

Appendix C
**Air Quality and GHG/ HRA
Appendix**

Air Quality Appendix

Assumptions

Construction Emissions

Operational Emissions

CO Hotspot Calculations

AERSCREEN Assumptions

United Rock Quarry Construction Assumptions

CalEEMod Inputs that are not modeling defaults:

Project Location: County
Los Angeles

Climate Zone: 9

Operational Year: 2020 (construction to occur in 2019 with operation beginning in 2020)

Utility Company: SCE

Land Use Type:

Commercial - Gen Office	400 sq ft	9.25 acres	spreading basin
	0.4 KSF	1.19 acres	access roads
		0.02 acres	Building area
		11 acres	Total Area graded
Parking lot	5 acre	5 acres	

Note: General Office and parking lot are used so that energy from the type of use (the 400 sqft scale/office building) and lights for the night activities are included. Specific construction and operational activities are modeled to address project specific activities. Note: Parking lot used in operations only for electrical usage of lighting for lights applied to the permanent access roads.

CONSTRUCTION INFORMATION

Construction Schedule:

Phase	Start Date	End Date	Days/Week	# days
Grading	1/1/2019	6/17/2019	5	120
Soil Import	1/1/2019	4/8/2019	5	70
Building	6/18/2019	7/29/2019	5	30
Arch Coating	7/18/2019	7/31/2019	5	10

Construction activities include grading and creating a new paved access road across the Buena Vista spreading basin, drainage improvement, construction of lighting in and around the quarry, new entrance gate, and a 20 ft x 20 ft operation building for office and truck scales. Construction is anticipated to occur over 8 months in 2019. Modeling Start and End dates represent conservative modeling assumptions only and do not represent the actual start/end dates as phases may actually begin/end at different times. The number of days per phase is the more accurate determination of phase length.

Overall Construction Equipment List

Equipment type	Phase	Type/Model	HP	#	Daily usage
Excavator	Grading	Cat 330	247	1	8 hrs
Grader	Grading	default	default	2	8 hrs
Water truck	Grading	default	default	2	6 hrs
Dozers	Grading	Swamp Cats D10	default	2	8 hrs
scrubber/sweeper	Grading	default	default	1	4 hrs
loaders	Grading	Cat 924, 928, 930, 950	230	1	8 hrs
Rough Terrain forklifts	Building	default	default	1	8 hrs
welders	Building	default	default	1	8 hrs
Paver	Building	default	default	1	8 hrs
Roller	Building	default	default	1	8 hrs
air compressor	Arch Coating	default	default	1	6 hrs

United Rock Quarry Construction Assumptions

Grading to create a new access road across the Buena Vista Spreading Basin and to improve site drainage would involve approximately 400 truck trips per day for 14 weeks, approximately 27,500 truck trips assuming using 10 CY trucks.

400
70
27,500 truck trips
275,000 cubic yards assuming 10 cubic yards per truck

Notes:

1. Due to the way CalEEMod calculates daily and annual emissions, and the fact that in order to accurately model 400 trucks for a max day, that would equal 28,000 trucks. This would accurately calculate daily emissions but overestimate GHG emissions. In order to accurately calculate both max daily emissions and annual emissions, the hauling was split into two phases. One that models the emissions for GHGs using 27,500 trips over the 14 week (70 day) period; and one that models 400 trips in a single day. The default CalEEMod hauling distances were used for fill for the Buena Vista Spreading Basin .

LST area determination:

Based on the *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* (available: [http://www.aqmd.gov/search?q=CalEEMod fact sheet](http://www.aqmd.gov/search?q=CalEEMod+fact+sheet)). The acreage of disturbance is determined by the equipment used and the daily acres disturbed per day for that equipment. The following table determines the acreage for the proposed project's LST analysis for construction and operational activities.

Equipment	Acres/day	Construction		Operation	
		#	Acres	#	Acres
crawler Tractor	0.5	0	0	0	0
Graders	0.5	2	1	1	0.5
Dozers	0.5	2	1	2	1
Scrapers	1	0	0	0	0
Total Acres:			2		1.5

United Rock Quarry Operational Assumptions

The depositing of debris into the quarry is modeled as operational activities because it will last for the duration of the project and therefor is the main operation/activity associated with the project. Quarry activities include a maximum of 5 employees to manage the unloading of materials with up to 400 truck loads per day (with a maximum of 7,200 cubic yards) over an 8 hour period.

Operational Mobile Sources

	Trips*/day	Trips/year	Miles	comments
<i>Typical Operation</i>				
Haul Trucks	800.0	200,000	3	From the site to the 210/605 Interchange
Employees	12.5	N/A	default	
<i>Emergency Operation</i>				
Haul Trucks	1250.0	25,000	3	From the site to the 210/605 Interchange (Additional daily trucks to reach 1,250 trucks per day)

* Trips = one way trips. Miles from project description for trucks. Employee daily trips are 2.5 times the number of employees (assumes some offsite travel for lunch)

* Employee trips modeled are greater than what is projected in the project specific traffic study because the traffic study was not available at the time the modeling was conducted. As the modeled employee trips are greater than those estimated in the traffic study this represents a conservative analysis.

*assumes use of 2 full 4,000 gallon trucks per day for watering and no landscaping needs.
Assumed connection to sewer

Solid Waste Generation: Default

Operational Offroad equipment:

Equipment type	Phase	Type/Model	HP	#	Average Daily	Emergency Daily Usage
Excavator	Grading	Cat 330	247	1	8 hrs	24 hrs
Grader	Grading	default	default (174)	1	4 hrs	12 hrs
Water truck	Grading	default	default (400)	1	8 hrs	24 hrs
Dozers	Grading	Swamp Cats D10	default (255)	2	8 hrs	24 hrs
scrubber/sweeper	Grading	default	default (64)	1	4 hr	12 hrs
Portable lighting	Grading	default	default (64)	1	0 hr	12 hrs

* With only 5 employees onsite, equipment cannot be operated the full 8 hours a day of operation. Therefore, as a conservative estimate the equipment hours of operation total 40 for the day (8 hr * 5 workers) and are allocated starting with the highest hp. The Water truck is assumed to operate for 4 hours per day (assuming 1 hour per watering episode).

Soil Import: 7,200 cubic yard/day 1,872,000 cubic yards/year

Rule 403: For onsite equipment it was set to 3 waterings per day or 61% reduction
For grading associated with sediment material it was set to 85% to account for saturated nature of the materials being graded.

Energy Adjustments

Adjustment to CO2 intensity based on Renewable resources.

	Base	2020 ^{1,2}
CO intensity	702.43634	443.23733
% renewable	0%	36.90%

¹ <http://www.cpuc.ca.gov/renewables/>

² Note: The CPUC updated SCE's estimated renewables percentage anticipated by 2020 to 41.4 percent subsequent to the analysis being completed. Because the 36.9 percent represents a conservative value, the analysis was not updated.

**United Rock Quarry
Operational Assumptions**

Conversion from 2013 Title 24 to 2016 Title 24

2016 results in a 5% reduction from 2013 Title 24 values for non-residential land uses.

	2013	2016
Electricity	4.82	4.579
Natural Gas	10.07	9.5665

United Rock Quarry Construction Inputs from CalEEMod Construction

Unmitigated Construction

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	lbs/day					
2017 Onsite	12.68	65.01	35.54	0.08	8.12	5.40
offsite	8.60	253.01	62.88	0.66	16.66	5.21
Total	21.28	318.02	98.41	0.74	24.78	10.61
SCAQMD Thresholds	75.00	100	550	150	150	55
Significant	No	Yes	No	No	No	No

LST

2017	Onsite	65	36		8	5
SCAQMD Thresholds		71	953		7	5
Significant		No	No		Yes	Yes

2 acre site based on equipment usage

SRA 9

NO_x: The screening criteria for NO_x were developed based on the 1-hour NO₂ CAAQS of 0.18 ppm. However, since the publication of the SCAQMD's guidance, the USEPA has promulgated a 1-hour NO₂ NAAQS of 0.100 ppm based on a 98th percentile value, which is more stringent than the CAAQS. In order to determine if project emissions would result in an exceedance of the 1 hour NO₂ NAAQS, an approximated LST was estimated to evaluate the federal 1-hour NO₂ standard, as the SCAQMD significance threshold has not been updated to reflect this standard. This was calculated by scaling the NO₂ LST using the ratio of 1-hour NO₂ standards (federal/state)(i.e., 128 lb/day * (0.10/0.18) = 71 lb/day)

United Rock Quarry

Construction Inputs from CalEEMod Construction

Unmitigated Construction

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	lbs/day Winter					
2019 Onsite	12.68	65.01	35.54	0.08	8.12	5.40
offsite	8.60	253.01	62.88	0.65	16.66	5.21
Total	21.28	318.02	98.41	0.73	24.78	10.61

	Winter					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	By Phase Only					
Grading Fugitive					5.13	2.64
2019 Onsite	4.9477	54.3927	24.8243	5.98E-02	2.38	2.19
Offsite	0.1274	0.0935	1.0177	2.64E-03	0.26	0.07
Soil Import	7.7059	248.2959	55.7724	6.28E-01	14.90	4.71
Total	12.781	302.7821	81.6144	0.69074	22.6733	9.6057
Construction Fugitive						
2019 Onsite	1.0366	8.7864	8.8705	1.33E-02	0.48	0.45
Offsite	0.6655	4.5459	5.2893	1.97E-02	1.29	0.37
Total	1.7021	13.3323	14.1598	0.033	1.77	0.82
Arch Coating Fugitive						
2019 Onsite	6.6943	1.8354	1.8413	2.97E-03	0.13	0.13
Offsite	0.0997	0.0732	0.7965	2.07E-03	0.20	0.06
Total	6.794	1.9086	2.6378	0.00504	0.33	0.18

United Rock Quarry

Construction Inputs from CalEEMod Construction

Unmitigated Construction

	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	lbs/day Summer					
2019 Onsite	5.98	63.18	33.69	0.07	7.99	5.28
offsite	8.24	249.62	58.89	0.66	16.44	5.14
Total	14.23	312.79	92.59	0.74	24.43	10.41

	Summer					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
	By Phase Only					
Grading Fugitive					5.13	2.64
Onsite	4.95	54.39	24.82	5.98E-02	2.38	2.19
Offsite	0.1149	0.0845	1.109	2.80E-03	0.26	0.07
Soil Import	7.5176	245.0265	52.242	6.39E-01	14.89	4.69
Total	12.58	299.50	78.18	0.70	22.66	9.59
Construction Fugitive					0.00	0.00
Onsite	1.04	8.79	8.87	1.33E-02	0.48	0.45
Offsite	0.6092	4.5041	5.5414	2.06E-02	1.29	0.37
Total	1.65	13.29	14.41	0.03	1.77	0.82
Arch Coating Fugitive					0.00	0.00
Onsite	6.69	1.84	1.84	2.97E-03	0.13	0.13
Offsite	0.0899	0.0661	0.8679	2.19E-03	0.20	0.06
Total	6.78	1.90	2.71	0.01	0.33	0.18

United Rock Quarry Construction Inputs from CalEEMod Construction

Mitigation:

Tier 4 Final Equipment as available or equipment that meets Tier 4 emissions standards.

Construction cannot occur while grading and hauling are occurring simultaneously.

Options:

- 1 No more than 135 haul trucks per day with 100% Grading activities and regular haul fleet
- 2 400 haul trucks per day with 100% grading activities and a 2014 or newer haul fleet
- 3 No more than 235 haul trucks per day with 100% grading activities and a 2013 or newer haul fleet
- 4 No more than 210 haul trucks per day with 100% grading activities and a 2012 or newer haul fleet

2014 truck fleet

Emission Reductions:

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
2012	36.21%	37.34%	21.01%	-0.43%	69.29%	69.29%
	4.92	155.57	44.06	0.63	4.58	1.45
2013	38.59%	43.99%	-15.56%	-0.27%	72.83%	72.83%
	4.73	139.08	64.45	0.63	4.05	1.28
2014	51.65%	69.36%	-5.35%	12.45%	78.14%	78.14%
Revised Haul Emissions:	3.7259037	76.08045	58.75527	0.550093	3.257251	1.029499

United Rock Quarry Construction Inputs from CalEEMod Construction

Mitigated Construction

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
2019 Onsite	7.72	6.13	41.51	0.08	5.35	2.86
offsite	4.62	88.88	66.27	0.58	6.81	2.10
Total	12.34	95.01	107.78	0.65	12.16	4.95
SCAQMD Thresholds	75.00	100	550	150	150	55
Significant	No	No	No	No	No	No

LST

2019 Onsite	6	42	5	3
SCAQMD Thresholds	71	953	7	5
Significant	No	No	No	No

2 acre site based on equipment usage
SRA 9

United Rock Quarry
Construction Inputs from CalEEMod Construction

Mitigated Construction

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
	lbs/day Winter					
2019 Onsite	7.72	6.13	41.51	0.08	5.35	2.86
offsite	4.62	88.88	65.86	0.57	6.81	2.10
Total	12.34	95.01	107.37	0.65	12.16	4.95

United Rock Quarry Construction Inputs from CalEEMod Construction

		Winter					
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
By Phase Only							
Grading	Fugitive					5.13	2.64
	Onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Offsite	0.13	0.09	1.02	0.00	0.26	0.07
	Soil Import	3.73	84.17	58.76	0.55	5.05	1.60
	Total	4.60	88.07	89.54	0.61	10.54	4.40
Construction	Fugitive					0.00	0.00
	Onsite	0.52	2.19	9.91	0.01	0.12	0.12
	Offsite	0.67	4.55	5.29	0.02	1.29	0.37
	Total	1.18	6.74	15.20	0.03	1.41	0.49
Arch Coating	Fugitive					0.00	0.00
	Onsite	6.46	0.13	1.83	0.00	0.00	0.00
	Offsite	0.10	0.07	0.80	0.00	0.20	0.06
	Total	6.56	0.20	2.63	0.01	0.21	0.06

