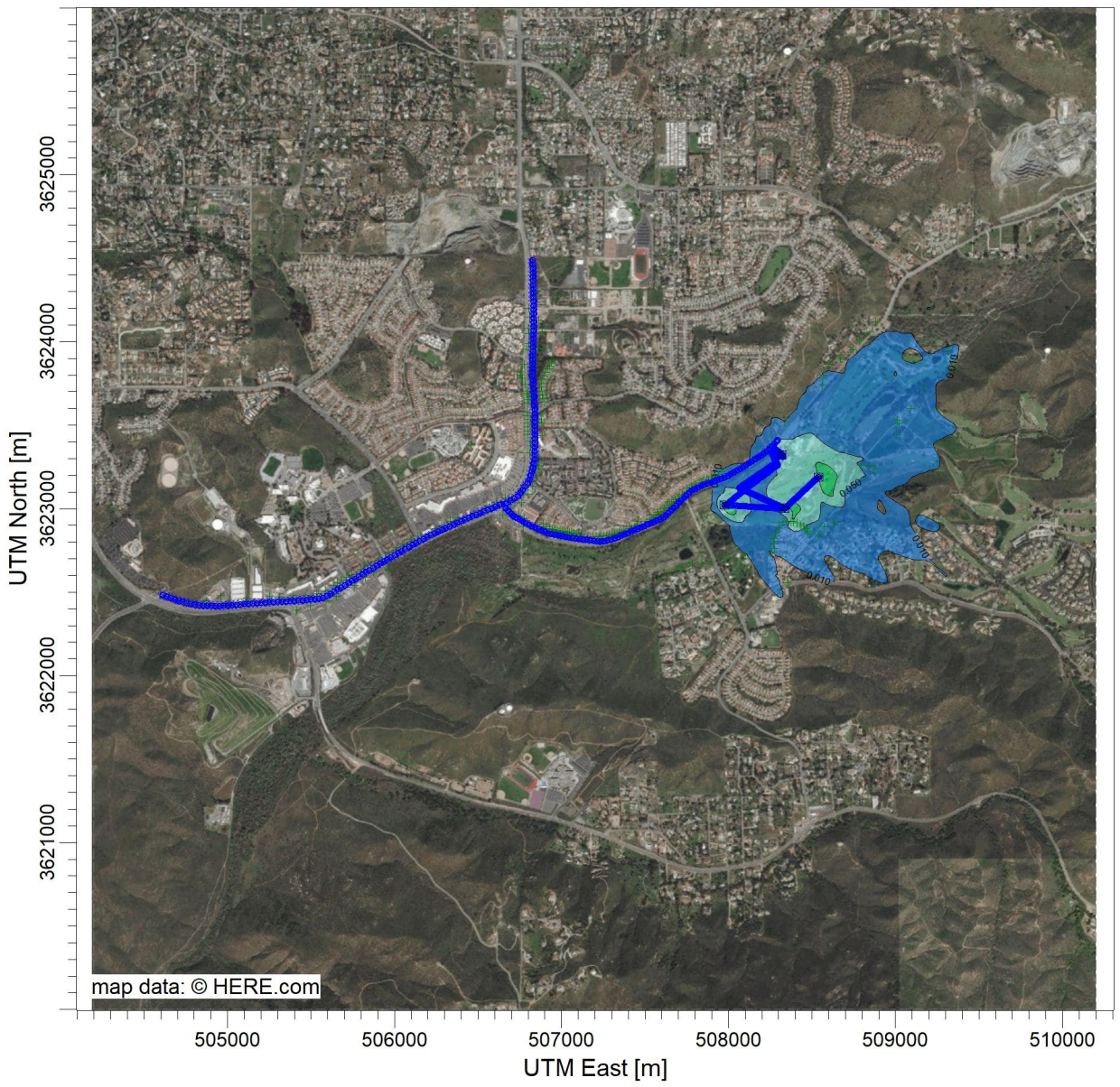
P2AEXTRACT	0	0	7440382	Arsenic	1	0.031821809	1.27E-05	1
P2AEXTRACT	0	0	7440393	Barium	1	0.848581564	0.00033808	1
P2AEXTRACT	0	0	7440417	Beryllium	1	0.005303635	2.11E-06	1
P2AEXTRACT	0	0	7440439	Cadmium	1	0.005303635	2.11E-06	1
P2AEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P2AEXTRACT	0	0	7440473	Chromium	1	0.180323582	7.18E-05	1
P2AEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P2AEXTRACT	0	0	7440508	Copper	1	0.381861704	0.000152	1
P2AEXTRACT	0	0	7439921	Lead	1	0.100769061	4.01E-05	1
P2AEXTRACT	0	0	7439965	Manganese	1	1.670644953	0.000665596	1
P2AEXTRACT	0	0	7439976	Mercury	1	0	0	1
P2AEXTRACT	0	0	7440020	Nickel	1	0.106072695	4.23E-05	1
P2AEXTRACT	0	0	7782492	Selenium	1	0.005303635	2.11E-06	1
P2AEXTRACT	0	0	1175	Silica, Cryst	1	530.3634773	0.21130019	1
P2AEXTRACT	0	0	7440666	Zinc	1	0.450808956	0.000179605	1
P2BEXTRACT	0	0	9901	DieselExhPM	1	30.62979095	0.012203104	1
P2BEXTRACT	0	0	7429905	Aluminum	1	106.0726955	0.042260038	1
P2BEXTRACT	0	0	7440382	Arsenic	1	0.031821809	1.27E-05	1
P2BEXTRACT	0	0	7440393	Barium	1	0.848581564	0.00033808	1
P2BEXTRACT	0	0	7440417	Beryllium	1	0.005303635	2.11E-06	1
P2BEXTRACT	0	0	7440439	Cadmium	1	0.005303635	2.11E-06	1
P2BEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P2BEXTRACT	0	0	7440473	Chromium	1	0.180323582	7.18E-05	1
P2BEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P2BEXTRACT	0	0	7440508	Copper	1	0.381861704	0.000152	1
P2BEXTRACT	0	0	7439921	Lead	1	0.100769061	4.01E-05	1
P2BEXTRACT	0	0	7439965	Manganese	1	1.670644953	0.000665596	1
P2BEXTRACT	0	0	7439976	Mercury	1	0	0	1
P2BEXTRACT	0	0	7440020	Nickel	1	0.106072695	4.23E-05	1
P2BEXTRACT	0	0	7782492	Selenium	1	0.005303635	2.11E-06	1
P2BEXTRACT	0	0	1175	Silica, Cryst	1	530.3634773	0.21130019	1
P2BEXTRACT	0	0	7440666	Zinc	1	0.450808956	0.000179605	1
P2CEXTRACT	0	0	9901	DieselExhPM	1	30.62979095	0.012203104	1
P2CEXTRACT	0	0	7429905	Aluminum	1	106.0726955	0.042260038	1
P2CEXTRACT	0	0	7440382	Arsenic	1	0.031821809	1.27E-05	1
P2CEXTRACT	0	0	7440393	Barium	1	0.848581564	0.00033808	1
P2CEXTRACT	0	0	7440417	Beryllium	1	0.005303635	2.11E-06	1
P2CEXTRACT	0	0	7440439	Cadmium	1	0.005303635	2.11E-06	1
P2CEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P2CEXTRACT	0	0	7440473	Chromium	1	0.180323582	7.18E-05	1
P2CEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P2CEXTRACT	0	0	7440508	Copper	1	0.381861704	0.000152	1
P2CEXTRACT	0	0	7439921	Lead	1	0.100769061	4.01E-05	1
P2CEXTRACT	0	0	7439965	Manganese	1	1.670644953	0.000665596	1
P2CEXTRACT	0	0	7439976	Mercury	1	0	0	1
P2CEXTRACT	0	0	7440020	Nickel	1	0.106072695	4.23E-05	1
P2CEXTRACT	0	0	7782492	Selenium	1	0.005303635	2.11E-06	1
P2CEXTRACT	0	0	1175	Silica, Cryst	1	530.3634773	0.21130019	1
P2CEXTRACT	0	0	7440666	Zinc	1	0.450808956	0.000179605	1
P2HRD	0	0	9901	DieselExhPM	1	22.674552	0.009033686	1
P2HRD	0	0	7429905	Aluminum	1	22.73617073	0.009058235	1
P2HRD	0	0	7440382	Arsenic	1	0.031830639	1.27E-05	1
P2HRD	0	0	7440393	Barium	1	0.219782984	8.76E-05	1

Cottonwood Sand Mine Phase 2 Emissions Inventory

P2HRD	0	0	7440417	Beryllium	1	0.001515745	6.04E-07	1
P2HRD	0	0	7440439	Cadmium	1	0.001515745	6.04E-07	1
P2HRD	0	0	18540299	Cr(VI)	1	0	0	1
P2HRD	0	0	7440473	Chromium	1	0.037893618	1.51E-05	1
P2HRD	0	0	7440484	Cobalt	1	0	0	1
P2HRD	0	0	7440508	Copper	1	0.060629789	2.42E-05	1
P2HRD	0	0	7439921	Lead	1	0.045472341	1.81E-05	1
P2HRD	0	0	7439965	Manganese	1	0.742714911	0.000295902	1
P2HRD	0	0	7439976	Mercury	1	0	0	1
P2HRD	0	0	7440020	Nickel	1	0.02879915	1.15E-05	1
P2HRD	0	0	7782492	Selenium	1	0.001515745	6.04E-07	1
P2HRD	0	0	1175	Silica, Cryst	1	151.5744715	0.060388236	1
P2HRD	0	0	7440666	Zinc	1	0.169763408	6.76E-05	1

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
Acute Hazard Index



COMMENTS:

Maximum Hazard Index

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

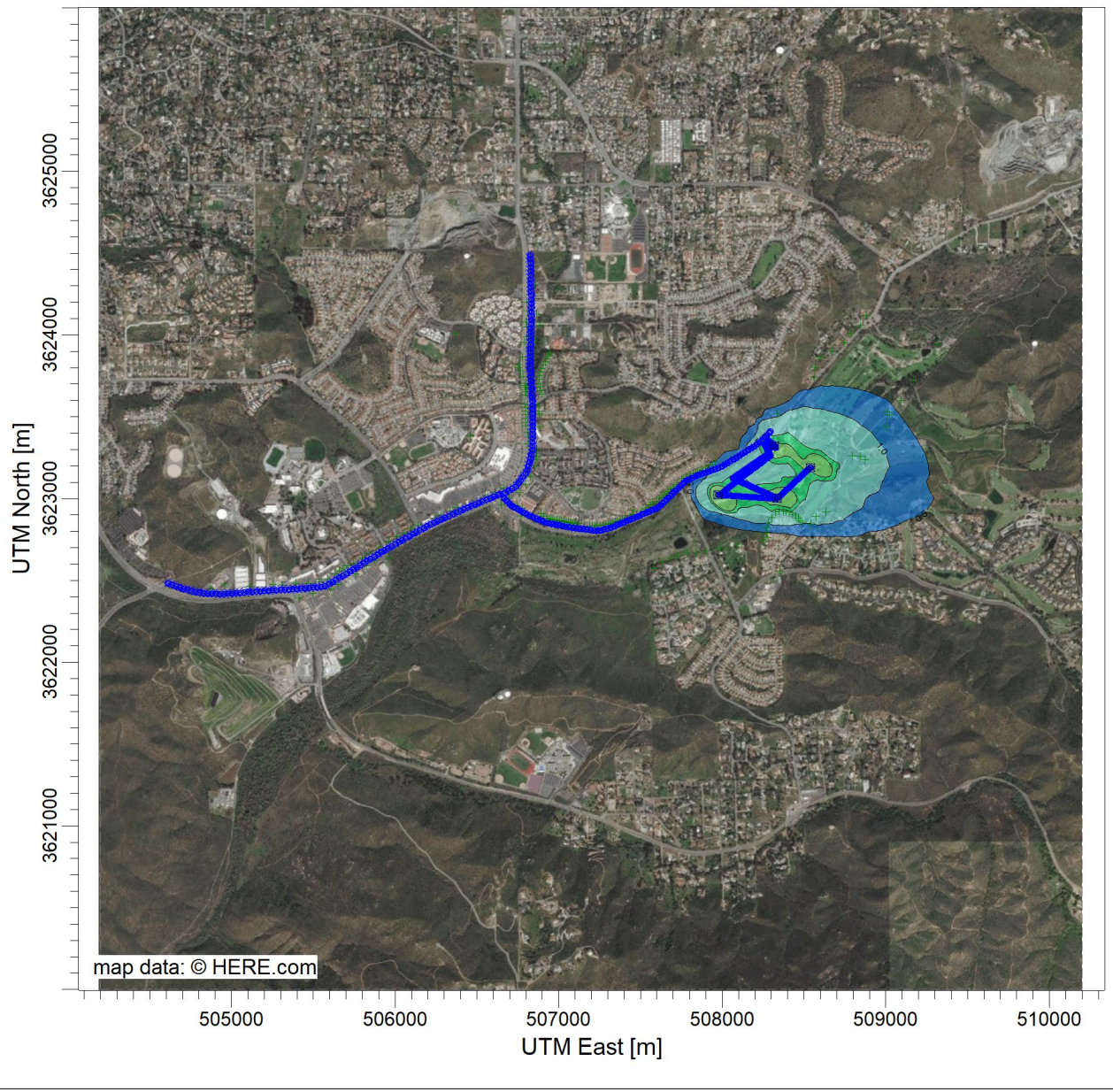
SCALE: 1:40,910

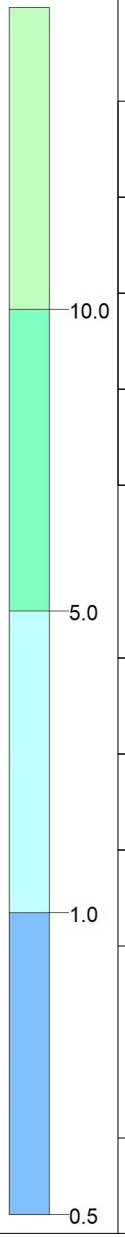
0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
Residential Cancer Risk





COMMENTS:

Risk in chances per million

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

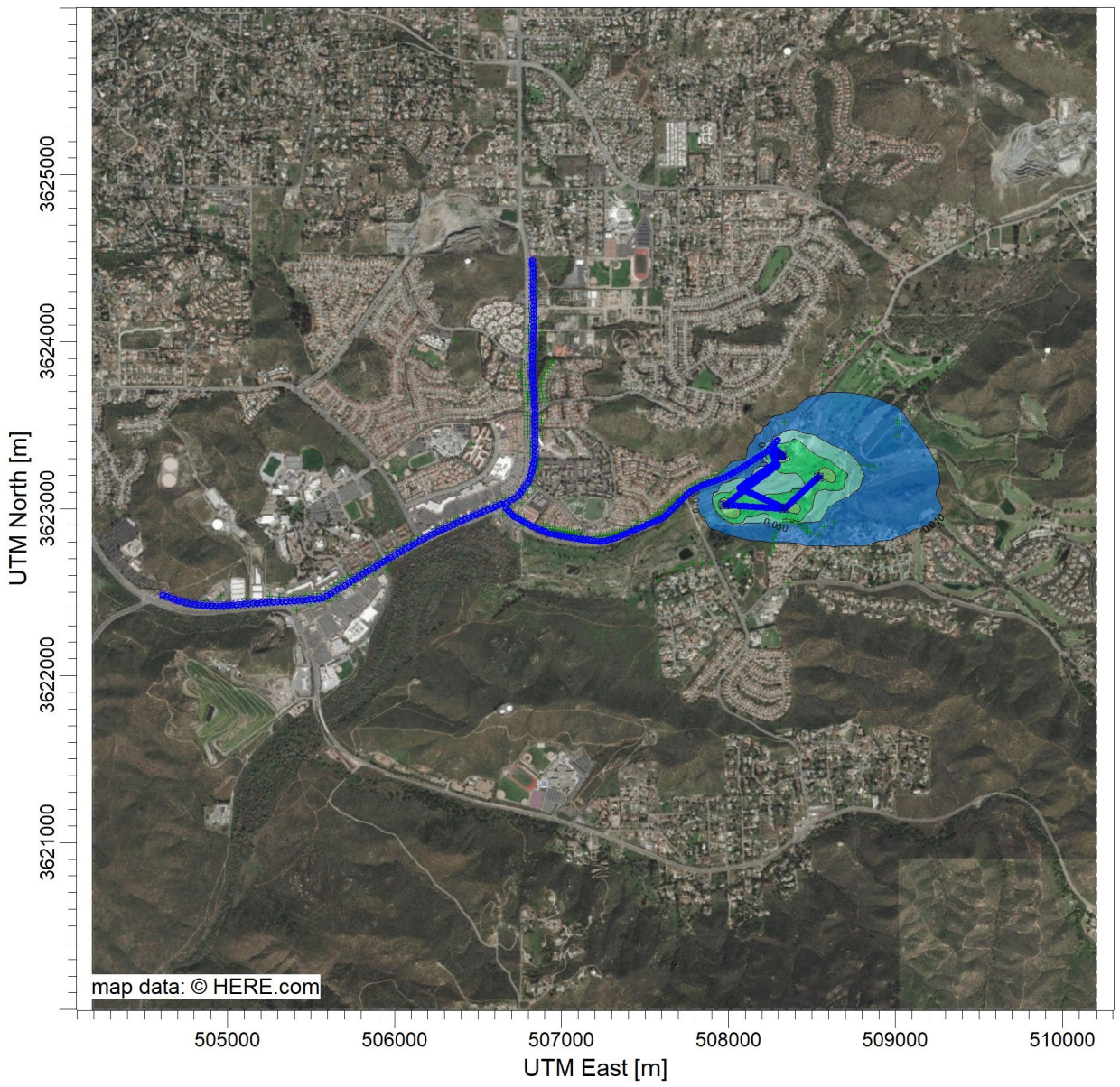
SCALE: 1:40,910

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
Residential Chronic Hazard Index



COMMENTS:

Maximum Hazard Index

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

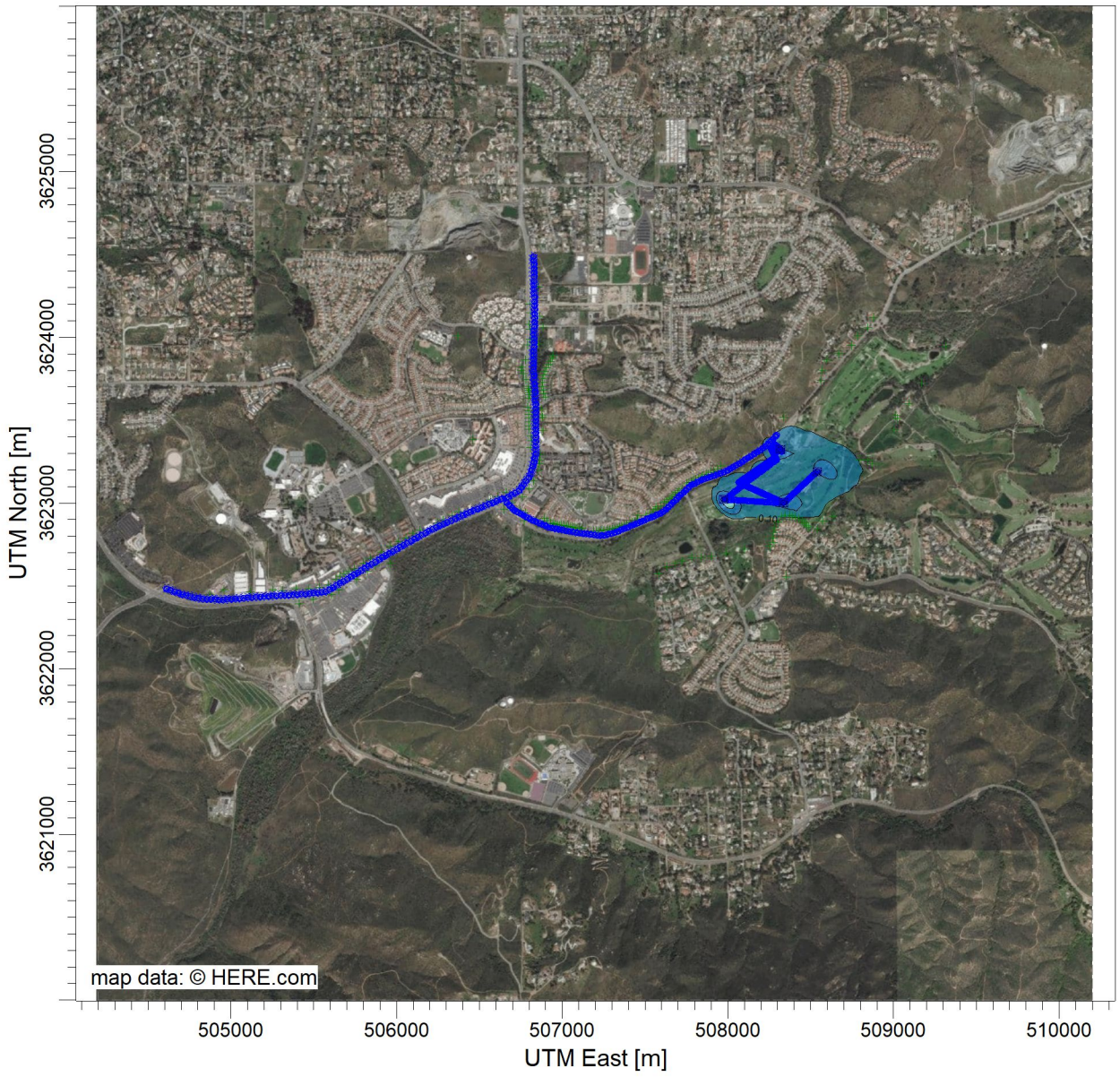
SCALE: 1:40,910

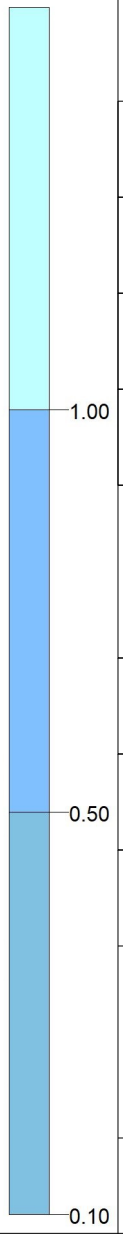
0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
Off-Site Worker Cancer Risk





COMMENTS:

