CEMEX CONSTRUCTION MATERIALS PACIFIC, LLC.

CLAYTON QUARRY

PRELIMINARY ESTIMATE OF AIR AND GREENHOUSE GAS EMISSIONS FOR THE 1983 RECLAMATION PLAN BACKFILL

PREPARED FOR:

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FOR SUBMITTAL TO:

Contra Costa County
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Community Development Division
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COMPASS LAND GROUP

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APPENDICES

1.0 PURPOSE AND SCOPE

Compass Land Group ("Compass") has prepared this preliminary estimate of air and greenhouse gas emissions ("Study") in support of the CEMEX Construction Materials, LLC. ("CEMEX") Clayton Quarry Reclamation Plan Amendment Project in unincorporated Contra Costa County, California ("Project", LUP #s LP15-2030/31). As part of the Project, CEMEX proposes an amendment to its 1983 Reclamation Plan ("1983 Plan") through adoption of a *Revised Reclamation Plan.* This Study is not intended as a comprehensive study of emissions associated with implementation of either the 1983 Plan or Revised Reclamation Plan. Instead, the focus of this Study is to perform a preliminary estimate of the emissions associated with carrying out the backfill requirements of the *current* 1983 Plan. This information may be useful to understand the order of magnitude of potential emissions that could be avoided through adoption of the *Revised Reclamation Plan*.

The sections that follow provide a description of the Project, methods for air quality and greenhouse gas emissions evaluation, and preliminary emissions estimates.

2.0 1983 PLAN IMPLEMENTATION: QUARRY PIT BACKFILL

The 1983 Plan envisions mining to 500' msl with a quarry pit backfill to 650' msl with positive drainage out of the quarry pit. Subsequent to 1983 Plan approval, a Final Drainage Plan (dated May 15, 1984) was submitted in response to Condition #17 (of LUP #2054-81), which shows an approximate backfill elevation of 700' msl at the west side of the quarry and 650' msl at the east side of the quarry, with a 2% minimum slope draining toward Mitchell Canyon Road. However, a contemporary geologic model prepared by Jeff Light Geologic Consulting indicates that in order to achieve a balanced backfill scenario with positive drainage, CEMEX would need to handle approximately 17.1 MCY of overburden to backfill the quarry pit to a toe elevation of 650' msl and crest elevation of 790' msl (at the base of the western quarry high wall). Overburden materials would be excavated and transported to the quarry floor using a combination of excavators and articulating haul-trucks (i.e., a Phase 1 backfill from 500' msl to 650' msl) and scrapers (i.e., a Phase 2 backfill from 650' msl to 790' msl). Of this total, approximately 10.2 MCY would be moved in Phase 1 and 6.9 MCY would be moved in Phase 2. In both cases, it is assumed that a bulldozer, motor grader, compactor, and water pull would assist on the backfill grade.

3.0 METHODS AND ASSUMPTIONS

This Study utilizes the California Emissions Estimator Model (CalEEMod). CalEEMod is a widely accepted modeling tool maintained by the California Air Pollution Control Officers Association (CAPCOA). CalEEMod incorporates state and locally approved emission factors and methodologies for estimating both the daily maximum and annual average emissions levels for criteria pollutants and greenhouse gas emissions associated with land development projects, including mining.

In order to assess Study emissions for the 1983 Plan and 1984 Final Drainage Plan backfill requirement, CalEEMod Version 2016.3.2 was used with the assumptions set forth below.

General

1. ***Operational Emissions:*** Operational emissions associated with carrying out the backfill requirements of reclamation are modeled using the CalEEMod Construction modules, which are setup to better address conventional site grading and earthmoving activities typical of mining applications.

Site Characteristics

1. ***Project Location:*** Location is set to the County level for Contra Costa County. This sets windspeed and precipitation frequency assumptions for modeling. The Project site is located within the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) and part of the San Francisco Bay Area Air Basin (SFBAAB). The SFBAAB is currently designated as a nonattainment area for state and national ozone standards and national particulate matter ambient air quality standards.

2. ***Lot Acreage:*** Under the 1983 Plan, the reclaimed quarry pit would encompass ±154 acres. For grading activity, this model input parameter has a negligible impact on modeled emissions outputs.

3. ***Urbanization:*** The land use setting is designated as rural, as the Project site is located in an open space environment in the unincorporated portions of Contra Costa County.

4. ***Climate Zone:*** The site is located within Climate Zone 4 based on the site's zip code.

Operational Parameters

1. ***Site Preparation:*** To carry out the backfill objectives of the 1983 Plan, site preparation would generally be limited to grading and maintenance of haul roads for overburden transport. These activities would require limited use of off-road equipment and emissions generated during this time-period would be significantly overshadowed by operational emissions once those roads are in place and backfill operations commence. Further, including routine site preparatory activities in this estimate would muddle a comparison of carrying out backfill obligations under the 1983 Plan versus not having to perform backfill under the proposed Project's Revised Reclamation Plan. For the reasons set forth above, and in order to focus this Study on the emissions associated with carrying out only the backfill requirements of the 1983 Plan, site preparation emissions are omitted from the analysis.

2. ***Production:*** The emissions analyses are based on equipment and production input parameters developed in coordination with CEMEX. Please refer to **Appendix A**, Equipment Input Parameters, and **Appendix B**, Construction Input Parameters. For Phase 1 backfill, the model is set to commence grading activity on April 1, 2019 (at the beginning of the coming dry season) and is completed by May 24, 2021. For Phase 2 backfill, the model is set to commence grading activity on May 25, 2021 and is completed by July 13,

2022. Actual final reclamation is not likely to occur for decades (until after mining is complete).

3. ***Equipment:*** CEMEX provided input into the equipment to be used to carry out the backfill requirements of the 1983 Plan and 1984 Final Drainage Plan (see **Appendix A**). Equipment horsepower ratings were obtained from CEMEX and the manufacturer (Caterpillar Handbook, Edition 37), while load factors were obtained from data provided by the California Air Resources Board.

    - ***For Phase 1 backfill from 500' msl to 650' msl,*** off-road equipment operation is assumed to include 2 excavators (Cat 385), 20 articulating haul trucks (Cat 740), 1 bulldozer (Cat D10), 1 motor grader (Cat 14M), 1 compactor (Cat 825), and 1 water pull (powered by a Cat 631 tractor). The operation will be governed by the excavator production capacity with support equipment (e.g., bulldozer) sized to match that production.

    - ***For Phase 2 backfill from 650' msl to 790' msl,*** off-road equipment operation is assumed to include 8 scrapers (Cat 637), 1 bulldozer (Cat D10), 1 motor grader (Cat 14M), 1 compactor (Cat 825), and 1 water pull (powered by a Cat 631 tractor). The operation will be governed by the scraper production capacity with support equipment (e.g., bulldozer) sized to match that production.

4. ***Energy Use:*** For purposes of carrying out the backfill requirements of the 1983 Plan, energy use is assumed to be zero.