Soil Import Options (max of each pollutant used for grading phase above)

		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Soil Import Option 1		2.61	84.17	18.91	0.21	5.05	1.60
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.13	0.09	1.02	0.00	0.26	0.07
	Total	3.49	88.07	49.69	0.28	5.41	1.76
Soil Import Option 2		3.73	76.08	58.76	0.55	3.26	1.03
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.13	0.09	1.02	0.00	0.26	0.07
	Total	4.60	79.98	89.54	0.61	3.61	1.20
Soil Import Option 3		2.78	81.81	37.91	0.37	2.38	0.75
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.13	0.09	1.02	0.00	0.26	0.07
	Total	3.66	85.71	68.69	0.43	2.74	0.92
Soil Import Option 4		2.59	81.88	23.19	0.33	2.41	0.76
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.13	0.09	1.02	0.00	0.26	0.07
	Total	3.46	85.78	53.97	0.39	2.77	0.93

United Rock Quarry
Construction Inputs from CalEEMod Construction

Mitigated Construction

	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
	lbs/day Summer					
2019 Onsite	7.72	6.13	41.51	0.08	5.35	2.86
offsite	4.54	87.71	66.27	0.58	6.80	2.09
Total	12.26	93.85	107.78	0.65	12.15	4.94

United Rock Quarry

Construction Inputs from CalEEMod Construction

		Summer					
		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
By Phase Only							
Grading Option 1 Fugitive						5.13	2.64
	Onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Offsite	0.11	0.08	1.11	0.00	0.26	0.07
	Soil Import	3.73	83.06	58.76	0.55	5.05	1.59
	Total	4.59	86.95	89.63	0.61	10.54	4.40
Construction Fugitive						0.00	0.00
	Onsite	0.52	2.19	9.91	0.01	0.12	0.12
	Offsite	0.61	4.50	5.54	0.02	1.29	0.37
	Total	1.13	6.70	15.45	0.03	1.41	0.49
Arch Coating Fugitive						0.00	0.00
	Onsite	6.46	0.13	1.83	0.00	0.00	0.00
	Offsite	0.09	0.07	0.87	0.00	0.20	0.06
	Total	6.55	0.19	2.70	0.01	0.21	0.06

Soil Import Options (max of each pollutant used for grading phase above)

		ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Soil Import Option 1		2.55	83.06	17.71	0.22	5.05	1.59
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.11	0.08	1.11	0.00	0.26	0.07
	Total	3.41	86.95	48.58	0.28	5.40	1.76
Soil Import Option 2		3.73	76.08	58.76	0.55	3.26	1.03
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.11	0.08	1.11	0.00	0.26	0.07
	Total	4.59	79.97	89.63	0.61	3.61	1.20
Soil Import Option 3		2.78	81.81	37.91	0.37	2.38	0.75
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.11	0.08	1.11	0.00	0.26	0.07
	Total	3.65	85.70	68.78	0.43	2.74	0.92
Soil Import Option 4		2.59	81.88	23.19	0.33	2.41	0.76
	Grading onsite	0.75	3.81	29.76	0.06	0.10	0.10
	Grading offsite	0.11	0.08	1.11	0.00	0.26	0.07
	Total	3.45	85.77	54.06	0.39	2.77	0.93

United Rock Quarry Haul Fleet Reductions

Reduction from Standard Fleet

	ROG	CO	NOx	CO ₂	PM ₁₀	PM _{2.5}	SOx
(2012 truck)	36.21%	21.01%	37.34%	1.94%	69.29%	69.29%	-0.43%
(2013 truck)	38.59%	-15.56%	43.99%	-2.96%	72.83%	72.83%	-0.27%
(2014 truck)	51.65%	-5.35%	69.36%	9.57%	78.14%	78.14%	12.45%

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: Los Angeles

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	CO_RUNEX	NOx_RUNEX
Los Angeles	2019	HHDT	Aggregated	Aggregated	DSL	49407.996	6707156.9	0	0.166397481	0.873965439	4.973383294
									CO2_RUNEX	PM10_RUNEX	PM2_5_RUNEX
									1698.923223	0.02428549	0.02323491
									SOx_RUNEX		
									0.015675058		

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: Los Angeles

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	CO_RUNEX	NOx_RUNEX
Los Angeles	2019	HHDT	2012	Aggregated	DSL	10085.648	1701475.4	0	0.106140525	0.690367944	3.116143186
									CO2_RUNEX	PM10_RUNEX	PM2_5_RUNEX
									1665.979726	0.007457545	0.007134935
									SOx_RUNEX		
									0.015742375		

United Rock Quarry Haul Fleet Reductions

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: Los Angeles

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	CO_RUNEX	NOx_RUNEX
Los Angeles	2019	HHDT	2013	Aggregated	DSL	2705.2401	372894.67	0	0.102178645	1.009945987	2.785683284
									CO2_RUNEX 1749.182571	PM10_RUNEX 0.006598749	PM2_5_RUNEX 0.00631329
									SOx_RUNEX 0.01571803		

EMFAC2014 (v1.0.7) Emission Rates

Region Type: County

Region: Los Angeles

Calendar Year: 2019

Season: Annual

Vehicle Classification: EMFAC2007 Categories

Units: miles/day for VMT, trips/day for Trips, g/mile for RUNEX, PMBW and PMTW, g/trip for STREX, HTSK and RUNLS, g/vehicle/day for IDLEX, RESTL and DIURN

Region	CalYr	VehClass	MdYr	Speed	Fuel	Population	VMT	Trips	ROG_RUNEX	CO_RUNEX	NOx_RUNEX
Los Angeles	2019	HHDT	2014	Aggregated	DSL	2241.0338	362253.21	0	0.080455363	0.920707625	1.523896429
									CO2_RUNEX 1536.349213	PM10_RUNEX 0.00530792	PM2_5_RUNEX 0.005078302
									SOx_RUNEX 0.01372391		

United Rock Quarry
Criteria Pollutant Operational Emissions

Unmitigated Operations

Emissions	Pollutant					
Source	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Daily Emissions (lbs/day)						
Winter						
Area	0.10	1.00E-05	5.50E-04	0.00E+00	0.00E+00	0.00E+00
Energy	1.20E-04	1.07E-03	9.00E-04	1.00E-05	8.00E-05	8.00E-05
Mobile - Worker	0.07	0.05	0.58	0.00	0.15	0.04
Mobile - Haul	2.60	102.26	20.36	0.16	2.31	0.77
Onsite - Exhaust	3.63	38.55	17.75	0.04	1.77	1.63
Onsite - Fugitive	-	-	-	-	1.98	1.02
Total	6.41	140.87	38.68	0.20	6.21	3.46
Summer						
Area	0.10	0.00	0.00	0.00	0.00	0.00
Energy	1.20E-04	1.07E-03	9.00E-04	1.00E-05	8.00E-05	8.00E-05
Mobile - Worker	0.06	0.05	0.63	0.00	0.15	0.04
Mobile - Haul	2.41	104.48	16.75	0.17	2.29	0.75
Onsite - Exhaust	3.63	38.55	17.75	0.04	1.77	1.63
Onsite - Fugitive	-	-	-	-	1.98	1.02
Total	6.21	143.08	35.12	0.21	6.19	3.44
Max						
Area	0.10	1.0E-05	5.5E-04	0.0E+00	0.0E+00	0.0E+00
Energy	1.2E-04	1.1E-03	9.0E-04	1.0E-05	8.0E-05	8.0E-05
Mobile	2.68	104.53	20.93	0.17	2.45	0.81
Onsite Emissions	3.63	38.55	17.75	0.04	3.76	2.65
Total	6.41	143.08	38.68	0.21	6.21	3.46
SCAQMD Thresholds	55	55	550	150	150	55
Significant	No	Yes	No	No	No	No
Source: ESA CalEEMod Modeling May 2017						

United Rock Quarry
Criteria Pollutant Operational Emissions

Mitigated Operations

Emissions	Pollutant					
Source	ROG	NO_x	CO	SO_x	PM₁₀	PM_{2.5}
Daily Emissions (lbs/day)						
Winter						
Area	0.10	0.00	0.00	0.00	0.00	0.00
Energy	1.20E-04	1.07E-03	9.00E-04	1.00E-05	8.00E-05	8.00E-05
Mobile - Worker	0.07	0.05	0.58	0.00	0.15	0.04
Moble - Haul	1.26	31.33	21.45	0.14	0.50	0.17
Onsite - Exhaust	0.51	2.77	19.98	0.04	0.07	0.07
Onsite - Fugitive	-	-	-	-	1.98	1.02
Total	1.94	34.15	42.00	0.18	2.70	1.29
Summer						
Area	0.10	0.00	0.00	0.00	0.00	0.00
Energy	1.20E-04	1.07E-03	9.00E-04	1.00E-05	8.00E-05	8.00E-05
Mobile - Worker	0.06	0.05	0.63	0.00	0.15	0.04
Moble - Haul	1.17	32.01	17.64	0.15	0.50	0.16
Onsite - Exhaust	0.51	2.77	19.98	0.04	0.07	0.07
Onsite - Fugitive	-	-	-	-	1.98	1.02
Total	1.84	34.83	38.25	0.19	6.19E+00	3.44E+00
Max						
Area	0.10	1.0E-05	5.5E-04	0.0E+00	0.0E+00	0.0E+00
Energy	1.2E-04	1.1E-03	9.0E-04	1.0E-05	8.0E-05	8.0E-05
Mobile	1.33	32.06	22.02	0.15	0.65	0.21
Onsite Emissions	0.51	2.77	19.98	0.04	2.05	1.08
Total	1.94	34.83	42.00	0.19	2.70	1.29
SCAQMD Thresholds	55	55	550	150	150	55
Significant	No	No	No	No	No	No
Source: ESA CalEEMod Modeling May 2017						

Mitigation:

¹ Tier 4 Final onsite equipment

² Haul Truck fleet with 2014 or newer engine emission rates.

United Rock Quarry
Operational Localized Significance

Unmitigated

Emissions	Pollutant			
Source	NO_x	CO	PM₁₀	PM_{2.5}
Daily (lbs/day)				
Project Operations	38.55	17.75	3.76	2.65
Onsite Mobile ¹	10.45	2.09	0.25	0.08
Total	49.00	19.84	4.00	2.73
SCAQMD Thresholds	49	623	2	1
Significant	Yes	No	Yes	Yes
Source: ESA CalEEMod Modeling May 2017				

Mitigated

Emissions	Pollutant			
Source	NO_x	CO	PM₁₀	PM_{2.5}
Daily (lbs/day)				
Proposed Project	2.77	19.98	2.05	1.08
Onsite Mobile ¹	3.21	2.20	0.01	0.07
Total	5.97	22.18	2.06	1.15
SCAQMD Thresholds	49	623	2	1
Significant	No	No	Yes	Yes
Source: ESA CalEEMod Modeling May 2017				

AERSCREEN Analysis

	PM ₁₀	PM _{2.5}	
µg/m ³ at Fenceline	1.01	0.59	µg/m ³
Threshold at receptor	2.5	2.5	µg/m ³
Significant?	No	No	

United Rock Quarry
Operational Localized Significance

Maximum Emissions for 1,250 truck trips per day

Emissions Source	Pollutant					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Unmitigated						
Operational	0.12	0.00	0.00	0.00	0.00	0.00
Onsite Equipment	11.54	118.69	56.82	0.12	28.93	17.62
Mobile - Haul	4.07	163.25	31.81	0.25	3.58	1.17
Mobile - Worker	0.22	0.16	1.88	0.00	0.44	0.12
Total	16	282	91	0	33	19
Mitigated						
Operational	0.12	0.00	0.00	0.00	0.00	0.00
Onsite Equipment	2.18	8.31	63.46	0.12	23.80	12.92
Mobile - Haul	1.97	50.02	33.51	0.22	0.78	0.26
Mobile - Worker	0.22	0.16	1.88	0.00	0.44	0.12
Total	4	58	99	0	25	13

United Rock Quarry CO Hotspot Analysis

Existing + Project

Main

	Total (PM)	NBL	NBT	NBR	WBL	WBT	WBR	SBL	SBT	SBR	EBL	EBT	EBR
1	2,757	0	0	0	0	944	0	0	0	619	0	1194	0
2	3,911	0	0	0	524	1029	0	0	0	0	0	1204	1154
3	3,466	7	0	9	116	923	0	0	0	0	0	2342	69
4	4,835	776	0	111	261	735	0	0	0	0	0	804	2148
5	2,830	0	0	0	0	665	317	585	0	342	247	674	0
6	2,446	0	0	0	0	435	0	185	0	551	0	1275	0
7	1,575	18	126	443	602	10	11	14	258	5	2	12	74
8	413	152	0	2	1	10	0	0	0	0	0	14	234
9	908	0	0	0	0	501	11	15	0	11	4	366	0
10	234	17	0	1	0	105	0	0	0	0	0	100	11
11	205	0	0	0	0	0	0	0	0	105	100	0	0
12	205	0	0	100	105	0	0	0	0	0	0	0	0
13	N/A												

Max	4,835 PM Peak
	48,350 Daily

Alternative

	Total (PM)	NBL	NBT	NBR	WBL	WBT	WBR	SBL	SBT	SBR	EBL	EBT	EBR
1	2,757	0	0	0	0	944	0	0	0	619	0	1194	0
2	3,911	0	0	0	524	1029	0	0	0	0	0	1204	1154
3	3,466	7	0	9	116	923	0	0	0	0	0	2342	69
4	4,176	117	0	111	261	735	0	0	0	0	0	804	2148
5	2,830	0	0	0	0	665	317	585	0	342	247	674	0
6	2,446	0	0	0	0	435	0	185	0	551	0	1275	0
7	1,575	18	126	443	602	10	11	14	258	5	2	12	74
8	413	152	0	2	1	10	0	0	0	0	0	14	234
9	1,113	0	0	0	0	606	11	15	0	11	4	466	0
10	29	17	0	1	0	0	0	0	0	0	0	0	11
11	N/A												
12	N/A												
13	1,098	100	381	0	0	0	0	0	512	0	0	0	105