Risk in chances per million

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

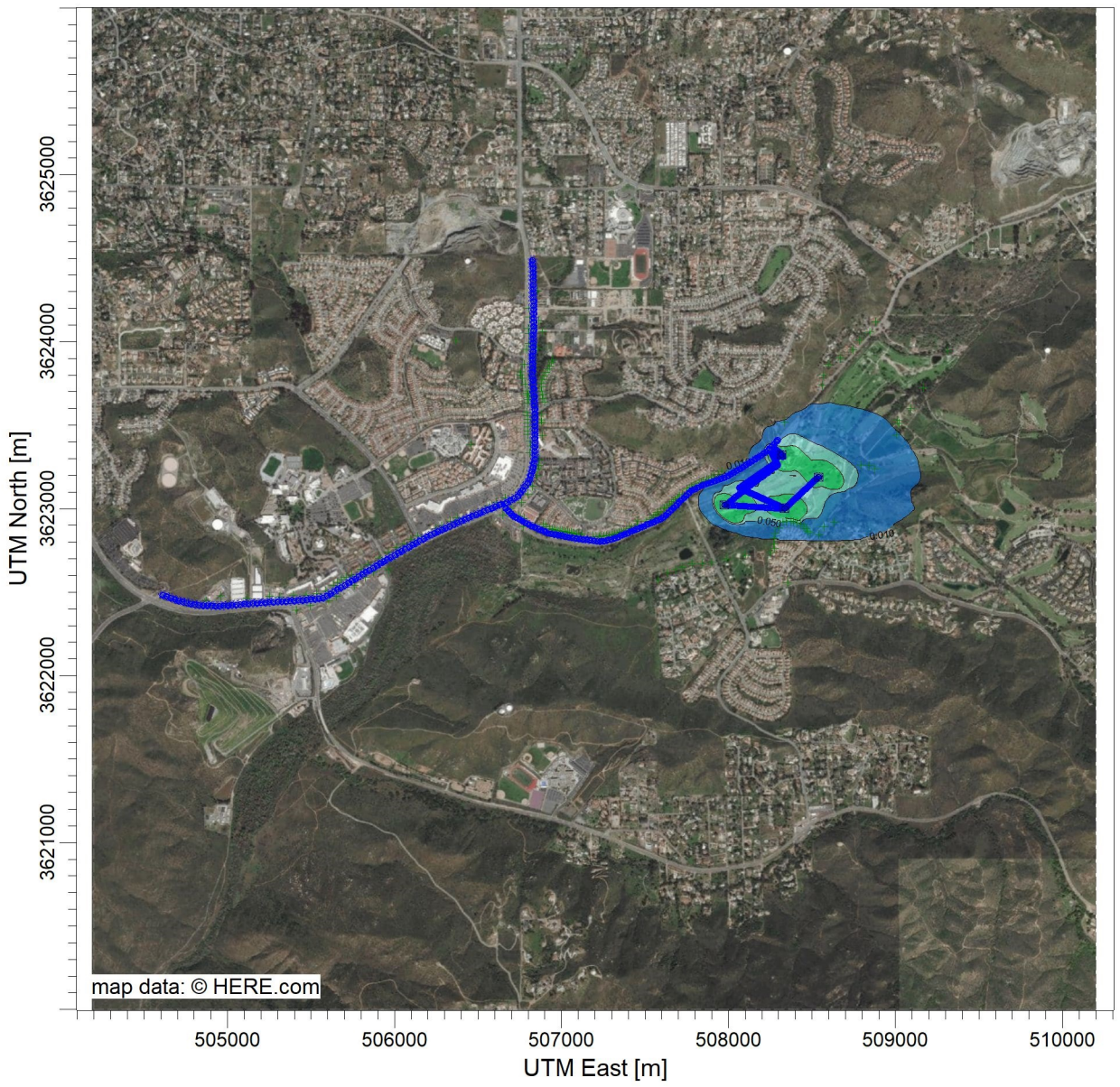
SCALE: 1:40,910

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
Off-Site Worker Chronic Hazard Index



COMMENTS:

Maximum Hazard Index

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

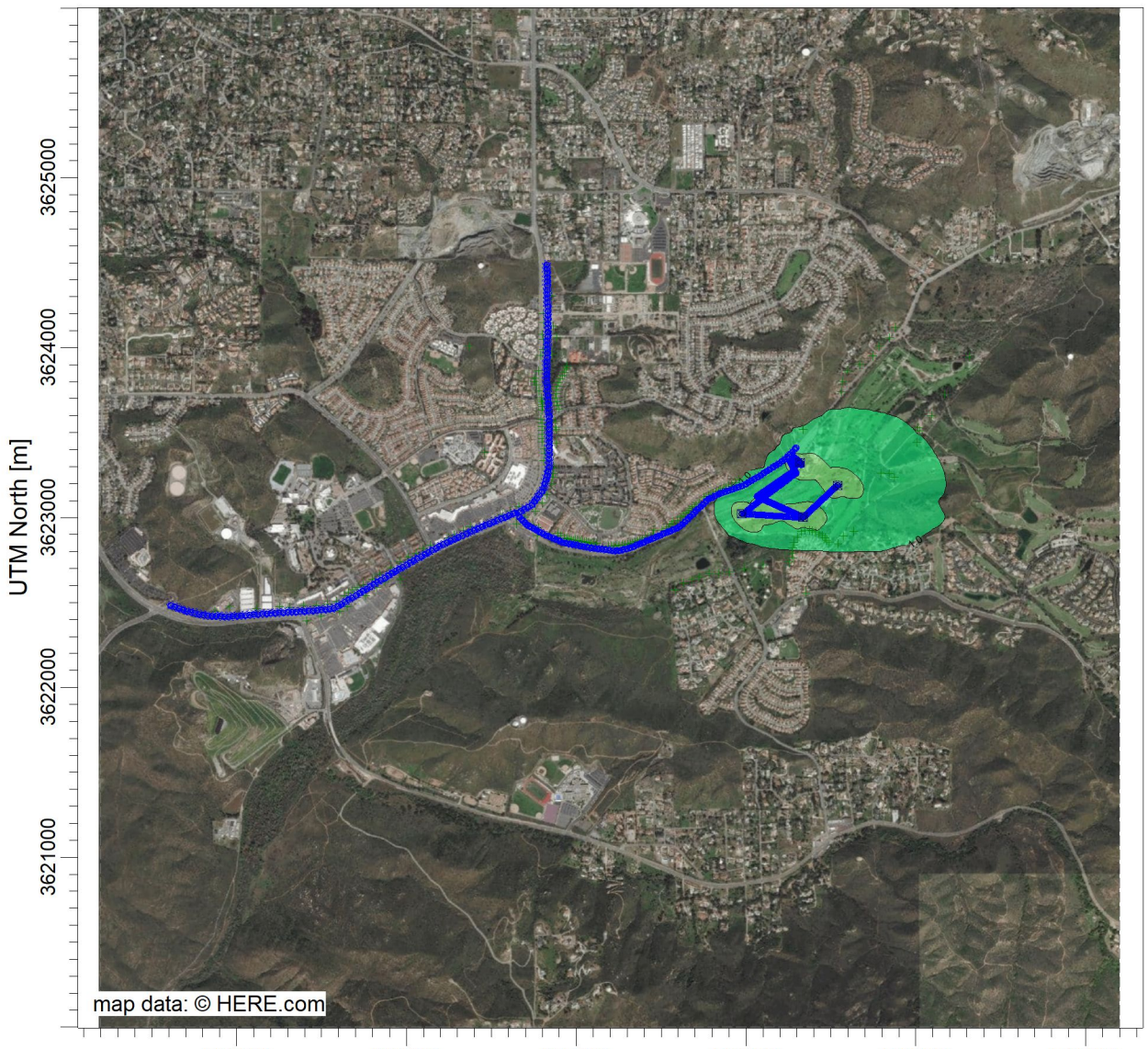
SCALE: 1:40,910

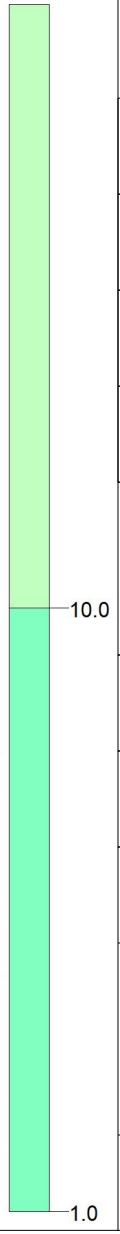
0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
Residential Cancer Burden





COMMENTS:

70-year 1 in 1million risk area

SOURCES:

12

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

SCALE: 1:40,910

0 1 km

PROJECT NO.:

Control Pathway

Dispersion Options

Titles

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

Dispersion Options

☑ Regulatory Default ☐ Non-Default Options

Dispersion Coefficient

Rural

Output Type

☑ Concentration
☐ Total Deposition (Dry & Wet)
☐ Dry Deposition
☐ Wet Deposition

Plume Depletion

☐ Dry Removal
☐ Wet Removal

Output Warnings

☐ No Output Warnings
☐ Non-fatal Warnings for Non-sequential Met Data

Pollutant / Averaging Time / Terrain Options

Pollutant Type

OTHER - MULTIPLE

Averaging Time Options

Hours ☑ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 6 ☐ 8 ☐ 12 ☐ 24

☐ Month ☑ Period ☐ Annual

Exponential Decay

Option not available

Terrain Height Options

☐ Flat ☑ Elevated

SO: Meters
RE: Meters
TG: Meters

Flagpole Receptors

☑ Yes ☐ No

Default Height = 1.20 m

Control Pathway

Optional Files

Re-Start File	Init File	Multi-Year Analyses	Event Input File	Error Listing File
☐	☐	☐	☐	■

Detailed Error Listing File

Filename: SIR02_Phase3_AERMOD.err

Source Pathway - Source Inputs

Volume Sources

Source Type	Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation (Optional)	Release Height [m]	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dim. [m]	Initial Vertical Dim. [m]
VOLUME	P3AEXTRACT	509074.23	3623831.28	114.14	3.00	1.00000	50.00	Surface-Based	11.63	1.05
		Phase 3-A Extraction								
VOLUME	PROCESS	508317.38	3623323.54	109.92	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Processing Area								
VOLUME	P3BEXTACT	508802.23	3623733.33	113.36	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 3-B Extraction								
VOLUME	P3CEXTRACT	508663.16	3623533.51	110.67	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 3-C Extraction								
VOLUME	P3DEXTRACT	508438.18	3623408.46	110.01	3.00	1.00000	50.00	Surface-Based	11.63	1.19
		Phase 3-D Extraction								

Source Pathway - Source Inputs

Line Volume Sources

Source Type: LINE VOLUME

Source: FCONV (Final Conveyor)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508280.92	3623353.74	112.41	10.73
			508313.10	3623329.17	109.91	10.73

Source Type: LINE VOLUME

Source: HRT1 (Haul Route 1 Willow Glen)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
21.24	1.00000		508295.91	3623410.45	116.37	2.55
			508224.91	3623337.84	112.76	2.55
			508079.69	3623244.25	111.69	2.55
			507992.56	3623192.62	110.61	2.55
			507842.50	3623139.37	111.46	2.55
			507777.96	3623107.10	111.18	2.55
			507736.01	3623068.37	108.25	2.55
			507627.90	3622961.88	107.44	2.55
			507595.63	3622937.67	107.02	2.55
			507318.10	3622821.50	109.93	2.55
			507243.87	3622802.14	107.83	2.55
			507084.13	3622821.50	113.74	2.55
			506919.55	3622853.77	113.66	2.55
			506819.51	3622897.34	105.79	2.55
			506709.79	3622957.04	104.94	2.55
			506661.38	3623007.06	105.54	2.55

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: HRT2 (Haul Route 2 Jamacha N)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
24.90	1.00000		506662.38	3623030.07	104.77	2.55
			506737.60	3623073.38	106.64	2.55
			506808.26	3623169.12	109.72	2.55
			506840.17	3623294.48	113.20	2.55
			506837.89	3623625.00	116.39	2.55
			506824.22	3623818.75	118.01	2.55
			506833.34	3624137.87	129.51	2.55
			506826.50	3624511.70	146.39	2.55

Source Type: LINE VOLUME
Source: HRT3 (Haul Route 3 Jamacha SW)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
24.90	1.00000		506638.96	3623027.47	104.28	2.55
			506454.47	3622950.05	102.55	2.55
			506233.73	3622851.22	101.74	2.55
			506088.77	3622772.15	101.33	2.55
			505912.52	3622670.02	101.71	2.55
			505653.89	3622511.88	104.82	2.55
			505573.18	3622465.75	106.06	2.55
			505471.05	3622452.57	107.71	2.55
			505191.01	3622436.10	113.50	2.55
			504952.15	3622416.33	123.16	2.55
			504817.08	3622422.92	131.63	2.55
			504701.77	3622449.28	137.29	2.55
			504594.70	3622490.46	133.87	2.55

Source Pathway - Source Inputs

Source Type: LINE VOLUME
Source: MCONV (Main Conveyor)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508280.93	3623353.72	112.41	0.00
			508260.69	3623331.50	111.28	0.00
			508287.26	3623276.19	108.57	0.00
			508426.32	3623291.13	108.90	0.00
			508637.71	3623429.09	111.29	0.00
			508854.88	3623704.34	112.16	0.00

Source Type: LINE VOLUME
Source: P3HRD (Haul Road Phase 3)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
9.50	1.00000		508373.81	3623308.88	109.30	3.19
			508450.70	3623325.44	107.95	3.19
			508666.04	3623532.22	110.64	3.19
			508807.02	3623731.76	113.48	3.19
			509071.14	3623836.89	114.04	3.19

Source Type: LINE VOLUME
Source: RSTACK1 (Radial Stacker 1)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508310.44	3623330.07	110.04	8.29
			508300.25	3623309.85	109.92	8.29

Source Type: LINE VOLUME
Source: RSTACK2 (Radial Stacker 2)

Length of Side [m]	Emission Rate [g/ s]	Building Height [m]	X Coordinate for Points [m]	Y Coordinate for points [m]	Base Elevation [m]	Release Height [m]
1.83	1.00000		508311.27	3623330.63	110.03	10.27
			508327.81	3623308.01	109.55	10.27

Source Pathway - Source Inputs

Volume Sources Generated from Line Sources

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000524	508288.48	3623402.85	116.04	2.55	0.01136	21.24		9.88	2.37
	L0000525	508273.64	3623387.67	116.60	2.55	0.01136	21.24		9.88	2.37
	L0000526	508258.79	3623372.48	115.77	2.55	0.01136	21.24		9.88	2.37
	L0000527	508243.94	3623357.29	113.95	2.55	0.01136	21.24		9.88	2.37
	L0000528	508229.09	3623342.11	112.91	2.55	0.01136	21.24		9.88	2.37
	L0000529	508212.08	3623329.56	113.15	2.55	0.01136	21.24		9.88	2.37
	L0000530	508194.22	3623318.06	113.04	2.55	0.01136	21.24		9.88	2.37
	L0000531	508176.37	3623306.55	113.63	2.55	0.01136	21.24		9.88	2.37
	L0000532	508158.52	3623295.05	113.85	2.55	0.01136	21.24		9.88	2.37
	L0000533	508140.66	3623283.54	113.24	2.55	0.01136	21.24		9.88	2.37
	L0000534	508122.81	3623272.04	113.19	2.55	0.01136	21.24		9.88	2.37
	L0000535	508104.96	3623260.53	113.09	2.55	0.01136	21.24		9.88	2.37
	L0000536	508087.10	3623249.02	112.68	2.55	0.01136	21.24		9.88	2.37
	L0000537	508069.00	3623237.92	112.51	2.55	0.01136	21.24		9.88	2.37
	L0000538	508050.73	3623227.09	112.32	2.55	0.01136	21.24		9.88	2.37
	L0000539	508032.46	3623216.26	112.33	2.55	0.01136	21.24		9.88	2.37
	L0000540	508014.19	3623205.43	112.27	2.55	0.01136	21.24		9.88	2.37
	L0000541	507995.91	3623194.60	112.04	2.55	0.01136	21.24		9.88	2.37
	L0000542	507976.22	3623186.82	113.04	2.55	0.01136	21.24		9.88	2.37
	L0000543	507956.20	3623179.71	113.53	2.55	0.01136	21.24		9.88	2.37
	L0000544	507936.18	3623172.61	112.66	2.55	0.01136	21.24		9.88	2.37
	L0000545	507916.16	3623165.51	112.44	2.55	0.01136	21.24		9.88	2.37
	L0000546	507896.15	3623158.40	112.47	2.55	0.01136	21.24		9.88	2.37
	L0000547	507876.13	3623151.30	111.94	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000548	507856.11	3623144.20	112.06	2.55	0.01136	21.24		9.88	2.37
	L0000549	507836.42	3623136.33	111.94	2.55	0.01136	21.24		9.88	2.37
	L0000550	507817.42	3623126.83	111.14	2.55	0.01136	21.24		9.88	2.37
	L0000551	507798.43	3623117.33	110.57	2.55	0.01136	21.24		9.88	2.37
	L0000552	507779.43	3623107.83	110.64	2.55	0.01136	21.24		9.88	2.37
	L0000553	507763.56	3623093.81	109.41	2.55	0.01136	21.24		9.88	2.37
	L0000554	507747.95	3623079.40	108.67	2.55	0.01136	21.24		9.88	2.37
	L0000555	507732.46	3623064.88	108.21	2.55	0.01136	21.24		9.88	2.37
	L0000556	507717.33	3623049.97	107.98	2.55	0.01136	21.24		9.88	2.37
	L0000557	507702.19	3623035.06	107.75	2.55	0.01136	21.24		9.88	2.37
	L0000558	507687.06	3623020.16	107.66	2.55	0.01136	21.24		9.88	2.37
	L0000559	507671.93	3623005.25	107.41	2.55	0.01136	21.24		9.88	2.37
	L0000560	507656.80	3622990.35	107.29	2.55	0.01136	21.24		9.88	2.37
	L0000561	507641.67	3622975.44	107.27	2.55	0.01136	21.24		9.88	2.37
	L0000562	507626.37	3622960.73	107.27	2.55	0.01136	21.24		9.88	2.37
	L0000563	507609.38	3622947.99	107.33	2.55	0.01136	21.24		9.88	2.37
	L0000564	507591.89	3622936.11	107.51	2.55	0.01136	21.24		9.88	2.37
	L0000565	507572.30	3622927.91	108.74	2.55	0.01136	21.24		9.88	2.37
	L0000566	507552.70	3622919.71	109.91	2.55	0.01136	21.24		9.88	2.37
	L0000567	507533.11	3622911.51	110.14	2.55	0.01136	21.24		9.88	2.37
	L0000568	507513.52	3622903.30	110.64	2.55	0.01136	21.24		9.88	2.37
	L0000569	507493.93	3622895.10	111.16	2.55	0.01136	21.24		9.88	2.37
	L0000570	507474.33	3622886.90	111.27	2.55	0.01136	21.24		9.88	2.37
	L0000571	507454.74	3622878.70	110.61	2.55	0.01136	21.24		9.88	2.37
	L0000572	507435.15	3622870.50	110.72	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000573	507415.55	3622862.30	110.81	2.55	0.01136	21.24		9.88	2.37
	L0000574	507395.96	3622854.09	110.53	2.55	0.01136	21.24		9.88	2.37
	L0000575	507376.37	3622845.89	110.77	2.55	0.01136	21.24		9.88	2.37
	L0000576	507356.78	3622837.69	110.73	2.55	0.01136	21.24		9.88	2.37
	L0000577	507337.18	3622829.49	110.66	2.55	0.01136	21.24		9.88	2.37
	L0000578	507317.57	3622821.36	110.13	2.55	0.01136	21.24		9.88	2.37
	L0000579	507297.01	3622816.00	110.47	2.55	0.01136	21.24		9.88	2.37
	L0000580	507276.46	3622810.64	110.76	2.55	0.01136	21.24		9.88	2.37
	L0000581	507255.91	3622805.28	109.76	2.55	0.01136	21.24		9.88	2.37
	L0000582	507235.14	3622803.19	109.55	2.55	0.01136	21.24		9.88	2.37
	L0000583	507214.05	3622805.75	111.04	2.55	0.01136	21.24		9.88	2.37
	L0000584	507192.97	3622808.31	113.12	2.55	0.01136	21.24		9.88	2.37
	L0000585	507171.88	3622810.86	114.04	2.55	0.01136	21.24		9.88	2.37
	L0000586	507150.79	3622813.42	107.99	2.55	0.01136	21.24		9.88	2.37
	L0000587	507129.71	3622815.97	108.59	2.55	0.01136	21.24		9.88	2.37
	L0000588	507108.62	3622818.53	114.66	2.55	0.01136	21.24		9.88	2.37
	L0000589	507087.54	3622821.09	114.33	2.55	0.01136	21.24		9.88	2.37
	L0000590	507066.66	3622824.93	113.71	2.55	0.01136	21.24		9.88	2.37
	L0000591	507045.81	3622829.01	114.46	2.55	0.01136	21.24		9.88	2.37
	L0000592	507024.97	3622833.10	113.96	2.55	0.01136	21.24		9.88	2.37
	L0000593	507004.13	3622837.19	114.02	2.55	0.01136	21.24		9.88	2.37
	L0000594	506983.28	3622841.27	114.81	2.55	0.01136	21.24		9.88	2.37
	L0000595	506962.44	3622845.36	113.90	2.55	0.01136	21.24		9.88	2.37
	L0000596	506941.60	3622849.45	114.45	2.55	0.01136	21.24		9.88	2.37
	L0000597	506920.75	3622853.53	114.31	2.55	0.01136	21.24		9.88	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT1	L0000598	506901.20	3622861.76	115.01	2.55	0.01136	21.24		9.88	2.37
	L0000599	506881.73	3622870.24	113.75	2.55	0.01136	21.24		9.88	2.37
	L0000600	506862.25	3622878.72	114.15	2.55	0.01136	21.24		9.88	2.37
	L0000601	506842.78	3622887.20	109.05	2.55	0.01136	21.24		9.88	2.37
	L0000602	506823.31	3622895.68	105.83	2.55	0.01136	21.24		9.88	2.37
	L0000603	506804.49	3622905.51	105.66	2.55	0.01136	21.24		9.88	2.37
	L0000604	506785.83	3622915.66	105.57	2.55	0.01136	21.24		9.88	2.37
	L0000605	506767.18	3622925.81	105.31	2.55	0.01136	21.24		9.88	2.37
	L0000606	506748.52	3622935.96	104.24	2.55	0.01136	21.24		9.88	2.37
	L0000607	506729.86	3622946.11	105.72	2.55	0.01136	21.24		9.88	2.37
	L0000608	506711.21	3622956.26	104.92	2.55	0.01136	21.24		9.88	2.37
	L0000609	506696.14	3622971.14	106.11	2.55	0.01136	21.24		9.88	2.37
	L0000610	506681.37	3622986.40	106.50	2.55	0.01136	21.24		9.88	2.37
	L0000611	506666.60	3623001.67	105.91	2.55	0.01136	21.24		9.88	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000612	506627.48	3623022.66	104.21	2.55	0.01136	24.90		11.58	2.37
	L0000613	506604.53	3623013.02	104.26	2.55	0.01136	24.90		11.58	2.37
	L0000614	506581.57	3623003.39	104.07	2.55	0.01136	24.90		11.58	2.37
	L0000615	506558.61	3622993.75	103.82	2.55	0.01136	24.90		11.58	2.37
	L0000616	506535.65	3622984.12	103.44	2.55	0.01136	24.90		11.58	2.37
	L0000617	506512.69	3622974.49	103.18	2.55	0.01136	24.90		11.58	2.37
	L0000618	506489.74	3622964.85	102.98	2.55	0.01136	24.90		11.58	2.37
	L0000619	506466.78	3622955.22	102.78	2.55	0.01136	24.90		11.58	2.37
	L0000620	506443.93	3622945.33	102.41	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000621	506421.20	3622935.16	102.35	2.55	0.01136	24.90		11.58	2.37
	L0000622	506398.48	3622924.98	102.22	2.55	0.01136	24.90		11.58	2.37
	L0000623	506375.76	3622914.81	102.04	2.55	0.01136	24.90		11.58	2.37
	L0000624	506353.03	3622904.63	101.96	2.55	0.01136	24.90		11.58	2.37
	L0000625	506330.31	3622894.46	101.82	2.55	0.01136	24.90		11.58	2.37
	L0000626	506307.59	3622884.28	101.87	2.55	0.01136	24.90		11.58	2.37
	L0000627	506284.86	3622874.11	101.75	2.55	0.01136	24.90		11.58	2.37
	L0000628	506262.14	3622863.93	101.81	2.55	0.01136	24.90		11.58	2.37
	L0000629	506239.42	3622853.76	101.87	2.55	0.01136	24.90		11.58	2.37
	L0000630	506217.34	3622842.27	101.82	2.55	0.01136	24.90		11.58	2.37
	L0000631	506195.48	3622830.35	101.62	2.55	0.01136	24.90		11.58	2.37
	L0000632	506173.63	3622818.43	101.50	2.55	0.01136	24.90		11.58	2.37
	L0000633	506151.77	3622806.51	101.46	2.55	0.01136	24.90		11.58	2.37
	L0000634	506129.91	3622794.58	101.39	2.55	0.01136	24.90		11.58	2.37
	L0000635	506108.05	3622782.66	101.32	2.55	0.01136	24.90		11.58	2.37
	L0000636	506086.23	3622770.67	101.26	2.55	0.01136	24.90		11.58	2.37
	L0000637	506064.69	3622758.19	101.18	2.55	0.01136	24.90		11.58	2.37
	L0000638	506043.15	3622745.71	101.14	2.55	0.01136	24.90		11.58	2.37
	L0000639	506021.61	3622733.23	101.13	2.55	0.01136	24.90		11.58	2.37
	L0000640	506000.06	3622720.74	101.18	2.55	0.01136	24.90		11.58	2.37
	L0000641	505978.52	3622708.26	101.26	2.55	0.01136	24.90		11.58	2.37
	L0000642	505956.98	3622695.78	101.36	2.55	0.01136	24.90		11.58	2.37
	L0000643	505935.44	3622683.30	101.49	2.55	0.01136	24.90		11.58	2.37
	L0000644	505913.89	3622670.81	101.66	2.55	0.01136	24.90		11.58	2.37
	L0000645	505892.63	3622657.86	101.87	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000646	505871.39	3622644.87	102.07	2.55	0.01136	24.90		11.58	2.37
	L0000647	505850.15	3622631.88	102.40	2.55	0.01136	24.90		11.58	2.37
	L0000648	505828.91	3622618.89	102.82	2.55	0.01136	24.90		11.58	2.37
	L0000649	505807.67	3622605.90	103.19	2.55	0.01136	24.90		11.58	2.37
	L0000650	505786.43	3622592.92	103.53	2.55	0.01136	24.90		11.58	2.37
	L0000651	505765.19	3622579.93	103.76	2.55	0.01136	24.90		11.58	2.37
	L0000652	505743.94	3622566.94	103.96	2.55	0.01136	24.90		11.58	2.37
	L0000653	505722.70	3622553.95	104.17	2.55	0.01136	24.90		11.58	2.37
	L0000654	505701.46	3622540.96	104.43	2.55	0.01136	24.90		11.58	2.37
	L0000655	505680.22	3622527.97	104.64	2.55	0.01136	24.90		11.58	2.37
	L0000656	505658.98	3622514.99	104.76	2.55	0.01136	24.90		11.58	2.37
	L0000657	505637.45	3622502.48	104.89	2.55	0.01136	24.90		11.58	2.37
	L0000658	505615.83	3622490.13	105.14	2.55	0.01136	24.90		11.58	2.37
	L0000659	505594.22	3622477.78	105.50	2.55	0.01136	24.90		11.58	2.37
	L0000660	505572.52	3622465.67	105.88	2.55	0.01136	24.90		11.58	2.37
	L0000661	505547.82	3622462.48	106.27	2.55	0.01136	24.90		11.58	2.37
	L0000662	505523.13	3622459.30	106.94	2.55	0.01136	24.90		11.58	2.37
	L0000663	505498.44	3622456.11	107.39	2.55	0.01136	24.90		11.58	2.37
	L0000664	505473.75	3622452.92	107.75	2.55	0.01136	24.90		11.58	2.37
	L0000665	505448.91	3622451.27	107.77	2.55	0.01136	24.90		11.58	2.37
	L0000666	505424.05	3622449.81	108.41	2.55	0.01136	24.90		11.58	2.37
	L0000667	505399.20	3622448.35	108.13	2.55	0.01136	24.90		11.58	2.37
	L0000668	505374.35	3622446.89	107.52	2.55	0.01136	24.90		11.58	2.37
	L0000669	505349.49	3622445.42	107.78	2.55	0.01136	24.90		11.58	2.37
	L0000670	505324.64	3622443.96	108.01	2.55	0.01136	24.90		11.58	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000671	505299.78	3622442.50	109.09	2.55	0.01136	24.90		11.58	2.37
	L0000672	505274.93	3622441.04	110.20	2.55	0.01136	24.90		11.58	2.37
	L0000673	505250.07	3622439.58	111.13	2.55	0.01136	24.90		11.58	2.37
	L0000674	505225.22	3622438.11	111.98	2.55	0.01136	24.90		11.58	2.37
	L0000675	505200.36	3622436.65	113.14	2.55	0.01136	24.90		11.58	2.37
	L0000676	505175.53	3622434.82	113.70	2.55	0.01136	24.90		11.58	2.37
	L0000677	505150.72	3622432.77	114.23	2.55	0.01136	24.90		11.58	2.37
	L0000678	505125.91	3622430.71	114.69	2.55	0.01136	24.90		11.58	2.37
	L0000679	505101.10	3622428.66	114.21	2.55	0.01136	24.90		11.58	2.37
	L0000680	505076.28	3622426.61	115.00	2.55	0.01136	24.90		11.58	2.37
	L0000681	505051.47	3622424.55	115.46	2.55	0.01136	24.90		11.58	2.37
	L0000682	505026.66	3622422.50	117.53	2.55	0.01136	24.90		11.58	2.37
	L0000683	505001.85	3622420.45	121.45	2.55	0.01136	24.90		11.58	2.37
	L0000684	504977.03	3622418.39	121.57	2.55	0.01136	24.90		11.58	2.37
	L0000685	504952.22	3622416.34	123.10	2.55	0.01136	24.90		11.58	2.37
	L0000686	504927.35	3622417.54	125.18	2.55	0.01136	24.90		11.58	2.37
	L0000687	504902.48	3622418.76	126.83	2.55	0.01136	24.90		11.58	2.37
	L0000688	504877.62	3622419.97	128.08	2.55	0.01136	24.90		11.58	2.37
	L0000689	504852.75	3622421.18	129.48	2.55	0.01136	24.90		11.58	2.37
	L0000690	504827.88	3622422.40	130.97	2.55	0.01136	24.90		11.58	2.37
	L0000691	504803.35	3622426.06	132.52	2.55	0.01136	24.90		11.58	2.37
	L0000692	504779.08	3622431.61	134.65	2.55	0.01136	24.90		11.58	2.37
	L0000693	504754.81	3622437.16	135.95	2.55	0.01136	24.90		11.58	2.37
	L0000694	504730.53	3622442.71	136.89	2.55	0.01136	24.90		11.58	2.37
	L0000695	504706.26	3622448.25	137.39	2.55	0.01136	24.90		11.58	2.37