5. ***Mitigated Construction:*** The "mitigated construction" results (as reported in Appendices C and D) reflect the use of CEMEX's existing equipment fleet, which includes Tier 3 or better engines. The mitigated construction assumptions also assume that disturbed surfaces would be wetted at least two times per day for dust control. CEMEX's current operating practices involve the use of a full-time water truck; therefore, this assumption is considered reasonable. No other mitigations have been modeled or credited in CalEEMod. Based on the foregoing, the mitigated construction results have been presented in Table 2 below as the Study's modeled emissions.

6. ***Trips and VMT:*** No material import or export is assumed as all materials used in the quarry pit backfill are assumed to be sourced on-site. Employee and vendor trips utilize model defaults and contribute only negligibly to Study emissions.

4.0 RESULTS

Study emissions estimates are summarized in Tables 1, 2, and 3 below.

TABLE 1

MODELED MAXIMUM DAILY EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS (LB/DAY)

Phase	ROG	NOx	PM_{10} (Total)	$PM_{2.5}$ (Total)	CO_2
Ph. 1	10.6	191.1	10.7	8.9	40,327.1
Ph. 2	2.2	35.4	4.7	3.0	7,342.3

Notes:

1. Detailed CalEEMod model outputs are reported in Appendix C.
2. PM Total represents the sum of fugitive and exhaust PM emissions.

TABLE 2

MODELED ANNUAL EMISSIONS OF CRITERIA AIR POLLUTANTS AND PRECURSORS (TONS/YEAR)

Year / Phase	ROG	NOx	PM_{10} (Total)	$PM_{2.5}$ (Total)	CO_2 (MT/year)
2019 /Ph. 1	1.0	18.8	1.1	0.9	3,599.4
2020 /Ph. 1	1.4	24.9	1.4	1.2	4,680.4
2021 /Ph. 2	0.7	12.4	1.0	0.7	2,349.6
2022 /Ph. 2	0.1	2.4	0.3	0.2	458.0
Total	**3.2**	**58.5**	**3.8**	**3.0**	**11,087.4**

Notes:

1. Detailed CalEEMod model outputs are reported in Appendix D.
2. PM Total represents the sum of fugitive and exhaust PM emissions.

TABLE 3

MODELED GREENHOUSE GAS EMISSIONS (METRIC TONS/YEAR)

Year / Phase	CO_2 (Total)	CH_4	N_20	CO_2E
2019 /Ph. 1	3,599.4	1.1	0.0	3,627.5
2020 /Ph. 1	4,680.4	1.5	0.0	4,717.8
2021 /Ph. 1 & 2	2,349.6	0.7	0.0	2,368.3
2022 /Ph. 2	458.0	0.1	0.0	461.6
Total	**11,087.4**	**3.4**	**0.0**	**11,175.2**

Notes:

1. Detailed CalEEMod model outputs are reported in Appendix D.

5.0 CONCLUSIONS

Based on the Study emissions estimates, implementation of the 1983 Plan's backfill requirement would generate significant levels of air quality pollutants and greenhouse gas emissions. Unlike the 1983 Plan, the proposed Project would not require backfill of the quarry pit as the quarry would be reclaimed to an open space condition that would adapt to a quarry lake over time. As such, the emissions estimated in this Study could be avoided upon County approval of the proposed Project's Revised Reclamation Plan.

Appendix A:
Equipment Input Parameters

Appendix A
Clayton Quarry Reclamation - 1983 Plan Backfill
Equipment Input Parameters

Equipment	Model (or equivalent)	HP	Tier
Phase 1 Backfill from 500' to 650' msl with haul trucks			
Excavator	CAT 385	523	3
Haul Trucks	CAT 740	457	3
Dozer	CAT D10	580	3
Motor Grader	CAT 14M3	259	3
Compactor	CAT 825	354	3
Water Pull (Scraper Tractor)	CAT 631	500	3
Phase 2 Backfill from 650' to 790' msl with scrapers			
Scrapers	CAT 637	783	3
Dozer	CAT D10	580	3
Motor Grader	CAT 14M3	259	3
Compactor	CAT 825	354	3
Water Pull (Scraper Tractor)	CAT 631	500	3

Appendix B:
Construction Input Parameters

Appendix B
Clayton Quarry Reclamation - 1983 Plan Backfill
Construction Input Parameters for Backfill Operations

Information Sources:

Quantities provided by Jeff Light Geologic Consulting (August 6, 2018).
Construction parameters developed in coordination with CEMEX.
Equipment production factors sources from Caterpillar Performance Handbook, Ed. 37.

Primary Reclamation Activity:

As reported by Jeff Light Geologic Consulting, approximately 17.1 million cubic yards of Knoxville overburden would need to be moved to carry out reclamation under the 1983 Plan and 1984 Final Drainage Plan with a backfill to elevation 790' msl at the base of the western quarry high wall. Overburden materials would be transported to the quarry floor using a combination of articulating haul-trucks (Phase 1 backfill from 500' msl to 650' msl) and scrapers (Phase 2 backfill from 650' msl to 790' msl). Of this total, approximately 10.2 million cubic yards is assumed to be moved in Phase 1 and 6.9 million cubic yards is assumed to be moved in Phase 2.

1. Phase 1 Backfill with Haul Trucks from 500' msl to 650' msl

Method:

For the first approximately 10.2 million cubic yards of backfill, this estimating method assumes an excavator will load articulating haul trucks. A bulldozer, motor grader, compactor, and water pull will assist on backfill grade. The operation will be governed by the excavator production capacity with the haul trucks and dozers sized to match that production. Although the haul distance and haul road grade will vary over time, this estimate conservatively assumes the following:

General Assumptions:

Production hours per shift:	8	hours
Shifts per day:	1	shifts
Production days per year:	250	days (5 days/week @ 50 weeks)
Efficiency:	83.3%	= 50 min hour / 60 min
Total CY moved:	10,200,000	CY

Cat 385 Production Assumptions Per Excavator:

Cat 385 excavator capacity:	7.5	CY heaped with mass excavation bucket
Cat 740 haul truck capacity:	22.9	CY loose in truck based on a 40-ton capacity
Load/Swing/Dump/Swing Cycle:	0.33	minutes
Bucket cycles per truck:	3.0	cycles
Total load time per truck:	1.0	minutes
Truck loads per hour:	60	loads @ 100% efficiency
CY per hour:	1,364	CY per excavator @ 100% efficiency
CY per hour, w/ efficiency factor:	1,136	CY per excavator adjusted for efficiency factor
CY per shift:	9,087	CY per excavator adjusted for efficiency factor

Production Summary:

Qty of production excavators:	2	Cat 385 excavators
Total production hours:	4,490	hours per excavator
Total production days:	561	days
Total production years:	2.2	years

Cat 740 Haul Truck and Haul Road Assumptions:

Haul distance:	4,000	LF est. one way (winding down toward pit floor)
Haul road grade:	10%	avg. grade
Haul road rolling resistance:	3%	firm, smooth, rolling road w/ dirt surfacing
Speed estimate, loaded:	9	mph based on Cat retarding/rimpull curve; geared down
Speed estimate, unloaded:	14	mph based on Cat retarding/rimpull curve; geared down
Truck maneuver in load area:	0.7	minutes
Travel time loaded:	5.1	minutes
Maneuver at dump point:	1.1	minutes
Travel time unloaded:	3.2	minutes
Total haul cycle time per load:	10.1	minutes
Recommended # of trucks:	20	trucks (# of excavators x (haul time / load time per truck))

2. Phase 2 Backfill with Scrapers from 650' msl to 790' msl

Method:

For the Phase 2 backfill (from 650' msl to 790' msl) this estimating method assumes that 6,900,000 cubic yards of backfill would be accomplished with scrapers given the shorter haul distances, pure overburden handle and earthmoving grades. A bulldozer, motor grader, compactor, and water pull will assist on backfill grade.