Max	4,176 PM Peak
	41,760 Daily

United Rock Quarry CO Hotspot Analysis

Cumulative + Project

Main

	Total (PM)	NBL	NBT	NBR	WBL	WBT	WBR	SBL	SBT	SBR	EBL	EBT	EBR
1	3,037	0	0	0	0	978	0	0	0	821	0	1238	0
2	4,457	0	0	0	524	1265	0	0	0	0	0	1248	1420
3	4,426	206	0	255	291	993	0	0	0	0	0	2390	291
4	5,385	820	0	352	488	738	0	0	0	0	0	805	2182
5	3,311	0	0	0	0	868	317	595	0	369	263	899	0
6	2,879	0	0	0	0	435	0	185	0	754	0	1505	0
7	1,632	18	126	461	638	12	11	14	258	5	2	13	74
8	413	152	0	2	1	10	0	0	0	0	0	14	234
9	940	0	0	0	0	528	11	15	0	11	4	371	0
10	234	17	0	1	0	105	0	0	0	0	0	100	11
11	210	0	0	0	0	0	0	0	0	105	100	5	0
12	205	0	0	100	105	0	0	0	0	0	0	0	0
13	N/A												
Max	5,385 PM Peak												
	53,850 Daily												

Alternative

	Total (PM)	NBL	NBT	NBR	WBL	WBT	WBR	SBL	SBT	SBR	EBL	EBT	EBR
1	3,037	0	0	0	0	978	0	0	0	821	0	1238	0
2	4,457	0	0	0	524	1265	0	0	0	0	0	1248	1420
3	4,426	206	0	255	291	993	0	0	0	0	0	2390	291
4	5,427	820	0	394	488	738	0	0	0	0	0	805	2182
5	3,311	0	0	0	0	868	317	595	0	369	263	899	0
6	2,884	0	0	0	0	435	0	185	0	754	0	1510	0
7	1,632	18	126	461	638	12	11	14	258	5	2	13	74
8	413	152	0	2	1	10	0	0	0	0	0	14	234
9	1,145	0	0	0	0	633	11	15	0	11	4	471	0
10	29	17	0	1	0	0	0	0	0	0	0	0	11
11	N/A												
12	N/A												
13	1,083	100	366	0	0	0	0	0	512	0	0	0	105
Max	5,427 PM Peak												
	54,270 Daily												

Based on the United Rock Draft Traffic Study Report dated:

30-Aug-16

United Rock Quarry AERSCREEN Input and Project Assumptions

Project Specific Information:

Block	(lbs/day)	Daily operation (hours)	Emission Rate	
			(g/s)	
Operation PM ₁₀	2.07	24	0.01043625	1.04E-02
Operation PM _{2.5}	1.20	24	0.00605	6.05E-03

AERSCREEN Input

Source Type: Area

Release Height: 3.66 meters
 Release height is the anticipated plume height times 0.5
 Plume height is Vehicle height times 2
 This assumes an average vehicle height at 12.6 feet.

Maximum horizontal dimension:
 Length of the longest side in meters
Operation
 Max 793

Minimum horizontal dimension:
 Length of the shortest side in meters
 Min 522

Initial Vertical Dimension: 3.40 meters
 Initial Vertical Dimension is the Plume Height divided by 2.15

Rural or Urban: Urban
 Is the site a rural or urban environment

Urban Population: 9,862,049 Los Angeles County (SCAQMD guidance)
 Population of the County

Minimum Distance to Ambient Air: 1 meter (AERSCREEN Default)

Maximum Distance to Probe: 1,000 meters
 This is the maximum distance from source to analyze.

Use Discrete Receptors: No
 not using discrete receptor distances assumes a minimum distance of 1 meter which is conservative for this analysis.

Use Flag Pole Receptors: Yes
 This assumes that the receptors are above ground level

Flag Pole Receptor Height: 2 meters (average height of a human)

Source Elevation: 0 meters (AERSCREEN Default)

Minimum & Maximum Temperature: 250 to 310 K (AERSCREEN Default)

Minimum Windspeed: 0.5 m/s (AERSCREEN Default)

Anemometer Height: 10 meters (AERSCREEN Default)

Surface Characteristics: AERMET Defaults

Dominant Surface Profile: Urban

Dominant Climate: Average Moisture

AERSCREEN Output Names:
Operational Mit PM10
Operational Mit PM2.5

$\mu\text{g}/\text{m}^3$	Distance (meters)
1.01E+00	1
5.87E-01	1

Air Quality Appendix

Construction CalEEMod Output

United Rock - Construction Only - Los Angeles-South Coast County, Winter

**United Rock - Construction Only
Los Angeles-South Coast County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - Equipment included in Grading

Off-road Equipment - Equipment included in grading

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment -

Grading - See Assumptions

Trips and VMT - See Assumptions

Energy Use - No operational emissions modeled

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	300.00	30.00
tblConstructionPhase	NumDays	30.00	120.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	10.00	70.00

tblConstructionPhase	PhaseEndDate	12/15/2020	7/31/2019
tblConstructionPhase	PhaseEndDate	11/17/2020	7/29/2019
tblConstructionPhase	PhaseEndDate	9/24/2019	6/17/2019
tblConstructionPhase	PhaseStartDate	11/18/2020	7/18/2019
tblConstructionPhase	PhaseStartDate	9/25/2019	6/18/2019
tblConstructionPhase	PhaseStartDate	4/10/2019	1/1/2019
tblGrading	AcresOfGrading	120.00	75.00
tblGrading	MaterialImported	0.00	4,000.00
tblGrading	MaterialImported	0.00	275,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	500.00	800.00
tblTripsAndVMT	HaulingTripNumber	34,375.00	55,000.00

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	12.7809	302.7822	81.6143	0.6908	27.4035	3.2971	30.7006	10.6627	3.0670	13.7297	0.0000	74,171.4684	74,171.4684	6.8269	0.0000	74,342.1401
Maximum	12.7809	302.7822	81.6143	0.6908	27.4035	3.2971	30.7006	10.6627	3.0670	13.7297	0.0000	74,171.4684	74,171.4684	6.8269	0.0000	74,342.1401

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	8.5807	252.1992	86.5539	0.6908	19.3763	1.0158	20.3921	6.5388	0.9760	7.5148	0.0000	74,171.4684	74,171.4684	6.8269	0.0000	74,342.1401

Maximum	8.5807	252.1992	86.5539	0.6908	19.3763	1.0158	20.3921	6.5388	0.9760	7.5148	0.0000	74,171.4684	74,171.4684	6.8269	0.0000	74,342.1401
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	32.86	16.71	-6.05	0.00	29.29	69.19	33.58	38.68	68.18	45.27	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Operational Emissions Modeled Separately

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Soil Import - Maximum Per Day	Site Preparation	1/1/2019	1/1/2019	5	1	
2	Soil Import - Total Import	Site Preparation	1/2/2019	4/9/2019	5	70	
3	Grading	Grading	1/1/2019	6/17/2019	5	120	
4	Building Construction	Building Construction	6/18/2019	7/29/2019	5	30	
5	Architectural Coating	Architectural Coating	7/18/2019	7/31/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 600; Non-Residential Outdoor: 200; Striped Parking Area: 13,068

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Soil Import - Total Import	Rubber Tired Dozers	0	8.00	247	0.40
Soil Import - Total Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Sweepers/Scrubbers	1	4.00	64	0.46
Grading	Off-Highway Trucks	2	6.00	402	0.38
Building Construction	Rough Terrain Forklifts	1	8.00	100	0.40
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	2	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Pavers	1	8.00	130	0.42
Soil Import - Maximum Per Day	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Soil Import - Maximum Per Day	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Rollers	1	8.00	80	0.38

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
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	92.00	36.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Soil Import - Total Import	0	0.00	0.00	55,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Soil Import - Maximum Per Day	0	0.00	0.00	800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Soil Import - Maximum Per Day - 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					0.4524	0.0000	0.4524	0.0685	0.0000	0.0685			0.0000			0.0000
Off-Road	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	0.4524	0.0000	0.4524	0.0685	0.0000	0.0685		0.0000	0.0000	0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7059	248.2959	55.7724	0.6283	13.9870	0.9160	14.9030	3.8340	0.8764	4.7103		67,987.9743	67,987.9743	4.9446		68,111.5882
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.7059	248.2959	55.7724	0.6283	13.9870	0.9160	14.9030	3.8340	0.8764	4.7103		67,987.9743	67,987.9743	4.9446		68,111.5882

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					0.1764	0.0000	0.1764	0.0267	0.0000	0.0267			0.0000			0.0000
Off-Road	0.0000	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	0.1764	0.0000	0.1764	0.0267	0.0000	0.0267	0.0000	0.0000	0.0000	0.0000		0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.7059	248.2959	55.7724	0.6283	13.9870	0.9160	14.9030	3.8340	0.8764	4.7103		67,987.9743	67,987.9743	4.9446		68,111.5882
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.7059	248.2959	55.7724	0.6283	13.9870	0.9160	14.9030	3.8340	0.8764	4.7103		67,987.9743	67,987.9743	4.9446		68,111.5882

3.3 Soil Import - Total Import - 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
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Category	lb/day										lb/day					
Fugitive Dust					0.4443	0.0000	0.4443	0.0673	0.0000	0.0673			0.0000			0.0000
Off-Road	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	0.4443	0.0000	0.4443	0.0673	0.0000	0.0673		0.0000	0.0000	0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	7.5683	243.8621	54.7764	0.6171	13.7373	0.8996	14.6369	3.7655	0.8607	4.6262		66,773.9034	66,773.9034	4.8563			66,895.3098
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	7.5683	243.8621	54.7764	0.6171	13.7373	0.8996	14.6369	3.7655	0.8607	4.6262		66,773.9034	66,773.9034	4.8563			66,895.3098

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					0.1733	0.0000	0.1733	0.0262	0.0000	0.0262			0.0000			0.0000
Off-Road	0.0000	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	0.1733	0.0000	0.1733	0.0262	0.0000	0.0262	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5683	243.8621	54.7764	0.6171	13.7373	0.8996	14.6369	3.7655	0.8607	4.6262		66,773.9034	66,773.9034	4.8563		66,895.3098
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.5683	243.8621	54.7764	0.6171	13.7373	0.8996	14.6369	3.7655	0.8607	4.6262		66,773.9034	66,773.9034	4.8563		66,895.3098

3.4 Grading - 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					12.7070	0.0000	12.7070	6.6920	0.0000	6.6920			0.0000			0.0000
Off-Road	4.9477	54.3927	24.8243	0.0598		2.3789	2.3789		2.1886	2.1886		5,920.8039	5,920.8039	1.8733		5,967.6359
Total	4.9477	54.3927	24.8243	0.0598	12.7070	2.3789	15.0859	6.6920	2.1886	8.8806		5,920.8039	5,920.8039	1.8733		5,967.6359

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	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		262.6901	262.6901	9.0400e-003		262.9160
Total	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		262.6901	262.6901	9.0400e-003		262.9160

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					4.9557	0.0000	4.9557	2.6099	0.0000	2.6099			0.0000			0.0000
Off-Road	0.7474	3.8097	29.7638	0.0598		0.0976	0.0976		0.0976	0.0976	0.0000	5,920.8039	5,920.8039	1.8733		5,967.6359
Total	0.7474	3.8097	29.7638	0.0598	4.9557	0.0976	5.0533	2.6099	0.0976	2.7075	0.0000	5,920.8039	5,920.8039	1.8733		5,967.6359

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	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	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		262.6901	262.6901	9.0400e-003		262.9160
Total	0.1274	0.0935	1.0177	2.6400e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		262.6901	262.6901	9.0400e-003		262.9160

3.5 Building Construction - 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					
Off-Road	1.0366	8.7864	8.8705	0.0133		0.4793	0.4793		0.4489	0.4489		1,266.9515	1,266.9515	0.3699		1,276.1987
Total	1.0366	8.7864	8.8705	0.0133		0.4793	0.4793		0.4489	0.4489		1,266.9515	1,266.9515	0.3699		1,276.1987

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	0.1560	4.1719	1.2185	9.1600e-003	0.2305	0.0270	0.2575	0.0664	0.0258	0.0922		976.5976	976.5976	0.0686		978.3127
Worker	0.5095	0.3741	4.0708	0.0106	1.0283	8.8700e-003	1.0372	0.2727	8.1700e-003	0.2809		1,050.7604	1,050.7604	0.0362		1,051.6640

Total	0.6655	4.5459	5.2893	0.0197	1.2588	0.0359	1.2947	0.3391	0.0340	0.3731		2,027.3580	2,027.3580	0.1048		2,029.9768
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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	0.5166	2.1939	9.9133	0.0133		0.1172	0.1172		0.1172	0.1172	0.0000	1,266.9515	1,266.9515	0.3699		1,276.1987
Total	0.5166	2.1939	9.9133	0.0133		0.1172	0.1172		0.1172	0.1172	0.0000	1,266.9515	1,266.9515	0.3699		1,276.1987

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	0.1560	4.1719	1.2185	9.1600e-003	0.2305	0.0270	0.2575	0.0664	0.0258	0.0922		976.5976	976.5976	0.0686		978.3127
Worker	0.5095	0.3741	4.0708	0.0106	1.0283	8.8700e-003	1.0372	0.2727	8.1700e-003	0.2809		1,050.7604	1,050.7604	0.0362		1,051.6640
Total	0.6655	4.5459	5.2893	0.0197	1.2588	0.0359	1.2947	0.3391	0.0340	0.3731		2,027.3580	2,027.3580	0.1048		2,029.9768

3.6 Architectural Coating - 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					
Archit. Coating	6.4278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	6.6943	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

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	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604