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT3	L0000696	504682.83	3622456.56	137.67	2.55	0.01136	24.90		11.58	2.37
	L0000697	504659.59	3622465.50	137.70	2.55	0.01136	24.90		11.58	2.37
	L0000698	504636.36	3622474.44	136.36	2.55	0.01136	24.90		11.58	2.37
	L0000699	504613.12	3622483.38	135.62	2.55	0.01136	24.90		11.58	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000700	506673.17	3623036.28	104.92	2.55	0.01613	24.90		11.58	2.37
	L0000701	506694.74	3623048.70	105.38	2.55	0.01613	24.90		11.58	2.37
	L0000702	506716.32	3623061.13	106.06	2.55	0.01613	24.90		11.58	2.37
	L0000703	506737.80	3623073.66	106.71	2.55	0.01613	24.90		11.58	2.37
	L0000704	506752.59	3623093.69	107.16	2.55	0.01613	24.90		11.58	2.37
	L0000705	506767.37	3623113.72	107.74	2.55	0.01613	24.90		11.58	2.37
	L0000706	506782.16	3623133.75	108.40	2.55	0.01613	24.90		11.58	2.37
	L0000707	506796.95	3623153.78	109.11	2.55	0.01613	24.90		11.58	2.37
	L0000708	506809.70	3623174.78	110.05	2.55	0.01613	24.90		11.58	2.37
	L0000709	506815.84	3623198.90	110.58	2.55	0.01613	24.90		11.58	2.37
	L0000710	506821.99	3623223.03	110.82	2.55	0.01613	24.90		11.58	2.37
	L0000711	506828.13	3623247.16	112.29	2.55	0.01613	24.90		11.58	2.37
	L0000712	506834.27	3623271.29	113.71	2.55	0.01613	24.90		11.58	2.37
	L0000713	506840.17	3623295.45	112.90	2.55	0.01613	24.90		11.58	2.37
	L0000714	506840.00	3623320.34	112.68	2.55	0.01613	24.90		11.58	2.37
	L0000715	506839.82	3623345.24	112.87	2.55	0.01613	24.90		11.58	2.37
	L0000716	506839.65	3623370.14	114.11	2.55	0.01613	24.90		11.58	2.37
	L0000717	506839.48	3623395.03	115.60	2.55	0.01613	24.90		11.58	2.37
	L0000718	506839.31	3623419.93	115.38	2.55	0.01613	24.90		11.58	2.37

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000719	506839.14	3623444.83	115.36	2.55	0.01613	24.90		11.58	2.37
	L0000720	506838.97	3623469.73	114.72	2.55	0.01613	24.90		11.58	2.37
	L0000721	506838.79	3623494.62	119.07	2.55	0.01613	24.90		11.58	2.37
	L0000722	506838.62	3623519.52	119.70	2.55	0.01613	24.90		11.58	2.37
	L0000723	506838.45	3623544.42	119.89	2.55	0.01613	24.90		11.58	2.37
	L0000724	506838.28	3623569.31	115.87	2.55	0.01613	24.90		11.58	2.37
	L0000725	506838.11	3623594.21	116.31	2.55	0.01613	24.90		11.58	2.37
	L0000726	506837.94	3623619.11	116.57	2.55	0.01613	24.90		11.58	2.37
	L0000727	506836.56	3623643.96	113.69	2.55	0.01613	24.90		11.58	2.37
	L0000728	506834.80	3623668.79	115.36	2.55	0.01613	24.90		11.58	2.37
	L0000729	506833.05	3623693.63	115.32	2.55	0.01613	24.90		11.58	2.37
	L0000730	506831.30	3623718.47	116.42	2.55	0.01613	24.90		11.58	2.37
	L0000731	506829.54	3623743.30	116.38	2.55	0.01613	24.90		11.58	2.37
	L0000732	506827.79	3623768.14	117.28	2.55	0.01613	24.90		11.58	2.37
	L0000733	506826.04	3623792.97	117.17	2.55	0.01613	24.90		11.58	2.37
	L0000734	506824.28	3623817.81	117.88	2.55	0.01613	24.90		11.58	2.37
	L0000735	506824.90	3623842.69	119.08	2.55	0.01613	24.90		11.58	2.37
	L0000736	506825.61	3623867.58	120.72	2.55	0.01613	24.90		11.58	2.37
	L0000737	506826.32	3623892.47	121.80	2.55	0.01613	24.90		11.58	2.37
	L0000738	506827.04	3623917.36	122.63	2.55	0.01613	24.90		11.58	2.37
	L0000739	506827.75	3623942.24	123.39	2.55	0.01613	24.90		11.58	2.37
	L0000740	506828.46	3623967.13	124.02	2.55	0.01613	24.90		11.58	2.37
	L0000741	506829.17	3623992.02	124.63	2.55	0.01613	24.90		11.58	2.37
	L0000742	506829.88	3624016.91	126.20	2.55	0.01613	24.90		11.58	2.37
	L0000743	506830.59	3624041.79	126.61	2.55	0.01613	24.90		11.58	2.37

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
HRT2	L0000744	506831.30	3624066.68	127.28	2.55	0.01613	24.90		11.58	2.37
	L0000745	506832.01	3624091.57	127.99	2.55	0.01613	24.90		11.58	2.37
	L0000746	506832.72	3624116.46	129.25	2.55	0.01613	24.90		11.58	2.37
	L0000747	506833.27	3624141.34	129.79	2.55	0.01613	24.90		11.58	2.37
	L0000748	506832.82	3624166.24	130.85	2.55	0.01613	24.90		11.58	2.37
	L0000749	506832.36	3624191.13	131.50	2.55	0.01613	24.90		11.58	2.37
	L0000750	506831.91	3624216.02	131.87	2.55	0.01613	24.90		11.58	2.37
	L0000751	506831.45	3624240.92	132.66	2.55	0.01613	24.90		11.58	2.37
	L0000752	506831.00	3624265.81	134.14	2.55	0.01613	24.90		11.58	2.37
	L0000753	506830.54	3624290.71	135.44	2.55	0.01613	24.90		11.58	2.37
	L0000754	506830.08	3624315.60	137.20	2.55	0.01613	24.90		11.58	2.37
	L0000755	506829.63	3624340.49	138.98	2.55	0.01613	24.90		11.58	2.37
	L0000756	506829.17	3624365.39	140.06	2.55	0.01613	24.90		11.58	2.37
	L0000757	506828.72	3624390.28	140.81	2.55	0.01613	24.90		11.58	2.37
	L0000758	506828.26	3624415.17	141.39	2.55	0.01613	24.90		11.58	2.37
	L0000759	506827.81	3624440.07	142.78	2.55	0.01613	24.90		11.58	2.37
	L0000760	506827.35	3624464.96	144.03	2.55	0.01613	24.90		11.58	2.37
	L0000761	506826.90	3624489.85	145.02	2.55	0.01613	24.90		11.58	2.37

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
FCONV	L0002171	508281.65	3623353.18	112.09	10.73	0.04545	1.83		0.85	3.74
	L0002172	508283.10	3623352.07	112.12	10.73	0.04545	1.83		0.85	3.74
	L0002173	508284.55	3623350.96	112.12	10.73	0.04545	1.83		0.85	3.74
	L0002174	508286.01	3623349.85	112.08	10.73	0.04545	1.83		0.85	3.74
	L0002175	508287.46	3623348.74	112.00	10.73	0.04545	1.83		0.85	3.74

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
FCONV	L0002176	508288.91	3623347.63	111.83	10.73	0.04545	1.83		0.85	3.74
	L0002177	508290.37	3623346.52	111.63	10.73	0.04545	1.83		0.85	3.74
	L0002178	508291.82	3623345.41	111.47	10.73	0.04545	1.83		0.85	3.74
	L0002179	508293.28	3623344.30	111.32	10.73	0.04545	1.83		0.85	3.74
	L0002180	508294.73	3623343.19	111.14	10.73	0.04545	1.83		0.85	3.74
	L0002181	508296.18	3623342.09	110.96	10.73	0.04545	1.83		0.85	3.74
	L0002182	508297.64	3623340.98	110.80	10.73	0.04545	1.83		0.85	3.74
	L0002183	508299.09	3623339.87	110.67	10.73	0.04545	1.83		0.85	3.74
	L0002184	508300.55	3623338.76	110.56	10.73	0.04545	1.83		0.85	3.74
	L0002185	508302.00	3623337.65	110.46	10.73	0.04545	1.83		0.85	3.74
	L0002186	508303.45	3623336.54	110.38	10.73	0.04545	1.83		0.85	3.74
	L0002187	508304.91	3623335.43	110.31	10.73	0.04545	1.83		0.85	3.74
	L0002188	508306.36	3623334.32	110.22	10.73	0.04545	1.83		0.85	3.74
	L0002189	508307.81	3623333.21	110.14	10.73	0.04545	1.83		0.85	3.74
	L0002190	508309.27	3623332.10	110.07	10.73	0.04545	1.83		0.85	3.74
	L0002191	508310.72	3623330.99	110.01	10.73	0.04545	1.83		0.85	3.74
	L0002192	508312.18	3623329.88	109.97	10.73	0.04545	1.83		0.85	3.74

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK1	L0002622	508310.03	3623329.25	109.97	8.29	0.08333	1.83		0.85	3.52
	L0002623	508309.20	3623327.62	109.93	8.29	0.08333	1.83		0.85	3.52
	L0002624	508308.38	3623325.99	109.87	8.29	0.08333	1.83		0.85	3.52
	L0002625	508307.56	3623324.35	109.81	8.29	0.08333	1.83		0.85	3.52
	L0002626	508306.73	3623322.72	109.91	8.29	0.08333	1.83		0.85	3.52
	L0002627	508305.91	3623321.09	110.00	8.29	0.08333	1.83		0.85	3.52

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK1	L0002628	508305.09	3623319.45	110.09	8.29	0.08333	1.83		0.85	3.52
	L0002629	508304.27	3623317.82	110.19	8.29	0.08333	1.83		0.85	3.52
	L0002630	508303.44	3623316.19	110.30	8.29	0.08333	1.83		0.85	3.52
	L0002631	508302.62	3623314.56	110.41	8.29	0.08333	1.83		0.85	3.52
	L0002632	508301.80	3623312.92	110.37	8.29	0.08333	1.83		0.85	3.52
	L0002633	508300.97	3623311.29	110.28	8.29	0.08333	1.83		0.85	3.52

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
RSTACK2	L0002650	508311.81	3623329.89	109.97	10.27	0.06667	1.83		0.85	3.59
	L0002651	508312.89	3623328.41	109.94	10.27	0.06667	1.83		0.85	3.59
	L0002652	508313.97	3623326.94	109.92	10.27	0.06667	1.83		0.85	3.59
	L0002653	508315.05	3623325.46	109.90	10.27	0.06667	1.83		0.85	3.59
	L0002654	508316.13	3623323.98	109.91	10.27	0.06667	1.83		0.85	3.59
	L0002655	508317.21	3623322.51	109.97	10.27	0.06667	1.83		0.85	3.59
	L0002656	508318.29	3623321.03	110.01	10.27	0.06667	1.83		0.85	3.59
	L0002657	508319.37	3623319.55	110.03	10.27	0.06667	1.83		0.85	3.59
	L0002658	508320.45	3623318.08	110.03	10.27	0.06667	1.83		0.85	3.59
	L0002659	508321.53	3623316.60	110.02	10.27	0.06667	1.83		0.85	3.59
	L0002660	508322.61	3623315.13	109.98	10.27	0.06667	1.83		0.85	3.59
	L0002661	508323.69	3623313.65	109.93	10.27	0.06667	1.83		0.85	3.59
	L0002662	508324.77	3623312.17	109.85	10.27	0.06667	1.83		0.85	3.59
	L0002663	508325.85	3623310.70	109.77	10.27	0.06667	1.83		0.85	3.59
	L0002664	508326.93	3623309.22	109.69	10.27	0.06667	1.83		0.85	3.59