Scrapers at average haul distance 1,000 feet. Cat 637 push-pull scraper: assume 20 cy/load heaped, 2.75 min cycle time, 90% efficiency = 20 loads per hour (400 cy per hour) per scraper. Assume dozer and motor grader assisting on-grade at 4 hours each per day of scraper operation. Dozer/motor-grader operator assumed to also serve as working foreman.

General Assumptions:

Production hours per shift:	8	hours
Shifts per day:	1	shifts
Production days per year:	250	days, assuming 5 days per week 50 weeks per year
Efficiency:	83.3%	= 50 min hour / 60 min
Total CY moved:	6,900,000	CY

Cat 637 Scraper Production Assumptions:

Scraper load capacity:	20.0	CY per load (heaped)
Scraper cycle time:	2.75	minutes
CY per hour:	436	CY per scraper @ 100% efficiency
CY per hour, w/ efficiency factor:	363	CY per scraper adjusted for efficiency factor
CY per shift:	2,908	CY per scraper adjusted for efficiency factor

Production Summary:

Qty of scrapers:	8	scrapers
Total production hours:	2,373	hours
Total production days:	297	days
Total production years:	1.2	years

Appendix C:
CalEEMod Model Report: Daily Emissions

Clayton Quarry Reclamation - 1983 Plan Backfill

Contra Costa County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	154.00	User Defined Unit	154.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Air emissions estimate assumes backfill to a toe elevation of 650' msl and crest elevation of 790' msl at the base of the western high wall.

Land Use - Quarry area to be reclaimed approx. 154 acres per Spinardi Associates.

Construction Phase - Construction assumptions and duration developed in coordination with CEMEX.

Off-road Equipment - For Phase 1, equipment type "scraper" represents Cat 631 Water Pull. Off-highway trucks represent Cat 740 Haul Trucks.

Off-road Equipment - For Phase 2, 500 hp scraper represents Cat 631 Water Pull.

Grading - No material import/export assumed.

Energy Use -

Construction Off-road Equipment Mitigation - All off-road equipment Tier 3 or better. Water exposed surfaces 2x per day.

Clayton Quarry Reclamation - 1983 Plan Backfill - Contra Costa County, Summer

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	310.00	561.00
tblConstructionPhase	NumDays	310.00	297.00
tblGrading	AcresOfGrading	841.50	154.00
tblGrading	AcresOfGrading	2,821.50	154.00
tblLandUse	LotAcreage	0.00	154.00
tblOffRoadEquipment	HorsePower	158.00	523.00
tblOffRoadEquipment	HorsePower	187.00	259.00
tblOffRoadEquipment	HorsePower	187.00	259.00
tblOffRoadEquipment	HorsePower	247.00	580.00
tblOffRoadEquipment	HorsePower	247.00	580.00
tblOffRoadEquipment	HorsePower	367.00	500.00
tblOffRoadEquipment	HorsePower	367.00	500.00
tblOffRoadEquipment	HorsePower	367.00	783.00
tblOffRoadEquipment	HorsePower	402.00	457.00

tblOffRoadEquipment	HorsePower	80.00	354.00
tblOffRoadEquipment	HorsePower	80.00	354.00
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	70.00	65.00
tblTripsAndVMT	WorkerTripNumber	40.00	30.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	22.5577	237.6171	135.0669	0.4074	6.8472	8.8015	15.6487	3.4833	8.0974	11.5807	0.0000	40,327.0954	40,327.0954	12.5967	0.0000	40,642.0127
2020	21.2886	214.1222	129.5878	0.4071	6.8472	7.9321	14.7792	3.4833	7.2975	10.7808	0.0000	39,428.6395	39,428.6395	12.5896	0.0000	39,743.3785
2021	19.7811	186.1912	123.6381	0.4070	6.8472	6.9202	13.7674	3.4833	6.3666	9.8499	0.0000	39,413.1560	39,413.1560	12.5894	0.0000	39,727.8903
2022	4.6695	52.4935	36.2990	0.0757	6.8184	2.0463	8.8647	3.4350	1.8826	5.3176	0.0000	7,335.3357	7,335.3357	2.3020	0.0000	7,392.8853
Maximum	**22.5577**	**237.6171**	**135.0669**	**0.4074**	**6.8472**	**8.8015**	**15.6487**	**3.4833**	**8.0974**	**11.5807**	**0.0000**	**40,327.0954**	**40,327.0954**	**12.5967**	**0.0000**	**40,642.0127**

2.1 Overall Construction (Maximum Daily Emission)

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					
2019	10.6149	191.0635	211.6535	0.4074	3.3749	7.3506	10.7255	1.6454	7.3065	8.9519	0.0000	40,327.0954	40,327.0954	12.5967	0.0000	40,642.0127
2020	10.5228	189.9163	211.3019	0.4071	3.3749	7.2840	10.6589	1.6454	7.2453	8.8906	0.0000	39,428.6394	39,428.6394	12.5896	0.0000	39,743.3784
2021	10.4445	188.8563	211.1213	0.4070	3.3749	7.2238	10.5987	1.6454	7.1898	8.8352	0.0000	39,413.1559	39,413.1559	12.5894	0.0000	39,727.8902
2022	2.1445	34.5491	42.5190	0.0757	3.2038	1.4071	4.6109	1.5817	1.3857	2.9673	0.0000	7,335.3357	7,335.3357	2.3020	0.0000	7,392.8853
Maximum	**10.6149**	**191.0635**	**211.6535**	**0.4074**	**3.3749**	**7.3506**	**10.7255**	**1.6454**	**7.3065**	**8.9519**	**0.0000**	**40,327.0954**	**40,327.0954**	**12.5967**	**0.0000**	**40,642.0127**

	ROG	NOx	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	**50.62**	**12.46**	**-59.35**	**0.00**	**51.28**	**9.47**	**31.03**	**53.06**	**2.19**	**21.01**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.4600e-003	1.4000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0337	0.0337	9.0000e-005		0.0359
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.4600e-003**	**1.4000e-004**	**0.0157**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**		**0.0337**	**0.0337**	**9.0000e-005**	**0.0000**	**0.0359**

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	1.4600e-003	1.4000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0337	0.0337	9.0000e-005		0.0359
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**1.4600e-003**	**1.4000e-004**	**0.0157**	**0.0000**	**0.0000**	**6.0000e-005**	**6.0000e-005**	**0.0000**	**6.0000e-005**	**6.0000e-005**		**0.0337**	**0.0337**	**9.0000e-005**	**0.0000**	**0.0359**