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	6.4278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0238		282.0423
Total	6.4575	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0238		282.0423

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	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604
Total	0.0997	0.0732	0.7965	2.0700e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		205.5836	205.5836	7.0700e-003		205.7604

4.0 Operational Detail - Mobile

Operational Emissions Modeled Separately

United Rock - Construction Only - Los Angeles-South Coast County, Summer

**United Rock - Construction Only
Los Angeles-South Coast County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - Equipment included in Grading

Off-road Equipment - Equipment included in grading

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment -

Grading - See Assumptions

Trips and VMT - See Assumptions

Energy Use - No operational emissions modeled

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	300.00	30.00
tblConstructionPhase	NumDays	30.00	120.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	10.00	70.00

tblConstructionPhase	PhaseEndDate	12/15/2020	7/31/2019
tblConstructionPhase	PhaseEndDate	11/17/2020	7/29/2019
tblConstructionPhase	PhaseEndDate	9/24/2019	6/17/2019
tblConstructionPhase	PhaseStartDate	11/18/2020	7/18/2019
tblConstructionPhase	PhaseStartDate	9/25/2019	6/18/2019
tblConstructionPhase	PhaseStartDate	4/10/2019	1/1/2019
tblGrading	AcresOfGrading	120.00	75.00
tblGrading	MaterialImported	0.00	4,000.00
tblGrading	MaterialImported	0.00	275,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	500.00	800.00
tblTripsAndVMT	HaulingTripNumber	34,375.00	55,000.00

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	12.5801	299.5037	78.1753	0.7018	27.4035	3.2802	30.6837	10.6627	3.0508	13.7135	0.0000	75,360.7234	75,360.7234	6.6459	0.0000	75,526.8707
Maximum	12.5801	299.5037	78.1753	0.7018	27.4035	3.2802	30.6837	10.6627	3.0508	13.7135	0.0000	75,360.7234	75,360.7234	6.6459	0.0000	75,526.8707

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	8.3799	248.9207	83.1149	0.7018	19.3763	0.9989	20.3752	6.5388	0.9599	7.4986	0.0000	75,360.7233	75,360.7233	6.6459	0.0000	75,526.8707

Maximum	8.3799	248.9207	83.1149	0.7018	19.3763	0.9989	20.3752	6.5388	0.9599	7.4986	0.0000	75,360.7233	75,360.7233	6.6459	0.0000	75,526.8707
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	33.39	16.89	-6.32	0.00	29.29	69.55	33.60	38.68	68.54	45.32	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Operations Modeled Separately

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Soil Import - Maximum Per Day	Site Preparation	1/1/2019	1/1/2019	5	1	
2	Soil Import - Total Import	Site Preparation	1/2/2019	4/9/2019	5	70	
3	Grading	Grading	1/1/2019	6/17/2019	5	120	
4	Building Construction	Building Construction	6/18/2019	7/29/2019	5	30	
5	Architectural Coating	Architectural Coating	7/18/2019	7/31/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 600; Non-Residential Outdoor: 200; Striped Parking Area: 13,068

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Soil Import - Total Import	Rubber Tired Dozers	0	8.00	247	0.40
Soil Import - Total Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37

Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Sweepers/Scrubbers	1	4.00	64	0.46
Grading	Off-Highway Trucks	2	6.00	402	0.38
Building Construction	Rough Terrain Forklifts	1	8.00	100	0.40
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	2	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Pavers	1	8.00	130	0.42
Soil Import - Maximum Per Day	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Soil Import - Maximum Per Day	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Rollers	1	8.00	80	0.38

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
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	92.00	36.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Soil Import - Total Import	0	0.00	0.00	55,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Soil Import - Maximum Per Day	0	0.00	0.00	800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Soil Import - Maximum Per Day - 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					0.4524	0.0000	0.4524	0.0685	0.0000	0.0685			0.0000			0.0000
Off-Road	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	0.4524	0.0000	0.4524	0.0685	0.0000	0.0685		0.0000	0.0000	0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5176	245.0265	52.2420	0.6392	13.9870	0.8991	14.8862	3.8340	0.8602	4.6942		69,160.9403	69,160.9403	4.7630		69,280.0161
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.5176	245.0265	52.2420	0.6392	13.9870	0.8991	14.8862	3.8340	0.8602	4.6942		69,160.9403	69,160.9403	4.7630		69,280.0161

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					0.1764	0.0000	0.1764	0.0267	0.0000	0.0267			0.0000			0.0000
Off-Road	0.0000	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	0.1764	0.0000	0.1764	0.0267	0.0000	0.0267	0.0000	0.0000	0.0000	0.0000		0.0000

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.5176	245.0265	52.2420	0.6392	13.9870	0.8991	14.8862	3.8340	0.8602	4.6942		69,160.9403	69,160.9403	4.7630		69,280.0161
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.5176	245.0265	52.2420	0.6392	13.9870	0.8991	14.8862	3.8340	0.8602	4.6942		69,160.9403	69,160.9403	4.7630		69,280.0161

3.3 Soil Import - Total Import - 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
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Category	lb/day										lb/day					
Fugitive Dust					0.4443	0.0000	0.4443	0.0673	0.0000	0.0673			0.0000			0.0000
Off-Road	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	0.4443	0.0000	0.4443	0.0673	0.0000	0.0673		0.0000	0.0000	0.0000		0.0000

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.3833	240.6510	51.3092	0.6278	13.7373	0.8831	14.6203	3.7655	0.8449	4.6104		67,925.9235	67,925.9235	4.6780		68,042.8729
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.3833	240.6510	51.3092	0.6278	13.7373	0.8831	14.6203	3.7655	0.8449	4.6104		67,925.9235	67,925.9235	4.6780		68,042.8729

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					0.1733	0.0000	0.1733	0.0262	0.0000	0.0262			0.0000			0.0000
Off-Road	0.0000	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	0.1733	0.0000	0.1733	0.0262	0.0000	0.0262	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.3833	240.6510	51.3092	0.6278	13.7373	0.8831	14.6203	3.7655	0.8449	4.6104		67,925.9235	67,925.9235	4.6780		68,042.8729
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	7.3833	240.6510	51.3092	0.6278	13.7373	0.8831	14.6203	3.7655	0.8449	4.6104		67,925.9235	67,925.9235	4.6780		68,042.8729

3.4 Grading - 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					12.7070	0.0000	12.7070	6.6920	0.0000	6.6920			0.0000			0.0000
Off-Road	4.9477	54.3927	24.8243	0.0598		2.3789	2.3789		2.1886	2.1886		5,920.8039	5,920.8039	1.8733		5,967.6359
Total	4.9477	54.3927	24.8243	0.0598	12.7070	2.3789	15.0859	6.6920	2.1886	8.8806		5,920.8039	5,920.8039	1.8733		5,967.6359

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	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		278.9792	278.9792	9.5800e-003		279.2187
Total	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		278.9792	278.9792	9.5800e-003		279.2187

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					4.9557	0.0000	4.9557	2.6099	0.0000	2.6099			0.0000			0.0000
Off-Road	0.7474	3.8097	29.7638	0.0598		0.0976	0.0976		0.0976	0.0976	0.0000	5,920.8039	5,920.8039	1.8733		5,967.6359
Total	0.7474	3.8097	29.7638	0.0598	4.9557	0.0976	5.0533	2.6099	0.0976	2.7075	0.0000	5,920.8039	5,920.8039	1.8733		5,967.6359

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	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	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		278.9792	278.9792	9.5800e-003		279.2187
Total	0.1149	0.0845	1.1090	2.8000e-003	0.2571	2.2200e-003	0.2593	0.0682	2.0400e-003	0.0702		278.9792	278.9792	9.5800e-003		279.2187

3.5 Building Construction - 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					
Off-Road	1.0366	8.7864	8.8705	0.0133		0.4793	0.4793		0.4489	0.4489		1,266.9515	1,266.9515	0.3699		1,276.1987
Total	1.0366	8.7864	8.8705	0.0133		0.4793	0.4793		0.4489	0.4489		1,266.9515	1,266.9515	0.3699		1,276.1987

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	0.1496	4.1663	1.1055	9.4100e-003	0.2305	0.0266	0.2570	0.0664	0.0254	0.0918		1,003.7326	1,003.7326	0.0643		1,005.3407
Worker	0.4596	0.3378	4.4359	0.0112	1.0283	8.8700e-003	1.0372	0.2727	8.1700e-003	0.2809		1,115.9167	1,115.9167	0.0383		1,116.8749

Total	0.6092	4.5041	5.5414	0.0206	1.2588	0.0354	1.2942	0.3391	0.0336	0.3727		2,119.6493	2,119.6493	0.1027		2,122.2156
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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	0.5166	2.1939	9.9133	0.0133		0.1172	0.1172		0.1172	0.1172	0.0000	1,266.9515	1,266.9515	0.3699		1,276.1987
Total	0.5166	2.1939	9.9133	0.0133		0.1172	0.1172		0.1172	0.1172	0.0000	1,266.9515	1,266.9515	0.3699		1,276.1987

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	0.1496	4.1663	1.1055	9.4100e-003	0.2305	0.0266	0.2570	0.0664	0.0254	0.0918		1,003.7326	1,003.7326	0.0643		1,005.3407
Worker	0.4596	0.3378	4.4359	0.0112	1.0283	8.8700e-003	1.0372	0.2727	8.1700e-003	0.2809		1,115.9167	1,115.9167	0.0383		1,116.8749
Total	0.6092	4.5041	5.5414	0.0206	1.2588	0.0354	1.2942	0.3391	0.0336	0.3727		2,119.6493	2,119.6493	0.1027		2,122.2156

3.6 Architectural Coating - 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					
Archit. Coating	6.4278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	6.6943	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423

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	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190

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	6.4278					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0238		282.0423
Total	6.4575	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0238		282.0423

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	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190
Total	0.0899	0.0661	0.8679	2.1900e-003	0.2012	1.7300e-003	0.2029	0.0534	1.6000e-003	0.0550		218.3315	218.3315	7.5000e-003		218.5190

4.0 Operational Detail - Mobile

Operations Modeled Separately

Air Quality Appendix

Operational CalEEMod Output
Typical Day

United Rock - Operational Emissions - Typical Day - Los Angeles-South Coast County, Winter

United Rock - Operational Emissions - Typical Day
Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions - Paving phase left because with parking lot CalEEMod won't calculate emissions without it.

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - CalEEMod requires paving phase with "parking lot" land use type. No paving associated with operations.

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - workers included under "construction phasing" for operational emissions

Energy Use - See Assumptions

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	85
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	85
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	250.00
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	4.82	4.58
tblEnergyUse	T24NG	10.07	9.57
tblGrading	AcresOfGrading	62.50	75.00
tblGrading	MaterialImported	0.00	1,872,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	3.00
tblTripsAndVMT	HaulingTripNumber	234,000.00	200,000.00
tblTripsAndVMT	WorkerTripNumber	15.00	13.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00

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	13.1000	140.8640	38.6773	0.1991	15.4669	1.9706	17.4375	7.4019	1.8201	9.2220	0.0000	21,142.2544	21,142.2544	3.3674	0.0000	21,226.4403
Maximum	13.1000	140.8640	38.6773	0.1991	15.4669	1.9706	17.4375	7.4019	1.8201	9.2220	0.0000	21,142.2544	21,142.2544	3.3674	0.0000	21,226.4403

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	13.1000	105.0840	40.8921	0.1991	4.2392	0.2616	4.5008	1.6363	0.2531	1.8894	0.0000	21,142.2544	21,142.2544	3.3674	0.0000	21,226.4403
Maximum	13.1000	105.0840	40.8921	0.1991	4.2392	0.2616	4.5008	1.6363	0.2531	1.8894	0.0000	21,142.2544	21,142.2544	3.3674	0.0000	21,226.4403

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	25.40	-5.73	0.00	72.59	86.72	74.19	77.89	86.10	79.51	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Energy	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

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
Total	0.1029	1.0800e-003	1.4500e-003	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		1.2853	1.2853	2.0000e-005	2.0000e-005	1.2930

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Energy	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.1029	1.0800e-003	1.4500e-003	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		1.2853	1.2853	2.0000e-005	2.0000e-005	1.2930

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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

Onsite Operations

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2019	12/16/2019	5	250	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Category	lb/day										lb/day				
Fugitive Dust					13.2091	0.0000	13.2091	6.7830	0.0000	6.7830			0.0000		0.0000
Off-Road	3.6259	38.5491	17.7457	0.0400		1.7744	1.7744		1.6324	1.6324		3,964.3511	3,964.3511	1.2543	3,995.7081
Total	3.6259	38.5491	17.7457	0.0400	13.2091	1.7744	14.9835	6.7830	1.6324	8.4155		3,964.3511	3,964.3511	1.2543	3,995.7081

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	2.6040	102.2620	20.3564	0.1576	2.1125	0.1950	2.3074	0.5803	0.1865	0.7668		17,029.4263	17,029.4263	2.1081		17,082.1275
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	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	2.6760	102.3149	20.9316	0.1591	2.2578	0.1962	2.4540	0.6189	0.1877	0.8065		17,177.9033	17,177.9033	2.1132		17,230.7322

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9814	0.0000	1.9814	1.0175	0.0000	1.0175			0.0000			0.0000
Off-Road	0.5060	2.7691	19.9605	0.0400		0.0654	0.0654		0.0654	0.0654	0.0000	3,964.3511	3,964.3511	1.2543		3,995.7081

Total	0.5060	2.7691	19.9605	0.0400	1.9814	0.0654	2.0468	1.0175	0.0654	1.0829	0.0000	3,964.3511	3,964.3511	1.2543		3,995.7081
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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	2.6040	102.2620	20.3564	0.1576	2.1125	0.1950	2.3074	0.5803	0.1865	0.7668		17,029.4263	17,029.4263	2.1081		17,082.1275
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	0.0720	0.0529	0.5752	1.4900e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		148.4770	148.4770	5.1100e-003		148.6047
Total	2.6760	102.3149	20.9316	0.1591	2.2578	0.1962	2.4540	0.6189	0.1877	0.8065		17,177.9033	17,177.9033	2.1132		17,230.7322

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	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
General Office Building	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Parking Lot	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

NaturalGas Unmitigated	1.2000e- 004	1.0700e- 003	9.0000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.2841	1.2841	2.0000e- 005	2.0000e- 005	1.2918
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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	lb/day										lb/day					
General Office Building	10.9151	1.2000e- 004	1.0700e- 003	9.0000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.2841	1.2841	2.0000e- 005	2.0000e- 005	1.2918
Parking Lot	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		1.2000e- 004	1.0700e- 003	9.0000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.2841	1.2841	2.0000e- 005	2.0000e- 005	1.2918

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	0.0109151	1.2000e- 004	1.0700e- 003	9.0000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.2841	1.2841	2.0000e- 005	2.0000e- 005	1.2918
Parking Lot	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		1.2000e- 004	1.0700e- 003	9.0000e- 004	1.0000e- 005		8.0000e- 005	8.0000e- 005		8.0000e- 005	8.0000e- 005		1.2841	1.2841	2.0000e- 005	2.0000e- 005	1.2918

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Unmitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-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	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e	
SubCategory	lb/day										lb/day						
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000				0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000			1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000			1.2600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

United Rock - Operational Emissions - Typical Day - Los Angeles-South Coast County, Summer

United Rock - Operational Emissions - Typical Day
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions - Paving phase left because with parking lot CalEEMod won't calculate emissions without it.