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011575	508280.32	3623353.04	111.97	0.00	0.00219	1.83		0.85	0.66
	L0011576	508279.09	3623351.69	111.85	0.00	0.00219	1.83		0.85	0.66
	L0011577	508277.85	3623350.34	111.84	0.00	0.00219	1.83		0.85	0.66
	L0011578	508276.62	3623348.99	111.80	0.00	0.00219	1.83		0.85	0.66
	L0011579	508275.39	3623347.64	111.73	0.00	0.00219	1.83		0.85	0.66
	L0011580	508274.16	3623346.28	111.63	0.00	0.00219	1.83		0.85	0.66
	L0011581	508272.93	3623344.93	111.51	0.00	0.00219	1.83		0.85	0.66
	L0011582	508271.70	3623343.58	111.46	0.00	0.00219	1.83		0.85	0.66
	L0011583	508270.47	3623342.23	111.44	0.00	0.00219	1.83		0.85	0.66
	L0011584	508269.23	3623340.88	111.48	0.00	0.00219	1.83		0.85	0.66
	L0011585	508268.00	3623339.52	111.48	0.00	0.00219	1.83		0.85	0.66
	L0011586	508266.77	3623338.17	111.45	0.00	0.00219	1.83		0.85	0.66
	L0011587	508265.54	3623336.82	111.39	0.00	0.00219	1.83		0.85	0.66
	L0011588	508264.31	3623335.47	111.29	0.00	0.00219	1.83		0.85	0.66
	L0011589	508263.08	3623334.12	111.22	0.00	0.00219	1.83		0.85	0.66
	L0011590	508261.84	3623332.76	111.22	0.00	0.00219	1.83		0.85	0.66
	L0011591	508260.75	3623331.39	111.24	0.00	0.00219	1.83		0.85	0.66
	L0011592	508261.54	3623329.74	111.17	0.00	0.00219	1.83		0.85	0.66
	L0011593	508262.33	3623328.10	111.12	0.00	0.00219	1.83		0.85	0.66
	L0011594	508263.12	3623326.45	111.07	0.00	0.00219	1.83		0.85	0.66
	L0011595	508263.91	3623324.80	111.02	0.00	0.00219	1.83		0.85	0.66
	L0011596	508264.71	3623323.15	110.95	0.00	0.00219	1.83		0.85	0.66
	L0011597	508265.50	3623321.50	110.83	0.00	0.00219	1.83		0.85	0.66
	L0011598	508266.29	3623319.85	110.67	0.00	0.00219	1.83		0.85	0.66
	L0011599	508267.08	3623318.20	110.47	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011600	508267.87	3623316.56	110.23	0.00	0.00219	1.83		0.85	0.66
	L0011601	508268.66	3623314.91	109.95	0.00	0.00219	1.83		0.85	0.66
	L0011602	508269.46	3623313.26	109.69	0.00	0.00219	1.83		0.85	0.66
	L0011603	508270.25	3623311.61	109.52	0.00	0.00219	1.83		0.85	0.66
	L0011604	508271.04	3623309.96	109.43	0.00	0.00219	1.83		0.85	0.66
	L0011605	508271.83	3623308.31	109.43	0.00	0.00219	1.83		0.85	0.66
	L0011606	508272.62	3623306.66	109.45	0.00	0.00219	1.83		0.85	0.66
	L0011607	508273.42	3623305.02	109.49	0.00	0.00219	1.83		0.85	0.66
	L0011608	508274.21	3623303.37	109.51	0.00	0.00219	1.83		0.85	0.66
	L0011609	508275.00	3623301.72	109.51	0.00	0.00219	1.83		0.85	0.66
	L0011610	508275.79	3623300.07	109.49	0.00	0.00219	1.83		0.85	0.66
	L0011611	508276.58	3623298.42	109.47	0.00	0.00219	1.83		0.85	0.66
	L0011612	508277.37	3623296.77	109.44	0.00	0.00219	1.83		0.85	0.66
	L0011613	508278.17	3623295.13	109.40	0.00	0.00219	1.83		0.85	0.66
	L0011614	508278.96	3623293.48	109.35	0.00	0.00219	1.83		0.85	0.66
	L0011615	508279.75	3623291.83	109.30	0.00	0.00219	1.83		0.85	0.66
	L0011616	508280.54	3623290.18	109.25	0.00	0.00219	1.83		0.85	0.66
	L0011617	508281.33	3623288.53	109.20	0.00	0.00219	1.83		0.85	0.66
	L0011618	508282.13	3623286.88	109.15	0.00	0.00219	1.83		0.85	0.66
	L0011619	508282.92	3623285.23	109.10	0.00	0.00219	1.83		0.85	0.66
	L0011620	508283.71	3623283.59	109.05	0.00	0.00219	1.83		0.85	0.66
	L0011621	508284.50	3623281.94	109.00	0.00	0.00219	1.83		0.85	0.66
	L0011622	508285.29	3623280.29	108.93	0.00	0.00219	1.83		0.85	0.66
	L0011623	508286.08	3623278.64	108.86	0.00	0.00219	1.83		0.85	0.66
	L0011624	508286.88	3623276.99	108.77	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011625	508288.19	3623276.29	108.72	0.00	0.00219	1.83		0.85	0.66
	L0011626	508290.01	3623276.48	108.79	0.00	0.00219	1.83		0.85	0.66
	L0011627	508291.83	3623276.68	108.85	0.00	0.00219	1.83		0.85	0.66
	L0011628	508293.65	3623276.87	108.92	0.00	0.00219	1.83		0.85	0.66
	L0011629	508295.47	3623277.07	108.99	0.00	0.00219	1.83		0.85	0.66
	L0011630	508297.28	3623277.26	109.05	0.00	0.00219	1.83		0.85	0.66
	L0011631	508299.10	3623277.46	109.02	0.00	0.00219	1.83		0.85	0.66
	L0011632	508300.92	3623277.65	109.00	0.00	0.00219	1.83		0.85	0.66
	L0011633	508302.74	3623277.85	108.97	0.00	0.00219	1.83		0.85	0.66
	L0011634	508304.56	3623278.04	108.93	0.00	0.00219	1.83		0.85	0.66
	L0011635	508306.38	3623278.24	108.91	0.00	0.00219	1.83		0.85	0.66
	L0011636	508308.19	3623278.43	108.90	0.00	0.00219	1.83		0.85	0.66
	L0011637	508310.01	3623278.63	108.89	0.00	0.00219	1.83		0.85	0.66
	L0011638	508311.83	3623278.83	108.89	0.00	0.00219	1.83		0.85	0.66
	L0011639	508313.65	3623279.02	108.88	0.00	0.00219	1.83		0.85	0.66
	L0011640	508315.47	3623279.22	108.85	0.00	0.00219	1.83		0.85	0.66
	L0011641	508317.29	3623279.41	108.82	0.00	0.00219	1.83		0.85	0.66
	L0011642	508319.10	3623279.61	108.79	0.00	0.00219	1.83		0.85	0.66
	L0011643	508320.92	3623279.80	108.76	0.00	0.00219	1.83		0.85	0.66
	L0011644	508322.74	3623280.00	108.73	0.00	0.00219	1.83		0.85	0.66
	L0011645	508324.56	3623280.19	108.75	0.00	0.00219	1.83		0.85	0.66
	L0011646	508326.38	3623280.39	108.77	0.00	0.00219	1.83		0.85	0.66
	L0011647	508328.20	3623280.58	108.79	0.00	0.00219	1.83		0.85	0.66
	L0011648	508330.01	3623280.78	108.80	0.00	0.00219	1.83		0.85	0.66
	L0011649	508331.83	3623280.97	108.83	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011650	508333.65	3623281.17	108.90	0.00	0.00219	1.83		0.85	0.66
	L0011651	508335.47	3623281.37	108.98	0.00	0.00219	1.83		0.85	0.66
	L0011652	508337.29	3623281.56	109.06	0.00	0.00219	1.83		0.85	0.66
	L0011653	508339.11	3623281.76	109.14	0.00	0.00219	1.83		0.85	0.66
	L0011654	508340.92	3623281.95	109.18	0.00	0.00219	1.83		0.85	0.66
	L0011655	508342.74	3623282.15	109.16	0.00	0.00219	1.83		0.85	0.66
	L0011656	508344.56	3623282.34	109.15	0.00	0.00219	1.83		0.85	0.66
	L0011657	508346.38	3623282.54	109.13	0.00	0.00219	1.83		0.85	0.66
	L0011658	508348.20	3623282.73	109.11	0.00	0.00219	1.83		0.85	0.66
	L0011659	508350.02	3623282.93	109.12	0.00	0.00219	1.83		0.85	0.66
	L0011660	508351.83	3623283.12	109.14	0.00	0.00219	1.83		0.85	0.66
	L0011661	508353.65	3623283.32	109.17	0.00	0.00219	1.83		0.85	0.66
	L0011662	508355.47	3623283.51	109.20	0.00	0.00219	1.83		0.85	0.66
	L0011663	508357.29	3623283.71	109.23	0.00	0.00219	1.83		0.85	0.66
	L0011664	508359.11	3623283.91	109.24	0.00	0.00219	1.83		0.85	0.66
	L0011665	508360.93	3623284.10	109.25	0.00	0.00219	1.83		0.85	0.66
	L0011666	508362.74	3623284.30	109.26	0.00	0.00219	1.83		0.85	0.66
	L0011667	508364.56	3623284.49	109.27	0.00	0.00219	1.83		0.85	0.66
	L0011668	508366.38	3623284.69	109.28	0.00	0.00219	1.83		0.85	0.66
	L0011669	508368.20	3623284.88	109.27	0.00	0.00219	1.83		0.85	0.66
	L0011670	508370.02	3623285.08	109.27	0.00	0.00219	1.83		0.85	0.66
	L0011671	508371.84	3623285.27	109.27	0.00	0.00219	1.83		0.85	0.66
	L0011672	508373.65	3623285.47	109.27	0.00	0.00219	1.83		0.85	0.66
	L0011673	508375.47	3623285.66	109.26	0.00	0.00219	1.83		0.85	0.66
	L0011674	508377.29	3623285.86	109.21	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011675	508379.11	3623286.05	109.16	0.00	0.00219	1.83		0.85	0.66
	L0011676	508380.93	3623286.25	109.11	0.00	0.00219	1.83		0.85	0.66
	L0011677	508382.75	3623286.45	109.06	0.00	0.00219	1.83		0.85	0.66
	L0011678	508384.56	3623286.64	109.06	0.00	0.00219	1.83		0.85	0.66
	L0011679	508386.38	3623286.84	109.10	0.00	0.00219	1.83		0.85	0.66
	L0011680	508388.20	3623287.03	109.14	0.00	0.00219	1.83		0.85	0.66
	L0011681	508390.02	3623287.23	109.19	0.00	0.00219	1.83		0.85	0.66
	L0011682	508391.84	3623287.42	109.23	0.00	0.00219	1.83		0.85	0.66
	L0011683	508393.66	3623287.62	109.26	0.00	0.00219	1.83		0.85	0.66
	L0011684	508395.47	3623287.81	109.29	0.00	0.00219	1.83		0.85	0.66
	L0011685	508397.29	3623288.01	109.31	0.00	0.00219	1.83		0.85	0.66
	L0011686	508399.11	3623288.20	109.34	0.00	0.00219	1.83		0.85	0.66
	L0011687	508400.93	3623288.40	109.36	0.00	0.00219	1.83		0.85	0.66
	L0011688	508402.75	3623288.59	109.36	0.00	0.00219	1.83		0.85	0.66
	L0011689	508404.57	3623288.79	109.37	0.00	0.00219	1.83		0.85	0.66
	L0011690	508406.38	3623288.99	109.37	0.00	0.00219	1.83		0.85	0.66
	L0011691	508408.20	3623289.18	109.37	0.00	0.00219	1.83		0.85	0.66
	L0011692	508410.02	3623289.38	109.40	0.00	0.00219	1.83		0.85	0.66
	L0011693	508411.84	3623289.57	109.48	0.00	0.00219	1.83		0.85	0.66
	L0011694	508413.66	3623289.77	109.58	0.00	0.00219	1.83		0.85	0.66
	L0011695	508415.48	3623289.96	109.68	0.00	0.00219	1.83		0.85	0.66
	L0011696	508417.29	3623290.16	109.80	0.00	0.00219	1.83		0.85	0.66
	L0011697	508419.11	3623290.35	109.75	0.00	0.00219	1.83		0.85	0.66
	L0011698	508420.93	3623290.55	109.51	0.00	0.00219	1.83		0.85	0.66
	L0011699	508422.75	3623290.74	109.26	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011700	508424.57	3623290.94	109.01	0.00	0.00219	1.83		0.85	0.66
	L0011701	508426.38	3623291.16	108.77	0.00	0.00219	1.83		0.85	0.66
	L0011702	508427.91	3623292.16	108.64	0.00	0.00219	1.83		0.85	0.66
	L0011703	508429.44	3623293.16	108.52	0.00	0.00219	1.83		0.85	0.66
	L0011704	508430.97	3623294.16	108.40	0.00	0.00219	1.83		0.85	0.66
	L0011705	508432.50	3623295.16	108.29	0.00	0.00219	1.83		0.85	0.66
	L0011706	508434.03	3623296.16	108.18	0.00	0.00219	1.83		0.85	0.66
	L0011707	508435.56	3623297.16	108.07	0.00	0.00219	1.83		0.85	0.66
	L0011708	508437.10	3623298.16	107.90	0.00	0.00219	1.83		0.85	0.66
	L0011709	508438.63	3623299.16	107.72	0.00	0.00219	1.83		0.85	0.66
	L0011710	508440.16	3623300.16	107.52	0.00	0.00219	1.83		0.85	0.66
	L0011711	508441.69	3623301.16	107.31	0.00	0.00219	1.83		0.85	0.66
	L0011712	508443.22	3623302.16	107.09	0.00	0.00219	1.83		0.85	0.66
	L0011713	508444.75	3623303.16	106.90	0.00	0.00219	1.83		0.85	0.66
	L0011714	508446.28	3623304.16	106.79	0.00	0.00219	1.83		0.85	0.66
	L0011715	508447.82	3623305.16	106.69	0.00	0.00219	1.83		0.85	0.66
	L0011716	508449.35	3623306.16	106.56	0.00	0.00219	1.83		0.85	0.66
	L0011717	508450.88	3623307.16	106.40	0.00	0.00219	1.83		0.85	0.66
	L0011718	508452.41	3623308.15	106.21	0.00	0.00219	1.83		0.85	0.66
	L0011719	508453.94	3623309.15	106.12	0.00	0.00219	1.83		0.85	0.66
	L0011720	508455.47	3623310.15	106.10	0.00	0.00219	1.83		0.85	0.66
	L0011721	508457.01	3623311.15	106.06	0.00	0.00219	1.83		0.85	0.66
	L0011722	508458.54	3623312.15	106.01	0.00	0.00219	1.83		0.85	0.66
	L0011723	508460.07	3623313.15	105.93	0.00	0.00219	1.83		0.85	0.66
	L0011724	508461.60	3623314.15	105.84	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011725	508463.13	3623315.15	105.88	0.00	0.00219	1.83		0.85	0.66
	L0011726	508464.66	3623316.15	105.91	0.00	0.00219	1.83		0.85	0.66
	L0011727	508466.19	3623317.15	105.93	0.00	0.00219	1.83		0.85	0.66
	L0011728	508467.73	3623318.15	105.95	0.00	0.00219	1.83		0.85	0.66
	L0011729	508469.26	3623319.15	105.96	0.00	0.00219	1.83		0.85	0.66
	L0011730	508470.79	3623320.15	105.99	0.00	0.00219	1.83		0.85	0.66
	L0011731	508472.32	3623321.15	106.06	0.00	0.00219	1.83		0.85	0.66
	L0011732	508473.85	3623322.15	106.11	0.00	0.00219	1.83		0.85	0.66
	L0011733	508475.38	3623323.15	106.13	0.00	0.00219	1.83		0.85	0.66
	L0011734	508476.91	3623324.15	106.11	0.00	0.00219	1.83		0.85	0.66
	L0011735	508478.45	3623325.15	106.11	0.00	0.00219	1.83		0.85	0.66
	L0011736	508479.98	3623326.15	106.27	0.00	0.00219	1.83		0.85	0.66
	L0011737	508481.51	3623327.15	106.51	0.00	0.00219	1.83		0.85	0.66
	L0011738	508483.04	3623328.14	106.71	0.00	0.00219	1.83		0.85	0.66
	L0011739	508484.57	3623329.14	106.89	0.00	0.00219	1.83		0.85	0.66
	L0011740	508486.10	3623330.14	107.05	0.00	0.00219	1.83		0.85	0.66
	L0011741	508487.64	3623331.14	107.19	0.00	0.00219	1.83		0.85	0.66
	L0011742	508489.17	3623332.14	107.66	0.00	0.00219	1.83		0.85	0.66
	L0011743	508490.70	3623333.14	108.17	0.00	0.00219	1.83		0.85	0.66
	L0011744	508492.23	3623334.14	108.73	0.00	0.00219	1.83		0.85	0.66
	L0011745	508493.76	3623335.14	109.28	0.00	0.00219	1.83		0.85	0.66
	L0011746	508495.29	3623336.14	109.65	0.00	0.00219	1.83		0.85	0.66
	L0011747	508496.82	3623337.14	109.80	0.00	0.00219	1.83		0.85	0.66
	L0011748	508498.36	3623338.14	109.66	0.00	0.00219	1.83		0.85	0.66
	L0011749	508499.89	3623339.14	109.59	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011750	508501.42	3623340.14	109.58	0.00	0.00219	1.83		0.85	0.66
	L0011751	508502.95	3623341.14	109.64	0.00	0.00219	1.83		0.85	0.66
	L0011752	508504.48	3623342.14	109.76	0.00	0.00219	1.83		0.85	0.66
	L0011753	508506.01	3623343.14	109.82	0.00	0.00219	1.83		0.85	0.66
	L0011754	508507.54	3623344.14	109.86	0.00	0.00219	1.83		0.85	0.66
	L0011755	508509.08	3623345.14	109.92	0.00	0.00219	1.83		0.85	0.66
	L0011756	508510.61	3623346.14	109.96	0.00	0.00219	1.83		0.85	0.66
	L0011757	508512.14	3623347.14	110.03	0.00	0.00219	1.83		0.85	0.66
	L0011758	508513.67	3623348.14	110.12	0.00	0.00219	1.83		0.85	0.66
	L0011759	508515.20	3623349.13	110.02	0.00	0.00219	1.83		0.85	0.66
	L0011760	508516.73	3623350.13	109.93	0.00	0.00219	1.83		0.85	0.66
	L0011761	508518.27	3623351.13	109.85	0.00	0.00219	1.83		0.85	0.66
	L0011762	508519.80	3623352.13	109.79	0.00	0.00219	1.83		0.85	0.66
	L0011763	508521.33	3623353.13	109.74	0.00	0.00219	1.83		0.85	0.66
	L0011764	508522.86	3623354.13	109.69	0.00	0.00219	1.83		0.85	0.66
	L0011765	508524.39	3623355.13	109.65	0.00	0.00219	1.83		0.85	0.66
	L0011766	508525.92	3623356.13	109.58	0.00	0.00219	1.83		0.85	0.66
	L0011767	508527.45	3623357.13	109.51	0.00	0.00219	1.83		0.85	0.66
	L0011768	508528.99	3623358.13	109.44	0.00	0.00219	1.83		0.85	0.66
	L0011769	508530.52	3623359.13	109.39	0.00	0.00219	1.83		0.85	0.66
	L0011770	508532.05	3623360.13	109.36	0.00	0.00219	1.83		0.85	0.66
	L0011771	508533.58	3623361.13	109.33	0.00	0.00219	1.83		0.85	0.66
	L0011772	508535.11	3623362.13	109.32	0.00	0.00219	1.83		0.85	0.66
	L0011773	508536.64	3623363.13	109.32	0.00	0.00219	1.83		0.85	0.66
	L0011774	508538.17	3623364.13	109.33	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011775	508539.71	3623365.13	109.34	0.00	0.00219	1.83		0.85	0.66
	L0011776	508541.24	3623366.13	109.36	0.00	0.00219	1.83		0.85	0.66
	L0011777	508542.77	3623367.13	109.38	0.00	0.00219	1.83		0.85	0.66
	L0011778	508544.30	3623368.13	109.40	0.00	0.00219	1.83		0.85	0.66
	L0011779	508545.83	3623369.13	109.43	0.00	0.00219	1.83		0.85	0.66
	L0011780	508547.36	3623370.12	109.45	0.00	0.00219	1.83		0.85	0.66
	L0011781	508548.90	3623371.12	109.48	0.00	0.00219	1.83		0.85	0.66
	L0011782	508550.43	3623372.12	109.52	0.00	0.00219	1.83		0.85	0.66
	L0011783	508551.96	3623373.12	109.56	0.00	0.00219	1.83		0.85	0.66
	L0011784	508553.49	3623374.12	109.61	0.00	0.00219	1.83		0.85	0.66
	L0011785	508555.02	3623375.12	109.66	0.00	0.00219	1.83		0.85	0.66
	L0011786	508556.55	3623376.12	109.71	0.00	0.00219	1.83		0.85	0.66
	L0011787	508558.08	3623377.12	109.79	0.00	0.00219	1.83		0.85	0.66
	L0011788	508559.62	3623378.12	109.89	0.00	0.00219	1.83		0.85	0.66
	L0011789	508561.15	3623379.12	109.96	0.00	0.00219	1.83		0.85	0.66
	L0011790	508562.68	3623380.12	110.02	0.00	0.00219	1.83		0.85	0.66
	L0011791	508564.21	3623381.12	110.07	0.00	0.00219	1.83		0.85	0.66
	L0011792	508565.74	3623382.12	110.10	0.00	0.00219	1.83		0.85	0.66
	L0011793	508567.27	3623383.12	110.08	0.00	0.00219	1.83		0.85	0.66
	L0011794	508568.80	3623384.12	110.08	0.00	0.00219	1.83		0.85	0.66
	L0011795	508570.34	3623385.12	110.08	0.00	0.00219	1.83		0.85	0.66
	L0011796	508571.87	3623386.12	110.10	0.00	0.00219	1.83		0.85	0.66
	L0011797	508573.40	3623387.12	110.16	0.00	0.00219	1.83		0.85	0.66
	L0011798	508574.93	3623388.12	110.23	0.00	0.00219	1.83		0.85	0.66
	L0011799	508576.46	3623389.12	110.30	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011800	508577.99	3623390.11	110.37	0.00	0.00219	1.83		0.85	0.66
	L0011801	508579.52	3623391.11	110.44	0.00	0.00219	1.83		0.85	0.66
	L0011802	508581.06	3623392.11	110.51	0.00	0.00219	1.83		0.85	0.66
	L0011803	508582.59	3623393.11	110.58	0.00	0.00219	1.83		0.85	0.66
	L0011804	508584.12	3623394.11	110.62	0.00	0.00219	1.83		0.85	0.66
	L0011805	508585.65	3623395.11	110.64	0.00	0.00219	1.83		0.85	0.66
	L0011806	508587.18	3623396.11	110.64	0.00	0.00219	1.83		0.85	0.66
	L0011807	508588.71	3623397.11	110.63	0.00	0.00219	1.83		0.85	0.66
	L0011808	508590.25	3623398.11	110.62	0.00	0.00219	1.83		0.85	0.66
	L0011809	508591.78	3623399.11	110.63	0.00	0.00219	1.83		0.85	0.66
	L0011810	508593.31	3623400.11	110.73	0.00	0.00219	1.83		0.85	0.66
	L0011811	508594.84	3623401.11	110.84	0.00	0.00219	1.83		0.85	0.66
	L0011812	508596.37	3623402.11	110.96	0.00	0.00219	1.83		0.85	0.66
	L0011813	508597.90	3623403.11	111.08	0.00	0.00219	1.83		0.85	0.66
	L0011814	508599.43	3623404.11	111.22	0.00	0.00219	1.83		0.85	0.66
	L0011815	508600.97	3623405.11	111.31	0.00	0.00219	1.83		0.85	0.66
	L0011816	508602.50	3623406.11	111.32	0.00	0.00219	1.83		0.85	0.66
	L0011817	508604.03	3623407.11	111.32	0.00	0.00219	1.83		0.85	0.66
	L0011818	508605.56	3623408.11	111.30	0.00	0.00219	1.83		0.85	0.66
	L0011819	508607.09	3623409.11	111.28	0.00	0.00219	1.83		0.85	0.66
	L0011820	508608.62	3623410.11	111.28	0.00	0.00219	1.83		0.85	0.66
	L0011821	508610.15	3623411.10	111.29	0.00	0.00219	1.83		0.85	0.66
	L0011822	508611.69	3623412.10	111.31	0.00	0.00219	1.83		0.85	0.66
	L0011823	508613.22	3623413.10	111.34	0.00	0.00219	1.83		0.85	0.66
	L0011824	508614.75	3623414.10	111.36	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011825	508616.28	3623415.10	111.39	0.00	0.00219	1.83		0.85	0.66
	L0011826	508617.81	3623416.10	111.42	0.00	0.00219	1.83		0.85	0.66
	L0011827	508619.34	3623417.10	111.44	0.00	0.00219	1.83		0.85	0.66
	L0011828	508620.88	3623418.10	111.47	0.00	0.00219	1.83		0.85	0.66
	L0011829	508622.41	3623419.10	111.49	0.00	0.00219	1.83		0.85	0.66
	L0011830	508623.94	3623420.10	111.50	0.00	0.00219	1.83		0.85	0.66
	L0011831	508625.47	3623421.10	111.51	0.00	0.00219	1.83		0.85	0.66
	L0011832	508627.00	3623422.10	111.51	0.00	0.00219	1.83		0.85	0.66
	L0011833	508628.53	3623423.10	111.50	0.00	0.00219	1.83		0.85	0.66
	L0011834	508630.06	3623424.10	111.50	0.00	0.00219	1.83		0.85	0.66
	L0011835	508631.60	3623425.10	111.50	0.00	0.00219	1.83		0.85	0.66
	L0011836	508633.13	3623426.10	111.50	0.00	0.00219	1.83		0.85	0.66
	L0011837	508634.66	3623427.10	111.52	0.00	0.00219	1.83		0.85	0.66
	L0011838	508636.19	3623428.10	111.37	0.00	0.00219	1.83		0.85	0.66
	L0011839	508637.72	3623429.10	111.19	0.00	0.00219	1.83		0.85	0.66
	L0011840	508638.85	3623430.54	111.09	0.00	0.00219	1.83		0.85	0.66
	L0011841	508639.98	3623431.97	111.00	0.00	0.00219	1.83		0.85	0.66
	L0011842	508641.12	3623433.41	110.91	0.00	0.00219	1.83		0.85	0.66
	L0011843	508642.25	3623434.84	110.84	0.00	0.00219	1.83		0.85	0.66
	L0011844	508643.38	3623436.28	110.79	0.00	0.00219	1.83		0.85	0.66
	L0011845	508644.51	3623437.71	110.77	0.00	0.00219	1.83		0.85	0.66
	L0011846	508645.65	3623439.15	110.81	0.00	0.00219	1.83		0.85	0.66
	L0011847	508646.78	3623440.59	110.81	0.00	0.00219	1.83		0.85	0.66
	L0011848	508647.91	3623442.02	110.79	0.00	0.00219	1.83		0.85	0.66
	L0011849	508649.05	3623443.46	110.74	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011850	508650.18	3623444.89	110.65	0.00	0.00219	1.83		0.85	0.66
	L0011851	508651.31	3623446.33	110.54	0.00	0.00219	1.83		0.85	0.66
	L0011852	508652.44	3623447.76	110.42	0.00	0.00219	1.83		0.85	0.66
	L0011853	508653.58	3623449.20	110.46	0.00	0.00219	1.83		0.85	0.66
	L0011854	508654.71	3623450.64	110.50	0.00	0.00219	1.83		0.85	0.66
	L0011855	508655.84	3623452.07	110.51	0.00	0.00219	1.83		0.85	0.66
	L0011856	508656.98	3623453.51	110.51	0.00	0.00219	1.83		0.85	0.66
	L0011857	508658.11	3623454.94	110.48	0.00	0.00219	1.83		0.85	0.66
	L0011858	508659.24	3623456.38	110.44	0.00	0.00219	1.83		0.85	0.66
	L0011859	508660.37	3623457.81	110.37	0.00	0.00219	1.83		0.85	0.66
	L0011860	508661.51	3623459.25	110.34	0.00	0.00219	1.83		0.85	0.66
	L0011861	508662.64	3623460.69	110.39	0.00	0.00219	1.83		0.85	0.66
	L0011862	508663.77	3623462.12	110.42	0.00	0.00219	1.83		0.85	0.66
	L0011863	508664.91	3623463.56	110.43	0.00	0.00219	1.83		0.85	0.66
	L0011864	508666.04	3623464.99	110.44	0.00	0.00219	1.83		0.85	0.66
	L0011865	508667.17	3623466.43	110.44	0.00	0.00219	1.83		0.85	0.66
	L0011866	508668.30	3623467.86	110.42	0.00	0.00219	1.83		0.85	0.66
	L0011867	508669.44	3623469.30	110.41	0.00	0.00219	1.83		0.85	0.66
	L0011868	508670.57	3623470.74	110.42	0.00	0.00219	1.83		0.85	0.66
	L0011869	508671.70	3623472.17	110.44	0.00	0.00219	1.83		0.85	0.66
	L0011870	508672.83	3623473.61	110.45	0.00	0.00219	1.83		0.85	0.66
	L0011871	508673.97	3623475.04	110.47	0.00	0.00219	1.83		0.85	0.66
	L0011872	508675.10	3623476.48	110.49	0.00	0.00219	1.83		0.85	0.66
	L0011873	508676.23	3623477.91	110.51	0.00	0.00219	1.83		0.85	0.66
	L0011874	508677.37	3623479.35	110.54	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011875	508678.50	3623480.79	110.57	0.00	0.00219	1.83		0.85	0.66
	L0011876	508679.63	3623482.22	110.59	0.00	0.00219	1.83		0.85	0.66
	L0011877	508680.76	3623483.66	110.62	0.00	0.00219	1.83		0.85	0.66
	L0011878	508681.90	3623485.09	110.64	0.00	0.00219	1.83		0.85	0.66
	L0011879	508683.03	3623486.53	110.67	0.00	0.00219	1.83		0.85	0.66
	L0011880	508684.16	3623487.96	110.69	0.00	0.00219	1.83		0.85	0.66
	L0011881	508685.30	3623489.40	110.68	0.00	0.00219	1.83		0.85	0.66
	L0011882	508686.43	3623490.84	110.57	0.00	0.00219	1.83		0.85	0.66
	L0011883	508687.56	3623492.27	110.48	0.00	0.00219	1.83		0.85	0.66
	L0011884	508688.69	3623493.71	110.44	0.00	0.00219	1.83		0.85	0.66
	L0011885	508689.83	3623495.14	110.43	0.00	0.00219	1.83		0.85	0.66
	L0011886	508690.96	3623496.58	110.46	0.00	0.00219	1.83		0.85	0.66
	L0011887	508692.09	3623498.01	110.53	0.00	0.00219	1.83		0.85	0.66
	L0011888	508693.23	3623499.45	110.64	0.00	0.00219	1.83		0.85	0.66
	L0011889	508694.36	3623500.89	110.78	0.00	0.00219	1.83		0.85	0.66
	L0011890	508695.49	3623502.32	110.91	0.00	0.00219	1.83		0.85	0.66
	L0011891	508696.62	3623503.76	110.91	0.00	0.00219	1.83		0.85	0.66
	L0011892	508697.76	3623505.19	110.90	0.00	0.00219	1.83		0.85	0.66
	L0011893	508698.89	3623506.63	110.88	0.00	0.00219	1.83		0.85	0.66
	L0011894	508700.02	3623508.06	110.87	0.00	0.00219	1.83		0.85	0.66
	L0011895	508701.15	3623509.50	110.86	0.00	0.00219	1.83		0.85	0.66
	L0011896	508702.29	3623510.94	110.84	0.00	0.00219	1.83		0.85	0.66
	L0011897	508703.42	3623512.37	110.85	0.00	0.00219	1.83		0.85	0.66
	L0011898	508704.55	3623513.81	110.87	0.00	0.00219	1.83		0.85	0.66
	L0011899	508705.69	3623515.24	110.89	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011900	508706.82	3623516.68	110.91	0.00	0.00219	1.83		0.85	0.66
	L0011901	508707.95	3623518.11	110.92	0.00	0.00219	1.83		0.85	0.66
	L0011902	508709.08	3623519.55	110.93	0.00	0.00219	1.83		0.85	0.66
	L0011903	508710.22	3623520.99	110.94	0.00	0.00219	1.83		0.85	0.66
	L0011904	508711.35	3623522.42	110.94	0.00	0.00219	1.83		0.85	0.66
	L0011905	508712.48	3623523.86	110.95	0.00	0.00219	1.83		0.85	0.66
	L0011906	508713.62	3623525.29	110.94	0.00	0.00219	1.83		0.85	0.66
	L0011907	508714.75	3623526.73	110.93	0.00	0.00219	1.83		0.85	0.66
	L0011908	508715.88	3623528.16	110.92	0.00	0.00219	1.83		0.85	0.66
	L0011909	508717.01	3623529.60	110.91	0.00	0.00219	1.83		0.85	0.66
	L0011910	508718.15	3623531.04	110.89	0.00	0.00219	1.83		0.85	0.66
	L0011911	508719.28	3623532.47	110.87	0.00	0.00219	1.83		0.85	0.66
	L0011912	508720.41	3623533.91	110.87	0.00	0.00219	1.83		0.85	0.66
	L0011913	508721.55	3623535.34	110.88	0.00	0.00219	1.83		0.85	0.66
	L0011914	508722.68	3623536.78	110.88	0.00	0.00219	1.83		0.85	0.66
	L0011915	508723.81	3623538.21	110.89	0.00	0.00219	1.83		0.85	0.66
	L0011916	508724.94	3623539.65	110.89	0.00	0.00219	1.83		0.85	0.66
	L0011917	508726.08	3623541.09	110.89	0.00	0.00219	1.83		0.85	0.66
	L0011918	508727.21	3623542.52	110.88	0.00	0.00219	1.83		0.85	0.66
	L0011919	508728.34	3623543.96	110.90	0.00	0.00219	1.83		0.85	0.66
	L0011920	508729.48	3623545.39	110.94	0.00	0.00219	1.83		0.85	0.66
	L0011921	508730.61	3623546.83	110.99	0.00	0.00219	1.83		0.85	0.66
	L0011922	508731.74	3623548.26	111.01	0.00	0.00219	1.83		0.85	0.66
	L0011923	508732.87	3623549.70	111.03	0.00	0.00219	1.83		0.85	0.66
	L0011924	508734.01	3623551.14	111.03	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011925	508735.14	3623552.57	111.02	0.00	0.00219	1.83		0.85	0.66
	L0011926	508736.27	3623554.01	111.03	0.00	0.00219	1.83		0.85	0.66
	L0011927	508737.40	3623555.44	111.05	0.00	0.00219	1.83		0.85	0.66
	L0011928	508738.54	3623556.88	111.09	0.00	0.00219	1.83		0.85	0.66
	L0011929	508739.67	3623558.31	111.12	0.00	0.00219	1.83		0.85	0.66
	L0011930	508740.80	3623559.75	111.13	0.00	0.00219	1.83		0.85	0.66
	L0011931	508741.94	3623561.19	111.14	0.00	0.00219	1.83		0.85	0.66
	L0011932	508743.07	3623562.62	111.14	0.00	0.00219	1.83		0.85	0.66
	L0011933	508744.20	3623564.06	111.14	0.00	0.00219	1.83		0.85	0.66
	L0011934	508745.33	3623565.49	111.15	0.00	0.00219	1.83		0.85	0.66
	L0011935	508746.47	3623566.93	111.17	0.00	0.00219	1.83		0.85	0.66
	L0011936	508747.60	3623568.36	111.18	0.00	0.00219	1.83		0.85	0.66
	L0011937	508748.73	3623569.80	111.19	0.00	0.00219	1.83		0.85	0.66
	L0011938	508749.87	3623571.24	111.20	0.00	0.00219	1.83		0.85	0.66
	L0011939	508751.00	3623572.67	111.20	0.00	0.00219	1.83		0.85	0.66
	L0011940	508752.13	3623574.11	111.21	0.00	0.00219	1.83		0.85	0.66
	L0011941	508753.26	3623575.54	111.21	0.00	0.00219	1.83		0.85	0.66
	L0011942	508754.40	3623576.98	111.22	0.00	0.00219	1.83		0.85	0.66
	L0011943	508755.53	3623578.41	111.23	0.00	0.00219	1.83		0.85	0.66
	L0011944	508756.66	3623579.85	111.24	0.00	0.00219	1.83		0.85	0.66
	L0011945	508757.80	3623581.29	111.25	0.00	0.00219	1.83		0.85	0.66
	L0011946	508758.93	3623582.72	111.27	0.00	0.00219	1.83		0.85	0.66
	L0011947	508760.06	3623584.16	111.29	0.00	0.00219	1.83		0.85	0.66
	L0011948	508761.19	3623585.59	111.32	0.00	0.00219	1.83		0.85	0.66
	L0011949	508762.33	3623587.03	111.35	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011950	508763.46	3623588.46	111.38	0.00	0.00219	1.83		0.85	0.66
	L0011951	508764.59	3623589.90	111.42	0.00	0.00219	1.83		0.85	0.66
	L0011952	508765.72	3623591.34	111.45	0.00	0.00219	1.83		0.85	0.66
	L0011953	508766.86	3623592.77	111.45	0.00	0.00219	1.83		0.85	0.66
	L0011954	508767.99	3623594.21	111.44	0.00	0.00219	1.83		0.85	0.66
	L0011955	508769.12	3623595.64	111.44	0.00	0.00219	1.83		0.85	0.66
	L0011956	508770.26	3623597.08	111.44	0.00	0.00219	1.83		0.85	0.66
	L0011957	508771.39	3623598.51	111.44	0.00	0.00219	1.83		0.85	0.66
	L0011958	508772.52	3623599.95	111.45	0.00	0.00219	1.83		0.85	0.66
	L0011959	508773.65	3623601.39	111.46	0.00	0.00219	1.83		0.85	0.66
	L0011960	508774.79	3623602.82	111.46	0.00	0.00219	1.83		0.85	0.66
	L0011961	508775.92	3623604.26	111.46	0.00	0.00219	1.83		0.85	0.66
	L0011962	508777.05	3623605.69	111.45	0.00	0.00219	1.83		0.85	0.66
	L0011963	508778.19	3623607.13	111.43	0.00	0.00219	1.83		0.85	0.66
	L0011964	508779.32	3623608.56	111.42	0.00	0.00219	1.83		0.85	0.66
	L0011965	508780.45	3623610.00	111.40	0.00	0.00219	1.83		0.85	0.66
	L0011966	508781.58	3623611.44	111.38	0.00	0.00219	1.83		0.85	0.66
	L0011967	508782.72	3623612.87	111.39	0.00	0.00219	1.83		0.85	0.66
	L0011968	508783.85	3623614.31	111.45	0.00	0.00219	1.83		0.85	0.66
	L0011969	508784.98	3623615.74	111.49	0.00	0.00219	1.83		0.85	0.66
	L0011970	508786.12	3623617.18	111.53	0.00	0.00219	1.83		0.85	0.66
	L0011971	508787.25	3623618.61	111.56	0.00	0.00219	1.83		0.85	0.66
	L0011972	508788.38	3623620.05	111.58	0.00	0.00219	1.83		0.85	0.66
	L0011973	508789.51	3623621.49	111.59	0.00	0.00219	1.83		0.85	0.66
	L0011974	508790.65	3623622.92	111.59	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0011975	508791.78	3623624.36	111.56	0.00	0.00219	1.83		0.85	0.66
	L0011976	508792.91	3623625.79	111.55	0.00	0.00219	1.83		0.85	0.66
	L0011977	508794.05	3623627.23	111.53	0.00	0.00219	1.83		0.85	0.66
	L0011978	508795.18	3623628.66	111.53	0.00	0.00219	1.83		0.85	0.66
	L0011979	508796.31	3623630.10	111.53	0.00	0.00219	1.83		0.85	0.66
	L0011980	508797.44	3623631.54	111.54	0.00	0.00219	1.83		0.85	0.66
	L0011981	508798.58	3623632.97	111.56	0.00	0.00219	1.83		0.85	0.66
	L0011982	508799.71	3623634.41	111.60	0.00	0.00219	1.83		0.85	0.66
	L0011983	508800.84	3623635.84	111.61	0.00	0.00219	1.83		0.85	0.66
	L0011984	508801.97	3623637.28	111.62	0.00	0.00219	1.83		0.85	0.66
	L0011985	508803.11	3623638.71	111.62	0.00	0.00219	1.83		0.85	0.66
	L0011986	508804.24	3623640.15	111.62	0.00	0.00219	1.83		0.85	0.66
	L0011987	508805.37	3623641.59	111.62	0.00	0.00219	1.83		0.85	0.66
	L0011988	508806.51	3623643.02	111.61	0.00	0.00219	1.83		0.85	0.66
	L0011989	508807.64	3623644.46	111.61	0.00	0.00219	1.83		0.85	0.66
	L0011990	508808.77	3623645.89	111.62	0.00	0.00219	1.83		0.85	0.66
	L0011991	508809.90	3623647.33	111.64	0.00	0.00219	1.83		0.85	0.66
	L0011992	508811.04	3623648.76	111.66	0.00	0.00219	1.83		0.85	0.66
	L0011993	508812.17	3623650.20	111.67	0.00	0.00219	1.83		0.85	0.66
	L0011994	508813.30	3623651.64	111.69	0.00	0.00219	1.83		0.85	0.66
	L0011995	508814.44	3623653.07	111.71	0.00	0.00219	1.83		0.85	0.66
	L0011996	508815.57	3623654.51	111.71	0.00	0.00219	1.83		0.85	0.66
	L0011997	508816.70	3623655.94	111.71	0.00	0.00219	1.83		0.85	0.66
	L0011998	508817.83	3623657.38	111.71	0.00	0.00219	1.83		0.85	0.66
	L0011999	508818.97	3623658.81	111.71	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0012000	508820.10	3623660.25	111.71	0.00	0.00219	1.83		0.85	0.66
	L0012001	508821.23	3623661.69	111.71	0.00	0.00219	1.83		0.85	0.66
	L0012002	508822.37	3623663.12	111.71	0.00	0.00219	1.83		0.85	0.66
	L0012003	508823.50	3623664.56	111.72	0.00	0.00219	1.83		0.85	0.66
	L0012004	508824.63	3623665.99	111.72	0.00	0.00219	1.83		0.85	0.66
	L0012005	508825.76	3623667.43	111.73	0.00	0.00219	1.83		0.85	0.66
	L0012006	508826.90	3623668.86	111.73	0.00	0.00219	1.83		0.85	0.66
	L0012007	508828.03	3623670.30	111.74	0.00	0.00219	1.83		0.85	0.66
	L0012008	508829.16	3623671.74	111.75	0.00	0.00219	1.83		0.85	0.66
	L0012009	508830.29	3623673.17	111.75	0.00	0.00219	1.83		0.85	0.66
	L0012010	508831.43	3623674.61	111.76	0.00	0.00219	1.83		0.85	0.66
	L0012011	508832.56	3623676.04	111.77	0.00	0.00219	1.83		0.85	0.66
	L0012012	508833.69	3623677.48	111.78	0.00	0.00219	1.83		0.85	0.66
	L0012013	508834.83	3623678.91	111.79	0.00	0.00219	1.83		0.85	0.66
	L0012014	508835.96	3623680.35	111.80	0.00	0.00219	1.83		0.85	0.66
	L0012015	508837.09	3623681.79	111.82	0.00	0.00219	1.83		0.85	0.66
	L0012016	508838.22	3623683.22	111.84	0.00	0.00219	1.83		0.85	0.66
	L0012017	508839.36	3623684.66	111.86	0.00	0.00219	1.83		0.85	0.66
	L0012018	508840.49	3623686.09	111.88	0.00	0.00219	1.83		0.85	0.66
	L0012019	508841.62	3623687.53	111.90	0.00	0.00219	1.83		0.85	0.66
	L0012020	508842.76	3623688.96	111.93	0.00	0.00219	1.83		0.85	0.66
	L0012021	508843.89	3623690.40	111.96	0.00	0.00219	1.83		0.85	0.66
	L0012022	508845.02	3623691.84	111.98	0.00	0.00219	1.83		0.85	0.66
	L0012023	508846.15	3623693.27	112.01	0.00	0.00219	1.83		0.85	0.66
	L0012024	508847.29	3623694.71	112.04	0.00	0.00219	1.83		0.85	0.66

