



Memorandum

Date: September 9, 2015

To: Ms. Mikaela Klein, Mt. San Antonio College

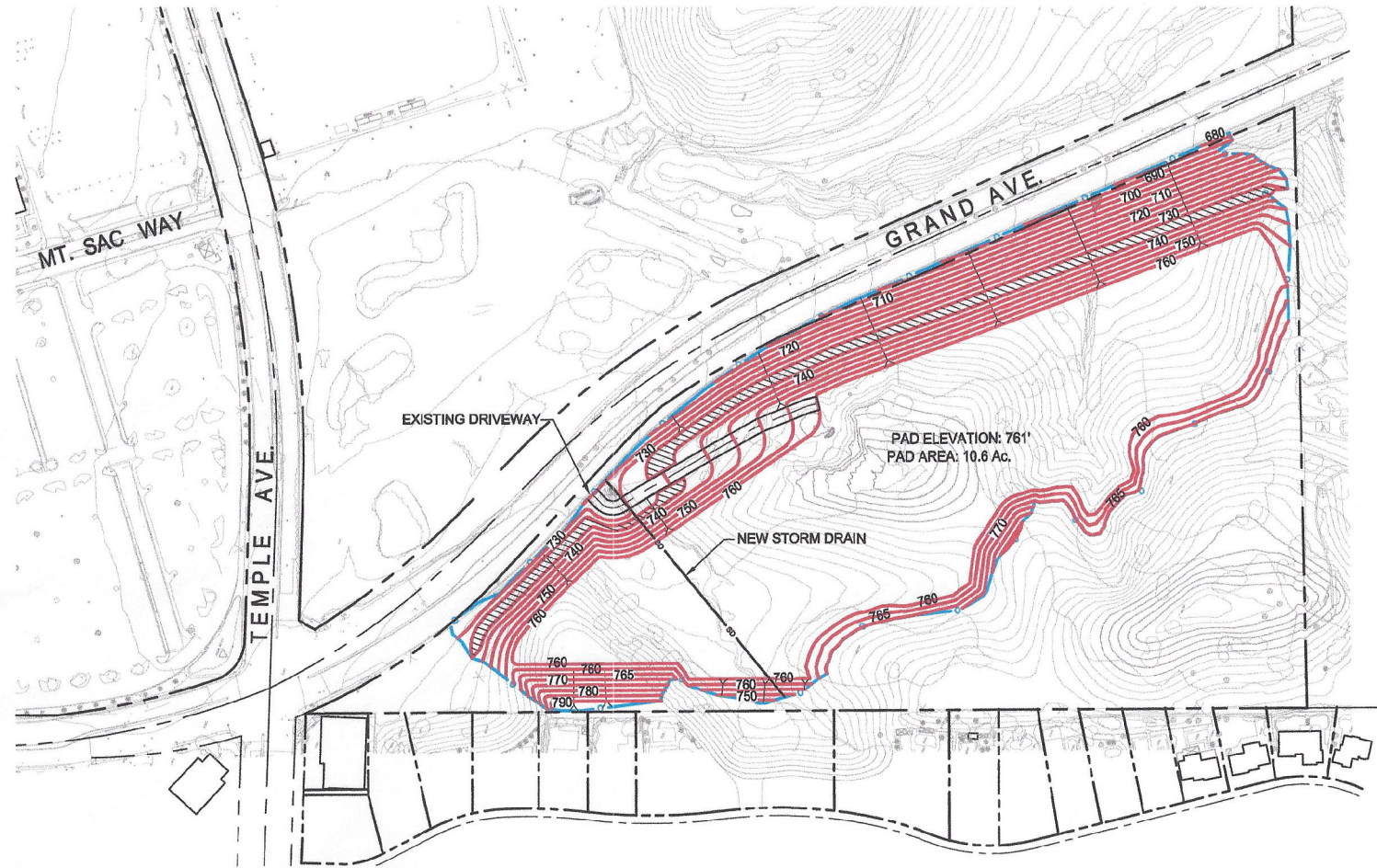
From: Fred Greve, Greve & Associates, LLC

Subject: West Parcel Solar Project - Air Quality Construction Analysis (Report #15-104C)

The analysis presented below examines the potential air quality impacts of the construction of the West Parcel Solar (WPS) project. The project will construct solar panels with a capacity of approximately 2.2 MW. The entire site is approximately 27.7 acres, and approximately 17.7 acres of the site will be graded. Substantial grading and import of dirt will be required for the project. The current grading estimates are 172,708 cubic yards of cut, 336,279 cubic yards of fill with a net import of 163,571 cubic yards. The import fill will come from the Athletics Complex East (ACE) area. The WPS site is a triangular parcel southwest of North Grand Avenue, east of homes along Regal Canyon Drive, and north of homes along Stonybrook Drive (refer to Exhibit 1). The main pad for the solar pads will be lower in elevation than the nearby homes, but some grading close to homes along Regal Canyon Drive will be necessary to construct slopes.

It should be noted that the project will need to comply with the air quality measures contained in the Mitigation Monitoring Program (MMP) for the 2012 Facilities Master Plan SEIR. Measures 3a through 3j of the MMP identify a spectrum of air quality mitigation with Measures 3a, 3b, 3c, 3f, 3g, 3h, and 3i are aimed specifically at reducing quality emissions.