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - CalEEMod requires paving phase with "parking lot" land use type. No paving associated with operations.

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - workers included under "construction phasing" for operational emissions

Energy Use - See Assumptions

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	85
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	85
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	250.00
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	4.82	4.58
tblEnergyUse	T24NG	10.07	9.57
tblGrading	AcresOfGrading	62.50	75.00
tblGrading	MaterialImported	0.00	1,872,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	3.00
tblTripsAndVMT	HaulingTripNumber	234,000.00	200,000.00
tblTripsAndVMT	WorkerTripNumber	15.00	13.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00

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	13.1000	143.0771	34.9473	0.2101	15.4669	1.9537	17.4206	7.4019	1.8039	9.2059	0.0000	22,324.4272	22,324.4272	3.1846	0.0000	22,404.0409
Maximum	13.1000	143.0771	34.9473	0.2101	15.4669	1.9537	17.4206	7.4019	1.8039	9.2059	0.0000	22,324.4272	22,324.4272	3.1846	0.0000	22,404.0409

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	13.1000	107.2971	37.1621	0.2101	4.2392	0.2447	4.4839	1.6363	0.2369	1.8733	0.0000	22,324.4272	22,324.4272	3.1846	0.0000	22,404.0409
Maximum	13.1000	107.2971	37.1621	0.2101	4.2392	0.2447	4.4839	1.6363	0.2369	1.8733	0.0000	22,324.4272	22,324.4272	3.1846	0.0000	22,404.0409

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	25.01	-6.34	0.00	72.59	87.47	74.26	77.89	86.87	79.65	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Energy	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.1029	1.0800e-003	1.4500e-003	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		1.2853	1.2853	2.0000e-005	2.0000e-005	1.2930

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Energy	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.1029	1.0800e-003	1.4500e-003	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005		1.2853	1.2853	2.0000e-005	2.0000e-005	1.2930

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2019	12/16/2019	5	250	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38

Grading	Graders	1	4.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Sweepers/Scrubbers	1	4.00	64	0.46
Grading	Tractors/Loaders/Backhoes	0	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
Grading	6	13.00	0.00	200,000.00	14.70	6.90	3.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					13.2091	0.0000	13.2091	6.7830	0.0000	6.7830			0.0000			0.0000
Off-Road	3.6259	38.5491	17.7457	0.0400		1.7744	1.7744		1.6324	1.6324		3,964.351	3,964.351	1.2543		3,995.708
												1				1

Total	3.6259	38.5491	17.7457	0.0400	13.2091	1.7744	14.9835	6.7830	1.6324	8.4155		3,964.351	3,964.3511	1.2543		3,995.708
												1				1

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	2.4134	104.4803	16.5748	0.1685	2.1125	0.1781	2.2906	0.5803	0.1704	0.7507		18,202.3922	18,202.3922	1.9249		18,250.5135
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	0.0649	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	2.4784	104.5280	17.2016	0.1700	2.2578	0.1793	2.4371	0.6189	0.1715	0.7904		18,360.0761	18,360.0761	1.9303		18,408.3328

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.9814	0.0000	1.9814	1.0175	0.0000	1.0175			0.0000			0.0000
Off-Road	0.5060	2.7691	19.9605	0.0400		0.0654	0.0654		0.0654	0.0654	0.0000	3,964.3511	3,964.3511	1.2543		3,995.7081
Total	0.5060	2.7691	19.9605	0.0400	1.9814	0.0654	2.0468	1.0175	0.0654	1.0829	0.0000	3,964.3511	3,964.3511	1.2543		3,995.7081

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	2.4134	104.4803	16.5748	0.1685	2.1125	0.1781	2.2906	0.5803	0.1704	0.7507		18,202.3922	18,202.3922	1.9249		18,250.5135
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	0.0649	0.0477	0.6268	1.5800e-003	0.1453	1.2500e-003	0.1466	0.0385	1.1500e-003	0.0397		157.6839	157.6839	5.4200e-003		157.8193
Total	2.4784	104.5280	17.2016	0.1700	2.2578	0.1793	2.4371	0.6189	0.1715	0.7904		18,360.0761	18,360.0761	1.9303		18,408.3328

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		

Parking Lot	0.00	0.00	0.00	
Total	0.00	0.00	0.00	

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	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
General Office Building	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Parking Lot	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
NaturalGas Unmitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas 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	10.9151	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Parking Lot	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		1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

Mitigated

	Natural Gas 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	0.0109151	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Parking Lot	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		1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Unmitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-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	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number
----------------	--------

11.0 Vegetation

Air Quality Appendix

Operational CalEEMod Output
Emergency Scenario

United Rock - Operational Emissions - Emergency - Los Angeles-South Coast County, Winter

**United Rock - Operational Emissions - Emergency
Los Angeles-South Coast County, Winter**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions - Paving phase left because with parking lot CalEEMod won't calculate emissions without it.

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - CalEEMod requires paving phase with "parking lot" land use type. No paving associated with operations.

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - workers included under "construction phasing" for operational emissions

Energy Use - See Assumptions

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	85
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	85
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	12/16/2019	1/28/2019
tblEnergyUse	T24E	4.82	4.58
tblEnergyUse	T24NG	10.07	9.57
tblGrading	AcresOfGrading	62.50	75.00
tblGrading	MaterialImported	0.00	225,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	HorsePower	88.00	13.00
tblOffRoadEquipment	LoadFactor	0.34	0.46
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOffRoadEquipment	UsageHours	8.00	12.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	3.00
tblTripsAndVMT	HaulingTripNumber	234,000.00	25,000.00
tblTripsAndVMT	WorkerTripNumber	15.00	39.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00

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	15.8218	278.6322	90.3525	0.3742	159.5380	5.8680	165.4059	84.4001	5.4097	89.8099	0.0000	39,287.3344	39,287.3344	7.1797	0.0000	39,466.8263
Maximum	15.8218	278.6322	90.3525	0.3742	159.5380	5.8680	165.4059	84.4001	5.4097	89.8099	0.0000	39,287.3344	39,287.3344	7.1797	0.0000	39,466.8263

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	13.1000	168.2502	96.9969	0.3742	27.1069	0.7411	27.8479	13.5290	0.7087	14.2377	0.0000	39,287.3344	39,287.3344	7.1797	0.0000	39,466.8263
Maximum	13.1000	168.2502	96.9969	0.3742	27.1069	0.7411	27.8479	13.5290	0.7087	14.2377	0.0000	39,287.3344	39,287.3344	7.1797	0.0000	39,466.8263

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	17.20	39.62	-7.35	0.00	83.01	87.37	83.16	83.97	86.90	84.15	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

1	Grading	Grading	1/1/2019	1/28/2019	5	20
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	24.00	158	0.38
Grading	Graders	1	12.00	187	0.41
Grading	Off-Highway Trucks	1	24.00	402	0.38
Grading	Rubber Tired Dozers	2	24.00	247	0.40
Grading	Scrapers	0	24.00	367	0.48
Grading	Sweepers/Scrubbers	1	12.00	64	0.46
Grading	Tractors/Loaders/Backhoes	0	24.00	97	0.37
Grading	Other General Industrial Equipment	4	12.00	13	0.46

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	39.00	0.00	25,000.00	14.70	6.90	3.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					155.8013	0.0000	155.8013	83.3778	0.0000	83.3778			0.0000			0.0000
Off-Road	11.5371	118.6892	56.8200	0.1235		5.5596	5.5596		5.1148	5.1148		12,233.4249	12,233.4249	3.8705		12,330.1880
Total	11.5371	118.6892	56.8200	0.1235	155.8013	5.5596	161.3609	83.3778	5.1148	88.4926		12,233.4249	12,233.4249	3.8705		12,330.1880

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0687	159.7844	31.8068	0.2463	3.3008	0.3046	3.6054	0.9068	0.2914	1.1982		26,608.4785	26,608.4785	3.2938		26,690.8242
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	0.2160	0.1586	1.7257	4.4700e-003	0.4359	3.7600e-003	0.4397	0.1156	3.4600e-003	0.1191		445.4310	445.4310	0.0153		445.8141
Total	4.2847	159.9430	33.5325	0.2507	3.7367	0.3084	4.0451	1.0224	0.2949	1.3173		27,053.9096	27,053.9096	3.3092		27,136.6383

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					23.3702	0.0000	23.3702	12.5067	0.0000	12.5067			0.0000			0.0000
Off-Road	2.1776	8.3072	63.4644	0.1235		0.4327	0.4327		0.4138	0.4138	0.0000	12,233.428	12,233.4248	3.8705		12,330.1880
Total	2.1776	8.3072	63.4644	0.1235	23.3702	0.4327	23.8029	12.5067	0.4138	12.9204	0.0000	12,233.428	12,233.4248	3.8705		12,330.1880

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	4.0687	159.7844	31.8068	0.2463	3.3008	0.3046	3.6054	0.9068	0.2914	1.1982		26,608.4785	26,608.4785	3.2938		26,690.8242
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	0.2160	0.1586	1.7257	4.4700e-003	0.4359	3.7600e-003	0.4397	0.1156	3.4600e-003	0.1191		445.4310	445.4310	0.0153		445.8141
Total	4.2847	159.9430	33.5325	0.2507	3.7367	0.3084	4.0451	1.0224	0.2949	1.3173		27,053.9096	27,053.9096	3.3092		27,136.6383

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	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
General Office Building	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Parking Lot	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
NaturalGas Unmitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

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	10.9151	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Parking Lot	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		1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

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	0.0109151	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Parking Lot	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		1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Mitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000			1.2600e-003
Unmitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000			1.2600e-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	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

United Rock - Operational Emissions - Emergency - Los Angeles-South Coast County, Summer

**United Rock - Operational Emissions - Emergency
Los Angeles-South Coast County, Summer**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions - Paving phase left because with parking lot CalEEMod won't calculate emissions without it.

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - CalEEMod requires paving phase with "parking lot" land use type. No paving associated with operations.

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - workers included under "construction phasing" for operational emissions

Energy Use - See Assumptions

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	85
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	85
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	20.00	1.00
tblConstructionPhase	PhaseEndDate	12/16/2019	1/28/2019
tblEnergyUse	T24E	4.82	4.58
tblEnergyUse	T24NG	10.07	9.57
tblGrading	AcresOfGrading	62.50	75.00
tblGrading	MaterialImported	0.00	225,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	HorsePower	88.00	13.00
tblOffRoadEquipment	LoadFactor	0.34	0.46
tblOffRoadEquipment	OffRoadEquipmentType		Other General Industrial Equipment
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOffRoadEquipment	UsageHours	8.00	12.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblOffRoadEquipment	UsageHours	8.00	24.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	3.00
tblTripsAndVMT	HaulingTripNumber	234,000.00	25,000.00
tblTripsAndVMT	WorkerTripNumber	15.00	39.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00

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	15.5029	282.0828	84.5985	0.3915	159.5380	5.8416	165.3796	84.4001	5.3845	89.7846	0.0000	41,147.7143	41,147.7143	6.8944	0.0000	41,320.0732
Maximum	15.5029	282.0828	84.5985	0.3915	159.5380	5.8416	165.3796	84.4001	5.3845	89.7846	0.0000	41,147.7143	41,147.7143	6.8944	0.0000	41,320.0732

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	13.1000	171.7008	91.2429	0.3915	27.1069	0.7147	27.8216	13.5290	0.6834	14.2125	0.0000	41,147.7142	41,147.7142	6.8944	0.0000	41,320.0732
Maximum	13.1000	171.7008	91.2429	0.3915	27.1069	0.7147	27.8216	13.5290	0.6834	14.2125	0.0000	41,147.7142	41,147.7142	6.8944	0.0000	41,320.0732

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	15.50	39.13	-7.85	0.00	83.01	87.77	83.18	83.97	87.31	84.17	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

1	Grading	Grading	1/1/2019	1/28/2019	5	20
---	---------	---------	----------	-----------	---	----

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	24.00	158	0.38
Grading	Graders	1	12.00	187	0.41
Grading	Off-Highway Trucks	1	24.00	402	0.38
Grading	Rubber Tired Dozers	2	24.00	247	0.40
Grading	Scrapers	0	24.00	367	0.48
Grading	Sweepers/Scrubbers	1	12.00	64	0.46
Grading	Tractors/Loaders/Backhoes	0	24.00	97	0.37
Grading	Other General Industrial Equipment	4	12.00	13	0.46

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	6	39.00	0.00	25,000.00	14.70	6.90	3.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					155.8013	0.0000	155.8013	83.3778	0.0000	83.3778			0.0000			0.0000
Off-Road	11.5371	118.6892	56.8200	0.1235		5.5596	5.5596		5.1148	5.1148		12,233.4249	12,233.4249	3.8705		12,330.1880
Total	11.5371	118.6892	56.8200	0.1235	155.8013	5.5596	161.3609	83.3778	5.1148	88.4926		12,233.4249	12,233.4249	3.8705		12,330.1880

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	3.7710	163.2504	25.8981	0.2632	3.3008	0.2783	3.5790	0.9068	0.2662	1.1730		28,441.2378	28,441.2378	3.0076		28,516.4274
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	0.1948	0.1432	1.8804	4.7500e-003	0.4359	3.7600e-003	0.4397	0.1156	3.4600e-003	0.1191		473.0516	473.0516	0.0163		473.4578
Total	3.9658	163.3936	27.7785	0.2680	3.7367	0.2820	4.0187	1.0224	0.2697	1.2921		28,914.2894	28,914.2894	3.0238		28,989.8852

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					23.3702	0.0000	23.3702	12.5067	0.0000	12.5067			0.0000				0.0000
Off-Road	2.1776	8.3072	63.4644	0.1235		0.4327	0.4327		0.4138	0.4138	0.0000	12,233.428	12,233.4248	3.8705			12,330.1880
Total	2.1776	8.3072	63.4644	0.1235	23.3702	0.4327	23.8029	12.5067	0.4138	12.9204	0.0000	12,233.428	12,233.4248	3.8705			12,330.1880

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	3.7710	163.2504	25.8981	0.2632	3.3008	0.2783	3.5790	0.9068	0.2662	1.1730		28,441.2378	28,441.2378	3.0076			28,516.4274
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	0.1948	0.1432	1.8804	4.7500e-003	0.4359	3.7600e-003	0.4397	0.1156	3.4600e-003	0.1191		473.0516	473.0516	0.0163			473.4578
Total	3.9658	163.3936	27.7785	0.2680	3.7367	0.2820	4.0187	1.0224	0.2697	1.2921		28,914.2894	28,914.2894	3.0238			28,989.8852

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	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
General Office Building	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Parking Lot	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
NaturalGas Unmitigated	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

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	10.9151	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Parking Lot	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		1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

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	0.0109151	1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918
Parking Lot	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		1.2000e-004	1.0700e-003	9.0000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005		1.2841	1.2841	2.0000e-005	2.0000e-005	1.2918

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Mitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000			1.2600e-003
Unmitigated	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000			1.2600e-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	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0851					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.0000e-005	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003
Total	0.1027	1.0000e-005	5.5000e-004	0.0000		0.0000	0.0000		0.0000	0.0000		1.1800e-003	1.1800e-003	0.0000		1.2600e-003

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

Air Quality Appendix

AERSCREEN Output

UROPPM10

AERSCREEN 14147 / AERMOD 14134

05/04/17

12:28:02

TITLE: UNITED ROCK PM10

***** AREA PARAMETERS *****

SOURCE EMISSION RATE: 0.0104 g/s 0.083 lb/hr

AREA EMISSION RATE: 0.252E-07 g/(s-m2) 0.200E-06 lb/(hr-m2)

AREA HEIGHT: 3.66 meters 12.01 feet

AREA SOURCE LONG SIDE: 793.00 meters 2601.71 feet

AREA SOURCE SHORT SIDE: 522.00 meters 1712.60 feet

INITIAL VERTICAL DIMENSION: 3.40 meters 11.15 feet

RURAL OR URBAN: URBAN

POPULATION: 9862049

FLAGPOLE RECEPTOR HEIGHT: 2.00 meters 6.56 feet

INITIAL PROBE DISTANCE = 1000. meters 3281. feet

***** BUILDING DOWNWASH PARAMETERS *****

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

***** FLOW SECTOR ANALYSIS *****

25 meter receptor spacing: 1. meters - 1000. meters

MAXIMUM IMPACT RECEPTOR

Zo	SURFACE	1-HR CONC	RADIAL DIST	TEMPORAL
SECTOR	ROUGHNESS	(ug/m3)	(deg)	PERIOD

UROPPM10

1* 1.000 1.326 30 450.0 WIN

* = worst case diagonal

***** MAKEMET METEOROLOGY PARAMETERS

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Average Moisture

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 1.50

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

10 01 10 10 01

H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS

-1.30 0.043 -9.000 0.020 -999. 21. 6.0 1.000 1.50 0.35 0.50

HT REF TA HT

10.0 310.0 2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

UROPPM10

 YR MO DY JDY HR

 10 01 10 10 01

H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS

 -1.30 0.043 -9.000 0.020 -999. 21. 6.0 1.000 1.50 0.35 0.50

HT REF TA HT

 10.0 310.0 2.0

 ***** AERSCREEN AUTOMATED DISTANCES *****
 OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

MAXIMUM		MAXIMUM	
DIST	1-HR CONC	DIST	1-HR CONC
(m)	(ug/m3)	(m)	(ug/m3)
1.00	1.012	525.00	0.9197
25.00	1.034	550.00	0.8346
50.00	1.058	575.00	0.7698
75.00	1.081	600.00	0.7178
100.00	1.103	625.00	0.6859
125.00	1.124	650.00	0.6458
150.00	1.145	675.00	0.6108
175.00	1.165	700.00	0.5801
200.00	1.184	725.00	0.5526
225.00	1.202	750.00	0.5284
250.00	1.219	775.00	0.5070
275.00	1.236	800.00	0.4875
300.00	1.253	825.00	0.4694
325.00	1.268	850.00	0.4537
350.00	1.283	875.00	0.4394
375.00	1.298	900.00	0.4257
400.00	1.309	925.00	0.4128
425.00	1.321	950.00	0.4006
450.00	1.326	975.00	0.3889

UROPPM10

475.00 1.158 1000.00 0.3779
 500.00 1.002

***** AERSCREEN MAXIMUM IMPACT SUMMARY *****

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4) Report number EPA-454/R-92-019 http://www.epa.gov/scram001/guidance_permit.htm under Screening Guidance

CALCULATION PROCEDURE	MAXIMUM 1-HOUR CONC (ug/m3)	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	1.328	1.328	1.328	1.328	N/A

DISTANCE FROM SOURCE 457.00 meters

IMPACT AT THE AMBIENT BOUNDARY	1.012	1.012	1.012	1.012	N/A

DISTANCE FROM SOURCE 1.00 meters

URopPM25

AERSCREEN 14147 / AERMOD 14134

05/04/17

12:31:48

TITLE: United Rock Operational PM2.5

***** AREA PARAMETERS *****

SOURCE EMISSION RATE: 0.605E-02 g/s 0.480E-01 lb/hr

AREA EMISSION RATE: 0.146E-07 g/(s-m2) 0.116E-06 lb/(hr-m2)

AREA HEIGHT: 3.66 meters 12.01 feet

AREA SOURCE LONG SIDE: 793.00 meters 2601.71 feet

AREA SOURCE SHORT SIDE: 522.00 meters 1712.60 feet

INITIAL VERTICAL DIMENSION: 3.40 meters 11.15 feet

RURAL OR URBAN: URBAN

POPULATION: 9862049

FLAGPOLE RECEPTOR HEIGHT: 2.00 meters 6.56 feet

INITIAL PROBE DISTANCE = 1000. meters 3281. feet

***** BUILDING DOWNWASH PARAMETERS *****

BUILDING DOWNWASH NOT USED FOR NON-POINT SOURCES

***** FLOW SECTOR ANALYSIS *****

25 meter receptor spacing: 1. meters - 1000. meters

MAXIMUM IMPACT RECEPTOR

Zo	SURFACE	1-HR CONC	RADIAL DIST	TEMPORAL
SECTOR	ROUGHNESS	(ug/m3)	(deg)	PERIOD

URopPM25

1* 1.000 0.7688 30 450.0 WIN

* = worst case diagonal

***** MAKEMET METEOROLOGY PARAMETERS

MIN/MAX TEMPERATURE: 250.0 / 310.0 (K)

MINIMUM WIND SPEED: 0.5 m/s

ANEMOMETER HEIGHT: 10.000 meters

SURFACE CHARACTERISTICS INPUT: AERMET SEASONAL TABLES

DOMINANT SURFACE PROFILE: Urban

DOMINANT CLIMATE TYPE: Average Moisture

DOMINANT SEASON: Winter

ALBEDO: 0.35

BOWEN RATIO: 1.50

ROUGHNESS LENGTH: 1.000 (meters)

METEOROLOGY CONDITIONS USED TO PREDICT OVERALL MAXIMUM IMPACT

YR MO DY JDY HR

10 01 10 10 01

H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS

-1.30 0.043 -9.000 0.020 -999. 21. 6.0 1.000 1.50 0.35 0.50

HT REF TA HT

10.0 310.0 2.0

METEOROLOGY CONDITIONS USED TO PREDICT AMBIENT BOUNDARY IMPACT

URopPM25

 YR MO DY JDY HR

 10 01 10 10 01

H0 U* W* DT/DZ ZICNV ZIMCH M-O LEN Z0 BOWEN ALBEDO REF WS

 -1.30 0.043 -9.000 0.020 -999. 21. 6.0 1.000 1.50 0.35 0.50

HT REF TA HT

 10.0 310.0 2.0

 ***** AERSCREEN AUTOMATED DISTANCES *****
 OVERALL MAXIMUM CONCENTRATIONS BY DISTANCE

MAXIMUM		MAXIMUM	
DIST	1-HR CONC	DIST	1-HR CONC
(m)	(ug/m3)	(m)	(ug/m3)
1.00	0.5868	525.00	0.5332
25.00	0.5997	550.00	0.4838
50.00	0.6134	575.00	0.4463
75.00	0.6267	600.00	0.4162
100.00	0.6395	625.00	0.3976
125.00	0.6519	650.00	0.3744
150.00	0.6638	675.00	0.3541
175.00	0.6752	700.00	0.3363
200.00	0.6863	725.00	0.3204
225.00	0.6968	750.00	0.3063
250.00	0.7070	775.00	0.2940
275.00	0.7167	800.00	0.2826
300.00	0.7262	825.00	0.2722
325.00	0.7352	850.00	0.2630
350.00	0.7440	875.00	0.2547
375.00	0.7525	900.00	0.2468
400.00	0.7591	925.00	0.2394
425.00	0.7659	950.00	0.2322
450.00	0.7688	975.00	0.2255

			URopPM25
475.00	0.6715	1000.00	0.2191
500.00	0.5811		

 ***** AERSCREEN MAXIMUM IMPACT SUMMARY

3-hour, 8-hour, and 24-hour scaled concentrations are equal to the 1-hour concentration as referenced in SCREENING PROCEDURES FOR ESTIMATING THE AIR QUALITY IMPACT OF STATIONARY SOURCES, REVISED (Section 4.5.4) Report number EPA-454/R-92-019 http://www.epa.gov/scram001/guidance_permit.htm under Screening Guidance

	MAXIMUM 1-HOUR CALCULATION PROCEDURE	SCALED 3-HOUR CONC (ug/m3)	SCALED 8-HOUR CONC (ug/m3)	SCALED 24-HOUR CONC (ug/m3)	SCALED ANNUAL CONC (ug/m3)
FLAT TERRAIN	0.7699	0.7699	0.7699	0.7699	N/A

DISTANCE FROM SOURCE 457.00 meters

IMPACT AT THE AMBIENT BOUNDARY	0.5868	0.5868	0.5868	0.5868	N/A
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DISTANCE FROM SOURCE 1.00 meters

Air Quality Appendix

Health Risk Analysis

Health Risk Analysis will be added once completed

GHG Appendix

Assumptions
GHG Emissions

United Rock Quarry Construction Assumptions

CalEEMod Inputs that are not modeling defaults:

Project Location: County
Los Angeles

Climate Zone: 9

Operational Year: 2020 (construction to occur in 2019 with operation beginning in 2020)

Utility Company: SCE

Land Use Type:

Commercial - Gen Office	400 sq ft	9.25 acres	spreading basin
	0.4 KSF	1.19 acres	access roads
		0.02 acres	Building area
		11 acres	Total Area graded
Parking lot	5 acre	5 acres	

Note: General Office and parking lot are used so that energy from the type of use (the 400 sqft scale/office building) and lights for the night activities are included. Specific construction and operational activities are modeled to address project specific activities. Note: Parking lot used in operations only for electrical usage of lighting for lights applied to the permanent access roads.

CONSTRUCTION INFORMATION

Construction Schedule:

Phase	Start Date	End Date	Days/Week	# days
Grading	1/1/2019	6/17/2019	5	120
Soil Import	1/1/2019	4/8/2019	5	70
Building	6/18/2019	7/29/2019	5	30
Arch Coating	7/18/2019	7/31/2019	5	10

Construction activities include grading and creating a new paved access road across the Buena Vista spreading basin, drainage improvement, construction of lighting in and around the quarry, new entrance gate, and a 20 ft x 20 ft operation building for office and truck scales. Construction is anticipated to occur over 8 months in 2019. Modeling Start and End dates represent conservative modeling assumptions only and do not represent the actual start/end dates as phases may actually begin/end at different times. The number of days per phase is the more accurate determination of phase length.

Overall Construction Equipment List

Equipment type	Phase	Type/Model	HP	#	Daily usage
Excavator	Grading	Cat 330	247	1	8 hrs
Grader	Grading	default	default	2	8 hrs
Water truck	Grading	default	default	2	6 hrs
Dozers	Grading	Swamp Cats D10	default	2	8 hrs
scrubber/sweeper	Grading	default	default	1	4 hrs
loaders	Grading	Cat 924, 928, 930, 950	230	1	8 hrs
Rough Terrain forklifts	Building	default	default	1	8 hrs
welders	Building	default	default	1	8 hrs
Paver	Building	default	default	1	8 hrs
Roller	Building	default	default	1	8 hrs
air compressor	Arch Coating	default	default	1	6 hrs

United Rock Quarry Construction Assumptions

Grading to create a new access road across the Buena Vista Spreading Basin and to improve site drainage would involve approximately 400 truck trips per day for 14 weeks, approximately 27,500 truck trips assuming using 10 CY trucks.

400
70
27,500 truck trips
275,000 cubic yards assuming 10 cubic yards per truck

Notes:

1. Due to the way CalEEMod calculates daily and annual emissions, and the fact that in order to accurately model 400 trucks for a max day, that would equal 28,000 trucks. This would accurately calculate daily emissions but overestimate GHG emissions. In order to accurately calculate both max daily emissions and annual emissions, the hauling was split into two phases. One that models the emissions for GHGs using 27,500 trips over the 14 week (70 day) period; and one that models 400 trips in a single day. The default CalEEMod hauling distances were used for fill for the Buena Vista Spreading Basin .

LST area determination:

Based on the *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds* (available: [http://www.aqmd.gov/search?q=CalEEMod fact sheet](http://www.aqmd.gov/search?q=CalEEMod+fact+sheet)). The acreage of disturbance is determined by the equipment used and the daily acres disturbed per day for that equipment. The following table determines the acreage for the proposed project's LST analysis for construction and operational activities.

Equipment	Acres/day	Construction		Operation	
		#	Acres	#	Acres
crawler Tractor	0.5	0	0	0	0
Graders	0.5	2	1	1	0.5
Dozers	0.5	2	1	2	1
Scrapers	1	0	0	0	0
Total Acres:			2		1.5

United Rock Quarry Operational Assumptions

The depositing of debris into the quarry is modeled as operational activities because it will last for the duration of the project and therefor is the main operation/activity associated with the project. Quarry activities include a maximum of 5 employees to manage the unloading of materials with up to 400 truck loads per day (with a maximum of 7,200 cubic yards) over an 8 hour period.

Operational Mobile Sources

	Trips*/day	Trips/year	Miles	comments
<i>Typical Operation</i>				
Haul Trucks	800.0	200,000	3	From the site to the 210/605 Interchange
Employees	12.5	N/A	default	
<i>Emergency Operation</i>				
Haul Trucks	1250.0	25,000	3	From the site to the 210/605 Interchange (Additional daily trucks to reach 1,250 trucks per day)

* Trips = one way trips. Miles from project description for trucks. Employee daily trips are 2.5 times the number of employees (assumes some offsite travel for lunch)

* Employee trips modeled are greater than what is projected in the project specific traffic study because the traffic study was not available at the time the modeling was conducted. As the modeled employee trips are greater than those estimated in the traffic study this represents a conservative analysis.

*assumes use of 2 full 4,000 gallon trucks per day for watering and no landscaping needs.
Assumed connection to sewer

Solid Waste Generation: Default

Operational Offroad equipment:

Equipment type	Phase	Type/Model	HP	#	Average Daily	Emergency Daily Usage
Excavator	Grading	Cat 330	247	1	8 hrs	24 hrs
Grader	Grading	default	default (174)	1	4 hrs	12 hrs
Water truck	Grading	default	default (400)	1	8 hrs	24 hrs
Dozers	Grading	Swamp Cats D10	default (255)	2	8 hrs	24 hrs
scrubber/sweeper	Grading	default	default (64)	1	4 hr	12 hrs
Portable lighting	Grading	default	default (64)	1	0 hr	12 hrs

* With only 5 employees onsite, equipment cannot be operated the full 8 hours a day of operation. Therefore, as a conservative estimate the equipment hours of operation total 40 for the day (8 hr * 5 workers) and are allocated starting with the highest hp. The Water truck is assumed to operate for 4 hours per day (assuming 1 hour per watering episode).

Soil Import: 7,200 cubic yard/day 1,872,000 cubic yards/year

Rule 403: For onsite equipment it was set to 3 waterings per day or 61% reduction
For grading associated with sediment material it was set to 85% to account for saturated nature of the materials being graded.

Energy Adjustments

Adjustment to CO2 intensity based on Renewable resources.

	Base	2020 ^{1,2}
CO intensity	702.43634	443.23733
% renewable	0%	36.90%

¹ <http://www.cpuc.ca.gov/renewables/>

² Note: The CPUC updated SCE's estimated renewables percentage anticipated by 2020 to 41.4 percent subsequent to the analysis being completed. Because the 36.9 percent represents a conservative value, the analysis was not updated.

**United Rock Quarry
Operational Assumptions**

Conversion from 2013 Title 24 to 2016 Title 24

2016 results in a 5% reduction from 2013 Title 24 values for non-residential land uses.

	2013	2016
Electricity	4.82	4.579
Natural Gas	10.07	9.5665

United Rock Quarry
GHG CalEEMod Results Compiled - SCAQMD Threshold

Unmitigated Construction

	CO ₂	CH ₄	(CH ₄ /CO ₂ e)	CO ₂ e
	MT/year			
Grading - Onsite	322.28	0.102	2.55	325
Grading - Offsite	14.54	5.00E-04	0.0125	15
Building Construction - Onsite	17.2404	5.03E-03	0.12575	17
Building Construction - Offsite	28.0398	1.40E-03	0.035	28
Architectural Coating - Onsite	1.2766	1.10E-04	0.00275	1
Architectural Coating - Offsite	0.948	3.00E-05	0.00075	1
Soil Import	2141.385	1.51E-01	3.775	2,145
			0	0
Total Project:				2,532
Amortized Construction:				50.64

United Rock Quarry
GHG CalEEMod Results Compiled - SCAQMD Threshold

Unmitigated Operational

	CO₂	CH₄ (CH₄/CO₂e)	N₂O (N₂O/CO₂e)		CO₂e
MT/year Annual Unmitigated					
Proposed Project					
Area	1.30E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Energy	39.79	2.59E-02	6.48E-01	5.40E-04	1.61E-01
Onsite Equipment	449.55	1.42E-01	3.56E+00	0.00E+00	0.00E+00
Mobile - Haul	2,008.25	2.28E-01	5.69E+00	0.00E+00	0.00E+00
Mobile - Worker	17.12	5.90E-04	1.48E-02	0.00E+00	0.00E+00
Waste	0.08	4.44E-03	1.11E-01	0.00E+00	0.00E+00
Water 1	0.31	2.34E-03	5.85E-02	6.00E-05	1.79E-02
Total Project	2,525				
Amortized Construction	51				
Total Operational Annual	2,576				
Threshold	3,000				
Significant	No				

GHG Appendix

Construction CalEEMod Output

United Rock - Construction Only - Los Angeles-South Coast County, Annual

United Rock - Construction Only
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions

Off-road Equipment - Equipment included in Grading

Off-road Equipment - Equipment included in grading

Off-road Equipment - See Assumptions

Off-road Equipment - See Assumptions

Off-road Equipment -

Grading - See Assumptions

Trips and VMT - See Assumptions

Energy Use - No operational emissions modeled

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	10.00
tblConstructionPhase	NumDays	300.00	30.00
tblConstructionPhase	NumDays	30.00	120.00
tblConstructionPhase	NumDays	10.00	1.00
tblConstructionPhase	NumDays	10.00	70.00

tblConstructionPhase	PhaseEndDate	12/15/2020	7/31/2019
tblConstructionPhase	PhaseEndDate	11/17/2020	7/29/2019
tblConstructionPhase	PhaseEndDate	9/24/2019	6/17/2019
tblConstructionPhase	PhaseStartDate	11/18/2020	7/18/2019
tblConstructionPhase	PhaseStartDate	9/25/2019	6/18/2019
tblConstructionPhase	PhaseStartDate	4/10/2019	1/1/2019
tblGrading	AcresOfGrading	120.00	75.00
tblGrading	MaterialImported	0.00	4,000.00
tblGrading	MaterialImported	0.00	275,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	LoadFactor	0.46	0.46
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rough Terrain Forklifts
tblOffRoadEquipment	OffRoadEquipmentType		Pavers
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripNumber	500.00	800.00
tblTripsAndVMT	HaulingTripNumber	34,375.00	55,000.00

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	0.6274	12.3102	3.6541	0.0264	1.2923	0.1829	1.4751	0.5449	0.1696	0.7144	0.0000	2,556.8491	2,556.8491	0.2623	0.0000	2,563.4054
Maximum	0.6274	12.3102	3.6541	0.0264	1.2923	0.1829	1.4751	0.5449	0.1696	0.7144	0.0000	2,556.8491	2,556.8491	0.2623	0.0000	2,563.4054

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	0.3664	9.1678	3.9661	0.0264	0.8176	0.0399	0.8575	0.2985	0.0385	0.3370	0.0000	2,556.8487	2,556.8487	0.2623	0.0000	2,563.4050

Maximum	0.3664	9.1678	3.9661	0.0264	0.8176	0.0399	0.8575	0.2985	0.0385	0.3370	0.0000	2,556.8487	2,556.8487	0.2623	0.0000	2,563.4050
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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	41.60	25.53	-8.54	0.00	36.73	78.17	41.87	45.22	77.29	52.83	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	1-1-2019	3-31-2019	1.9145	0.1536
2	4-1-2019	6-30-2019	1.7280	0.1688
3	7-1-2019	9-30-2019	0.1981	0.1147
		Highest	1.9145	0.1688

2.2 Overall Operational

Operational activities modeled separately

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Soil Import - Maximum Per Day	Site Preparation	1/1/2019	1/1/2019	5	1	
2	Soil Import - Total Import	Site Preparation	1/2/2019	4/9/2019	5	70	
3	Grading	Grading	1/1/2019	6/17/2019	5	120	
4	Building Construction	Building Construction	6/18/2019	7/29/2019	5	30	
5	Architectural Coating	Architectural Coating	7/18/2019	7/31/2019	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 600; Non-Residential Outdoor: 200; Striped Parking Area: 13,068

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Soil Import - Total Import	Rubber Tired Dozers	0	8.00	247	0.40
Soil Import - Total Import	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Building Construction	Cranes	0	7.00	231	0.29
Building Construction	Forklifts	0	8.00	89	0.20
Building Construction	Generator Sets	0	8.00	84	0.74
Grading	Sweepers/Scrubbers	1	4.00	64	0.46
Grading	Off-Highway Trucks	2	6.00	402	0.38
Building Construction	Rough Terrain Forklifts	1	8.00	100	0.40
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Graders	2	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Pavers	1	8.00	130	0.42
Soil Import - Maximum Per Day	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Soil Import - Maximum Per Day	Rubber Tired Dozers	0	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45
Building Construction	Rollers	1	8.00	80	0.38

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
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	4	92.00	36.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Soil Import - Total Import	0	0.00	0.00	55,000.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	9	23.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Soil Import - Maximum Per Day	0	0.00	0.00	800.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
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3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Soil Import - Maximum Per Day - 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					2.3000e-004	0.0000	2.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	2.3000e-004	0.0000	2.3000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	3.8000e-003	0.1266	0.0269	3.2000e-004	6.8700e-003	4.5000e-004	7.3300e-003	1.8900e-003	4.3000e-004	2.3200e-003	0.0000	31.1474	31.1474	2.2000e-003	0.0000	31.2023

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.8000e-003	0.1266	0.0269	3.2000e-004	6.8700e-003	4.5000e-004	7.3300e-003	1.8900e-003	4.3000e-004	2.3200e-003	0.0000	31.1474	31.1474	2.2000e-003	0.0000	31.2023

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					9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	9.0000e-005	0.0000	9.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	3.8000e-003	0.1266	0.0269	3.2000e-004	6.8700e-003	4.5000e-004	7.3300e-003	1.8900e-003	4.3000e-004	2.3200e-003	0.0000	31.1474	31.1474	2.2000e-003	0.0000	31.2023
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.8000e-003	0.1266	0.0269	3.2000e-004	6.8700e-003	4.5000e-004	7.3300e-003	1.8900e-003	4.3000e-004	2.3200e-003	0.0000	31.1474	31.1474	2.2000e-003	0.0000	31.2023

3.3 Soil Import - Total Import - 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					0.0156	0.0000	0.0156	2.3500e-003	0.0000	2.3500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	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	0.0156	0.0000	0.0156	2.3500e-003	0.0000	2.3500e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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	0.2612	8.7034	1.8487	0.0218	0.4726	0.0312	0.5037	0.1298	0.0298	0.1596	0.0000	2,141.3848	2,141.3848	0.1510	0.0000	2,145.1601
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.2612	8.7034	1.8487	0.0218	0.4726	0.0312	0.5037	0.1298	0.0298	0.1596	0.0000	2,141.3848	2,141.3848	0.1510	0.0000	2,145.1601

Mitigated Construction On-Site

Off-Road	0.2969	3.2636	1.4895	3.5900e-003		0.1427	0.1427		0.1313	0.1313	0.0000	322.2758	322.2758	0.1020	0.0000	324.8249
Total	0.2969	3.2636	1.4895	3.5900e-003	0.7624	0.1427	0.9052	0.4015	0.1313	0.5328	0.0000	322.2758	322.2758	0.1020	0.0000	324.8249

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	6.9100e-003	5.7600e-003	0.0627	1.6000e-004	0.0151	1.3000e-004	0.0153	4.0200e-003	1.2000e-004	4.1400e-003	0.0000	14.5363	14.5363	5.0000e-004	0.0000	14.5488
Total	6.9100e-003	5.7600e-003	0.0627	1.6000e-004	0.0151	1.3000e-004	0.0153	4.0200e-003	1.2000e-004	4.1400e-003	0.0000	14.5363	14.5363	5.0000e-004	0.0000	14.5488

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					0.2973	0.0000	0.2973	0.1566	0.0000	0.1566	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0449	0.2286	1.7858	3.5900e-003		5.8600e-003	5.8600e-003		5.8600e-003	5.8600e-003	0.0000	322.2754	322.2754	0.1020	0.0000	324.8245
Total	0.0449	0.2286	1.7858	3.5900e-003	0.2973	5.8600e-003	0.3032	0.1566	5.8600e-003	0.1625	0.0000	322.2754	322.2754	0.1020	0.0000	324.8245

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	6.9100e-003	5.7600e-003	0.0627	1.6000e-004	0.0151	1.3000e-004	0.0153	4.0200e-003	1.2000e-004	4.1400e-003	0.0000	14.5363	14.5363	5.0000e-004	0.0000	14.5488
Total	6.9100e-003	5.7600e-003	0.0627	1.6000e-004	0.0151	1.3000e-004	0.0153	4.0200e-003	1.2000e-004	4.1400e-003	0.0000	14.5363	14.5363	5.0000e-004	0.0000	14.5488

3.5 Building Construction - 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					
Off-Road	0.0156	0.1318	0.1331	2.0000e-004		7.1900e-003	7.1900e-003		6.7300e-003	6.7300e-003	0.0000	17.2404	17.2404	5.0300e-003	0.0000	17.3662
Total	0.0156	0.1318	0.1331	2.0000e-004		7.1900e-003	7.1900e-003		6.7300e-003	6.7300e-003	0.0000	17.2404	17.2404	5.0300e-003	0.0000	17.3662

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
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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
Vendor	2.2900e-003	0.0638	0.0174	1.4000e-004	3.4000e-003	4.0000e-004	3.8000e-003	9.8000e-004	3.8000e-004	1.3700e-003	0.0000	13.5035	13.5035	9.0000e-004	0.0000	13.5260
Worker	6.9100e-003	5.7600e-003	0.0627	1.6000e-004	0.0151	1.3000e-004	0.0153	4.0200e-003	1.2000e-004	4.1400e-003	0.0000	14.5363	14.5363	5.0000e-004	0.0000	14.5488
Total	9.2000e-003	0.0695	0.0801	3.0000e-004	0.0185	5.3000e-004	0.0191	5.0000e-003	5.0000e-004	5.5100e-003	0.0000	28.0398	28.0398	1.4000e-003	0.0000	28.0749

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	7.7500e-003	0.0329	0.1487	2.0000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	17.2404	17.2404	5.0300e-003	0.0000	17.3662
Total	7.7500e-003	0.0329	0.1487	2.0000e-004		1.7600e-003	1.7600e-003		1.7600e-003	1.7600e-003	0.0000	17.2404	17.2404	5.0300e-003	0.0000	17.3662

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	2.2900e-003	0.0638	0.0174	1.4000e-004	3.4000e-003	4.0000e-004	3.8000e-003	9.8000e-004	3.8000e-004	1.3700e-003	0.0000	13.5035	13.5035	9.0000e-004	0.0000	13.5260

Worker	6.9100e-003	5.7600e-003	0.0627	1.6000e-004	0.0151	1.3000e-004	0.0153	4.0200e-003	1.2000e-004	4.1400e-003	0.0000	14.5363	14.5363	5.0000e-004	0.0000	14.5488
Total	9.2000e-003	0.0695	0.0801	3.0000e-004	0.0185	5.3000e-004	0.0191	5.0000e-003	5.0000e-004	5.5100e-003	0.0000	28.0398	28.0398	1.4000e-003	0.0000	28.0749

3.6 Architectural Coating - 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					
Archit. Coating	0.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.3300e-003	9.1800e-003	9.2100e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
Total	0.0335	9.1800e-003	9.2100e-003	1.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793

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	4.5000e-004	3.8000e-004	4.0900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9480	0.9480	3.0000e-005	0.0000	0.9488
Total	4.5000e-004	3.8000e-004	4.0900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9480	0.9480	3.0000e-005	0.0000	0.9488

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	0.0321					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-004	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793
Total	0.0323	6.4000e-004	9.1600e-003	1.0000e-005		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	1.2766	1.2766	1.1000e-004	0.0000	1.2793

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	4.5000e-004	3.8000e-004	4.0900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9480	0.9480	3.0000e-005	0.0000	0.9488
Total	4.5000e-004	3.8000e-004	4.0900e-003	1.0000e-005	9.9000e-004	1.0000e-005	9.9000e-004	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.9480	0.9480	3.0000e-005	0.0000	0.9488

4.0 Operational Detail - Mobile

Operational activities modeled separately

GHG Appendix

Operational CalEEMod Output

United Rock - Operational Emissions - Typical Day - Los Angeles-South Coast County, Annual

United Rock - Operational Emissions - Typical Day
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	0.40	1000sqft	11.00	400.00	0
Parking Lot	5.00	Acre	5.00	217,800.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	33
Climate Zone	9			Operational Year	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	443.24	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - See Assumptions

Land Use - See Assumptions

Construction Phase - See Assumptions - Paving phase left because with parking lot CalEEMod won't calculate emissions without it.

Off-road Equipment -

Off-road Equipment - See Assumptions

Off-road Equipment - CalEEMod requires paving phase with "parking lot" land use type. No paving associated with operations.

Trips and VMT - See Assumptions

Grading - See Assumptions

Vehicle Trips - workers included under "construction phasing" for operational emissions

Energy Use - See Assumptions

Water And Wastewater -

Solid Waste -

Construction Off-road Equipment Mitigation - See Assumptions

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	85
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	85
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	30.00	250.00
tblConstructionPhase	NumDays	20.00	1.00
tblEnergyUse	T24E	4.82	4.58
tblEnergyUse	T24NG	10.07	9.57
tblGrading	AcresOfGrading	62.50	75.00
tblGrading	MaterialImported	0.00	1,872,000.00
tblLandUse	LotAcreage	0.01	11.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	PhaseName		Grading
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	443.24
tblProjectCharacteristics	OperationalYear	2018	2020
tblTripsAndVMT	HaulingTripLength	20.00	3.00
tblTripsAndVMT	HaulingTripNumber	234,000.00	200,000.00
tblTripsAndVMT	WorkerTripNumber	15.00	13.00
tblVehicleTrips	ST_TR	2.46	0.00
tblVehicleTrips	SU_TR	1.05	0.00
tblVehicleTrips	WD_TR	11.03	0.00

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	0.7800	17.9011	4.5807	0.0257	1.9285	0.2451	2.1736	0.9241	0.2263	1.1504	0.0000	2,474.9184	2,474.9184	0.3703	0.0000	2,484.1752
Maximum	0.7800	17.9011	4.5807	0.0257	1.9285	0.2451	2.1736	0.9241	0.2263	1.1504	0.0000	2,474.9184	2,474.9184	0.3703	0.0000	2,484.1752

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	0.3900	13.4286	4.8575	0.0257	0.5251	0.0315	0.5565	0.2034	0.0305	0.2338	0.0000	2,474.9179	2,474.9179	0.3703	0.0000	2,484.1747
Maximum	0.3900	13.4286	4.8575	0.0257	0.5251	0.0315	0.5565	0.2034	0.0305	0.2338	0.0000	2,474.9179	2,474.9179	0.3703	0.0000	2,484.1747

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	50.00	24.98	-6.04	0.00	72.77	87.16	74.40	77.99	86.54	79.67	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	1-1-2019	3-31-2019	4.7303	3.4800
2	4-1-2019	6-30-2019	4.8484	3.5841
3	7-1-2019	9-30-2019	4.9017	3.6235
		Highest	4.9017	3.6235

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0187	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	39.7986	39.7986	2.5900e-003	5.4000e-004	40.0243

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	0.0751	0.0000	0.0751	4.4400e-003	0.0000	0.1861
Water						0.0000	0.0000		0.0000	0.0000	0.0226	0.2834	0.3060	2.3400e-003	6.0000e-005	0.3818
Total	0.0188	2.0000e-004	2.3000e-004	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0977	40.0822	40.1798	9.3700e-003	6.0000e-004	40.5923

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0187	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Energy	2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	39.7986	39.7986	2.5900e-003	5.4000e-004	40.0243
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	0.0751	0.0000	0.0751	4.4400e-003	0.0000	0.1861
Water						0.0000	0.0000		0.0000	0.0000	0.0226	0.2834	0.3060	2.3400e-003	6.0000e-005	0.3818
Total	0.0188	2.0000e-004	2.3000e-004	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005	0.0977	40.0822	40.1798	9.3700e-003	6.0000e-004	40.5923

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	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
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1	Grading	Grading	1/1/2019	12/16/2019	5	250
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 75

Acres of Paving: 5

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	4.00	187	0.41
Grading	Off-Highway Trucks	1	8.00	402	0.38
Grading	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Scrapers	0	8.00	367	0.48
Grading	Sweepers/Scrubbers	1	4.00	64	0.46
Grading	Tractors/Loaders/Backhoes	0	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
Grading	6	13.00	0.00	200,000.00	14.70	6.90	3.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 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					1.6511	0.0000	1.6511	0.8479	0.0000	0.8479	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.4532	4.8186	2.2182	5.0000e-003		0.2218	0.2218		0.2041	0.2041	0.0000	449.5499	449.5499	0.1422	0.0000	453.1057
Total	0.4532	4.8186	2.2182	5.0000e-003	1.6511	0.2218	1.8729	0.8479	0.2041	1.0519	0.0000	449.5499	449.5499	0.1422	0.0000	453.1057

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	0.3121	13.0757	2.2887	0.0205	0.2596	0.0232	0.2827	0.0714	0.0221	0.0936	0.0000	2,008.2515	2,008.2515	0.2275	0.0000	2,013.9377
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	8.1400e-003	6.7800e-003	0.0738	1.9000e-004	0.0178	1.6000e-004	0.0180	4.7300e-003	1.4000e-004	4.8700e-003	0.0000	17.1171	17.1171	5.9000e-004	0.0000	17.1318
Total	0.3202	13.0825	2.3624	0.0207	0.2774	0.0233	0.3007	0.0762	0.0223	0.0985	0.0000	2,025.3685	2,025.3685	0.2280	0.0000	2,031.0695

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
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Category	tons/yr										MT/yr					
Fugitive Dust					0.2477	0.0000	0.2477	0.1272	0.0000	0.1272	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0633	0.3461	2.4951	5.0000e-003		8.1700e-003	8.1700e-003		8.1700e-003	8.1700e-003	0.0000	449.5493	449.5493	0.1422	0.0000	453.1051
Total	0.0633	0.3461	2.4951	5.0000e-003	0.2477	8.1700e-003	0.2558	0.1272	8.1700e-003	0.1354	0.0000	449.5493	449.5493	0.1422	0.0000	453.1051

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	0.3121	13.0757	2.2887	0.0205	0.2596	0.0232	0.2827	0.0714	0.0221	0.0936	0.0000	2,008.2515	2,008.2515	0.2275	0.0000	2,013.9377
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	8.1400e-003	6.7800e-003	0.0738	1.9000e-004	0.0178	1.6000e-004	0.0180	4.7300e-003	1.4000e-004	4.8700e-003	0.0000	17.1171	17.1171	5.9000e-004	0.0000	17.1318
Total	0.3202	13.0825	2.3624	0.0207	0.2774	0.0233	0.3007	0.0762	0.0223	0.0985	0.0000	2,025.3685	2,025.3685	0.2280	0.0000	2,031.0695

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
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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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Parking Lot	16.60	8.40	6.90	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
General Office Building	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907
Parking Lot	0.547726	0.045437	0.201480	0.122768	0.016614	0.006090	0.019326	0.029174	0.002438	0.002359	0.005005	0.000677	0.000907

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	39.5860	39.5860	2.5900e-003	5.4000e-004	39.8104
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	39.5860	39.5860	2.5900e-003	5.4000e-004	39.8104
NaturalGas Mitigated	2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2126	0.2126	0.0000	0.0000	0.2139
NaturalGas Unmitigated	2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2126	0.2126	0.0000	0.0000	0.2139

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	3984	2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2126	0.2126	0.0000	0.0000	0.2139
Parking Lot	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		2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2126	0.2126	0.0000	0.0000	0.2139

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	3984	2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2126	0.2126	0.0000	0.0000	0.2139
Parking Lot	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		2.0000e-005	2.0000e-004	1.6000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	0.2126	0.2126	0.0000	0.0000	0.2139

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	5232	1.0519	7.0000e-005	1.0000e-005	1.0579
Parking Lot	191664	38.5341	2.5200e-003	5.2000e-004	38.7526
Total		39.5860	2.5900e-003	5.3000e-004	39.8104

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	5232	1.0519	7.0000e-005	1.0000e-005	1.0579
Parking Lot	191664	38.5341	2.5200e-003	5.2000e-004	38.7526
Total		39.5860	2.5900e-003	5.3000e-004	39.8104

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0187	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Unmitigated	0.0187	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-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	3.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	0.0187	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	3.2100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0155					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0000e-005	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004
Total	0.0187	0.0000	7.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.3000e-004	1.3000e-004	0.0000	0.0000	1.4000e-004

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.3060	2.3400e-003	6.0000e-005	0.3818
Unmitigated	0.3060	2.3400e-003	6.0000e-005	0.3818

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.0710935 /	0.3060	2.3400e-003	6.0000e-005	0.3818
Parking Lot	0.0425724 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.3060	2.3400e-003	6.0000e-005	0.3818

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	0.0710935 /	0.3060	2.3400e-003	6.0000e-005	0.3818
Parking Lot	0.0425724 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.3060	2.3400e-003	6.0000e-005	0.3818

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			

Mitigated	0.0751	4.4400e-003	0.0000	0.1861
Unmitigated	0.0751	4.4400e-003	0.0000	0.1861

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.37	0.0751	4.4400e-003	0.0000	0.1861
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0751	4.4400e-003	0.0000	0.1861

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	0.37	0.0751	4.4400e-003	0.0000	0.1861
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		0.0751	4.4400e-003	0.0000	0.1861

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