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
MCONV	L0012025	508848.42	3623696.14	112.07	0.00	0.00219	1.83		0.85	0.66
	L0012026	508849.55	3623697.58	112.09	0.00	0.00219	1.83		0.85	0.66
	L0012027	508850.69	3623699.01	112.11	0.00	0.00219	1.83		0.85	0.66
	L0012028	508851.82	3623700.45	112.13	0.00	0.00219	1.83		0.85	0.66
	L0012029	508852.95	3623701.88	112.15	0.00	0.00219	1.83		0.85	0.66
	L0012030	508854.08	3623703.32	112.17	0.00	0.00219	1.83		0.85	0.66

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P3HRD	L0013370	508378.45	3623309.88	109.15	3.19	0.01053	9.50		4.42	2.97
	L0013371	508387.74	3623311.88	109.09	3.19	0.01053	9.50		4.42	2.97
	L0013372	508397.03	3623313.88	109.23	3.19	0.01053	9.50		4.42	2.97
	L0013373	508406.31	3623315.88	109.41	3.19	0.01053	9.50		4.42	2.97
	L0013374	508415.60	3623317.88	109.62	3.19	0.01053	9.50		4.42	2.97
	L0013375	508424.89	3623319.88	110.02	3.19	0.01053	9.50		4.42	2.97
	L0013376	508434.17	3623321.88	110.31	3.19	0.01053	9.50		4.42	2.97
	L0013377	508443.46	3623323.88	109.92	3.19	0.01053	9.50		4.42	2.97
	L0013378	508452.21	3623326.89	108.34	3.19	0.01053	9.50		4.42	2.97
	L0013379	508459.06	3623333.47	107.44	3.19	0.01053	9.50		4.42	2.97
	L0013380	508465.92	3623340.05	106.78	3.19	0.01053	9.50		4.42	2.97
	L0013381	508472.77	3623346.63	106.25	3.19	0.01053	9.50		4.42	2.97
	L0013382	508479.62	3623353.21	106.09	3.19	0.01053	9.50		4.42	2.97
	L0013383	508486.47	3623359.79	106.08	3.19	0.01053	9.50		4.42	2.97
	L0013384	508493.33	3623366.37	106.04	3.19	0.01053	9.50		4.42	2.97
	L0013385	508500.18	3623372.95	106.26	3.19	0.01053	9.50		4.42	2.97
	L0013386	508507.03	3623379.53	106.55	3.19	0.01053	9.50		4.42	2.97

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P3HRD	L0013387	508513.88	3623386.11	106.91	3.19	0.01053	9.50		4.42	2.97
	L0013388	508520.74	3623392.69	107.78	3.19	0.01053	9.50		4.42	2.97
	L0013389	508527.59	3623399.27	108.37	3.19	0.01053	9.50		4.42	2.97
	L0013390	508534.44	3623405.85	108.91	3.19	0.01053	9.50		4.42	2.97
	L0013391	508541.29	3623412.43	109.87	3.19	0.01053	9.50		4.42	2.97
	L0013392	508548.15	3623419.01	110.63	3.19	0.01053	9.50		4.42	2.97
	L0013393	508555.00	3623425.59	110.53	3.19	0.01053	9.50		4.42	2.97
	L0013394	508561.85	3623432.17	110.30	3.19	0.01053	9.50		4.42	2.97
	L0013395	508568.70	3623438.75	110.25	3.19	0.01053	9.50		4.42	2.97
	L0013396	508575.56	3623445.33	110.14	3.19	0.01053	9.50		4.42	2.97
	L0013397	508582.41	3623451.91	110.17	3.19	0.01053	9.50		4.42	2.97
	L0013398	508589.26	3623458.49	110.18	3.19	0.01053	9.50		4.42	2.97
	L0013399	508596.11	3623465.07	110.22	3.19	0.01053	9.50		4.42	2.97
	L0013400	508602.97	3623471.65	110.48	3.19	0.01053	9.50		4.42	2.97
	L0013401	508609.82	3623478.23	110.61	3.19	0.01053	9.50		4.42	2.97
	L0013402	508616.67	3623484.81	110.65	3.19	0.01053	9.50		4.42	2.97
	L0013403	508623.52	3623491.39	110.76	3.19	0.01053	9.50		4.42	2.97
	L0013404	508630.38	3623497.97	110.83	3.19	0.01053	9.50		4.42	2.97
	L0013405	508637.23	3623504.55	110.90	3.19	0.01053	9.50		4.42	2.97
	L0013406	508644.08	3623511.13	110.75	3.19	0.01053	9.50		4.42	2.97
	L0013407	508650.93	3623517.71	110.64	3.19	0.01053	9.50		4.42	2.97
	L0013408	508657.79	3623524.29	110.73	3.19	0.01053	9.50		4.42	2.97
	L0013409	508664.64	3623530.87	110.67	3.19	0.01053	9.50		4.42	2.97
	L0013410	508670.40	3623538.38	110.05	3.19	0.01053	9.50		4.42	2.97
	L0013411	508675.88	3623546.14	109.99	3.19	0.01053	9.50		4.42	2.97