	ROG	NOx	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	Ph 1: Backfill with Haul Trucks	Grading	4/1/2019	5/24/2021	5	561	Backfill from 500' to 650' msl
2	Ph 2: Backfill with Scrapers	Grading	5/25/2021	7/13/2022	5	297	Backfill from 650' to 790' msl

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Clayton Quarry Reclamation - 1983 Plan Backfill - Contra Costa County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Ph 1: Backfill with Haul Trucks	Excavators	2	8.00	523	0.38
Ph 1: Backfill with Haul Trucks	Graders	1	8.00	259	0.41
Ph 1: Backfill with Haul Trucks	Off-Highway Trucks	20	8.00	457	0.38
Ph 1: Backfill with Haul Trucks	Rollers	1	8.00	354	0.37
Ph 1: Backfill with Haul Trucks	Rubber Tired Dozers	1	8.00	580	0.40
Ph 1: Backfill with Haul Trucks	Scrapers	1	8.00	500	0.48
Ph 2: Backfill with Scrapers	Excavators	2	8.00	158	0.38
Ph 1: Backfill with Haul Trucks	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Ph 2: Backfill with Scrapers	Graders	1	8.00	259	0.41
Ph 2: Backfill with Scrapers	Rollers	1	8.00	354	0.38
Ph 2: Backfill with Scrapers	Rubber Tired Dozers	1	8.00	580	0.40
Ph 2: Backfill with Scrapers	Scrapers	1	8.00	500	0.37
Ph 2: Backfill with Scrapers	Scrapers	8	8.00	783	0.48
Ph 2: Backfill with Scrapers	Tractors/Loaders/Backhoes	2	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
Ph 1: Backfill with Haul Trucks	28	65.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Ph 2: Backfill with Scrapers	16	30.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Ph 1: Backfill with Haul Trucks - 2019

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					6.3132	0.0000	6.3132	3.3417	0.0000	3.3417			0.0000			0.0000
Off-Road	22.2983	237.4572	133.0309	0.4018		8.7980	8.7980		8.0942	8.0942		39,765.8155	39,765.8155	12.5815		40,080.3525
Total	**22.2983**	**237.4572**	**133.0309**	**0.4018**	**6.3132**	**8.7980**	**15.1112**	**3.3417**	**8.0942**	**11.4358**		**39,765.8155**	**39,765.8155**	**12.5815**		**40,080.3525**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.2594	0.1600	2.0361	5.6400e-003	0.5340	3.5200e-003	0.5375	0.1416	3.2400e-003	0.1449		561.2799	561.2799	0.0152		561.6602
Total	**0.2594**	**0.1600**	**2.0361**	**5.6400e-003**	**0.5340**	**3.5200e-003**	**0.5375**	**0.1416**	**3.2400e-003**	**0.1449**		**561.2799**	**561.2799**	**0.0152**		**561.6602**

3.2 Ph 1: Backfill with Haul Trucks - 2019

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					2.8409	0.0000	2.8409	1.5038	0.0000	1.5038			0.0000			0.0000
Off-Road	10.3555	190.9035	209.6174	0.4018		7.3471	7.3471		7.3033	7.3033	0.0000	39,765.8154	39,765.8154	12.5815		40,080.3525
Total	**10.3555**	**190.9035**	**209.6174**	**0.4018**	**2.8409**	**7.3471**	**10.1880**	**1.5038**	**7.3033**	**8.8070**	**0.0000**	**39,765.8154**	**39,765.8154**	**12.5815**		**40,080.3525**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.2594	0.1600	2.0361	5.6400e-003	0.5340	3.5200e-003	0.5375	0.1416	3.2400e-003	0.1449		561.2799	561.2799	0.0152		561.6602
Total	**0.2594**	**0.1600**	**2.0361**	**5.6400e-003**	**0.5340**	**3.5200e-003**	**0.5375**	**0.1416**	**3.2400e-003**	**0.1449**		**561.2799**	**561.2799**	**0.0152**		**561.6602**

3.2 Ph 1: Backfill with Haul Trucks - 2020

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					6.3132	0.0000	6.3132	3.3417	0.0000	3.3417			0.0000			0.0000
Off-Road	21.0521	213.9810	127.7610	0.4016		7.9286	7.9286		7.2943	7.2943		38,885.1818	38,885.1818	12.5763		39,199.5882
Total	**21.0521**	**213.9810**	**127.7610**	**0.4016**	**6.3132**	**7.9286**	**14.2418**	**3.3417**	**7.2943**	**10.6360**		**38,885.1818**	**38,885.1818**	**12.5763**		**39,199.5882**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.2365	0.1412	1.8268	5.4500e-003	0.5340	3.4400e-003	0.5374	0.1416	3.1700e-003	0.1448		543.4577	543.4577	0.0133		543.7903
Total	**0.2365**	**0.1412**	**1.8268**	**5.4500e-003**	**0.5340**	**3.4400e-003**	**0.5374**	**0.1416**	**3.1700e-003**	**0.1448**		**543.4577**	**543.4577**	**0.0133**		**543.7903**

3.2 Ph 1: Backfill with Haul Trucks - 2020

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					2.8409	0.0000	2.8409	1.5038	0.0000	1.5038			0.0000			0.0000
Off-Road	10.2863	189.7751	209.4752	0.4016		7.2805	7.2805		7.2421	7.2421	0.0000	38,885.1818	38,885.1818	12.5763		39,199.5882
Total	**10.2863**	**189.7751**	**209.4752**	**0.4016**	**2.8409**	**7.2805**	**10.1215**	**1.5038**	**7.2421**	**8.7458**	**0.0000**	**38,885.1818**	**38,885.1818**	**12.5763**		**39,199.5882**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.2365	0.1412	1.8268	5.4500e-003	0.5340	3.4400e-003	0.5374	0.1416	3.1700e-003	0.1448		543.4577	543.4577	0.0133		543.7903
Total	**0.2365**	**0.1412**	**1.8268**	**5.4500e-003**	**0.5340**	**3.4400e-003**	**0.5374**	**0.1416**	**3.1700e-003**	**0.1448**		**543.4577**	**543.4577**	**0.0133**		**543.7903**

3.2 Ph 1: Backfill with Haul Trucks - 2021

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					6.3132	0.0000	6.3132	3.3417	0.0000	3.3417			0.0000			0.0000
Off-Road	19.5629	186.0652	121.9683	0.4017		6.9169	6.9169		6.3635	6.3635		38,888.9719	38,888.9719	12.5775		39,203.4090
Total	**19.5629**	**186.0652**	**121.9683**	**0.4017**	**6.3132**	**6.9169**	**13.2301**	**3.3417**	**6.3635**	**9.7052**		**38,888.9719**	**38,888.9719**	**12.5775**		**39,203.4090**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.2183	0.1260	1.6698	5.2600e-003	0.5340	3.3500e-003	0.5373	0.1416	3.0900e-003	0.1447		524.1840	524.1840	0.0119		524.4813
Total	**0.2183**	**0.1260**	**1.6698**	**5.2600e-003**	**0.5340**	**3.3500e-003**	**0.5373**	**0.1416**	**3.0900e-003**	**0.1447**		**524.1840**	**524.1840**	**0.0119**		**524.4813**

3.2 Ph 1: Backfill with Haul Trucks - 2021

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					2.8409	0.0000	2.8409	1.5038	0.0000	1.5038			0.0000			0.0000
Off-Road	10.2262	188.7303	209.4515	0.4017		7.2204	7.2204		7.1868	7.1868	0.0000	38,888.9719	38,888.9719	12.5775		39,203.4089
Total	**10.2262**	**188.7303**	**209.4515**	**0.4017**	**2.8409**	**7.2204**	**10.0613**	**1.5038**	**7.1868**	**8.6905**	**0.0000**	**38,888.9719**	**38,888.9719**	**12.5775**		**39,203.4089**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.2183	0.1260	1.6698	5.2600e-003	0.5340	3.3500e-003	0.5373	0.1416	3.0900e-003	0.1447		524.1840	524.1840	0.0119		524.4813
Total	**0.2183**	**0.1260**	**1.6698**	**5.2600e-003**	**0.5340**	**3.3500e-003**	**0.5373**	**0.1416**	**3.0900e-003**	**0.1447**		**524.1840**	**524.1840**	**0.0119**		**524.4813**

3.3 Ph 2: Backfill with Scrapers - 2021

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					6.5720	0.0000	6.5720	3.3696	0.0000	3.3696			0.0000			0.0000
Off-Road	4.8103	56.1758	36.4366	0.0733		2.2183	2.2183		2.0408	2.0408		7,100.3835	7,100.3835	2.2964		7,157.7937
Total	**4.8103**	**56.1758**	**36.4366**	**0.0733**	**6.5720**	**2.2183**	**8.7903**	**3.3696**	**2.0408**	**5.4104**		**7,100.3835**	**7,100.3835**	**2.2964**		**7,157.7937**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.1007	0.0582	0.7707	2.4300e-003	0.2464	1.5500e-003	0.2480	0.0654	1.4200e-003	0.0668		241.9311	241.9311	5.4900e-003		242.0683
Total	**0.1007**	**0.0582**	**0.7707**	**2.4300e-003**	**0.2464**	**1.5500e-003**	**0.2480**	**0.0654**	**1.4200e-003**	**0.0668**		**241.9311**	**241.9311**	**5.4900e-003**		**242.0683**

3.3 Ph 2: Backfill with Scrapers - 2021

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					2.9574	0.0000	2.9574	1.5163	0.0000	1.5163			0.0000			0.0000
Off-Road	2.1228	35.3138	41.8704	0.0733		1.4674	1.4674		1.4412	1.4412	0.0000	7,100.3835	7,100.3835	2.2964		7,157.7937
Total	**2.1228**	**35.3138**	**41.8704**	**0.0733**	**2.9574**	**1.4674**	**4.4248**	**1.5163**	**1.4412**	**2.9575**	**0.0000**	**7,100.3835**	**7,100.3835**	**2.2964**		**7,157.7937**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.1007	0.0582	0.7707	2.4300e-003	0.2464	1.5500e-003	0.2480	0.0654	1.4200e-003	0.0668		241.9311	241.9311	5.4900e-003		242.0683
Total	**0.1007**	**0.0582**	**0.7707**	**2.4300e-003**	**0.2464**	**1.5500e-003**	**0.2480**	**0.0654**	**1.4200e-003**	**0.0668**		**241.9311**	**241.9311**	**5.4900e-003**		**242.0683**

3.3 Ph 2: Backfill with Scrapers - 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					6.5720	0.0000	6.5720	3.3696	0.0000	3.3696			0.0000			0.0000
Off-Road	4.5759	52.4414	35.5891	0.0733		2.0448	2.0448		1.8812	1.8812		7,102.3958	7,102.3958	2.2971		7,159.8222
Total	**4.5759**	**52.4414**	**35.5891**	**0.0733**	**6.5720**	**2.0448**	**8.6168**	**3.3696**	**1.8812**	**5.2508**		**7,102.3958**	**7,102.3958**	**2.2971**		**7,159.8222**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0935	0.0521	0.7099	2.3400e-003	0.2464	1.5100e-003	0.2480	0.0654	1.3900e-003	0.0668		232.9399	232.9399	4.9300e-003		233.0631
Total	**0.0935**	**0.0521**	**0.7099**	**2.3400e-003**	**0.2464**	**1.5100e-003**	**0.2480**	**0.0654**	**1.3900e-003**	**0.0668**		**232.9399**	**232.9399**	**4.9300e-003**		**233.0631**

3.3 Ph 2: Backfill with Scrapers - 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	lb/day										lb/day					
Fugitive Dust					2.9574	0.0000	2.9574	1.5163	0.0000	1.5163			0.0000			0.0000
Off-Road	2.0509	34.4970	41.8091	0.0733		1.4056	1.4056		1.3843	1.3843	0.0000	7,102.3958	7,102.3958	2.2971		7,159.8222
Total	**2.0509**	**34.4970**	**41.8091**	**0.0733**	**2.9574**	**1.4056**	**4.3630**	**1.5163**	**1.3843**	**2.9006**	**0.0000**	**7,102.3958**	**7,102.3958**	**2.2971**		**7,159.8222**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	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	0.0935	0.0521	0.7099	2.3400e-003	0.2464	1.5100e-003	0.2480	0.0654	1.3900e-003	0.0668		232.9399	232.9399	4.9300e-003		233.0631
Total	**0.0935**	**0.0521**	**0.7099**	**2.3400e-003**	**0.2464**	**1.5100e-003**	**0.2480**	**0.0654**	**1.3900e-003**	**0.0668**		**232.9399**	**232.9399**	**4.9300e-003**		**233.0631**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.590657	0.037535	0.185105	0.118290	0.015611	0.005013	0.010768	0.024764	0.001635	0.001742	0.005351	0.002726	0.000802

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
User Defined Industrial	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	1.4600e-003	1.4000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0337	0.0337	9.0000e-005		0.0359
Unmitigated	1.4600e-003	1.4000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0337	0.0337	9.0000e-005		0.0359

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	1.4600e-003	1.4000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0337	0.0337	9.0000e-005		0.0359
Total	**1.4600e-003**	**1.4000e-004**	**0.0157**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0337**	**0.0337**	**9.0000e-005**		**0.0359**

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	1.4600e-003	1.4000e-004	0.0157	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005		0.0337	0.0337	9.0000e-005		0.0359
Total	**1.4600e-003**	**1.4000e-004**	**0.0157**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**		**0.0337**	**0.0337**	**9.0000e-005**		**0.0359**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix D:
CalEEMod Model Report: Annual Emissions

Clayton Quarry Reclamation - 1983 Plan Backfill

Contra Costa County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	154.00	User Defined Unit	154.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Air emissions estimate assumes backfill to a toe elevation of 650' msl and crest elevation of 790' msl at the base of the western high wall.

Land Use - Quarry area to be reclaimed approx. 154 acres per Spinardi Associates.

Construction Phase - Construction assumptions and duration developed in coordination with CEMEX.

Off-road Equipment - For Phase 1, equipment type "scraper" represents Cat 631 Water Pull. Off-highway trucks represent Cat 740 Haul Trucks.

Off-road Equipment - For Phase 2, 500 hp scraper represents Cat 631 Water Pull.

Grading - No material import/export assumed.

Energy Use -

Construction Off-road Equipment Mitigation - All off-road equipment Tier 3 or better. Water exposed surfaces 2x per day.

Clayton Quarry Reclamation - 1983 Plan Backfill - Contra Costa County, Annual

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	20.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstructionPhase	NumDays	310.00	561.00
tblConstructionPhase	NumDays	310.00	297.00
tblGrading	AcresOfGrading	841.50	154.00
tblGrading	AcresOfGrading	2,821.50	154.00
tblLandUse	LotAcreage	0.00	154.00
tblOffRoadEquipment	HorsePower	158.00	523.00
tblOffRoadEquipment	HorsePower	187.00	259.00
tblOffRoadEquipment	HorsePower	187.00	259.00
tblOffRoadEquipment	HorsePower	247.00	580.00
tblOffRoadEquipment	HorsePower	247.00	580.00
tblOffRoadEquipment	HorsePower	367.00	500.00
tblOffRoadEquipment	HorsePower	367.00	500.00
tblOffRoadEquipment	HorsePower	367.00	783.00
tblOffRoadEquipment	HorsePower	402.00	457.00

tblOffRoadEquipment	HorsePower	80.00	354.00
tblOffRoadEquipment	HorsePower	80.00	354.00
tblOffRoadEquipment	LoadFactor	0.48	0.37
tblOffRoadEquipment	LoadFactor	0.38	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	8.00
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	WorkerTripNumber	70.00	65.00
tblTripsAndVMT	WorkerTripNumber	40.00	30.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	2.2200	23.4072	13.2835	0.0401	0.7256	0.8670	1.5926	0.3484	0.7976	1.1460	0.0000	3,599.3930	3,599.3930	1.1255	0.0000	3,627.5306
2020	2.7864	28.0522	16.9506	0.0533	0.9381	1.0391	1.9772	0.4604	0.9560	1.4164	0.0000	4,680.4083	4,680.4083	1.4960	0.0000	4,717.8091
2021	1.3978	13.9676	9.2476	0.0267	0.9944	0.5294	1.5238	0.4616	0.4871	0.9487	0.0000	2,349.5957	2,349.5957	0.7484	0.0000	2,368.3058
2022	0.3217	3.6225	2.4992	5.2100e-003	0.5136	0.1412	0.6548	0.2416	0.1299	0.3715	0.0000	457.9562	457.9562	0.1441	0.0000	461.5580
Maximum	**2.7864**	**28.0522**	**16.9506**	**0.0533**	**0.9944**	**1.0391**	**1.9772**	**0.4616**	**0.9560**	**1.4164**	**0.0000**	**4,680.4083**	**4,680.4083**	**1.4960**	**0.0000**	**4,717.8091**

2.1 Overall Construction

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					
2019	1.0436	18.8216	20.8272	0.0401	0.3545	0.7240	1.0785	0.1642	0.7197	0.8839	0.0000	3,599.3887	3,599.3887	1.1255	0.0000	3,627.5264
2020	1.3761	24.8812	27.6551	0.0533	0.4593	0.9542	1.4135	0.2171	0.9491	1.1662	0.0000	4,680.4028	4,680.4028	1.4960	0.0000	4,717.8036
2021	0.7080	12.4450	14.1412	0.0267	0.4724	0.4852	0.9575	0.2144	0.4814	0.6957	0.0000	2,349.5930	2,349.5930	0.7484	0.0000	2,368.3031
2022	0.1475	2.3843	2.9284	5.2100e-003	0.2402	0.0971	0.3372	0.1111	0.0956	0.2067	0.0000	457.9557	457.9557	0.1441	0.0000	461.5574
Maximum	**1.3761**	**24.8812**	**27.6551**	**0.0533**	**0.4724**	**0.9542**	**1.4135**	**0.2171**	**0.9491**	**1.1662**	**0.0000**	**4,680.4028**	**4,680.4028**	**1.4960**	**0.0000**	**4,717.8036**

	ROG	NOx	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	**51.31**	**15.23**	**-56.15**	**0.00**	**51.88**	**12.27**	**34.12**	**53.26**	**5.26**	**23.95**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**4-1-2019**	**6-30-2019**	8.4557	6.5545
2	**7-1-2019**	**9-30-2019**	8.5486	6.6266
3	**10-1-2019**	**12-31-2019**	8.5500	6.6279
4	**1-1-2020**	**3-31-2020**	7.6520	6.5154
5	**4-1-2020**	**6-30-2020**	7.6508	6.5143
6	**7-1-2020**	**9-30-2020**	7.7349	6.5859
7	**10-1-2020**	**12-31-2020**	7.7361	6.5870
8	**1-1-2021**	**3-31-2021**	6.6216	6.4071

9	**4-1-2021**	**6-30-2021**	4.7803	4.3405
10	**7-1-2021**	**9-30-2021**	2.0091	1.2353
11	**10-1-2021**	**12-31-2021**	2.0095	1.2358
12	**1-1-2022**	**3-31-2022**	1.8378	1.1799
13	**4-1-2022**	**6-30-2022**	1.8578	1.1925
14	**7-1-2022**	**9-30-2022**	0.2654	0.1704
		Highest	8.5500	6.6279

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	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-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	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	**1.3000e-004**	**1.0000e-005**	**1.4100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7500e-003**	**2.7500e-003**	**1.0000e-005**	**0.0000**	**2.9300e-003**

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	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-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	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	**1.3000e-004**	**1.0000e-005**	**1.4100e-003**	**0.0000**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7500e-003**	**2.7500e-003**	**1.0000e-005**	**0.0000**	**2.9300e-003**

	ROG	NOx	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	Ph 1: Backfill with Haul Trucks	Grading	4/1/2019	5/24/2021	5	561	Backfill from 500' to 650' msl
2	Ph 2: Backfill with Scrapers	Grading	5/25/2021	7/13/2022	5	297	Backfill from 650' to 790' msl

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Ph 1: Backfill with Haul Trucks	Excavators	2	8.00	523	0.38
Ph 1: Backfill with Haul Trucks	Graders	1	8.00	259	0.41
Ph 1: Backfill with Haul Trucks	Off-Highway Trucks	20	8.00	457	0.38
Ph 1: Backfill with Haul Trucks	Rollers	1	8.00	354	0.37
Ph 1: Backfill with Haul Trucks	Rubber Tired Dozers	1	8.00	580	0.40
Ph 1: Backfill with Haul Trucks	Scrapers	1	8.00	500	0.48
Ph 2: Backfill with Scrapers	Excavators	2	8.00	158	0.38
Ph 1: Backfill with Haul Trucks	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Ph 2: Backfill with Scrapers	Graders	1	8.00	259	0.41
Ph 2: Backfill with Scrapers	Rollers	1	8.00	354	0.38
Ph 2: Backfill with Scrapers	Rubber Tired Dozers	1	8.00	580	0.40
Ph 2: Backfill with Scrapers	Scrapers	1	8.00	500	0.37
Ph 2: Backfill with Scrapers	Scrapers	8	8.00	783	0.48
Ph 2: Backfill with Scrapers	Tractors/Loaders/Backhoes	2	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
Ph 1: Backfill with Haul Trucks	28	65.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Ph 2: Backfill with Scrapers	16	30.00	0.00	0.00	10.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

3.2 Ph 1: Backfill with Haul Trucks - 2019

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					0.6748	0.0000	0.6748	0.3349	0.0000	0.3349	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1964	23.3895	13.1035	0.0396		0.8666	0.8666		0.7973	0.7973	0.0000	3,553.3817	3,553.3817	1.1243	0.0000	3,581.4880
Total	**2.1964**	**23.3895**	**13.1035**	**0.0396**	**0.6748**	**0.8666**	**1.5414**	**0.3349**	**0.7973**	**1.1321**	**0.0000**	**3,553.3817**	**3,553.3817**	**1.1243**	**0.0000**	**3,581.4880**

3.2 Ph 1: Backfill with Haul Trucks - 2019

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	0.0236	0.0176	0.1799	5.1000e-004	0.0508	3.5000e-004	0.0511	0.0135	3.2000e-004	0.0138	0.0000	46.0113	46.0113	1.2600e-003	0.0000	46.0427
Total	**0.0236**	**0.0176**	**0.1799**	**5.1000e-004**	**0.0508**	**3.5000e-004**	**0.0511**	**0.0135**	**3.2000e-004**	**0.0138**	**0.0000**	**46.0113**	**46.0113**	**1.2600e-003**	**0.0000**	**46.0427**

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					0.3037	0.0000	0.3037	0.1507	0.0000	0.1507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.0200	18.8040	20.6473	0.0396		0.7237	0.7237		0.7194	0.7194	0.0000	3,553.3775	3,553.3775	1.1243	0.0000	3,581.4837
Total	**1.0200**	**18.8040**	**20.6473**	**0.0396**	**0.3037**	**0.7237**	**1.0274**	**0.1507**	**0.7194**	**0.8701**	**0.0000**	**3,553.3775**	**3,553.3775**	**1.1243**	**0.0000**	**3,581.4837**

3.2 Ph 1: Backfill with Haul Trucks - 2019

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	0.0236	0.0176	0.1799	5.1000e-004	0.0508	3.5000e-004	0.0511	0.0135	3.2000e-004	0.0138	0.0000	46.0113	46.0113	1.2600e-003	0.0000	46.0427
Total	**0.0236**	**0.0176**	**0.1799**	**5.1000e-004**	**0.0508**	**3.5000e-004**	**0.0511**	**0.0135**	**3.2000e-004**	**0.0138**	**0.0000**	**46.0113**	**46.0113**	**1.2600e-003**	**0.0000**	**46.0427**

3.2 Ph 1: Backfill with Haul Trucks - 2020

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					0.8706	0.0000	0.8706	0.4425	0.0000	0.4425	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7578	28.0315	16.7367	0.0526		1.0387	1.0387		0.9556	0.9556	0.0000	4,621.1617	4,621.1617	1.4946	0.0000	4,658.5261
Total	**2.7578**	**28.0315**	**16.7367**	**0.0526**	**0.8706**	**1.0387**	**1.9092**	**0.4425**	**0.9556**	**1.3980**	**0.0000**	**4,621.1617**	**4,621.1617**	**1.4946**	**0.0000**	**4,658.5261**

3.2 Ph 1: Backfill with Haul Trucks - 2020

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	0.0286	0.0207	0.2139	6.6000e-004	0.0675	4.5000e-004	0.0680	0.0180	4.2000e-004	0.0184	0.0000	59.2466	59.2466	1.4500e-003	0.0000	59.2830
Total	**0.0286**	**0.0207**	**0.2139**	**6.6000e-004**	**0.0675**	**4.5000e-004**	**0.0680**	**0.0180**	**4.2000e-004**	**0.0184**	**0.0000**	**59.2466**	**59.2466**	**1.4500e-003**	**0.0000**	**59.2830**

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					0.3918	0.0000	0.3918	0.1991	0.0000	0.1991	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3475	24.8605	27.4412	0.0526		0.9538	0.9538		0.9487	0.9487	0.0000	4,621.1562	4,621.1562	1.4946	0.0000	4,658.5206
Total	**1.3475**	**24.8605**	**27.4412**	**0.0526**	**0.3918**	**0.9538**	**1.3455**	**0.1991**	**0.9487**	**1.1478**	**0.0000**	**4,621.1562**	**4,621.1562**	**1.4946**	**0.0000**	**4,658.5206**

3.2 Ph 1: Backfill with Haul Trucks - 2020

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	0.0286	0.0207	0.2139	6.6000e-004	0.0675	4.5000e-004	0.0680	0.0180	4.2000e-004	0.0184	0.0000	59.2466	59.2466	1.4500e-003	0.0000	59.2830
Total	**0.0286**	**0.0207**	**0.2139**	**6.6000e-004**	**0.0675**	**4.5000e-004**	**0.0680**	**0.0180**	**4.2000e-004**	**0.0184**	**0.0000**	**59.2466**	**59.2466**	**1.4500e-003**	**0.0000**	**59.2830**

3.2 Ph 1: Backfill with Haul Trucks - 2021

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					0.3888	0.0000	0.3888	0.1776	0.0000	0.1776	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.9977	9.4893	6.2204	0.0205		0.3528	0.3528		0.3245	0.3245	0.0000	1,799.2536	1,799.2536	0.5819	0.0000	1,813.8015
Total	**0.9977**	**9.4893**	**6.2204**	**0.0205**	**0.3888**	**0.3528**	**0.7415**	**0.1776**	**0.3245**	**0.5022**	**0.0000**	**1,799.2536**	**1,799.2536**	**0.5819**	**0.0000**	**1,813.8015**

3.2 Ph 1: Backfill with Haul Trucks - 2021

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	0.0103	7.1800e-003	0.0759	2.5000e-004	0.0263	1.7000e-004	0.0265	6.9900e-003	1.6000e-004	7.1500e-003	0.0000	22.2478	22.2478	5.1000e-004	0.0000	22.2604
Total	**0.0103**	**7.1800e-003**	**0.0759**	**2.5000e-004**	**0.0263**	**1.7000e-004**	**0.0265**	**6.9900e-003**	**1.6000e-004**	**7.1500e-003**	**0.0000**	**22.2478**	**22.2478**	**5.1000e-004**	**0.0000**	**22.2604**

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					0.1750	0.0000	0.1750	0.0799	0.0000	0.0799	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.5215	9.6252	10.6820	0.0205		0.3682	0.3682		0.3665	0.3665	0.0000	1,799.2514	1,799.2514	0.5819	0.0000	1,813.7993
Total	**0.5215**	**9.6252**	**10.6820**	**0.0205**	**0.1750**	**0.3682**	**0.5432**	**0.0799**	**0.3665**	**0.4465**	**0.0000**	**1,799.2514**	**1,799.2514**	**0.5819**	**0.0000**	**1,813.7993**

3.2 Ph 1: Backfill with Haul Trucks - 2021

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	0.0103	7.1800e-003	0.0759	2.5000e-004	0.0263	1.7000e-004	0.0265	6.9900e-003	1.6000e-004	7.1500e-003	0.0000	22.2478	22.2478	5.1000e-004	0.0000	22.2604
Total	**0.0103**	**7.1800e-003**	**0.0759**	**2.5000e-004**	**0.0263**	**1.7000e-004**	**0.0265**	**6.9900e-003**	**1.6000e-004**	**7.1500e-003**	**0.0000**	**22.2478**	**22.2478**	**5.1000e-004**	**0.0000**	**22.2604**

3.3 Ph 2: Backfill with Scrapers - 2021

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					0.5604	0.0000	0.5604	0.2720	0.0000	0.2720	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3824	4.4660	2.8967	5.8300e-003		0.1764	0.1764		0.1623	0.1623	0.0000	512.0881	512.0881	0.1656	0.0000	516.2286
Total	**0.3824**	**4.4660**	**2.8967**	**5.8300e-003**	**0.5604**	**0.1764**	**0.7368**	**0.2720**	**0.1623**	**0.4342**	**0.0000**	**512.0881**	**512.0881**	**0.1656**	**0.0000**	**516.2286**

3.3 Ph 2: Backfill with Scrapers - 2021

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	7.3900e-003	5.1600e-003	0.0546	1.8000e-004	0.0189	1.2000e-004	0.0190	5.0300e-003	1.1000e-004	5.1400e-003	0.0000	16.0063	16.0063	3.6000e-004	0.0000	16.0154
Total	**7.3900e-003**	**5.1600e-003**	**0.0546**	**1.8000e-004**	**0.0189**	**1.2000e-004**	**0.0190**	**5.0300e-003**	**1.1000e-004**	**5.1400e-003**	**0.0000**	**16.0063**	**16.0063**	**3.6000e-004**	**0.0000**	**16.0154**

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					0.2522	0.0000	0.2522	0.1224	0.0000	0.1224	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1688	2.8074	3.3287	5.8300e-003		0.1167	0.1167		0.1146	0.1146	0.0000	512.0875	512.0875	0.1656	0.0000	516.2280
Total	**0.1688**	**2.8074**	**3.3287**	**5.8300e-003**	**0.2522**	**0.1167**	**0.3689**	**0.1224**	**0.1146**	**0.2370**	**0.0000**	**512.0875**	**512.0875**	**0.1656**	**0.0000**	**516.2280**

3.3 Ph 2: Backfill with Scrapers - 2021

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	7.3900e-003	5.1600e-003	0.0546	1.8000e-004	0.0189	1.2000e-004	0.0190	5.0300e-003	1.1000e-004	5.1400e-003	0.0000	16.0063	16.0063	3.6000e-004	0.0000	16.0154
Total	**7.3900e-003**	**5.1600e-003**	**0.0546**	**1.8000e-004**	**0.0189**	**1.2000e-004**	**0.0190**	**5.0300e-003**	**1.1000e-004**	**5.1400e-003**	**0.0000**	**16.0063**	**16.0063**	**3.6000e-004**	**0.0000**	**16.0154**

3.3 Ph 2: Backfill with Scrapers - 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					0.4972	0.0000	0.4972	0.2372	0.0000	0.2372	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3157	3.6185	2.4557	5.0600e-003		0.1411	0.1411		0.1298	0.1298	0.0000	444.5798	444.5798	0.1438	0.0000	448.1744
Total	**0.3157**	**3.6185**	**2.4557**	**5.0600e-003**	**0.4972**	**0.1411**	**0.6383**	**0.2372**	**0.1298**	**0.3670**	**0.0000**	**444.5798**	**444.5798**	**0.1438**	**0.0000**	**448.1744**

3.3 Ph 2: Backfill with Scrapers - 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	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	5.9600e-003	4.0200e-003	0.0436	1.5000e-004	0.0164	1.0000e-004	0.0165	4.3700e-003	1.0000e-004	4.4600e-003	0.0000	13.3765	13.3765	2.8000e-004	0.0000	13.3835
Total	**5.9600e-003**	**4.0200e-003**	**0.0436**	**1.5000e-004**	**0.0164**	**1.0000e-004**	**0.0165**	**4.3700e-003**	**1.0000e-004**	**4.4600e-003**	**0.0000**	**13.3765**	**13.3765**	**2.8000e-004**	**0.0000**	**13.3835**

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					0.2237	0.0000	0.2237	0.1068	0.0000	0.1068	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1415	2.3803	2.8848	5.0600e-003		0.0970	0.0970		0.0955	0.0955	0.0000	444.5792	444.5792	0.1438	0.0000	448.1739
Total	**0.1415**	**2.3803**	**2.8848**	**5.0600e-003**	**0.2237**	**0.0970**	**0.3207**	**0.1068**	**0.0955**	**0.2023**	**0.0000**	**444.5792**	**444.5792**	**0.1438**	**0.0000**	**448.1739**

3.3 Ph 2: Backfill with Scrapers - 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	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	5.9600e-003	4.0200e-003	0.0436	1.5000e-004	0.0164	1.0000e-004	0.0165	4.3700e-003	1.0000e-004	4.4600e-003	0.0000	13.3765	13.3765	2.8000e-004	0.0000	13.3835
Total	**5.9600e-003**	**4.0200e-003**	**0.0436**	**1.5000e-004**	**0.0164**	**1.0000e-004**	**0.0165**	**4.3700e-003**	**1.0000e-004**	**4.4600e-003**	**0.0000**	**13.3765**	**13.3765**	**2.8000e-004**	**0.0000**	**13.3835**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.590657	0.037535	0.185105	0.118290	0.015611	0.005013	0.010768	0.024764	0.001635	0.001742	0.005351	0.002726	0.000802

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

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					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	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

	ROG	NOx	CO	SO2	Fugitive 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	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Unmitigated	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-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	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	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Total	**1.3000e-004**	**1.0000e-005**	**1.4100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7500e-003**	**2.7500e-003**	**1.0000e-005**	**0.0000**	**2.9300e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	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	1.3000e-004	1.0000e-005	1.4100e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	2.7500e-003	2.7500e-003	1.0000e-005	0.0000	2.9300e-003
Total	**1.3000e-004**	**1.0000e-005**	**1.4100e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**2.7500e-003**	**2.7500e-003**	**1.0000e-005**	**0.0000**	**2.9300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	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			
User Defined Industrial	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			
User Defined Industrial	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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	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			
User Defined Industrial	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

11.0 Vegetation