Exhibit 1 - Site Plan



LEGEND

-  NEW CONTOUR LINE
-  DAYLIGHT LINE
-  EXISTING BUILDING
-  NEW STORM DRAIN



THRESHOLDS OF SIGNIFICANCE

In their "1993 CEQA Air Quality Handbook", the South Coast Air Quality Management District (SCAQMD) established significance thresholds to assess the impact of project related air pollutant emissions. Table 1 presents the significance thresholds for construction. There are separate thresholds for short-term construction and long-term operational emissions. A project with daily emission rates below these thresholds are considered to have a less than significant effect on regional air quality. It should be noted the thresholds recommended by the SCAQMD are very low and subject to controversy. It is up to the individual lead agencies to determine if the SCAQMD thresholds are appropriate for their projects.

Table 1 Regional Pollutant Emission Thresholds of Significance

	Pollutant Emissions (lbs./day)					
	CO	VOC	NOx	PM10	PM2.5	SOx
<i>Construction</i>	<i>550</i>	<i>75</i>	<i>100</i>	<i>150</i>	<i>55</i>	<i>150</i>

SCAQMD staff also developed a localized significance threshold (LST) methodology that can be used to determine whether or not a project may generate significant adverse localized air quality impacts. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard, and are developed based on the ambient concentrations of that pollutant for each source receptor area (SRA). The LST methodology is described in the "Final Localized Significance Threshold Methodology" updated in 2009 by the SCAQMD and is available at the SCAQMD website (<http://aqmd.gov/ceqa/handbook/LST/LST.html>).

The LST mass rate look-up tables provided by the SCAQMD allow one to determine if the daily emissions for proposed construction or operational activities could result in significant local air impacts. If the calculated on-site emissions for the proposed construction or operational activities are below the LST emission levels found on the LST mass rate look-up tables, then the proposed construction or operation activity is not significant for air quality.

The project is located in SRA 10. The nearest existing land uses are the residences are at the edge of the project site. If receptors are within 25 meters of the site, the methodology document says that the threshold for the 25 meter distance should be used. Table 2 summarizes the LSTs for construction.

Table 2 Localized Significance Thresholds at the Nearest Receptors

Description	Localized Significance Threshold (lbs./day)			
	NOx	CO	PM ₁₀	PM _{2.5}
Construction Activities	236	1,566	12	7

POTENTIAL FOR CONSTRUCTION IMPACTS

Air pollutants are emitted by construction equipment and fugitive dust is generated during earth moving operations. Air impacts can contribute significantly to the regional air pollution levels, and this type of impact is referred to as a regional air impact. Air contaminants can also affect sensitive receptors very close to the project, and this is referred to as a local impact. Both regional and local impacts are assessed for the construction the WPS project.

Regional Air Impacts

Construction Emission Calculation Methodology

Emissions during the phases of construction were calculated using the California Emissions Estimator Model (CalEEMod). CalEEMod is a computer program developed by the SCAQMD in conjunction with the California Air Resources Board (CARB). The model calculates emissions for construction and operation of various projects. The latest version of the model was used (i.e., version CalEEMod.2013.2.2)

Construction Activities

The construction area of the site totals approximately 17.7 acres. The construction of the project is estimated to take a little less than 1 year with an estimated start date of October 2015 and a completion date of July 2016. The following are the likely phases of construction; site preparation, grading with import of fill, final grading, solar panel installation, restoration, and landscaping. The appropriate number of acres, duration of each construction phase, key construction equipment, and other key elements of the project were input into the CalEEMod to generate the estimate of emissions. The solar panel installation, restoration, and landscaping will likely occur concurrently, while there will be little overlap between the other phases. Each construction phase is discussed below. Construction is currently envisioned to occur on weekdays and Saturdays (i.e., six days per week) from 7 a.m. to 7 p.m. CalEEMod printouts are included in the Appendix.

Site Preparation. Site preparation will include cacti/duff collection and grub clearing. Likely heavy equipment will include at most a dozer and a backhoe.

Grading with Soil Importation. This construction phase will take about 130 days of work. Some grading may occur prior to importing fill, but most of the time importation of fill will be occurring simultaneously with grading. Heavy equipment during this time will be limited to

three scrapers, a dozer, a loader, and a compactor. Approximately 163,571 cubic yards of dirt will be moved to the WPS from the ACE complex area. Export of dirt will require about 20,446 haul truck trips. A round trip for the haul trucks will be 6.6 miles.

Finish Grading. Finish grading will employ up to 4 scrapers, a dozer, and a compactor. Finish grading is anticipated to last 76 workdays.

Solar Panel Installation/Landscaping/Restoration. These three construction phases will likely occur concurrently for most of the time. Solar panel installation is projected to last 76 workdays, while landscaping and restoration are anticipated to each last 62 days. Very little heavy equipment is needed for this work. Three pieces of equipment are estimated for this time period with the equipment being some mix of tractors and backhoes.

Construction Emissions

Table 3 presents the results of the total emissions calculations for the construction activities discussed above. The highest daily construction emissions for each phase are presented below and represent a worst-case scenario. No mitigation is included in the emission projections presented below. The projected emissions are compared to the Significance Thresholds described above. CalEEMod printouts are included in the Appendix.

Table 3 Peak Construction Emissions

Activity	Pollutant Emissions (lbs./day)					
	ROG	NOx	CO	SOx	PM10	PM2.5
Collection, Clear & Grub	1.7	17.9	13.7	0.0	7.9	4.3
Grading with Import	9.7	99.6	105.0	0.1	14.0	7.8
Final Grading	7.9	94.7	60.4	0.1	11.2	7.2
Solar Installation	0.3	3.0	2.6	0.0	0.3	0.2
Restoration	0.2	1.6	1.4	0.0	0.5	0.2
Landscaping	0.2	1.6	1.4	0.0	0.4	0.2
Solar Install+Restoration +Landscaping	0.7	6.3	5.4	0.0	1.2	0.5
<i>SCQAMD Thresholds</i>	<i>75</i>	<i>100</i>	<i>550</i>	<i>150</i>	<i>150</i>	<i>55</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

The projected construction emissions are below the significance thresholds established by the SCAQMD. In all cases the peak daily emissions are well below the thresholds. The NOx emissions for grading with import and for final grading are just below the significance threshold. It is critical that the contractor does not use more equipment than that listed below:

Grading with Importation

3 Scrapers, 1 Loader, 1 Dozer, and 1 Compactor

Grading Alone

4 Scrapers, 1 Dozer, and 1 Compactor

Local Air Impacts

The on-site emissions for the LST analysis were calculated utilizing CalEEMod. The emissions presented in Table 4 are those that would be emitted from activity within the project site. The total on-site construction emissions are compared to the Localized Significance Thresholds (LSTs) described above.

Table 4 On-Site Emissions By Construction Activity

Activity	Daily Emissions (lbs./day)			
	NOx	CO	PM10	PM2.5
Collection, Clear & Grub	17.8	13.4	7.9	4.3
Grading with Import	77.0	50.6	9.8 (6.3)	6.5 (4.7)
Final Grading	94.6	59.5	11.0 (7.2)	7.2 (5.3)
Solar Installation	2.8	2.1	0.2	0.2
Restoration	1.6	1.2	0.4	0.1
Landscaping	1.6	1.2	0.4	0.1
Solar Install+Restoration +Landscaping	6.1	4.5	1.1	0.5
<i>LST Thresholds</i>	<i>236</i>	<i>1,566</i>	<i>12</i>	<i>7</i>
<i>Exceed Threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Note: Values in parenthesis include watering of the active area twice a day.

Without any mitigation, none of the emissions will exceed the LST significance thresholds, except PM2.5 during final grading. The projected emission rate will be 7.2 for PM2.5 emissions during final grading, and the threshold is 7 pounds per day. However, the Mitigation Monitoring Program Measure 3h requires watering at least twice per day. When watering of the site is included in the CalEEMod calculations, the emission projection is reduced to 5.3 pounds per day, which is below the 7 pounds per day threshold. Therefore, no local air impacts will occur due to construction activities.

Diesel Particulate Matter Emissions During Construction

In 1998, the California Air Resources Board (ARB) identified particulate matter from diesel-fueled engines (Diesel Particulate Matter or DPM) as a Toxic Air Contaminant (TAC). It is assumed that the majority of the heavy construction equipment utilized during construction would be diesel fueled and emit DPM.

Impacts from toxic substances are related to cumulative exposure and are assessed over a 70-year period. Cancer risk is expressed as the maximum number of new cases of cancer projected to occur in a population of one million people due to exposure to the cancer-causing substance over a 70-year lifetime (California Environmental Protection Agency, Office of Environmental Health Hazard Assessment, Guide to Health Risk Assessment.) Use of heavy diesel generating equipment will be used intermittently over a nine-month period. Because of the relatively short duration of construction compared to a 70-year lifespan, diesel emissions resulting from the construction of the project will not result in a significant impact.

GREENHOUSE GAS

The SCAQMD has not officially adopted significance thresholds for greenhouse gas emissions. However, their draft recommendations use a 3,500 MT CO₂EQ/yr. threshold for residential projects, a 1,400 MT CO₂EQ/yr. (metric ton of equivalent carbon dioxide per year) threshold for commercial projects, and a 3,000 MT CO₂ EQ/yr. for mixed-use projects. This project

does not fall into any of these categories. Construction emissions are amortized over the life of the project, defined by SCAQMD as 30 years, and are added to the annual operation emissions. The greenhouse gas emissions for construction are very small when amortized over a 30 year period. The CalEEMod analysis (see Appendix) shows that the total greenhouse gas emissions from the project will be 755 metric tons equivalent carbon dioxide (MTCO₂EQ), or amortized over 30 years it is 25 MTCO₂EQ per year. The construction emissions are well below any SCAQMD recommended threshold. Since the project will generate electricity from solar power, it will reduce GHG emissions during the operational phase. Therefore, the project will not have a significant impact on greenhouse gas emissions.

CONCLUSION

Potential air quality impacts during construction were assessed for the WPS project. Both local and regional air impacts were considered. No air quality impacts are forecasted during construction of the WPS project.

Appendix

CaIEMod Output for Winter

CaIEMod Output for Annual

West Parcel Solar - WPS
South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	10.00	1000sqft	17.70	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 17.7 acres is the area that will be graded. 10,000 square feet of building was put into the model to represent a very rough approximation of the amount of construction that will be required for the installation of the solar panels.

Construction Phase - Schedule has been adjusted to match actual proposed schedule.

Off-road Equipment - Per discussions with Tilden Coil

Off-road Equipment - Per discussions with Tilden-Coil. No compactor in list, using one graders as a substitute for compactor.

Off-road Equipment - Per discussions with Tilden-Coil and EPT

Off-road Equipment - Per discussions with Tilden-Coil and EPT

Off-road Equipment - Per discussions with Tilden-Coil

Off-road Equipment - Per discussions with Borrego Solar

Trips and VMT - Distances for hauling represent actual proposed routes

Grading - Actual size of area to be graded/worked.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	76.00
tblConstructionPhase	NumDays	30.00	130.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/24/2016	7/14/2016
tblConstructionPhase	PhaseEndDate	9/8/2016	6/28/2016
tblConstructionPhase	PhaseStartDate	6/29/2016	4/17/2016
tblConstructionPhase	PhaseStartDate	6/29/2016	4/17/2016
tblGrading	AcresOfGrading	390.00	17.70
tblGrading	AcresOfGrading	90.00	17.70
tblGrading	AcresOfGrading	0.00	17.70
tblGrading	AcresOfGrading	0.00	17.70
tblGrading	AcresOfGrading	0.00	17.70
tblGrading	MaterialImported	0.00	163,571.00
tblLandUse	LotAcreage	0.23	17.70
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	5.60

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					
2015	9.7381	99.5853	104.9829	0.1070	10.2352	3.7723	14.0075	4.3440	3.4702	7.8142						10,997.8169

2016	9.0399	94.7193	99.5428	0.1068	9.6372	4.0668	13.1566	4.1973	3.7415	7.4350							10,875.5834
Total	18.7780	194.3046	204.5256	0.2138	19.8723	7.8391	27.1641	8.5413	7.2117	15.2492							21,873.4003

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						
2015	9.7381	99.5853	104.9829	0.1070	10.2352	3.7723	14.0075	4.3440	3.4702	7.8142							10,997.8169
2016	9.0399	94.7193	99.5428	0.1068	9.6372	4.0668	13.1566	4.1973	3.7415	7.4350							10,875.5834
Total	18.7780	194.3046	204.5256	0.2138	19.8723	7.8391	27.1641	8.5413	7.2117	15.2492							21,873.4003

	ROG	NOx	CO	SO2	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	Site Preparation	Site Preparation	10/1/2015	10/24/2015	6	21	
2	Grading including Import	Grading	10/25/2015	3/24/2016	6	130	
3	Finish Grading	Grading	3/25/2016	4/16/2016	6	20	
4	Landscaping	Site Preparation	4/17/2016	6/28/2016	6	62	
5	Restoration	Site Preparation	4/17/2016	6/28/2016	6	62	

6	Solar Panel Installation	Building Construction	4/17/2016	7/14/2016	6	76
---	--------------------------	-----------------------	-----------	-----------	---	----

Acres of Grading (Site Preparation Phase): 17.7

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading including Import	Concrete/Industrial Saws	0		81	0.73
Grading including Import	Crawler Tractors	0	8.00	208	0.37
Grading including Import	Excavators	0	8.00	162	0.38
Grading including Import	Graders	0	8.00	174	0.41
Grading including Import	Rubber Tired Dozers	1	8.00	255	0.40
Grading including Import	Rubber Tired Dozers	0	8.00	255	0.40
Grading including Import	Scrapers	3	8.00	361	0.48
Grading including Import	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Finish Grading	Excavators	0	8.00	162	0.38
Finish Grading	Graders	1	8.00	174	0.41
Finish Grading	Rubber Tired Dozers	1	8.00	255	0.40
Finish Grading	Scrapers	4	8.00	361	0.48
Finish Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Landscaping	Pavers	0	8.00	125	0.42
Landscaping	Paving Equipment	0	8.00	130	0.36
Landscaping	Rollers	0	8.00	80	0.38
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Restoration	Air Compressors	0	6.00	78	0.48

Restoration	Rubber Tired Dozers	0	8.00	255	0.40
Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Solar Panel Installation	Cranes	0	7.00	226	0.29
Solar Panel Installation	Forklifts	0	8.00	89	0.20
Solar Panel Installation	Generator Sets	0	8.00	84	0.74
Solar Panel Installation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Solar Panel Installation	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading including Import	6	15.00	0.00	20,446.00	14.70	6.90	1.00	LD_Mix	HDT_Mix	HHDT
Grading including Import	6	15.00	0.00	20,446.00	14.70	6.90	5.60	LD_Mix	HDT_Mix	HHDT
Finish Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Restoration	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Solar Panel Installation	1	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

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
Fugitive Dust					6.9159	0.0000	6.9159	3.4067	0.0000	3.4067						0.0000

Off-Road	1.6335	17.8192	13.4021	0.0120		0.9399	0.9399		0.8647	0.8647							1,269.3272
Total	1.6335	17.8192	13.4021	0.0120	6.9159	0.9399	7.8558	3.4067	0.8647	4.2714							1,269.3272

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.0237	0.0318	0.3318	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153							57.8527
Total	0.0237	0.0318	0.3318	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153							57.8527

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					6.9159	0.0000	6.9159	3.4067	0.0000	3.4067							0.0000
Off-Road	1.6335	17.8192	13.4021	0.0120		0.9399	0.9399		0.8647	0.8647							1,269.3272
Total	1.6335	17.8192	13.4021	0.0120	6.9159	0.9399	7.8558	3.4067	0.8647	4.2714							1,269.3272

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0237	0.0318	0.3318	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153						57.8527
Total	0.0237	0.0318	0.3318	6.6000e-004	0.0559	4.9000e-004	0.0564	0.0148	4.5000e-004	0.0153						57.8527

3.3 Grading including Import - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3088	0.0000	6.3088	3.3474	0.0000	3.3474						0.0000
Off-Road	6.3233	77.0481	50.5576	0.0598		3.4620	3.4620		3.1851	3.1851						6,322.0350
Total	6.3233	77.0481	50.5576	0.0598	6.3088	3.4620	9.7708	3.3474	3.1851	6.5324						6,322.0350

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
--	-----	-----	----	-----	---------------	--------------	------------	----------------	---------------	-------------	----------	-----------	-----------	-----	-----	------

Worker	0.1421	0.1907	1.9908	3.9800e-003	0.6269	2.9500e-003	0.6298	0.1605	2.7000e-003	0.1632							347.1161
Total	3.4148	22.5372	54.4253	0.0471	3.9264	0.3103	4.2367	0.9967	0.2851	1.2818							4,675.7820

3.3 Grading including Import - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					6.3088	0.0000	6.3088	3.3474	0.0000	3.3474							0.0000
Off-Road	6.0668	73.1679	48.3745	0.0598		3.2743	3.2743		3.0124	3.0124							6,252.5697
Total	6.0668	73.1679	48.3745	0.0598	6.3088	3.2743	9.5831	3.3474	3.0124	6.3597							6,252.5697

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	2.8451	19.9887	49.3716	0.0431	2.7016	0.2423	2.9439	0.6894	0.2228	0.9122							4,279.1941
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1280	0.1720	1.7967	3.9800e-003	0.6269	2.8000e-003	0.6297	0.1605	2.5800e-003	0.1631							335.0991
Total	2.9731	20.1607	51.1683	0.0470	3.3284	0.2451	3.5736	0.8499	0.2253	1.0752							4,614.2931

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					6.3088	0.0000	6.3088	3.3474	0.0000	3.3474							0.0000
Off-Road	6.0668	73.1679	48.3745	0.0598		3.2743	3.2743		3.0124	3.0124							6,252.5697
Total	6.0668	73.1679	48.3745	0.0598	6.3088	3.2743	9.5831	3.3474	3.0124	6.3597							6,252.5697

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	2.8451	19.9887	49.3716	0.0431	2.7016	0.2423	2.9439	0.6894	0.2228	0.9122							4,279.1941
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.1280	0.1720	1.7967	3.9800e-003	0.6269	2.8000e-003	0.6297	0.1605	2.5800e-003	0.1631							335.0991
Total	2.9731	20.1607	51.1683	0.0470	3.3284	0.2451	3.5736	0.8499	0.2253	1.0752							4,614.2931

3.4 Finish Grading - 2016

Unmitigated Construction On-Site

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

Category	lb/day										lb/day					
Fugitive Dust					6.9606	0.0000	6.9606	3.4116	0.0000	3.4116						0.0000
Off-Road	7.7869	94.6333	59.4982	0.0747			4.0654	4.0654		3.7402	3.7402					7,811.9129
Total	7.7869	94.6333	59.4982	0.0747	6.9606	4.0654	11.0260	3.4116	3.7402	7.1517					7,811.9129	

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						167.5495
Total	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458						167.5495

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					6.9606	0.0000	6.9606	3.4116	0.0000	3.4116						0.0000
Off-Road	7.7869	94.6333	59.4982	0.0747			4.0654	4.0654		3.7402	3.7402					7,811.9129

Total	7.7869	94.6333	59.4982	0.0747	6.9606	4.0654	11.0260	3.4116	3.7402	7.1517							7,811.9129
--------------	--------	---------	---------	--------	--------	--------	---------	--------	--------	--------	--	--	--	--	--	--	------------

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458							167.5495
Total	0.0640	0.0860	0.8984	1.9900e-003	0.1677	1.4000e-003	0.1691	0.0445	1.2900e-003	0.0458							167.5495

3.5 Landscaping - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Fugitive Dust					0.3028	0.0000	0.3028	0.0327	0.0000	0.0327							0.0000
Off-Road	0.1703	1.6275	1.2063	1.5600e-003		0.1253	0.1253		0.1153	0.1153							162.8638
Total	0.1703	1.6275	1.2063	1.5600e-003	0.3028	0.1253	0.4281	0.0327	0.1153	0.1480							162.8638

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003						33.5099
Total	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003						33.5099

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					0.3028	0.0000	0.3028	0.0327	0.0000	0.0327						0.0000
Off-Road	0.1703	1.6275	1.2063	1.5600e-003		0.1253	0.1253		0.1153	0.1153						162.8638
Total	0.1703	1.6275	1.2063	1.5600e-003	0.3028	0.1253	0.4281	0.0327	0.1153	0.1480						162.8638

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					

Total	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003						33.5099
--------------	---------------	---------------	---------------	--------------------	---------------	--------------------	---------------	--------------------	--------------------	--------------------	--	--	--	--	--	----------------

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					0.3028	0.0000	0.3028	0.0327	0.0000	0.0327							0.0000
Off-Road	0.1703	1.6275	1.2063	1.5600e-003		0.1253	0.1253		0.1153	0.1153							162.8638
Total	0.1703	1.6275	1.2063	1.5600e-003	0.3028	0.1253	0.4281	0.0327	0.1153	0.1480							162.8638

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003							33.5099
Total	0.0128	0.0172	0.1797	4.0000e-004	0.0335	2.8000e-004	0.0338	8.8900e-003	2.6000e-004	9.1500e-003							33.5099

3.7 Solar Panel Installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2980	2.8482	2.1110	2.7200e-003		0.2193	0.2193		0.2018	0.2018						285.0116
Total	0.2980	2.8482	2.1110	2.7200e-003		0.2193	0.2193		0.2018	0.2018						285.0116

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
Vendor	0.0183	0.1771	0.2391	4.3000e-004	0.0125	2.8700e-003	0.0154	3.5600e-003	2.6400e-003	6.2000e-003						43.2468
Worker	0.0171	0.0229	0.2396	5.3000e-004	0.0447	3.7000e-004	0.0451	0.0119	3.4000e-004	0.0122						44.6799
Total	0.0353	0.2000	0.4787	9.6000e-004	0.0572	3.2400e-003	0.0605	0.0154	2.9800e-003	0.0184						87.9267

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	0.2980	2.8482	2.1110	2.7200e-003		0.2193	0.2193		0.2018	0.2018							285.0116
Total	0.2980	2.8482	2.1110	2.7200e-003		0.2193	0.2193		0.2018	0.2018							285.0116

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
Vendor	0.0183	0.1771	0.2391	4.3000e-004	0.0125	2.8700e-003	0.0154	3.5600e-003	2.6400e-003	6.2000e-003							43.2468
Worker	0.0171	0.0229	0.2396	5.3000e-004	0.0447	3.7000e-004	0.0451	0.0119	3.4000e-004	0.0122							44.6799
Total	0.0353	0.2000	0.4787	9.6000e-004	0.0572	3.2400e-003	0.0605	0.0154	2.9800e-003	0.0184							87.9267

Operational information removed since it was not relevant to this study.

West Parcel Solar - WPS
South Coast AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	10.00	1000sqft	17.70	10,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	9			Operational Year	2016
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - 17.7 acres is the area that will be graded. 10,000 square feet of building was put into the model to represent a very rough approximation of the amount of construction that will be required for the installation of the solar panels.

Construction Phase - Schedule has been adjusted to match actual proposed schedule.

Off-road Equipment - Per discussions with Tilden Coil

Off-road Equipment - Per discussions with Tilden-Coil. No compactor in list, using one graders as a substitute for compactor.

Off-road Equipment - Per discussions with Tilden-Coil and EPT

Off-road Equipment - Per discussions with Tilden-Coil and EPT

Off-road Equipment - Per discussions with Tilden-Coil

Off-road Equipment - Per discussions with Borrego Solar

Trips and VMT - Distances for hauling represent actual proposed routes

Grading - Actual size of area to be graded/worked.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	76.00
tblConstructionPhase	NumDays	30.00	130.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDays	10.00	62.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	9/24/2016	7/14/2016
tblConstructionPhase	PhaseEndDate	9/8/2016	6/28/2016
tblConstructionPhase	PhaseStartDate	6/29/2016	4/17/2016
tblConstructionPhase	PhaseStartDate	6/29/2016	4/17/2016
tblGrading	AcresOfGrading	390.00	17.70
tblGrading	AcresOfGrading	90.00	17.70
tblGrading	AcresOfGrading	0.00	17.70
tblGrading	AcresOfGrading	0.00	17.70
tblGrading	AcresOfGrading	0.00	17.70
tblGrading	MaterialImported	0.00	163,571.00
tblLandUse	LotAcreage	0.23	17.70
tblOffRoadEquipment	LoadFactor	0.43	0.37
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblOffRoadEquipment	UsageHours	8.00	4.00
tblProjectCharacteristics	OperationalYear	2014	2016
tblTripsAndVMT	HaulingTripLength	20.00	1.00
tblTripsAndVMT	HaulingTripLength	20.00	5.60

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					
2015	0.2965	3.0877	3.1541	3.2500e-003	0.5949	0.1192	0.7141	0.2819	0.1096	0.3915						302.9810

2016	0.4245	4.5386	4.3290	4.8900e-003	0.6218	0.1835	0.8053	0.2853	0.1689	0.4542							452.4927
Total	0.7210	7.6264	7.4830	8.1400e-003	1.2166	0.3027	1.5194	0.5672	0.2785	0.8456							755.4736

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						
2015	0.2965	3.0877	3.1541	3.2500e-003	0.5949	0.1192	0.7141	0.2819	0.1096	0.3915							302.9807
2016	0.4244	4.5386	4.3289	4.8900e-003	0.6218	0.1835	0.8053	0.2853	0.1689	0.4542							452.4923
Total	0.7210	7.6264	7.4830	8.1400e-003	1.2166	0.3027	1.5194	0.5672	0.2785	0.8456							755.4730

	ROG	NOx	CO	SO2	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	Site Preparation	Site Preparation	10/1/2015	10/24/2015	6	21	
2	Grading including Import	Grading	10/25/2015	3/24/2016	6	130	
3	Finish Grading	Grading	3/25/2016	4/16/2016	6	20	
4	Landscaping	Site Preparation	4/17/2016	6/28/2016	6	62	
5	Restoration	Site Preparation	4/17/2016	6/28/2016	6	62	

6	Solar Panel Installation	Building Construction	4/17/2016	7/14/2016	6	76
---	--------------------------	-----------------------	-----------	-----------	---	----

Acres of Grading (Site Preparation Phase): 17.7

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	1	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Grading including Import	Concrete/Industrial Saws	0		81	0.73
Grading including Import	Crawler Tractors	0	8.00	208	0.37
Grading including Import	Excavators	0	8.00	162	0.38
Grading including Import	Graders	0	8.00	174	0.41
Grading including Import	Rubber Tired Dozers	1	8.00	255	0.40
Grading including Import	Rubber Tired Dozers	0	8.00	255	0.40
Grading including Import	Scrapers	3	8.00	361	0.48
Grading including Import	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Finish Grading	Excavators	0	8.00	162	0.38
Finish Grading	Graders	1	8.00	174	0.41
Finish Grading	Rubber Tired Dozers	1	8.00	255	0.40
Finish Grading	Scrapers	4	8.00	361	0.48
Finish Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Landscaping	Pavers	0	8.00	125	0.42
Landscaping	Paving Equipment	0	8.00	130	0.36
Landscaping	Rollers	0	8.00	80	0.38
Landscaping	Rubber Tired Dozers	0	8.00	255	0.40
Landscaping	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Restoration	Air Compressors	0	6.00	78	0.48

Restoration	Rubber Tired Dozers	0	8.00	255	0.40
Restoration	Tractors/Loaders/Backhoes	1	4.00	97	0.37
Solar Panel Installation	Cranes	0	7.00	226	0.29
Solar Panel Installation	Forklifts	0	8.00	89	0.20
Solar Panel Installation	Generator Sets	0	8.00	84	0.74
Solar Panel Installation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Solar Panel Installation	Welders	0	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading including Import	6	15.00	0.00	20,446.00	14.70	6.90	1.00	LD_Mix	HDT_Mix	HHDT
Grading including Import	6	15.00	0.00	20,446.00	14.70	6.90	5.60	LD_Mix	HDT_Mix	HHDT
Finish Grading	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Landscaping	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Restoration	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Solar Panel Installation	1	4.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

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
	tons/yr										M1/yr					
Fugitive Dust					0.0726	0.0000	0.0726	0.0358	0.0000	0.0358						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	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
Worker	2.3000e-004	3.4000e-004	3.5700e-003	1.0000e-005	5.8000e-004	1.0000e-005	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.5596
Total	2.3000e-004	3.4000e-004	3.5700e-003	1.0000e-005	5.8000e-004	1.0000e-005	5.8000e-004	1.5000e-004	0.0000	1.6000e-004						0.5596

3.3 Grading including Import - 2015

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					0.4101	0.0000	0.4101	0.2176	0.0000	0.2176						0.0000
Off-Road	0.1834	2.2344	1.4662	1.7300e-003		0.1004	0.1004		0.0924	0.0924						166.3224
Total	0.1834	2.2344	1.4662	1.7300e-003	0.4101	0.1004	0.5105	0.2176	0.0924	0.3100						166.3224

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	0.0919	0.6602	1.4845	1.2600e-003	0.0938	8.8100e-003	0.1026	0.0238	8.1000e-003	0.0319							114.7345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000							0.0000
Worker	3.8900e-003	5.7000e-003	0.0591	1.2000e-004	0.0178	9.0000e-005	0.0179	4.5700e-003	8.0000e-005	4.6400e-003							9.2736
Total	0.0958	0.6659	1.5436	1.3800e-003	0.1116	8.9000e-003	0.1205	0.0284	8.1800e-003	0.0365							124.0081

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					0.4101	0.0000	0.4101	0.2176	0.0000	0.2176						0.0000
Off-Road	0.1834	2.2344	1.4662	1.7300e-003		0.1004	0.1004		0.0924	0.0924						166.3222
Total	0.1834	2.2344	1.4662	1.7300e-003	0.4101	0.1004	0.5105	0.2176	0.0924	0.3100						166.3222

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	0.0919	0.6602	1.4845	1.2600e-003	0.0938	8.8100e-003	0.1026	0.0238	8.1000e-003	0.0319						114.7345
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000

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					0.4101	0.0000	0.4101	0.2176	0.0000	0.2176						0.0000
Off-Road	0.2184	2.6340	1.7415	2.1500e-003		0.1179	0.1179		0.1084	0.1084						204.2003
Total	0.2184	2.6340	1.7415	2.1500e-003	0.4101	0.1179	0.5279	0.2176	0.1084	0.3260						204.2003

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	0.0993	0.7330	1.7324	1.5600e-003	0.0954	8.6600e-003	0.1040	0.0244	7.9600e-003	0.0323						140.8047
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	4.3400e-003	6.3800e-003	0.0663	1.5000e-004	0.0221	1.0000e-004	0.0222	5.6700e-003	9.0000e-005	5.7600e-003						11.1136
Total	0.1037	0.7394	1.7987	1.7100e-003	0.1175	8.7600e-003	0.1262	0.0300	8.0500e-003	0.0381						151.9183

3.4 Finish Grading - 2016

Unmitigated Construction On-Site

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

Category	tons/yr										MT/yr					
Fugitive Dust					0.0696	0.0000	0.0696	0.0341	0.0000	0.0341						0.0000
Off-Road	0.0779	0.9463	0.5950	7.5000e-004		0.0407	0.0407		0.0374	0.0374						70.8685
Total	0.0779	0.9463	0.5950	7.5000e-004	0.0696	0.0407	0.1103	0.0341	0.0374	0.0715						70.8685

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	6.0000e-004	8.9000e-004	9.2000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						1.5436
Total	6.0000e-004	8.9000e-004	9.2000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						1.5436

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					0.0696	0.0000	0.0696	0.0341	0.0000	0.0341						0.0000
Off-Road	0.0779	0.9463	0.5950	7.5000e-004		0.0407	0.0407		0.0374	0.0374						70.8684

Total	0.0779	0.9463	0.5950	7.5000e-004	0.0696	0.0407	0.1103	0.0341	0.0374	0.0715						70.8684
-------	--------	--------	--------	-------------	--------	--------	--------	--------	--------	--------	--	--	--	--	--	---------

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	6.0000e-004	8.9000e-004	9.2000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						1.5436
Total	6.0000e-004	8.9000e-004	9.2000e-003	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004						1.5436

3.5 Landscaping - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3900e-003	0.0000	9.3900e-003	1.0100e-003	0.0000	1.0100e-003						0.0000
Off-Road	5.2800e-003	0.0505	0.0374	5.0000e-005		3.8800e-003	3.8800e-003		3.5700e-003	3.5700e-003						4.5802
Total	5.2800e-003	0.0505	0.0374	5.0000e-005	9.3900e-003	3.8800e-003	0.0133	1.0100e-003	3.5700e-003	4.5800e-003						4.5802

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570
Total	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570

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					9.3900e-003	0.0000	9.3900e-003	1.0100e-003	0.0000	1.0100e-003						0.0000
Off-Road	5.2800e-003	0.0505	0.0374	5.0000e-005		3.8800e-003	3.8800e-003		3.5700e-003	3.5700e-003						4.5802
Total	5.2800e-003	0.0505	0.0374	5.0000e-005	9.3900e-003	3.8800e-003	0.0133	1.0100e-003	3.5700e-003	4.5800e-003						4.5802

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570
Total	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570

3.6 Restoration - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3900e-003	0.0000	9.3900e-003	1.0100e-003	0.0000	1.0100e-003						0.0000
Off-Road	5.2800e-003	0.0505	0.0374	5.0000e-005		3.8800e-003	3.8800e-003		3.5700e-003	3.5700e-003						4.5802
Total	5.2800e-003	0.0505	0.0374	5.0000e-005	9.3900e-003	3.8800e-003	0.0133	1.0100e-003	3.5700e-003	4.5800e-003						4.5802

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570

Total	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570
-------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	-------------	--	--	--	--	--	--------

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										M1/yr						
Fugitive Dust					9.3900e-003	0.0000	9.3900e-003	1.0100e-003	0.0000	1.0100e-003							0.0000
Off-Road	5.2800e-003	0.0505	0.0374	5.0000e-005		3.8800e-003	3.8800e-003		3.5700e-003	3.5700e-003							4.5802
Total	5.2800e-003	0.0505	0.0374	5.0000e-005	9.3900e-003	3.8800e-003	0.0133	1.0100e-003	3.5700e-003	4.5800e-003							4.5802

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										M1/yr					
Hauling	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
Worker	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570
Total	3.7000e-004	5.5000e-004	5.7100e-003	1.0000e-005	1.0200e-003	1.0000e-005	1.0300e-003	2.7000e-004	1.0000e-005	2.8000e-004						0.9570

3.7 Solar Panel Installation - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0113	0.1082	0.0802	1.0000e-004		8.3300e-003	8.3300e-003		7.6700e-003	7.6700e-003						9.8252
Total	0.0113	0.1082	0.0802	1.0000e-004		8.3300e-003	8.3300e-003		7.6700e-003	7.6700e-003						9.8252

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
Vendor	6.7000e-004	6.8600e-003	8.8500e-003	2.0000e-005	4.7000e-004	1.1000e-004	5.8000e-004	1.3000e-004	1.0000e-004	2.3000e-004						1.4982
Worker	6.1000e-004	9.0000e-004	9.3300e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004						1.5641
Total	1.2800e-003	7.7600e-003	0.0182	4.0000e-005	2.1400e-003	1.2000e-004	2.2600e-003	5.7000e-004	1.1000e-004	6.9000e-004						3.0623

Mitigated Construction On-Site

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

Off-Road	0.0113	0.1082	0.0802	1.0000e-004		8.3300e-003	8.3300e-003		7.6700e-003	7.6700e-003						9.8252
Total	0.0113	0.1082	0.0802	1.0000e-004		8.3300e-003	8.3300e-003		7.6700e-003	7.6700e-003						9.8252

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
Vendor	6.7000e-004	6.8600e-003	8.8500e-003	2.0000e-005	4.7000e-004	1.1000e-004	5.8000e-004	1.3000e-004	1.0000e-004	2.3000e-004						1.4982
Worker	6.1000e-004	9.0000e-004	9.3300e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004						1.5641
Total	1.2800e-003	7.7600e-003	0.0182	4.0000e-005	2.1400e-003	1.2000e-004	2.2600e-003	5.7000e-004	1.1000e-004	6.9000e-004						3.0623

Operational information removed since it was not relevant to this study.