Source Pathway - Source Inputs

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Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P3HRD	L0013412	508681.36	3623553.90	110.13	3.19	0.01053	9.50		4.42	2.97
	L0013413	508686.85	3623561.66	110.26	3.19	0.01053	9.50		4.42	2.97
	L0013414	508692.33	3623569.42	110.79	3.19	0.01053	9.50		4.42	2.97
	L0013415	508697.81	3623577.18	110.88	3.19	0.01053	9.50		4.42	2.97
	L0013416	508703.29	3623584.94	110.92	3.19	0.01053	9.50		4.42	2.97
	L0013417	508708.77	3623592.70	110.98	3.19	0.01053	9.50		4.42	2.97
	L0013418	508714.25	3623600.46	111.06	3.19	0.01053	9.50		4.42	2.97
	L0013419	508719.73	3623608.21	111.15	3.19	0.01053	9.50		4.42	2.97
	L0013420	508725.22	3623615.97	111.17	3.19	0.01053	9.50		4.42	2.97
	L0013421	508730.70	3623623.73	111.17	3.19	0.01053	9.50		4.42	2.97
	L0013422	508736.18	3623631.49	111.26	3.19	0.01053	9.50		4.42	2.97
	L0013423	508741.66	3623639.25	111.32	3.19	0.01053	9.50		4.42	2.97
	L0013424	508747.14	3623647.01	111.43	3.19	0.01053	9.50		4.42	2.97
	L0013425	508752.62	3623654.77	111.55	3.19	0.01053	9.50		4.42	2.97
	L0013426	508758.10	3623662.53	111.65	3.19	0.01053	9.50		4.42	2.97
	L0013427	508763.59	3623670.29	111.87	3.19	0.01053	9.50		4.42	2.97
	L0013428	508769.07	3623678.05	112.05	3.19	0.01053	9.50		4.42	2.97
	L0013429	508774.55	3623685.80	112.24	3.19	0.01053	9.50		4.42	2.97
	L0013430	508780.03	3623693.56	112.32	3.19	0.01053	9.50		4.42	2.97
	L0013431	508785.51	3623701.32	112.40	3.19	0.01053	9.50		4.42	2.97
	L0013432	508790.99	3623709.08	112.69	3.19	0.01053	9.50		4.42	2.97
	L0013433	508796.48	3623716.84	113.12	3.19	0.01053	9.50		4.42	2.97
	L0013434	508801.96	3623724.60	113.25	3.19	0.01053	9.50		4.42	2.97
	L0013435	508807.70	3623732.03	113.49	3.19	0.01053	9.50		4.42	2.97
	L0013436	508816.52	3623735.55	113.48	3.19	0.01053	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P3HRD	L0013437	508825.35	3623739.06	113.00	3.19	0.01053	9.50		4.42	2.97
	L0013438	508834.18	3623742.57	112.78	3.19	0.01053	9.50		4.42	2.97
	L0013439	508843.00	3623746.09	113.21	3.19	0.01053	9.50		4.42	2.97
	L0013440	508851.83	3623749.60	113.24	3.19	0.01053	9.50		4.42	2.97
	L0013441	508860.66	3623753.11	113.28	3.19	0.01053	9.50		4.42	2.97
	L0013442	508869.48	3623756.62	113.13	3.19	0.01053	9.50		4.42	2.97
	L0013443	508878.31	3623760.14	113.01	3.19	0.01053	9.50		4.42	2.97
	L0013444	508887.13	3623763.65	113.29	3.19	0.01053	9.50		4.42	2.97
	L0013445	508895.96	3623767.16	113.13	3.19	0.01053	9.50		4.42	2.97
	L0013446	508904.79	3623770.68	113.43	3.19	0.01053	9.50		4.42	2.97
	L0013447	508913.61	3623774.19	113.65	3.19	0.01053	9.50		4.42	2.97
	L0013448	508922.44	3623777.70	113.89	3.19	0.01053	9.50		4.42	2.97
	L0013449	508931.27	3623781.22	113.81	3.19	0.01053	9.50		4.42	2.97
	L0013450	508940.09	3623784.73	113.20	3.19	0.01053	9.50		4.42	2.97
	L0013451	508948.92	3623788.24	113.16	3.19	0.01053	9.50		4.42	2.97
	L0013452	508957.75	3623791.76	113.14	3.19	0.01053	9.50		4.42	2.97
	L0013453	508966.57	3623795.27	113.19	3.19	0.01053	9.50		4.42	2.97
	L0013454	508975.40	3623798.78	112.87	3.19	0.01053	9.50		4.42	2.97
	L0013455	508984.23	3623802.29	112.52	3.19	0.01053	9.50		4.42	2.97
	L0013456	508993.05	3623805.81	112.49	3.19	0.01053	9.50		4.42	2.97
	L0013457	509001.88	3623809.32	112.45	3.19	0.01053	9.50		4.42	2.97
	L0013458	509010.71	3623812.83	112.56	3.19	0.01053	9.50		4.42	2.97
	L0013459	509019.53	3623816.35	112.69	3.19	0.01053	9.50		4.42	2.97
	L0013460	509028.36	3623819.86	112.89	3.19	0.01053	9.50		4.42	2.97
	L0013461	509037.19	3623823.37	113.31	3.19	0.01053	9.50		4.42	2.97

Source Pathway - Source Inputs

AERMOD

Line Source ID	Volume Source ID	X Coordinate [m]	Y Coordinate [m]	Base Elevation [m]	Release Height [m[	Emission Rate [g/s]	Length of Side [m]	Building Height [m]	Initial Lateral Dimencion [m]	Initial Vertical Dimencion [m]
P3HRD	L0013462	509046.01	3623826.89	113.59	3.19	0.01053	9.50		4.42	2.97
	L0013463	509054.84	3623830.40	113.81	3.19	0.01053	9.50		4.42	2.97
	L0013464	509063.67	3623833.91	114.02	3.19	0.01053	9.50		4.42	2.97

Source Pathway

Building Downwash Information

Option not in use

Emission Rate Units for Output

For Concentration

Unit Factor:	1E6
Emission Unit Label:	GRAMS/SEC
Concentration Unit Label:	MICROGRAMS/M**3

Variable Emissions

Hour-of-Day / Day-of-Week Emission Rate Variation

Scenario: Scenario 1

Source ID:	**FCONV**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**MCONV**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P3AEXTRACT**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P3BEXTACT**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00

Scenario: Scenario 1

Source ID:	**P3BEXTACT**							
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P3CEXTRACT**							
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P3HRD**							
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**PROCESS**							
Weekdays								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
	Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
	Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
		19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 1

Source ID:	**PROCESS**							
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**RSTACK2**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**RSTACK1**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**P3DEXTRACT**							
Weekdays								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	1.00	1.00	1.00	1.00	1.00
Day	13 - 18	1.00	1.00	1.00	1.00	1.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
of	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
Day	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Source Pathway

Scenario: Scenario 2

Source ID:	**HRT1**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	0.50	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**HRT2**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	0.50	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Source ID:	**HRT3**							
Weekdays								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	1.00	1.00	1.00
	13 - 18	1.00	1.00	1.00	0.50	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Saturday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00
Sunday								
Hour of Day	1 - 6	0.00	0.00	0.00	0.00	0.00	0.00
	7 - 12	0.00	0.00	0.00	0.00	0.00	0.00
	13 - 18	0.00	0.00	0.00	0.00	0.00	0.00
	19 - 24	0.00	0.00	0.00	0.00	0.00	0.00

Receptor Pathway

Receptor Networks

Note: Terrain Elavations and Flagpole Heights for Network Grids are in Page RE2 - 1 (If applicable)
Generated Discrete Receptors for Multi-Tier (Risk) Grid and Receptor Locations for Fenceline Grid are in Page RE3 - 1 (If applicable)

Uniform Cartesian Grid

Receptor Network ID	Grid Origin X Coordinate [m]	Grid Origin Y Coordinate [m]	No. of X-Axis Receptors	No. of Y-Axis Receptors	Spacing for X-Axis [m]	Spacing for Y-Axis [m]
UCART1	504500.00	3621700.00	55	30	100.00	100.00

Discrete Receptors

Discrete Cartesian Receptors

Record Number	X-Coordinate [m]	Y-Coordinate [m]	Group Name (Optional)	Terrain Elevations	Flagpole Heights [m] (Optional)
1	507580.81	3622577.05		101.29	
2	507634.55	3622614.60		101.74	
3	507681.66	3622633.00		103.37	
4	507723.62	3622649.19		103.54	
5	507783.24	3622669.80		103.49	
6	507839.92	3622670.54		104.03	
7	507898.81	3622678.64		104.29	
8	507988.61	3622701.46		106.91	
9	508100.50	3622721.33		107.75	
10	508252.14	3622738.26		111.47	
11	508274.96	3622762.55		111.53	
12	508270.54	3622789.05		111.43	
13	508272.75	3622822.91		109.73	
14	508282.32	3622851.62		109.37	
15	508302.19	3622882.54		107.33	
16	508325.01	3622917.14		107.30	
17	508348.57	3622925.23		108.65	
18	508374.33	3622925.23		109.95	
19	508389.79	3622921.55		109.97	
20	508410.40	3622914.19		110.32	
21	508429.54	3622906.09		110.35	
22	508450.89	3622892.84		110.08	
23	508463.40	3622878.86		110.24	
24	508474.44	3622867.08		111.65	
25	508490.64	3622854.57		112.54	
26	508539.96	3622846.47		114.28	

27	508572.35	3622891.37	115.79
28	508636.39	3622918.61	116.62
29	508794.57	3623262.05	113.43
30	508842.91	3623256.49	114.27
31	508873.61	3623236.24	116.16
32	509004.19	3623442.79	116.36
33	509022.69	3623510.97	116.18
34	509011.39	3623529.06	115.41
35	509090.50	3623601.26	115.51
36	509168.48	3623726.89	116.23
37	509315.56	3623943.46	115.94
38	508880.25	3624121.01	125.53
39	508844.97	3624057.24	118.77
40	508783.91	3624009.75	119.90
41	508746.82	3623951.85	118.60
42	508670.83	3623903.91	120.76
43	508594.85	3623863.20	127.80
44	508569.14	3623802.34	125.38
45	508562.36	3623740.37	118.33
46	508335.05	3623519.25	130.80
47	507959.93	3623225.12	123.76
48	507937.33	3623204.57	119.13
49	507912.67	3623191.01	118.90
50	507896.64	3623185.67	118.67
51	507881.85	3623175.81	118.28
52	507868.29	3623170.05	117.88
53	507849.80	3623163.07	117.24
54	507838.29	3623158.14	116.71
55	507823.09	3623151.15	116.36
56	507807.88	3623144.99	115.87
57	507793.09	3623136.36	115.20
58	507779.53	3623126.49	114.85
59	507763.91	3623121.56	114.28
60	507751.58	3623114.99	113.94
61	507723.23	3623084.17	109.22
62	507707.61	3623074.31	111.26
63	507696.93	3623064.03	112.76
64	507682.55	3623054.58	113.58

65	507668.99	3623044.72	114.67
66	507657.89	3623031.16	115.30
67	507645.56	3623022.12	116.36
68	507629.54	3623009.38	117.67
69	507616.80	3623002.39	118.44
70	507593.79	3622984.31	119.48
71	507571.59	3622976.09	119.80
72	507563.79	3622959.66	120.10
73	507550.64	3622947.74	117.71
74	507530.91	3622934.18	114.78
75	507506.67	3622924.73	114.64
76	507457.77	3622924.31	115.68
77	507453.66	3622897.60	115.51
78	507423.25	3622884.87	113.22
79	507408.04	3622879.11	112.64
80	507391.20	3622869.66	112.46
81	507374.35	3622863.09	112.33
82	507359.96	3622858.57	112.41
83	507345.99	3622855.28	112.74
84	507330.79	3622849.11	113.16
85	507317.64	3622846.65	113.46
86	507304.49	3622841.72	113.88
87	507288.05	3622839.25	114.25
88	507269.15	3622837.61	114.43
89	507252.71	3622836.79	114.65
90	507235.86	3622834.32	114.80
91	507222.71	3622833.50	114.60
92	507207.92	3622832.27	114.39
93	507191.07	3622831.03	113.90
94	507120.39	3622850.35	114.80
95	507101.90	3622847.47	115.13
96	507087.93	3622849.11	114.69
97	507077.24	3622850.76	114.83
98	507067.79	3622853.63	115.09
99	507057.52	3622855.28	115.22
100	507047.65	3622856.51	115.20
101	507036.56	3622858.15	115.27
102	507026.70	3622861.03	115.35

103	507015.19	3622863.09	115.31
104	507004.92	3622865.55	115.14
105	506995.88	3622865.14	115.09
106	506983.96	3622868.02	115.05
107	506975.74	3622868.43	115.05
108	506965.47	3622871.72	115.05
109	506955.19	3622875.00	114.87
110	506943.28	3622875.41	114.71
111	506930.54	3622880.76	114.57
112	506907.94	3622889.80	114.40
113	506892.32	3622907.06	114.68
114	506852.87	3623197.59	115.42
115	506861.09	3623235.80	115.69
116	506864.38	3623257.99	115.82
117	506868.08	3623296.62	113.65
118	506882.46	3623517.70	124.02
119	506876.71	3623532.91	124.05
120	506877.53	3623567.43	122.25
121	506896.96	3623639.34	123.44
122	506886.73	3623659.81	123.47
123	506883.58	3623681.85	123.53
124	506878.07	3623706.26	123.67
125	506882.01	3623729.09	123.89
126	506882.01	3623751.92	124.10
127	506888.30	3623773.17	124.32
128	506894.60	3623794.43	125.10
129	506904.05	3623815.68	126.24
130	506919.01	3623836.94	127.19
131	506930.82	3623854.26	127.88
132	506941.05	3623877.87	128.23
133	506947.35	3623893.62	126.57
134	506856.86	3623962.53	122.85
135	506856.29	3624303.98	135.49
136	506805.89	3624199.89	131.96
137	506808.57	3624149.04	129.97
138	506801.88	3624080.78	127.11
139	506805.89	3624047.99	126.16
140	506803.89	3623987.76	124.70

141	506791.17	3623955.64	124.15
142	506777.79	3623863.96	121.98
143	506756.37	3623821.13	121.93
144	506754.37	3623803.07	121.61
145	506767.75	3623780.98	121.25
146	506781.80	3623746.85	118.86
147	506795.19	3623704.03	117.07
148	506795.86	3623691.31	116.78
149	506797.86	3623681.27	116.53
150	506799.87	3623667.22	116.28
151	506801.88	3623651.83	116.11
152	506797.19	3623631.08	115.67
153	506791.84	3623576.21	115.16
154	506798.53	3623554.80	115.03
155	506797.86	3623535.39	114.83
156	506797.19	3623513.98	114.52
157	506797.86	3623489.89	114.17
158	506798.53	3623466.46	113.85
159	506797.86	3623443.71	113.50
160	506810.58	3623403.56	113.12
161	506815.26	3623374.78	112.62
162	506140.72	3622834.08	101.86
163	506097.89	3622814.01	102.79
164	506056.40	3622790.58	102.54
165	506010.90	3622766.49	102.41
166	505964.72	3622742.40	102.26
167	505905.84	3622704.93	102.45
168	505842.26	3622664.78	102.62
169	505800.77	3622637.34	103.73
170	505252.04	3622475.40	112.05
171	505410.76	3622390.74	106.51
172	505493.57	3622420.16	107.30
173	505605.81	3622446.32	104.98
174	505652.67	3622475.74	104.20
175	505758.36	3622541.12	103.87
176	505824.83	3622587.97	102.13
177	505873.87	3622621.75	101.92
178	505962.13	3622634.83	100.14

179	506647.54	3622965.00	104.50
180	506771.23	3622894.35	103.82
181	506778.84	3622941.54	105.58
182	506744.71	3622957.61	105.59
183	506696.52	3623003.12	106.26
184	506759.43	3623036.59	107.52
185	506799.59	3623087.46	109.15
186	506825.03	3623132.30	109.97
187	506884.60	3623439.52	117.86
188	506885.59	3624060.64	125.65
189	506865.33	3624127.94	129.39
190	506807.16	3623335.84	111.82
191	506662.43	3623064.93	105.91
192	506611.20	3623040.95	104.80
193	506564.33	3623018.06	104.87
194	506375.75	3622947.21	102.45
195	506333.24	3622925.40	103.07
196	506282.01	3622899.24	103.08
197	506247.13	3622880.71	103.27
198	505744.44	3622604.96	104.62
199	505710.97	3622588.89	104.92
200	505680.85	3622576.17	105.66
201	505658.75	3622556.76	105.78
202	505633.32	3622540.02	105.84
203	505590.47	3622507.89	106.09
204	505534.24	3622493.83	107.37
205	505471.98	3622482.45	107.97
206	505392.99	3622480.45	108.76
207	505309.98	3622472.41	109.66
208	504871.97	3622447.16	128.92
209	505117.07	3622465.66	116.19
210	504958.41	3622477.71	130.50
211	508353.65	3622554.75	117.19
212	506457.68	3623382.05	110.89
213	506367.01	3624009.61	164.05

Plant Boundary Receptors

Meteorology Pathway

Met Input Data

Surface Met Data

Filename: 722907.SFC
Format Type: Default AERMET format

Profile Met Data

Filename: 722907.PFL
Format Type: Default AERMET format

Wind Speed

☐ Wind Speeds are Vector Mean (Not Scalar Means)

Wind Direction

Rotation Adjustment [deg]:

Potential Temperature Profile

Base Elevation above MSL (for Primary Met Tower): 118.00 [m]

Meteorological Station Data

Stations	Station No.	Year	X Coordinate [m]	Y Coordinate [m]	Station Name
Surface		2009			
Upper Air		2009			

Data Period

Data Period to Process

Start Date: 1/1/2009 Start Hour: 1 End Date: 1/2/2014 End Hour: 24

Wind Speed Categories

Stability Category	Wind Speed [m/s]	Stability Category	Wind Speed [m/s]
A	1.54	D	8.23
B	3.09	E	10.8
C	5.14	F	No Upper Bound

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: SIR02_PHASE3_AERMOD.AD

Averaging Period	Source Group ID	High Value	File Name
1	ALL	1st	01H1GALL.PLT
Period	ALL	N/A	PE00GALL.PLT

HARP Project Summary Report

PROJECT INFORMATION
HARP Version: 21081
Project Name: SIR02_PHASE3_HARP
HARP Database: NA

EMISSION INVENTORY
No. of Pollutants:173
No. of Background Pollutants:0

Emissions

ScrID	StkID	ProID	PolID	PolAbbrev	Multi	Annual Em (lbs/yr)	MaxHr Em (lbs/hr)	MWAF
HRT1	0	0	9901	DieselExhPM	1	2.87937	0.001765	1
HRT2	0	0	9901	DieselExhPM	1	0.359482	0.00022	1
HRT3	0	0	9901	DieselExhPM	1	2.883311	0.001767	1
PROCESS	0	0	9901	DieselExhPM	1	28.81915	0.011482	1
PROCESS	0	0	7429905	Aluminum	1	36.55913	0.01442	1
PROCESS	0	0	7440382	Arsenic	1	0.05362	2.11E-05	1
PROCESS	0	0	7440393	Barium	1	0.548387	0.000216	1
PROCESS	0	0	7440417	Beryllium	1	0.002437	9.61E-07	1
PROCESS	0	0	7440439	Cadmium	1	0.002437	9.61E-07	1
PROCESS	0	0	18540299	Cr(VI)	1	0	0	1
PROCESS	0	0	7440473	Chromium	1	0.068244	2.69E-05	1
PROCESS	0	0	7440484	Cobalt	1	0.02681	1.06E-05	1
PROCESS	0	0	7440508	Copper	1	0.090179	3.56E-05	1
PROCESS	0	0	7439921	Lead	1	0.121864	4.81E-05	1
PROCESS	0	0	7439965	Manganese	1	1.291756	0.00051	1
PROCESS	0	0	7439976	Mercury	1	0	0	1
PROCESS	0	0	7440020	Nickel	1	0.068244	2.69E-05	1
PROCESS	0	0	7782492	Selenium	1	0.002437	9.61E-07	1
PROCESS	0	0	1175	Silica, Cryst	1	243.7276	0.096133	1
PROCESS	0	0	7440666	Zinc	1	0.24129	9.52E-05	1
RSTACK1	0	0	9901	DieselExhPM	1	0	0	1
RSTACK1	0	0	7429905	Aluminum	1	3.5532	0.001416	1
RSTACK1	0	0	7440382	Arsenic	1	0.004974	1.98E-06	1
RSTACK1	0	0	7440393	Barium	1	0.034348	1.37E-05	1
RSTACK1	0	0	7440417	Beryllium	1	0.000237	9.44E-08	1
RSTACK1	0	0	7440439	Cadmium	1	0.000237	9.44E-08	1
RSTACK1	0	0	18540299	Cr(VI)	1	0	0	1
RSTACK1	0	0	7440473	Chromium	1	0.005922	2.36E-06	1
RSTACK1	0	0	7440484	Cobalt	1	0	0	1
RSTACK1	0	0	7440508	Copper	1	0.009475	3.77E-06	1
RSTACK1	0	0	7439921	Lead	1	0.007106	2.83E-06	1
RSTACK1	0	0	7439965	Manganese	1	0.116071	4.62E-05	1
RSTACK1	0	0	7439976	Mercury	1	0	0	1

HARP Project Summary Report

RSTACK1	0	0	7440020	Nickel	1	0.004501	1.79E-06	1
RSTACK1	0	0	7782492	Selenium	1	0.000237	9.44E-08	1
RSTACK1	0	0	1175	Silica, Cryst	1	23.688	0.009437	1
RSTACK1	0	0	7440666	Zinc	1	0.026531	1.06E-05	1
RSTACK2	0	0	9901	DieselExhPM	1	0	0	1
RSTACK2	0	0	7429905	Aluminum	1	3.5532	0.001416	1
RSTACK2	0	0	7440382	Arsenic	1	0.004974	1.98E-06	1
RSTACK2	0	0	7440393	Barium	1	0.034348	1.37E-05	1
RSTACK2	0	0	7440417	Beryllium	1	0.000237	9.44E-08	1
RSTACK2	0	0	7440439	Cadmium	1	0.000237	9.44E-08	1
RSTACK2	0	0	18540299	Cr(VI)	1	0	0	1
RSTACK2	0	0	7440473	Chromium	1	0.005922	2.36E-06	1
RSTACK2	0	0	7440484	Cobalt	1	0	0	1
RSTACK2	0	0	7440508	Copper	1	0.009475	3.77E-06	1
RSTACK2	0	0	7439921	Lead	1	0.007106	2.83E-06	1
RSTACK2	0	0	7439965	Manganese	1	0.116071	4.62E-05	1
RSTACK2	0	0	7439976	Mercury	1	0	0	1
RSTACK2	0	0	7440020	Nickel	1	0.004501	1.79E-06	1
RSTACK2	0	0	7782492	Selenium	1	0.000237	9.44E-08	1
RSTACK2	0	0	1175	Silica, Cryst	1	23.688	0.009437	1
RSTACK2	0	0	7440666	Zinc	1	0.026531	1.06E-05	1
FCONV	0	0	9901	DieselExhPM	1	0	0	1
FCONV	0	0	7429905	Aluminum	1	0.6768	0.00027	1
FCONV	0	0	7440382	Arsenic	1	0.000203	8.09E-08	1
FCONV	0	0	7440393	Barium	1	0.005414	2.16E-06	1
FCONV	0	0	7440417	Beryllium	1	3.38E-05	1.35E-08	1
FCONV	0	0	7440439	Cadmium	1	3.38E-05	1.35E-08	1
FCONV	0	0	18540299	Cr(VI)	1	0	0	1
FCONV	0	0	7440473	Chromium	1	0.001151	4.58E-07	1
FCONV	0	0	7440484	Cobalt	1	0	0	1
FCONV	0	0	7440508	Copper	1	0.002436	9.71E-07	1
FCONV	0	0	7439921	Lead	1	0.000643	2.56E-07	1
FCONV	0	0	7439965	Manganese	1	0.01066	4.25E-06	1
FCONV	0	0	7439976	Mercury	1	0	0	1
FCONV	0	0	7440020	Nickel	1	0.000677	2.70E-07	1
FCONV	0	0	7782492	Selenium	1	3.38E-05	1.35E-08	1
FCONV	0	0	1175	Silica, Cryst	1	3.384	0.001348	1
FCONV	0	0	7440666	Zinc	1	0.002876	1.15E-06	1
MCONV	0	0	9901	DieselExhPM	1	0	0	1
MCONV	0	0	7429905	Aluminum	1	4.7376	0.001887	1
MCONV	0	0	7440382	Arsenic	1	0.001421	5.66E-07	1
MCONV	0	0	7440393	Barium	1	0.037901	1.51E-05	1
MCONV	0	0	7440417	Beryllium	1	0.000237	9.44E-08	1
MCONV	0	0	7440439	Cadmium	1	0.000237	9.44E-08	1
MCONV	0	0	18540299	Cr(VI)	1	0	0	1
MCONV	0	0	7440473	Chromium	1	0.008054	3.21E-06	1
MCONV	0	0	7440484	Cobalt	1	0	0	1

HARP Project Summary Report

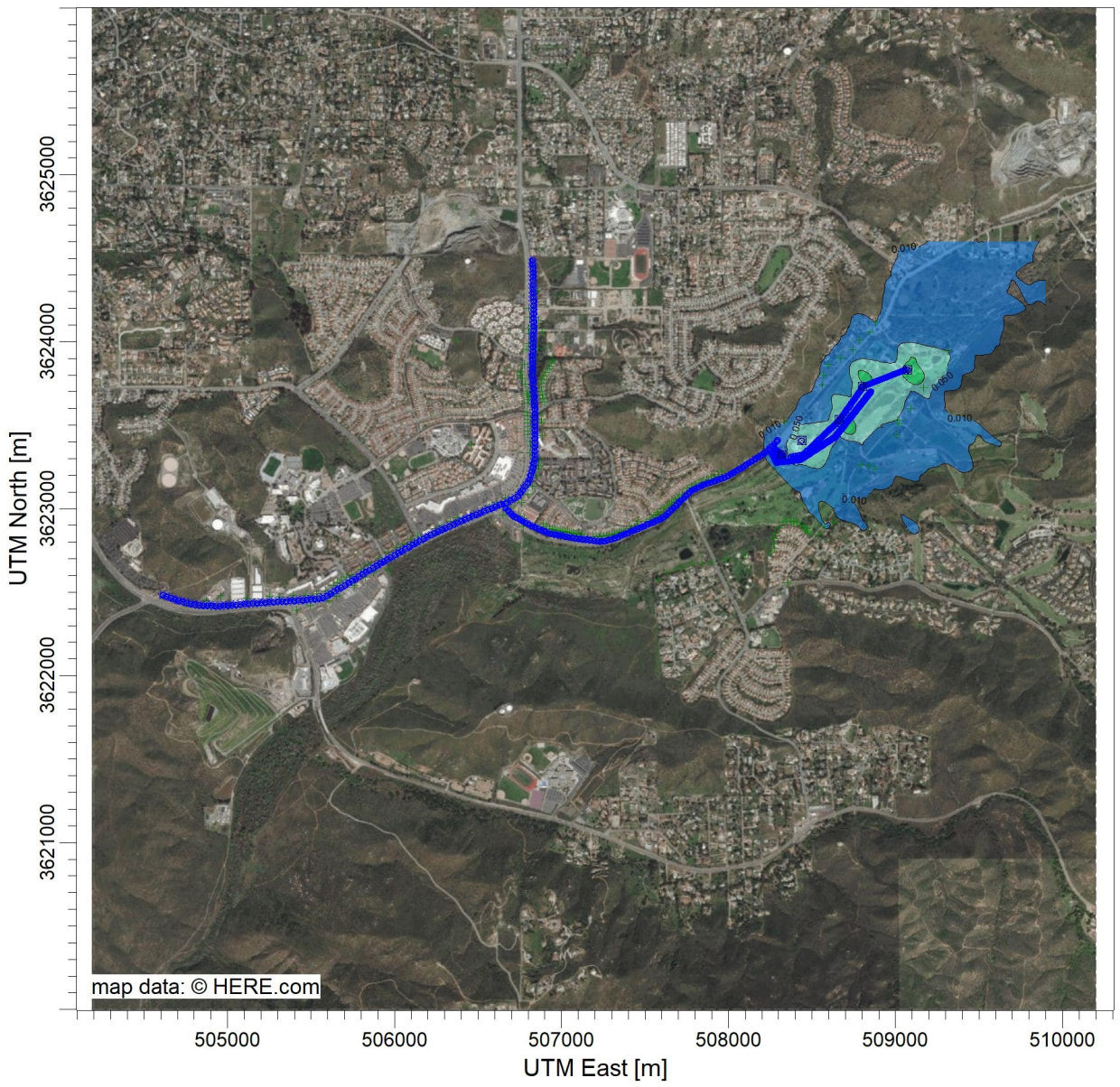
MCONV	0	0	7440508	Copper	1	0.017055	6.79E-06	1
MCONV	0	0	7439921	Lead	1	0.004501	1.79E-06	1
MCONV	0	0	7439965	Manganese	1	0.074617	2.97E-05	1
MCONV	0	0	7439976	Mercury	1	0	0	1
MCONV	0	0	7440020	Nickel	1	0.004738	1.89E-06	1
MCONV	0	0	7782492	Selenium	1	0.000237	9.44E-08	1
MCONV	0	0	1175	Silica, Cryst	1	23.688	0.009437	1
MCONV	0	0	7440666	Zinc	1	0.020135	8.02E-06	1
P3AEXTRACT	0	0	9901	DieselExhPM	1	30.62979	0.012203	1
P3AEXTRACT	0	0	7429905	Aluminum	1	106.0727	0.04226	1
P3AEXTRACT	0	0	7440382	Arsenic	1	0.031822	1.27E-05	1
P3AEXTRACT	0	0	7440393	Barium	1	0.848582	0.000338	1
P3AEXTRACT	0	0	7440417	Beryllium	1	0.005304	2.11E-06	1
P3AEXTRACT	0	0	7440439	Cadmium	1	0.005304	2.11E-06	1
P3AEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P3AEXTRACT	0	0	7440473	Chromium	1	0.180324	7.18E-05	1
P3AEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P3AEXTRACT	0	0	7440508	Copper	1	0.381862	0.000152	1
P3AEXTRACT	0	0	7439921	Lead	1	0.100769	4.01E-05	1
P3AEXTRACT	0	0	7439965	Manganese	1	1.670645	0.000666	1
P3AEXTRACT	0	0	7439976	Mercury	1	0	0	1
P3AEXTRACT	0	0	7440020	Nickel	1	0.106073	4.23E-05	1
P3AEXTRACT	0	0	7782492	Selenium	1	0.005304	2.11E-06	1
P3AEXTRACT	0	0	1175	Silica, Cryst	1	530.3635	0.2113	1
P3AEXTRACT	0	0	7440666	Zinc	1	0.450809	0.00018	1
P3BEXTRACT	0	0	9901	DieselExhPM	1	30.62979	0.012203	1
P3BEXTRACT	0	0	7429905	Aluminum	1	106.0727	0.04226	1
P3BEXTRACT	0	0	7440382	Arsenic	1	0.031822	1.27E-05	1
P3BEXTRACT	0	0	7440393	Barium	1	0.848582	0.000338	1
P3BEXTRACT	0	0	7440417	Beryllium	1	0.005304	2.11E-06	1
P3BEXTRACT	0	0	7440439	Cadmium	1	0.005304	2.11E-06	1
P3BEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P3BEXTRACT	0	0	7440473	Chromium	1	0.180324	7.18E-05	1
P3BEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P3BEXTRACT	0	0	7440508	Copper	1	0.381862	0.000152	1
P3BEXTRACT	0	0	7439921	Lead	1	0.100769	4.01E-05	1
P3BEXTRACT	0	0	7439965	Manganese	1	1.670645	0.000666	1
P3BEXTRACT	0	0	7439976	Mercury	1	0	0	1
P3BEXTRACT	0	0	7440020	Nickel	1	0.106073	4.23E-05	1
P3BEXTRACT	0	0	7782492	Selenium	1	0.005304	2.11E-06	1
P3BEXTRACT	0	0	1175	Silica, Cryst	1	530.3635	0.2113	1
P3BEXTRACT	0	0	7440666	Zinc	1	0.450809	0.00018	1
P3CEXTRACT	0	0	9901	DieselExhPM	1	30.62979	0.012203	1
P3CEXTRACT	0	0	7429905	Aluminum	1	106.0727	0.04226	1
P3CEXTRACT	0	0	7440382	Arsenic	1	0.031822	1.27E-05	1
P3CEXTRACT	0	0	7440393	Barium	1	0.848582	0.000338	1
P3CEXTRACT	0	0	7440417	Beryllium	1	0.005304	2.11E-06	1

HARP Project Summary Report

P3CEXTRACT	0	0	7440439	Cadmium	1	0.005304	2.11E-06	1
P3CEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P3CEXTRACT	0	0	7440473	Chromium	1	0.180324	7.18E-05	1
P3CEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P3CEXTRACT	0	0	7440508	Copper	1	0.381862	0.000152	1
P3CEXTRACT	0	0	7439921	Lead	1	0.100769	4.01E-05	1
P3CEXTRACT	0	0	7439965	Manganese	1	1.670645	0.000666	1
P3CEXTRACT	0	0	7439976	Mercury	1	0	0	1
P3CEXTRACT	0	0	7440020	Nickel	1	0.106073	4.23E-05	1
P3CEXTRACT	0	0	7782492	Selenium	1	0.005304	2.11E-06	1
P3CEXTRACT	0	0	1175	Silica, Cryst	1	530.3635	0.2113	1
P3CEXTRACT	0	0	7440666	Zinc	1	0.450809	0.00018	1
P3DEXTRACT	0	0	9901	DieselExhPM	1	22.97234	0.009152	1
P3DEXTRACT	0	0	7429905	Aluminum	1	79.55452	0.031695	1
P3DEXTRACT	0	0	7440382	Arsenic	1	0.023866	9.51E-06	1
P3DEXTRACT	0	0	7440393	Barium	1	0.636436	0.000254	1
P3DEXTRACT	0	0	7440417	Beryllium	1	0.003978	1.58E-06	1
P3DEXTRACT	0	0	7440439	Cadmium	1	0.003978	1.58E-06	1
P3DEXTRACT	0	0	18540299	Cr(VI)	1	0	0	1
P3DEXTRACT	0	0	7440473	Chromium	1	0.135243	5.39E-05	1
P3DEXTRACT	0	0	7440484	Cobalt	1	0	0	1
P3DEXTRACT	0	0	7440508	Copper	1	0.286396	0.000114	1
P3DEXTRACT	0	0	7439921	Lead	1	0.075577	3.01E-05	1
P3DEXTRACT	0	0	7439965	Manganese	1	1.252984	0.000499	1
P3DEXTRACT	0	0	7439976	Mercury	1	0	0	1
P3DEXTRACT	0	0	7440020	Nickel	1	0.079555	3.17E-05	1
P3DEXTRACT	0	0	7782492	Selenium	1	0.003978	1.58E-06	1
P3DEXTRACT	0	0	1175	Silica, Cryst	1	397.7726	0.158475	1
P3DEXTRACT	0	0	7440666	Zinc	1	0.338107	0.000135	1
P3HRD	0	0	9901	DieselExhPM	1	22.67455	0.009034	1
P3HRD	0	0	7429905	Aluminum	1	22.73617	0.009058	1
P3HRD	0	0	7440382	Arsenic	1	0.031831	1.27E-05	1
P3HRD	0	0	7440393	Barium	1	0.219783	8.76E-05	1
P3HRD	0	0	7440417	Beryllium	1	0.001516	6.04E-07	1
P3HRD	0	0	7440439	Cadmium	1	0.001516	6.04E-07	1
P3HRD	0	0	18540299	Cr(VI)	1	0	0	1
P3HRD	0	0	7440473	Chromium	1	0.037894	1.51E-05	1
P3HRD	0	0	7440484	Cobalt	1	0	0	1
P3HRD	0	0	7440508	Copper	1	0.06063	2.42E-05	1
P3HRD	0	0	7439921	Lead	1	0.045472	1.81E-05	1
P3HRD	0	0	7439965	Manganese	1	0.742715	0.000296	1
P3HRD	0	0	7439976	Mercury	1	0	0	1
P3HRD	0	0	7440020	Nickel	1	0.028799	1.15E-05	1
P3HRD	0	0	7782492	Selenium	1	0.001516	6.04E-07	1
P3HRD	0	0	1175	Silica, Cryst	1	151.5745	0.060388	1
P3HRD	0	0	7440666	Zinc	1	0.169763	6.76E-05	1

PROJECT TITLE:

Cottonwood Sand Mine Phase 3
Acute Hazard Index



COMMENTS:

Maximum Hazard Index

SOURCES:

13

RECEPTORS:

1863

OUTPUT TYPE:

Concentration

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

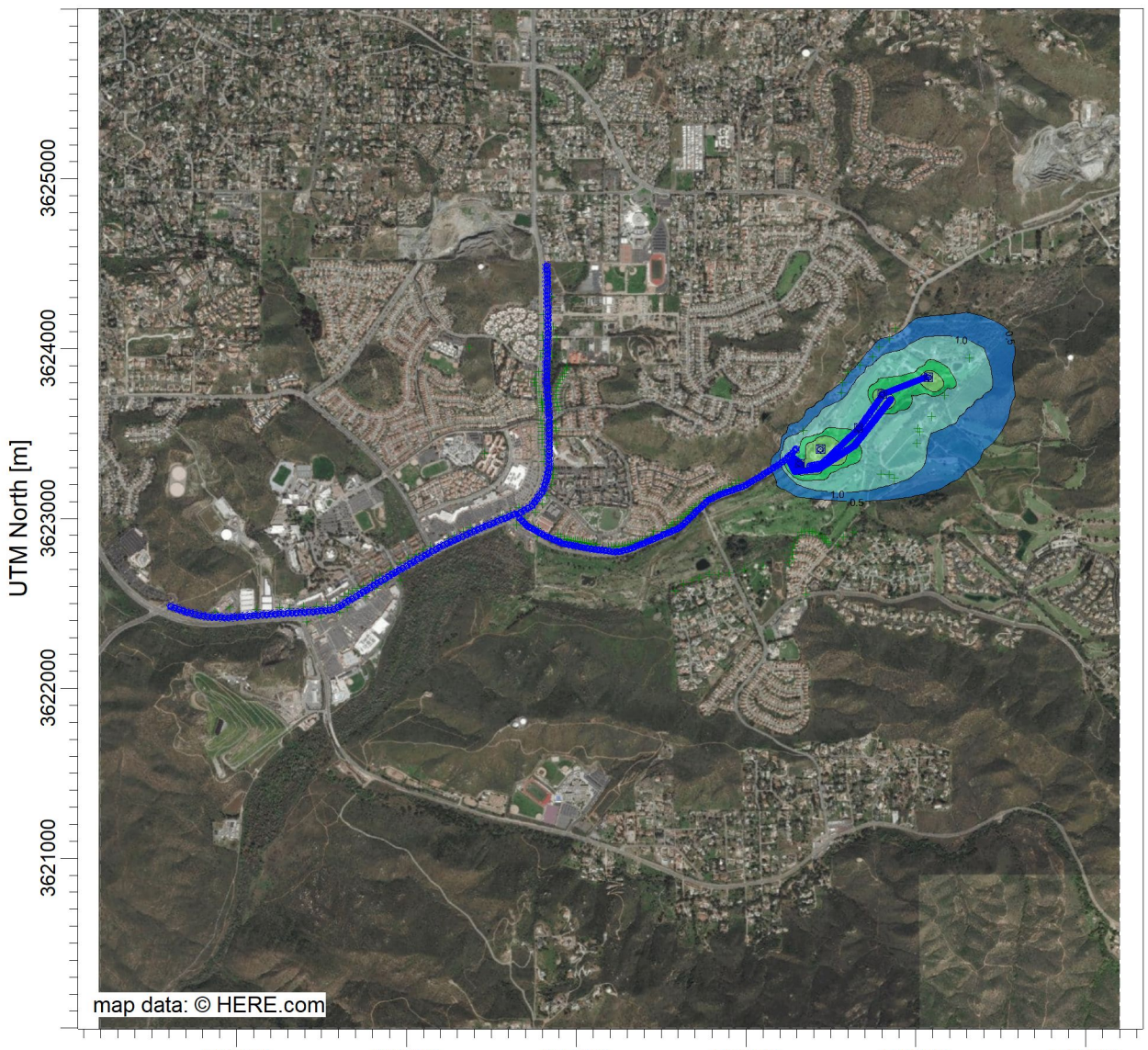
SCALE: 1:40,910

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 3
Residential Cancer Risk



COMMENTS:

Risk in chances per million

SOURCES:

13

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

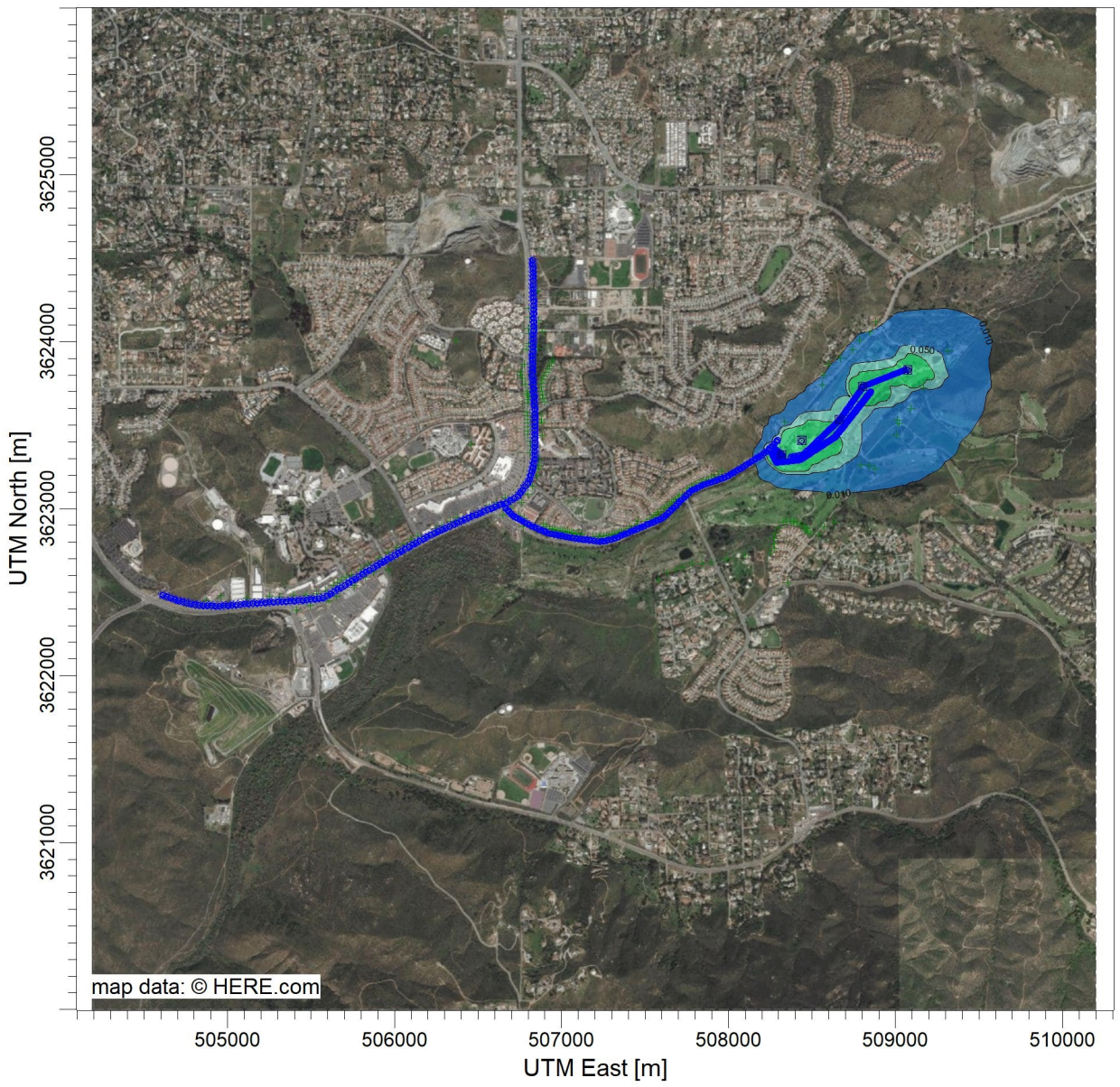
SCALE: 1:40,910

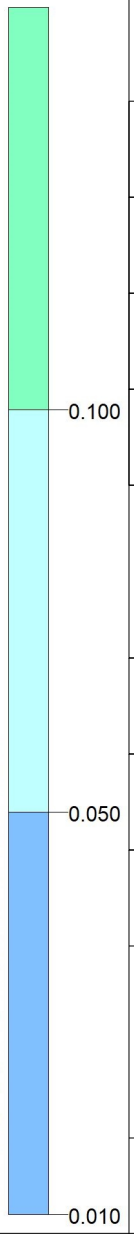
0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 3
Residential Chronic Hazard Index





COMMENTS:

Maximum Hazard Index

SOURCES:

13

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

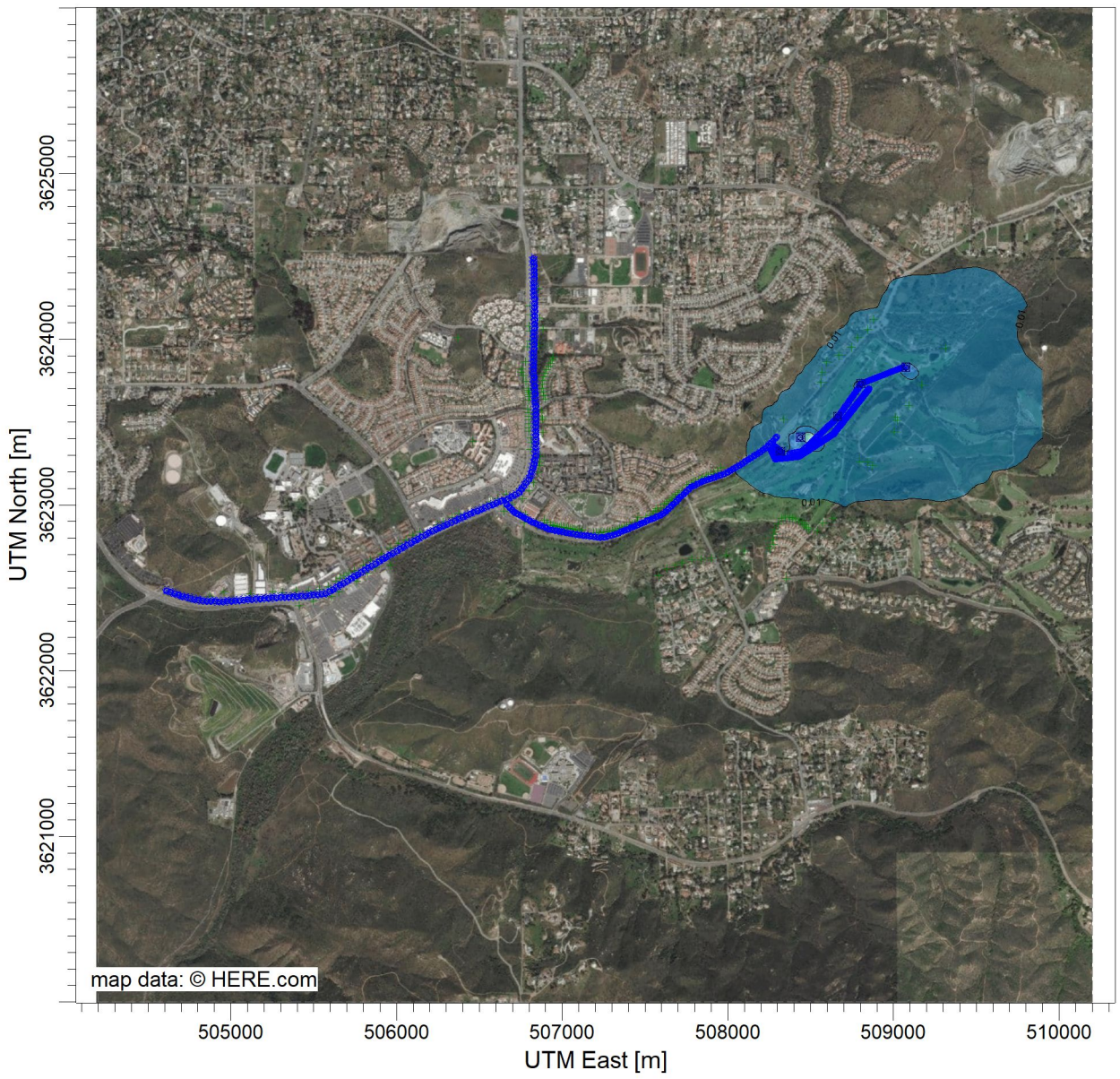
SCALE: 1:40,910

0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 3
Off-Site Worker Cancer Risk



COMMENTS:

Risk in chances per million

SOURCES:

13

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

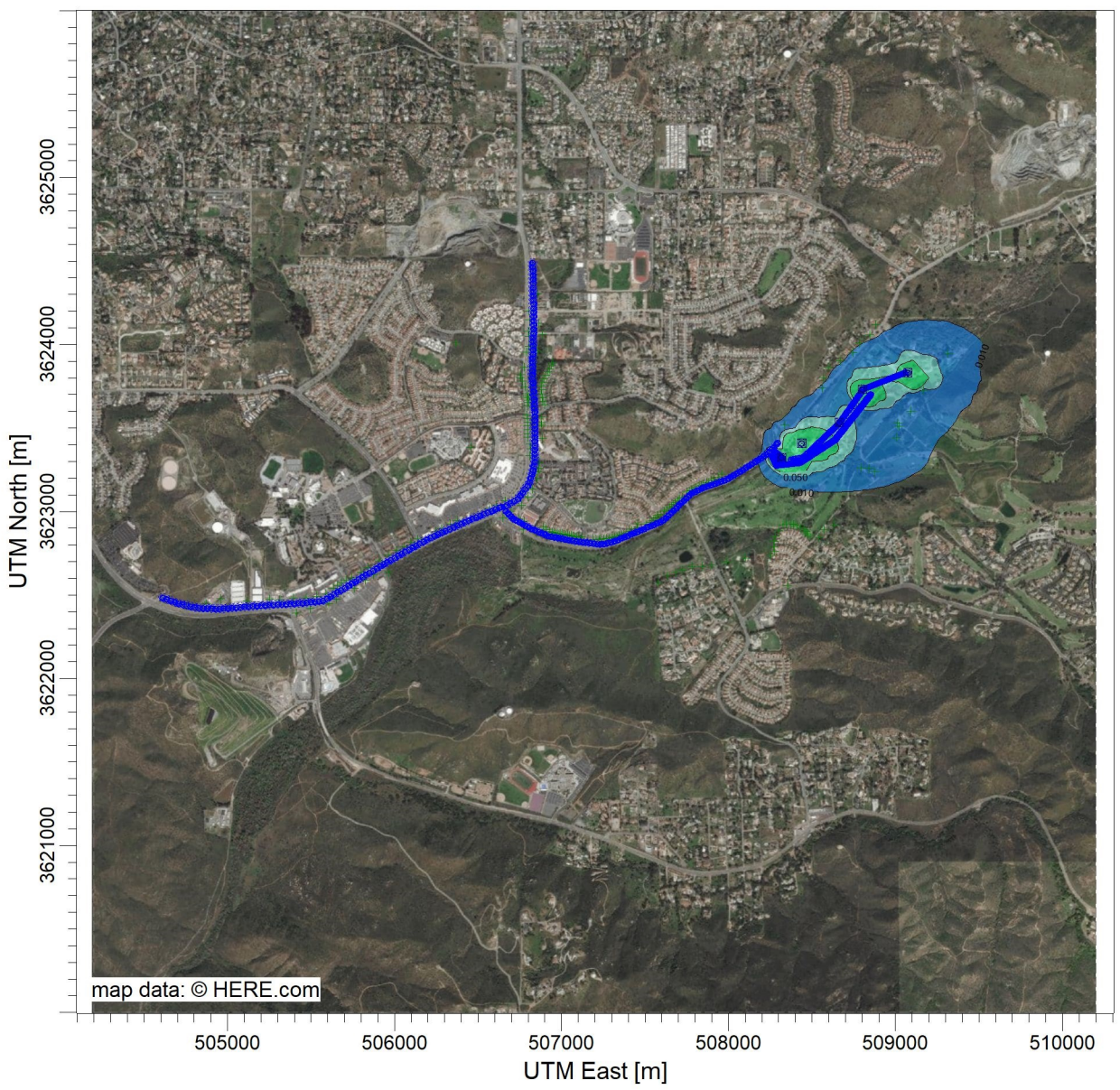
SCALE: 1:40,910

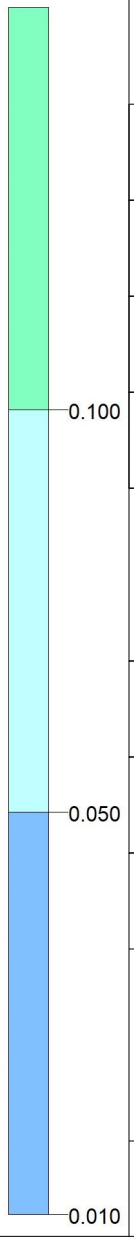
0 1 km

PROJECT NO.:

PROJECT TITLE:

Cottonwood Sand Mine Phase 3
Off-Site Worker Chronic Hazard Index





COMMENTS:

Maximum Hazard Index

SOURCES:

13

RECEPTORS:

1863

OUTPUT TYPE:

MAX:

COMPANY NAME:

HELIX Environmenal Planning

DATE:

11/5/2021

SCALE: 1:40,910

0 1 km

PROJECT NO.:

Output Pathway

Tabular Printed Outputs

Short Term Averaging Period	RECTABLE Highest Values Table										MAXTABLE Maximum Values Table	DAYTABLE Daily Values Table
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		No
MONTH	■	☐	☐	☐	☐	☐	☐	☐	☐	☐		No

Contour Plot Files (PLOTFILE)

Path for PLOTFILES: SIR02_PHASE2_LEAD.AD

Averaging Period	Source Group ID	High Value	File Name
Month	ALL	1st	MOH1GALL.PLT

Results Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.01379	ug/m^3	508000.00	3623000.00	106.80	1.20	301.10	7/31/2012, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00004	ug/m^3	1	507580.81	3622577.05	102.51	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507634.55	3622614.60	102.49	1.20	295.61	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507681.66	3622633.00	103.89	1.20	295.61	5/31/2012, 24
MONTH	1ST	0.00006	ug/m^3	1	507723.62	3622649.19	103.07	1.20	301.12	5/31/2012, 24
MONTH	1ST	0.00007	ug/m^3	1	507783.24	3622669.80	103.45	1.20	301.12	5/31/2012, 24
MONTH	1ST	0.00008	ug/m^3	1	507839.92	3622670.54	104.04	1.20	301.12	5/31/2012, 24
MONTH	1ST	0.00009	ug/m^3	1	507898.81	3622678.64	103.98	1.20	301.12	6/30/2012, 24
MONTH	1ST	0.00017	ug/m^3	1	507988.61	3622701.46	106.79	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00020	ug/m^3	1	508100.50	3622721.33	107.89	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00042	ug/m^3	1	508252.14	3622738.26	111.32	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00053	ug/m^3	1	508274.96	3622762.55	111.10	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00059	ug/m^3	1	508270.54	3622789.05	110.11	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00070	ug/m^3	1	508272.75	3622822.91	110.16	1.20	301.12	6/30/2012, 24
MONTH	1ST	0.00099	ug/m^3	1	508282.32	3622851.62	109.11	1.20	301.12	7/31/2012, 24
MONTH	1ST	0.00131	ug/m^3	1	508302.19	3622882.54	108.95	1.20	301.12	7/31/2012, 24
MONTH	1ST	0.00169	ug/m^3	1	508325.01	3622917.14	107.51	1.20	301.12	7/31/2012, 24
MONTH	1ST	0.00192	ug/m^3	1	508348.57	3622925.23	108.38	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00254	ug/m^3	1	508374.33	3622925.23	109.50	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00276	ug/m^3	1	508389.79	3622921.55	109.94	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00261	ug/m^3	1	508410.40	3622914.19	110.65	1.20	301.12	9/30/2012, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00236	ug/m^3	1	508429.54	3622906.09	111.04	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00207	ug/m^3	1	508450.89	3622892.84	110.49	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00181	ug/m^3	1	508463.40	3622878.86	110.40	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00162	ug/m^3	1	508474.44	3622867.08	110.74	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00137	ug/m^3	1	508490.64	3622854.57	111.86	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00109	ug/m^3	1	508539.96	3622846.47	114.30	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00157	ug/m^3	1	508572.35	3622891.37	115.96	1.20	301.12	7/31/2012, 24
MONTH	1ST	0.00150	ug/m^3	1	508636.39	3622918.61	116.66	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00087	ug/m^3	1	508794.57	3623262.05	113.59	1.20	301.12	7/31/2012, 24
MONTH	1ST	0.00073	ug/m^3	1	508842.91	3623256.49	114.36	1.20	301.12	7/31/2012, 24
MONTH	1ST	0.00072	ug/m^3	1	508873.61	3623236.24	115.92	1.20	301.12	9/30/2012, 24
MONTH	1ST	0.00019	ug/m^3	1	509004.19	3623442.79	116.30	1.20	304.85	6/30/2012, 24
MONTH	1ST	0.00017	ug/m^3	1	509022.69	3623510.97	116.19	1.20	304.85	6/30/2012, 24
MONTH	1ST	0.00016	ug/m^3	1	509011.39	3623529.06	115.34	1.20	304.85	6/30/2012, 24
MONTH	1ST	0.00012	ug/m^3	1	509090.50	3623601.26	115.60	1.20	304.85	6/30/2012, 24
MONTH	1ST	0.00009	ug/m^3	1	509168.48	3623726.89	116.13	1.20	304.85	12/31/2013, 24
MONTH	1ST	0.00006	ug/m^3	1	509315.56	3623943.46	115.85	1.20	304.85	6/30/2012, 24
MONTH	1ST	0.00008	ug/m^3	1	508880.25	3624121.01	124.37	1.20	304.85	7/31/2012, 24
MONTH	1ST	0.00011	ug/m^3	1	508844.97	3624057.24	118.44	1.20	304.85	7/31/2012, 24
MONTH	1ST	0.00012	ug/m^3	1	508783.91	3624009.75	119.84	1.20	304.85	8/31/2012, 24
MONTH	1ST	0.00013	ug/m^3	1	508746.82	3623951.85	118.43	1.20	304.85	8/31/2012, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00015	ug/m^3	1	508670.83	3623903.91	120.56	1.20	304.85	8/31/2012, 24
MONTH	1ST	0.00012	ug/m^3	1	508594.85	3623863.20	126.25	1.20	304.85	7/31/2012, 24
MONTH	1ST	0.00016	ug/m^3	1	508569.14	3623802.34	124.61	1.20	304.85	7/31/2012, 24
MONTH	1ST	0.00024	ug/m^3	1	508562.36	3623740.37	118.04	1.20	304.85	7/31/2012, 24
MONTH	1ST	0.00026	ug/m^3	1	508335.05	3623519.25	130.52	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00024	ug/m^3	1	507959.93	3623225.12	123.68	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00028	ug/m^3	1	507937.33	3623204.57	119.23	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00026	ug/m^3	1	507912.67	3623191.01	118.83	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00028	ug/m^3	1	507896.64	3623185.67	117.70	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00032	ug/m^3	1	507881.85	3623175.81	116.83	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00035	ug/m^3	1	507868.29	3623170.05	117.22	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00034	ug/m^3	1	507849.80	3623163.07	117.08	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00032	ug/m^3	1	507838.29	3623158.14	116.46	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00030	ug/m^3	1	507823.09	3623151.15	114.77	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00028	ug/m^3	1	507807.88	3623144.99	114.45	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00024	ug/m^3	1	507793.09	3623136.36	115.21	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00023	ug/m^3	1	507779.53	3623126.49	114.44	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00021	ug/m^3	1	507763.91	3623121.56	113.35	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00018	ug/m^3	1	507751.58	3623114.99	112.96	1.20	220.75	11/30/2013, 24
MONTH	1ST	0.00015	ug/m^3	1	507723.23	3623084.17	110.21	1.20	220.75	12/31/2012, 24
MONTH	1ST	0.00014	ug/m^3	1	507707.61	3623074.31	110.47	1.20	220.75	12/31/2012, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00013	ug/m^3	1	507696.93	3623064.03	111.71	1.20	220.75	5/31/2012, 24
MONTH	1ST	0.00012	ug/m^3	1	507682.55	3623054.58	112.30	1.20	220.40	5/31/2012, 24
MONTH	1ST	0.00012	ug/m^3	1	507668.99	3623044.72	113.94	1.20	218.95	5/31/2012, 24
MONTH	1ST	0.00011	ug/m^3	1	507657.89	3623031.16	114.33	1.20	216.21	5/31/2012, 24
MONTH	1ST	0.00011	ug/m^3	1	507645.56	3623022.12	114.62	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00010	ug/m^3	1	507629.54	3623009.38	116.68	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00009	ug/m^3	1	507616.80	3623002.39	117.68	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00007	ug/m^3	1	507593.79	3622984.31	118.40	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00006	ug/m^3	1	507571.59	3622976.09	119.94	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00006	ug/m^3	1	507563.79	3622959.66	118.68	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507550.64	3622947.74	117.42	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00006	ug/m^3	1	507530.91	3622934.18	113.56	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507506.67	3622924.73	114.42	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507457.77	3622924.31	115.78	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507453.66	3622897.60	114.18	1.20	211.75	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507423.25	3622884.87	113.00	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507408.04	3622879.11	112.21	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507391.20	3622869.66	111.54	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507374.35	3622863.09	112.24	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00005	ug/m^3	1	507359.96	3622858.57	112.43	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00004	ug/m^3	1	507345.99	3622855.28	112.76	1.20	249.45	5/31/2012, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00004	ug/m^3	1	507330.79	3622849.11	112.84	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00004	ug/m^3	1	507317.64	3622846.65	112.81	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00004	ug/m^3	1	507304.49	3622841.72	112.93	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00004	ug/m^3	1	507288.05	3622839.25	113.60	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507269.15	3622837.61	114.32	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507252.71	3622836.79	114.59	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507235.86	3622834.32	114.60	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507222.71	3622833.50	114.48	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507207.92	3622832.27	114.25	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507191.07	3622831.03	114.01	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507120.39	3622850.35	114.70	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507101.90	3622847.47	114.78	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507087.93	3622849.11	114.71	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	507077.24	3622850.76	114.97	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507067.79	3622853.63	115.24	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507057.52	3622855.28	115.32	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507047.65	3622856.51	115.34	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507036.56	3622858.15	115.36	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507026.70	3622861.03	115.32	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507015.19	3622863.09	115.25	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	507004.92	3622865.55	115.14	1.20	249.45	5/31/2012, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00002	ug/m^3	1	506995.88	3622865.14	115.09	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506983.96	3622868.02	114.96	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506975.74	3622868.43	114.90	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506965.47	3622871.72	114.76	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506955.19	3622875.00	114.66	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506943.28	3622875.41	114.65	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506930.54	3622880.76	114.59	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506907.94	3622889.80	114.73	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506892.32	3622907.06	114.69	1.20	249.45	5/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506852.87	3623197.59	115.35	1.20	211.75	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506861.09	3623235.80	115.51	1.20	211.75	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506864.38	3623257.99	115.64	1.20	211.75	12/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506868.08	3623296.62	115.15	1.20	247.21	5/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506882.46	3623517.70	124.08	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506876.71	3623532.91	123.99	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506877.53	3623567.43	122.29	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506896.96	3623639.34	123.44	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00002	ug/m^3	1	506886.73	3623659.81	123.75	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506883.58	3623681.85	123.61	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506878.07	3623706.26	123.67	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506882.01	3623729.09	123.86	1.20	247.21	11/30/2013, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00003	ug/m^3	1	506882.01	3623751.92	124.09	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506888.30	3623773.17	124.22	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506894.60	3623794.43	124.98	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506904.05	3623815.68	125.82	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506919.01	3623836.94	127.27	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506930.82	3623854.26	127.64	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506941.05	3623877.87	127.13	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506947.35	3623893.62	125.78	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506856.86	3623962.53	123.05	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506856.29	3624303.98	135.64	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506805.89	3624199.89	131.95	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506808.57	3624149.04	129.87	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506801.88	3624080.78	127.43	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506805.89	3624047.99	126.10	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506803.89	3623987.76	124.75	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506791.17	3623955.64	125.05	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506777.79	3623863.96	121.96	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506756.37	3623821.13	121.75	1.20	247.21	12/31/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506754.37	3623803.07	121.53	1.20	247.21	12/31/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506767.75	3623780.98	120.48	1.20	247.21	12/31/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506781.80	3623746.85	118.86	1.20	247.21	12/31/2013, 24

Sensitive Receptor Summary

SIR02 Cottonwood Sand Mine Phase 2 AERMOD

LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00003	ug/m^3	1	506795.19	3623704.03	117.11	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506795.86	3623691.31	116.91	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506797.86	3623681.27	116.69	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506799.87	3623667.22	116.52	1.20	247.21	11/30/2013, 24
MONTH	1ST	0.00003	ug/m^3	1	506801.88	3623651.83	116.32	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506797.19	3623631.08	116.39	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506791.84	3623576.21	115.40	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506798.53	3623554.80	115.28	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506797.86	3623535.39	114.92	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506797.19	3623513.98	114.61	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506797.86	3623489.89	114.31	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506798.53	3623466.46	113.99	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00003	ug/m^3	1	506797.86	3623443.71	113.65	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00002	ug/m^3	1	506810.58	3623403.56	113.29	1.20	247.21	12/31/2013, 24
MONTH	1ST	0.00002	ug/m^3	1	506815.26	3623374.78	112.77	1.20	247.21	12/31/2013, 24
MONTH	1ST	0.00001	ug/m^3	1	506140.72	3622834.08	102.05	1.20	249.45	9/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	506097.89	3622814.01	102.74	1.20	249.45	9/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	506056.40	3622790.58	102.24	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	506010.90	3622766.49	102.31	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	505964.72	3622742.40	102.14	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	505905.84	3622704.93	102.25	1.20	249.45	6/30/2012, 24

Sensitive Receptor Summary

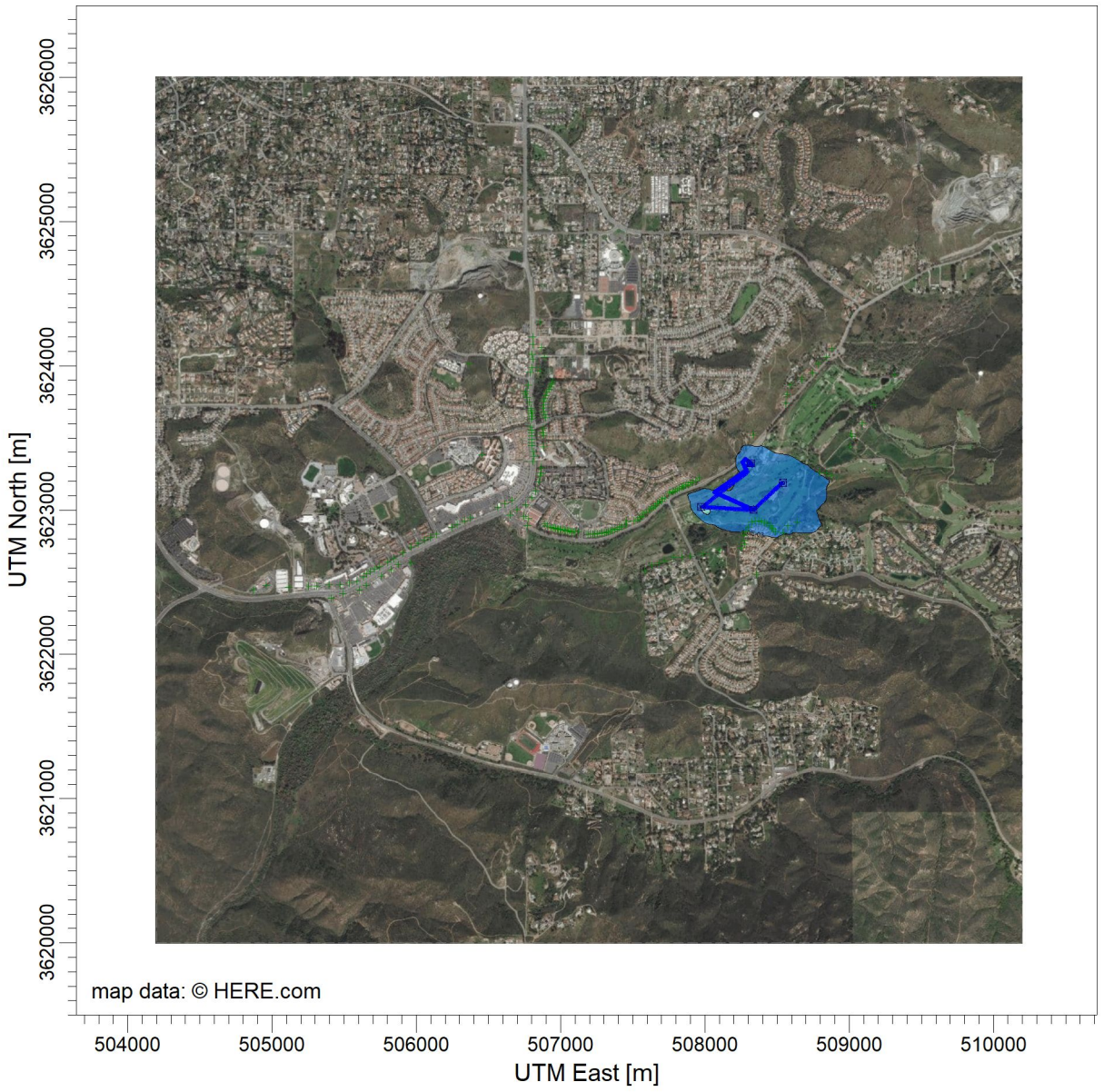
SIR02 Cottonwood Sand Mine Phase 2 AERMOD

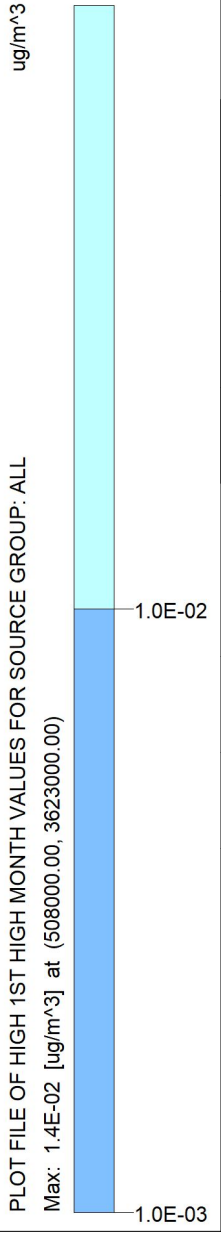
LEAD - Concentration - Source Group: ALL

Averaging Period	Rank	Peak	Units	Receptor ID	X (m)	Y (m)	ZELEV (m)	ZFLAG (m)	ZHILL (m)	Peak Date, Start Hour
MONTH	1ST	0.00001	ug/m^3	1	505842.26	3622664.78	102.58	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	505800.77	3622637.34	103.62	1.20	249.45	6/30/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	505252.04	3622475.40	112.09	1.20	228.97	6/30/2012, 24
MONTH	1ST	0.00018	ug/m^3	1	508353.65	3622554.75	116.53	1.20	301.12	12/31/2013, 24
MONTH	1ST	0.00002	ug/m^3	1	506457.68	3623382.05	110.48	1.20	247.21	12/31/2012, 24
MONTH	1ST	0.00001	ug/m^3	1	506367.01	3624009.61	163.47	1.20	247.21	11/30/2013, 24

PROJECT TITLE:

Cottonwood Sand Mine Phase 2
30-day Lead Concentration





COMMENTS:

SOURCES:
9

RECEPTORS:
1863

OUTPUT TYPE:
Concentration

MAX:
1.4E-02 ug/m^3

COMPANY NAME:
HELIX Environmenal Planning

DATE:
11/5/2021

SCALE: 1:47,619
0 1 km

PROJECT NO.: