Attachment A

Response to #11

Supplemental Information Concerning Guard Structures

[Note: Deficiency request is in italics, followed by PG&E's response.]

#11 State what methods would be used for stringing conductor and removing conductor over roadways.

PEA Figure 2-2 shows eight locations where conductor stringing would take place over South McCall Avenue and East Jensen Avenue as well as several locations where conductor would be removed from over roadways. State how PG&E would ensure motorist safety during stringing operations, such as through use of guard structures or netting. Clarify whether any methods would be used when conductor that crosses roadways is temporarily transferred onto shoo-fly structures.

From Chapter 2, Project Description, Section 2.5.9.3, Stringing Conductor:

> "Before installing conductor, temporary clearance structures will be installed to protect the existing 12 kV lines where they cross under the 115 kV lines. This clearance structure typically consists of one or two poles on either side of the line crossed with a "V" shaped cargo net tensioned between the support structures."

Clearance structures, also known as guard structures, will also be installed at road crossings over E. Jensen Avenue and S. McCall Avenue. Prior to pulling and tensioning, workers will install temporary guard structures where the line crosses roadways to preserve sock line or conductors from dropping onto the road. No energized electric lines will be crossed.

Guard structures will be positioned and configured to catch and support the weight of the conductor if it unexpectedly drops or sags excessively during the tensioning process. These structures will be placed on one side or on each side of the road or other location being crossed. Each temporary structure would typically consist of a wood pole with a frame at the top that resembles a "Y" or "H". Foundations and grading will not be required. Methods for installing and removing clearance structures will be similar to those for light-duty steel poles except that the wood poles will only be placed approximately six to ten feet deep. Netting will be installed between the two Y-frame or H-frame structures as needed to avoid contact between the new conductor and an existing facility. Where necessary, traffic control will be provided during installation and removal of these temporary guard structures.

PG&E does not anticipate using shoo-fly structures where the line crosses roadways.

Attachment B

Response to #13 and #14

Estimated Construction Equipment and Schedule by Phase

[Note: Deficiency request is in italics, followed by PG&E's response.]

#13 Provide a schedule by phase for the proposed project.

Provide durations of each phase of construction described in section 2.5.13 and in Table 3.16-3. Provide descriptions of each phase, including designating which activities in 2.5.6 would occur in each phase in section 2.5.13.

#14 Provide more detail about equipment used during construction.

PEA Table 2-1 provides a list of equipment that would be used during construction. Specify which equipment and the quantity of equipment that would be used for each phase of construction described in PEA section 2.5.13.

PG&E Response:

[Note that PG&E's Project Manager has now extended the construction schedule to 19 months.]

Estimated Construction Equipment and Schedule by Phase- Sanger Substation Expansion Project

Phase	Construction Activities	Duration (months)	Construction Equipment Required
Phase 1 – Substation: site grading, access, and security fencing	• Establish substation SWPPP BMP's • Clear, grub & scarify construction area • Establish access points to project area (two point of entry planned). • Perform rough grading (cut and fill as necessary). Build substation pad, salvage top soil, grade, compact, etc. • Expanded storm water detention facilities. • Establish and security fence construction areas.	**3 months**	• 1 – D5 Bulldozers • 1 - Compactor • 1 - Road Roller • 1 - Water Trucks • 1 - Skip-steer bobcat • 4 – Dump Trucks • 1 – Mechanic Truck • 1 – Backhoe • 1 – Track mounted backhoe • 1 – Fuel truck • 2 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Crew cab trucks (3/4 – 1 ton) • 1 – Road grader, six wheel • 1 - Elevating scraper
Phase 2 – Substation: install foundations and	• Construct equipment foundations and footings	**3 months**	• 1 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks

Estimated Construction Equipment and Schedule by Phase- Sanger Substation Expansion Project

Phase	Construction Activities	Duration (months)	Construction Equipment Required
footings	• Install pull boxes • Install conduits and grounds • Install ground wells		• 1 – Skip steer bobcats • 1 – Skip loader • 1 – Water truck • 1 – Fork lift • 1 – 2 ton flatbed trucks • 1 – Dump trucks (5 to 10 ton) • 1 – Air tampers • 1 – Mini excavator • 1 – Air compressor • 1 – Drill Rig (Self-propelled, 5 ton) • 1 – Construction trucks and trailers (2 to 60 ton) • 1 – Track mounted backhoe • 2 – Concrete trucks
Phase 3 – Substation: install equipment and components	• Install substation steel structures • Install major equipment (circuit breakers and switches) • Install Modular Control Buildings (MPAC) • Install bus work and associated 115kV conductors within the substation. • Install control wire. • Test and commission equipment – place into service (to be performed in concert w/ Phase 4 work)	**12 months**	• 1 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Skip steer bobcats • 1 – Water truck • 1 – Fork lift • 1 – 2 ton flatbed trucks • 1 – Air compressor • 1 – Man lift • 1 – Boom truck • 1 – Semi tractor trailer • 1 – Rigging truck
Phase 4a – Power line re-routes: install TSP foundations	• Install TSP foundations at locations where no clearances are required. • Install temporary shoo-flies or clear lines to install foundations where possible safety conflicts exist with equipment • Establish access routes to TSP locations where no access currently exists • Install BMP's associated with T-	**2 months** Work will be performed in parallel w/ Phase 3	• 1 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Skip loader • 1 – Water truck • 1 – Crane (15 – 80 ton) • 1 – Concrete trucks • 1 – Crawler mounted auger

Estimated Construction Equipment and Schedule by Phase- Sanger Substation Expansion Project

Phase	Construction Activities	Duration (months)	Construction Equipment Required
	Line component of project SWPPP prior to construction.		
Phase 4b – Power line re-routes: install TSPs	• Install/ erect TSP's at locations where no clearances are required. • Install temporary shoo-flies or clear lines to install TSP's where possible safety conflicts exist with equipment and material. • Demo selective lattice towers and remove wood poles that would conflict with line re-routes. • Install road crossing guard structures • Hang insulator and associated equipment to string in conductor. • Install temporary shoo-flies or clear lines to install foundations where possible safety conflicts exist with equipment • Install pull and tension sites • Modify 12/21kV distribution in the vicinity of the substation as necessary to accommodate re-routes	**2 months** Work will be performed in parallel w/ Phase 3	• 1 – D5 Bulldozers • 1 - Compactor • 1 - Road Roller • 1 - Water Trucks • 1 - Skip-steer bobcat • 4 – Dump Trucks • 1 – Mechanic Truck • 1 – Fuel truck • 2 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Crew cab trucks (3/4 – 1 ton) • 1 – Road grader, six wheel • 1 - Elevating scraper • 1 – Aerial lift trucks
Phase 4c – Power line re-routes: string power lines	• Mobilize line crews and associated equipment. • Set-up pull and tension equipment • String in conductors and terminate at substation dead end structures. • Sequentially energize and test lines to clearance point within substation. • Remove wood poles where no longer required as a result of re-routes. • Demo lattice tower steel, where not previously removed in earlier phases. • Remove all guard structures and	**1 month** Work will be performed in parallel w/ Phase 3	• 2 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Puller • 1 – Tensioner • 1 – Aerial lift trucks • 1 – Crane (15 – 80 ton) • 1 – Semi tractor trailer • 1 – Boom truck • 1 – Fork lift

Estimated Construction Equipment and Schedule by Phase- Sanger Substation Expansion Project

Phase	Construction Activities	Duration (months)	Construction Equipment Required
	shoo-flies as applicable. • Demobilize line crews and associated equipment.		
Phase 4d– Power line re-routes: Remove pull sites and restore impacted property	• Remove pull sites and improved access areas where applicable. Salvage base rock materials and provide to land owner if requested. • Remove lattice tower foundation piers and restore sites to the fullest degree possible. • Restore pull sites and temporary work areas where TSP's were installed or where wood poles and lattice towers were removed.	**1 month** Work will be performed in parallel w/ Phase 3	• 2 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Skip loader • 1 – Water trucks • 2 – Dump trucks (5 to 10 ton) • 1 – Mini excavator • 1 – Track mounted backhoe • 1 – Hydraulic excavator
Phase 5 – Substation: remove existing equipment from the existing Sanger Substation and finish post-construction cleanup	<u>At existing Sanger Substation area:</u> • Decommission equipment and re-cycle and/ or dispose of insulating fluids and gases. • Remove transmission equipment (circuit breakers, switches, etc.), bus work and structures. • Reconfigure connections as necessary to accept relocated 115kV infrastructure. • Remove existing control building structures • Remove all foundations • Restore site and grade as necessary <u>At new/ expanded Sanger Substation area</u> • Complete finish grading and drainage • Complete paving • Remove all SWPPP BMP's	**3 months**	• 2 – ½ ton pick-up trucks • 1 – ¾ ton pick-up trucks • 1 – Skip loader • 1 – Water trucks • 2 – Dump trucks (5 to 10 ton) • 1 – Mini excavator • 1 – Track mounted backhoe • 1 – Hydraulic excavator • 1 – Road grader, six wheel • 1 – Elevating scraper • 1 – D5 bulldozer • 1 – Compactor • 1 – Road Roller • 1 – Paver • 1 – Ship steer bobcat • 1 – Fork lift • 1 – Boom truck • 1 – Air compressor

Attachment C

Response to #15

Air Quality Emissions Summary Reports

(pdf version- excel version provided in electronic submittal)

Sanger Substation Expansion Project

Fresno County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	7.00	0.00	0
Other Non-Asphalt Surfaces			11.00		0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on PEA, Section 2.0 Project Description, substation expansion will occur on 7 acres and will result in temporary disturbance to 11 acres.

Construction Phase - Based on Construction Equipment and Schedule by Phase table developed by PGE.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table. Puller and tensioner under "Other General Industrial Equipment."

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Grading - Phase 1 will result in 7 acres permanent disturbance of expanded substation. Phase 4b will temporarily disturb 4.11 acres for TSP sites, and Phase 4d will temporarily disturb 3.19 acres for pole and tower removals and 2.65 acres for pull sites. See PEA, Section 2.0 for additional details.

Trips and VMT - Vendor trips include trips associated with the following: water trucks, dump trucks, fuel trucks, concrete trucks, mechanics trucks, and aerial lift trucks as identified in the "Construction Equipment and Schedule by Phase" table.

Construction Off-road Equipment Mitigation - Water trucks will be used to reduce fugitive dust during ground disturbance.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	66.00
tblConstructionPhase	NumDays	230.00	261.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	PhaseEndDate	8/31/2018	9/1/2018
tblConstructionPhase	PhaseEndDate	6/29/2018	6/30/2018
tblConstructionPhase	PhaseEndDate	10/31/2018	4/30/2018

tblConstructionPhase	PhaseEndDate	12/3/2018	12/31/2018
tblConstructionPhase	PhaseStartDate	9/2/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	10/1/2018
tblGrading	AcresOfGrading	99.00	7.00
tblGrading	AcresOfGrading	66.00	4.11
tblLandUse	LotAcreage	0.00	7.00
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
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	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00

tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
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tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP

tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 4d-Power line re-route: Remove pull site and restore property
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	28.00

tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	12.00
tblTripsAndVMT	WorkerTripNumber	33.00	32.00

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					
2017	0.2752	2.6784	2.1394	3.3800e-003	0.0390	0.1460	0.1850	0.0101	0.1357	0.1458	0.0000	304.0291	304.0291	0.0686	0.0000	305.4705
2018	0.3861	3.7949	3.1196	5.0800e-003	0.0567	0.2054	0.2621	0.0146	0.1909	0.2055	0.0000	449.7621	449.7621	0.1063	0.0000	451.9942
Total	**0.6613**	**6.4733**	**5.2589**	**8.4600e-003**	**0.0957**	**0.3514**	**0.4470**	**0.0247**	**0.3267**	**0.3513**	**0.0000**	**753.7912**	**753.7912**	**0.1749**	**0.0000**	**757.4647**

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					
2017	0.2752	2.6784	2.1394	3.3800e-003	0.0369	0.1460	0.1829	9.8600e-003	0.1357	0.1456	0.0000	304.0288	304.0288	0.0686	0.0000	305.4702
2018	0.3861	3.7949	3.1195	5.0800e-003	0.0538	0.2054	0.2592	0.0143	0.1909	0.2052	0.0000	449.7617	449.7617	0.1063	0.0000	451.9938
Total	**0.6613**	**6.4733**	**5.2589**	**8.4600e-003**	**0.0907**	**0.3514**	**0.4421**	**0.0241**	**0.3267**	**0.3508**	**0.0000**	**753.7905**	**753.7905**	**0.1749**	**0.0000**	**757.4640**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**5.17**	**0.00**	**1.11**	**2.23**	**0.00**	**0.15**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1-Substation Grading and Access	Grading	3/1/2017	5/31/2017	5	66	
2	Phase 2-Substation Foundations and Footings	Building Construction	6/1/2017	8/31/2017	5	66	
3	Phase 3-Substation Equipment Installation	Building Construction	9/1/2017	9/1/2018	5	261	
4	Phase 4a-Power line re-route: Install TSP Foundations	Paving	3/1/2018	4/30/2018	5	43	
5	Phase 4b-Power line re-route: Install TSP	Grading	5/1/2018	6/30/2018	5	44	
6	Phase 4c-Power line re-route: String Power line	Site Preparation	7/1/2018	7/31/2018	5	22	
7	Phase 4d-Power line re-route: Remove pull site and restore property	Site Preparation	8/1/2018	8/31/2018	5	23	
8	Phase 5: Equipment Removal and Clean-up	Paving	10/1/2018	12/31/2018	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1-Substation Grading and Access	Excavators	0	8.00	162	0.38
Phase 1-Substation Grading and Access	Graders	1	8.00	174	0.41
Phase 1-Substation Grading and Access	Other Construction Equipment	1	8.00	171	0.42
Phase 1-Substation Grading and Access	Plate Compactors	1	8.00	8	0.43
Phase 1-Substation Grading and Access	Rollers	1	8.00	80	0.38
Phase 1-Substation Grading and Access	Rubber Tired Dozers	0	8.00	255	0.40
Phase 1-Substation Grading and Access	Scrapers	1	8.00	361	0.48

Phase 1-Substation Grading and Access	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Phase 2-Substation Foundations and Footings	Air Compressors	1	8.00	78	0.48
Phase 2-Substation Foundations and Footings	Bore/Drill Rigs	1	8.00	205	0.50
Phase 2-Substation Foundations and Footings	Cranes	0	7.00	226	0.29
Phase 2-Substation Foundations and Footings	Excavators	1	8.00	162	0.38
Phase 2-Substation Foundations and Footings	Forklifts	1	8.00	89	0.20
Phase 2-Substation Foundations and Footings	Generator Sets	0	8.00	84	0.74
Phase 2-Substation Foundations and Footings	Skid Steer Loaders	2	8.00	64	0.37
Phase 2-Substation Foundations and Footings	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 2-Substation Foundations and Footings	Welders	0	8.00	46	0.45
Phase 3-Substation Equipment Installation	Air Compressors	1	8.00	78	0.48
Phase 3-Substation Equipment Installation	Cranes	0	7.00	226	0.29
Phase 3-Substation Equipment Installation	Forklifts	1	8.00	89	0.20
Phase 3-Substation Equipment Installation	Generator Sets	0	8.00	84	0.74
Phase 3-Substation Equipment Installation	Other General Industrial Equipment	1	8.00	87	0.34
Phase 3-Substation Equipment Installation	Skid Steer Loaders	1	8.00	64	0.37
Phase 3-Substation Equipment Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Phase 3-Substation Equipment Installation	Welders	0	8.00	46	0.45
Phase 4a-Power line re-route: Install TSP Foundations	Bore/Drill Rigs	1	8.00	205	0.50
Phase 4a-Power line re-route: Install TSP Foundations	Cranes	1	8.00	226	0.29
Phase 4a-Power line re-route: Install TSP Foundations	Forklifts	0	8.00	89	0.20
Phase 4a-Power line re-route: Install TSP Foundations	Generator Sets	0	8.00	84	0.74
Phase 4a-Power line re-route: Install TSP Foundations	Skid Steer Loaders	1	8.00	64	0.37

Phase 4a-Power line re-route: Install TSP Foundations	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase 4a-Power line re-route: Install TSP Foundations	Welders	0	8.00	46	0.45
Phase 4b-Power line re-route: Install TSP	Graders	1	8.00	174	0.41
Phase 4b-Power line re-route: Install TSP	Other Construction Equipment	1	8.00	171	0.42
Phase 4b-Power line re-route: Install TSP	Pavers	0	8.00	125	0.42
Phase 4b-Power line re-route: Install TSP	Paving Equipment	0	8.00	130	0.36
Phase 4b-Power line re-route: Install TSP	Plate Compactors	1	8.00	8	0.43
Phase 4b-Power line re-route: Install TSP	Rollers	1	8.00	80	0.38
Phase 4b-Power line re-route: Install TSP	Scrapers	1	8.00	361	0.48
Phase 4b-Power line re-route: Install TSP	Skid Steer Loaders	1	8.00	64	0.37
Phase 4c-Power line re-route: String Power line	Aerial Lifts	1	8.00	62	0.31
Phase 4c-Power line re-route: String Power line	Air Compressors	0	6.00	78	0.48
Phase 4c-Power line re-route: String Power line	Cranes	1	8.00	226	0.29
Phase 4c-Power line re-route: String Power line	Forklifts	1	8.00	89	0.20
Phase 4c-Power line re-route: String Power line	Other General Industrial Equipment	2	8.00	87	0.34
Phase 4d-Power line re-route: Remove pull site and restore property	Skid Steer Loaders	1	8.00	64	0.37
Phase 4d-Power line re-route: Remove pull site and restore property	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Phase 5: Equipment Removal and Clean-up	Air Compressors	1	8.00	78	0.48
Phase 5: Equipment Removal and Clean-up	Forklifts	1	8.00	89	0.20
Phase 5: Equipment Removal and Clean-up	Graders	1	8.00	174	0.41
Phase 5: Equipment Removal and Clean-up	Other Construction Equipment	1	8.00	171	0.42
Phase 5: Equipment Removal and Clean-up	Pavers	1	8.00	125	0.42
Phase 5: Equipment Removal and Clean-up	Plate Compactors	1	8.00	8	0.43
Phase 5: Equipment Removal and Clean-up	Rollers	1	8.00	80	0.38

Phase 5: Equipment Removal and Clean-up	Scrapers	1	8.00	361	0.48
Phase 5: Equipment Removal and Clean-up	Skid Steer Loaders	2	8.00	64	0.37
Phase 5: Equipment Removal and Clean-up	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Phase 1-Substation Grading and Access	Skid Steer Loaders	1	8.00	64	0.37
Phase 4b-Power line re-route: Install TSP	Aerial Lifts	1	8.00	62	0.31

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
Phase 1-Substation Grading and Access	8	20.00	28.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2-Substation Foundations and Footin	7	16.00	24.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3-Substation Equipment Installation	4	10.00	20.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4a-Power line re-route: Install TSP Fo	3	8.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4b-Power line re-route: Install TSP	6	16.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4c-Power line re-route: String Power li	5	12.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4d-Power line re-route: Remove pull s	4	10.00	12.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5: Equipment Removal and Clean-up	13	32.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Phase 1-Substation Grading and Access - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.7100e-003	0.0000	3.7100e-003	4.0000e-004	0.0000	4.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1312	1.4364	0.9119	1.2700e-003		0.0764	0.0764		0.0703	0.0703	0.0000	117.8203	117.8203	0.0359	0.0000	118.5740
Total	**0.1312**	**1.4364**	**0.9119**	**1.2700e-003**	**3.7100e-003**	**0.0764**	**0.0801**	**4.0000e-004**	**0.0703**	**0.0707**	**0.0000**	**117.8203**	**117.8203**	**0.0359**	**0.0000**	**118.5740**

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	0.0104	0.0754	0.1249	2.0000e-004	5.4400e-003	1.2300e-003	6.6700e-003	1.5600e-003	1.1300e-003	2.6900e-003	0.0000	17.8690	17.8690	1.5000e-004	0.0000	17.8721
Worker	2.4300e-003	4.1500e-003	0.0395	9.0000e-005	8.2000e-003	5.0000e-005	8.2600e-003	2.1800e-003	5.0000e-005	2.2300e-003	0.0000	6.7695	6.7695	3.4000e-004	0.0000	6.7765
Total	**0.0129**	**0.0796**	**0.1643**	**2.9000e-004**	**0.0136**	**1.2800e-003**	**0.0149**	**3.7400e-003**	**1.1800e-003**	**4.9200e-003**	**0.0000**	**24.6384**	**24.6384**	**4.9000e-004**	**0.0000**	**24.6486**

3.2 Phase 1-Substation Grading and Access - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.6700e-003	0.0000	1.6700e-003	1.8000e-004	0.0000	1.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1312	1.4364	0.9119	1.2700e-003		0.0764	0.0764		0.0703	0.0703	0.0000	117.8202	117.8202	0.0359	0.0000	118.5739
Total	**0.1312**	**1.4364**	**0.9119**	**1.2700e-003**	**1.6700e-003**	**0.0764**	**0.0781**	**1.8000e-004**	**0.0703**	**0.0705**	**0.0000**	**117.8202**	**117.8202**	**0.0359**	**0.0000**	**118.5739**

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	0.0104	0.0754	0.1249	2.0000e-004	5.4400e-003	1.2300e-003	6.6700e-003	1.5600e-003	1.1300e-003	2.6900e-003	0.0000	17.8690	17.8690	1.5000e-004	0.0000	17.8721
Worker	2.4300e-003	4.1500e-003	0.0395	9.0000e-005	8.2000e-003	5.0000e-005	8.2600e-003	2.1800e-003	5.0000e-005	2.2300e-003	0.0000	6.7695	6.7695	3.4000e-004	0.0000	6.7765
Total	**0.0129**	**0.0796**	**0.1643**	**2.9000e-004**	**0.0136**	**1.2800e-003**	**0.0149**	**3.7400e-003**	**1.1800e-003**	**4.9200e-003**	**0.0000**	**24.6384**	**24.6384**	**4.9000e-004**	**0.0000**	**24.6486**

3.3 Phase 2-Substation Foundations and Footings - 2017

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	0.0614	0.6304	0.4725	8.8000e-004		0.0359	0.0359		0.0336	0.0336	0.0000	80.8478	80.8478	0.0225	0.0000	81.3206
Total	**0.0614**	**0.6304**	**0.4725**	**8.8000e-004**		**0.0359**	**0.0359**		**0.0336**	**0.0336**	**0.0000**	**80.8478**	**80.8478**	**0.0225**	**0.0000**	**81.3206**

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	8.9500e-003	0.0646	0.1070	1.7000e-004	4.6600e-003	1.0600e-003	5.7100e-003	1.3300e-003	9.7000e-004	2.3000e-003	0.0000	15.3163	15.3163	1.3000e-004	0.0000	15.3190
Worker	1.9500e-003	3.3200e-003	0.0316	8.0000e-005	6.5600e-003	4.0000e-005	6.6100e-003	1.7400e-003	4.0000e-005	1.7800e-003	0.0000	5.4156	5.4156	2.7000e-004	0.0000	5.4212
Total	**0.0109**	**0.0680**	**0.1386**	**2.5000e-004**	**0.0112**	**1.1000e-003**	**0.0123**	**3.0700e-003**	**1.0100e-003**	**4.0800e-003**	**0.0000**	**20.7318**	**20.7318**	**4.0000e-004**	**0.0000**	**20.7402**

3.3 Phase 2-Substation Foundations and Footings - 2017

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	0.0614	0.6304	0.4725	8.8000e-004		0.0359	0.0359		0.0336	0.0336	0.0000	80.8477	80.8477	0.0225	0.0000	81.3205
Total	**0.0614**	**0.6304**	**0.4725**	**8.8000e-004**		**0.0359**	**0.0359**		**0.0336**	**0.0336**	**0.0000**	**80.8477**	**80.8477**	**0.0225**	**0.0000**	**81.3205**

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	8.9500e-003	0.0646	0.1070	1.7000e-004	4.6600e-003	1.0600e-003	5.7100e-003	1.3300e-003	9.7000e-004	2.3000e-003	0.0000	15.3163	15.3163	1.3000e-004	0.0000	15.3190
Worker	1.9500e-003	3.3200e-003	0.0316	8.0000e-005	6.5600e-003	4.0000e-005	6.6100e-003	1.7400e-003	4.0000e-005	1.7800e-003	0.0000	5.4156	5.4156	2.7000e-004	0.0000	5.4212
Total	**0.0109**	**0.0680**	**0.1386**	**2.5000e-004**	**0.0112**	**1.1000e-003**	**0.0123**	**3.0700e-003**	**1.0100e-003**	**4.0800e-003**	**0.0000**	**20.7318**	**20.7318**	**4.0000e-004**	**0.0000**	**20.7402**

3.4 Phase 3-Substation Equipment Installation - 2017

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	0.0475	0.3912	0.3101	4.3000e-004		0.0301	0.0301		0.0285	0.0285	0.0000	38.9490	38.9490	8.9900e-003	0.0000	39.1379
Total	**0.0475**	**0.3912**	**0.3101**	**4.3000e-004**		**0.0301**	**0.0301**		**0.0285**	**0.0285**	**0.0000**	**38.9490**	**38.9490**	**8.9900e-003**	**0.0000**	**39.1379**

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	9.7200e-003	0.0702	0.1162	1.9000e-004	5.0600e-003	1.1500e-003	6.2000e-003	1.4500e-003	1.0500e-003	2.5000e-003	0.0000	16.6313	16.6313	1.4000e-004	0.0000	16.6342
Worker	1.5900e-003	2.7000e-003	0.0257	6.0000e-005	5.3500e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.4104	4.4104	2.2000e-004	0.0000	4.4150
Total	**0.0113**	**0.0729**	**0.1419**	**2.5000e-004**	**0.0104**	**1.1900e-003**	**0.0116**	**2.8700e-003**	**1.0800e-003**	**3.9500e-003**	**0.0000**	**21.0417**	**21.0417**	**3.6000e-004**	**0.0000**	**21.0492**

3.4 Phase 3-Substation Equipment Installation - 2017

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	0.0475	0.3912	0.3101	4.3000e-004		0.0301	0.0301		0.0285	0.0285	0.0000	38.9490	38.9490	8.9900e-003	0.0000	39.1378
Total	**0.0475**	**0.3912**	**0.3101**	**4.3000e-004**		**0.0301**	**0.0301**		**0.0285**	**0.0285**	**0.0000**	**38.9490**	**38.9490**	**8.9900e-003**	**0.0000**	**39.1378**

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	9.7200e-003	0.0702	0.1162	1.9000e-004	5.0600e-003	1.1500e-003	6.2000e-003	1.4500e-003	1.0500e-003	2.5000e-003	0.0000	16.6313	16.6313	1.4000e-004	0.0000	16.6342
Worker	1.5900e-003	2.7000e-003	0.0257	6.0000e-005	5.3500e-003	4.0000e-005	5.3800e-003	1.4200e-003	3.0000e-005	1.4500e-003	0.0000	4.4104	4.4104	2.2000e-004	0.0000	4.4150
Total	**0.0113**	**0.0729**	**0.1419**	**2.5000e-004**	**0.0104**	**1.1900e-003**	**0.0116**	**2.8700e-003**	**1.0800e-003**	**3.9500e-003**	**0.0000**	**21.0417**	**21.0417**	**3.6000e-004**	**0.0000**	**21.0492**

3.4 Phase 3-Substation Equipment Installation - 2018

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	0.0838	0.7025	0.6192	8.8000e-004		0.0516	0.0516		0.0488	0.0488	0.0000	78.4636	78.4636	0.0180	0.0000	78.8413
Total	**0.0838**	**0.7025**	**0.6192**	**8.8000e-004**		**0.0516**	**0.0516**		**0.0488**	**0.0488**	**0.0000**	**78.4636**	**78.4636**	**0.0180**	**0.0000**	**78.8413**

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	0.0170	0.1284	0.2149	3.8000e-004	0.0103	2.1300e-003	0.0124	2.9500e-003	1.9600e-003	4.9100e-003	0.0000	33.2441	33.2441	2.8000e-004	0.0000	33.2499
Worker	2.8200e-003	4.9300e-003	0.0466	1.3000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9600e-003	0.0000	8.6691	8.6691	4.1000e-004	0.0000	8.6777
Total	**0.0198**	**0.1333**	**0.2615**	**5.1000e-004**	**0.0212**	**2.2000e-003**	**0.0234**	**5.8400e-003**	**2.0200e-003**	**7.8700e-003**	**0.0000**	**41.9132**	**41.9132**	**6.9000e-004**	**0.0000**	**41.9276**

3.4 Phase 3-Substation Equipment Installation - 2018

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	0.0838	0.7025	0.6192	8.8000e-004		0.0516	0.0516		0.0488	0.0488	0.0000	78.4635	78.4635	0.0180	0.0000	78.8412
Total	**0.0838**	**0.7025**	**0.6192**	**8.8000e-004**		**0.0516**	**0.0516**		**0.0488**	**0.0488**	**0.0000**	**78.4635**	**78.4635**	**0.0180**	**0.0000**	**78.8412**

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	0.0170	0.1284	0.2149	3.8000e-004	0.0103	2.1300e-003	0.0124	2.9500e-003	1.9600e-003	4.9100e-003	0.0000	33.2441	33.2441	2.8000e-004	0.0000	33.2499
Worker	2.8200e-003	4.9300e-003	0.0466	1.3000e-004	0.0109	7.0000e-005	0.0110	2.8900e-003	6.0000e-005	2.9600e-003	0.0000	8.6691	8.6691	4.1000e-004	0.0000	8.6777
Total	**0.0198**	**0.1333**	**0.2615**	**5.1000e-004**	**0.0212**	**2.2000e-003**	**0.0234**	**5.8400e-003**	**2.0200e-003**	**7.8700e-003**	**0.0000**	**41.9132**	**41.9132**	**6.9000e-004**	**0.0000**	**41.9276**

3.5 Phase 4a-Power line re-route: Install TSP Foundations - 2018

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	0.0200	0.2528	0.1242	3.5000e-004		9.8300e-003	9.8300e-003		9.0400e-003	9.0400e-003	0.0000	32.1570	32.1570	0.0100	0.0000	32.3672
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0200**	**0.2528**	**0.1242**	**3.5000e-004**		**9.8300e-003**	**9.8300e-003**		**9.0400e-003**	**9.0400e-003**	**0.0000**	**32.1570**	**32.1570**	**0.0100**	**0.0000**	**32.3672**

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	1.6700e-003	0.0126	0.0211	4.0000e-005	1.0100e-003	2.1000e-004	1.2200e-003	2.9000e-004	1.9000e-004	4.8000e-004	0.0000	3.2674	3.2674	3.0000e-005	0.0000	3.2680
Worker	5.6000e-004	9.7000e-004	9.1500e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.7041	1.7041	8.0000e-005	0.0000	1.7058
Total	**2.2300e-003**	**0.0136**	**0.0303**	**6.0000e-005**	**3.1500e-003**	**2.2000e-004**	**3.3700e-003**	**8.6000e-004**	**2.0000e-004**	**1.0600e-003**	**0.0000**	**4.9715**	**4.9715**	**1.1000e-004**	**0.0000**	**4.9738**

3.5 Phase 4a-Power line re-route: Install TSP Foundations - 2018

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	0.0200	0.2528	0.1242	3.5000e-004		9.8300e-003	9.8300e-003		9.0400e-003	9.0400e-003	0.0000	32.1570	32.1570	0.0100	0.0000	32.3672
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0200**	**0.2528**	**0.1242**	**3.5000e-004**		**9.8300e-003**	**9.8300e-003**		**9.0400e-003**	**9.0400e-003**	**0.0000**	**32.1570**	**32.1570**	**0.0100**	**0.0000**	**32.3672**

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	1.6700e-003	0.0126	0.0211	4.0000e-005	1.0100e-003	2.1000e-004	1.2200e-003	2.9000e-004	1.9000e-004	4.8000e-004	0.0000	3.2674	3.2674	3.0000e-005	0.0000	3.2680
Worker	5.6000e-004	9.7000e-004	9.1500e-003	2.0000e-005	2.1400e-003	1.0000e-005	2.1500e-003	5.7000e-004	1.0000e-005	5.8000e-004	0.0000	1.7041	1.7041	8.0000e-005	0.0000	1.7058
Total	**2.2300e-003**	**0.0136**	**0.0303**	**6.0000e-005**	**3.1500e-003**	**2.2000e-004**	**3.3700e-003**	**8.6000e-004**	**2.0000e-004**	**1.0600e-003**	**0.0000**	**4.9715**	**4.9715**	**1.1000e-004**	**0.0000**	**4.9738**

3.6 Phase 4b-Power line re-route: Install TSP - 2018

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					2.1800e-003	0.0000	2.1800e-003	2.4000e-004	0.0000	2.4000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0647	0.7244	0.4846	7.5000e-004		0.0351	0.0351		0.0323	0.0323	0.0000	68.1004	68.1004	0.0211	0.0000	68.5426
Total	**0.0647**	**0.7244**	**0.4846**	**7.5000e-004**	**2.1800e-003**	**0.0351**	**0.0372**	**2.4000e-004**	**0.0323**	**0.0325**	**0.0000**	**68.1004**	**68.1004**	**0.0211**	**0.0000**	**68.5426**

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	3.4100e-003	0.0258	0.0432	8.0000e-005	2.0700e-003	4.3000e-004	2.5000e-003	5.9000e-004	3.9000e-004	9.9000e-004	0.0000	6.6868	6.6868	6.0000e-005	0.0000	6.6880
Worker	1.1400e-003	1.9800e-003	0.0187	5.0000e-005	4.3800e-003	3.0000e-005	4.4000e-003	1.1600e-003	3.0000e-005	1.1900e-003	0.0000	3.4875	3.4875	1.7000e-004	0.0000	3.4909
Total	**4.5500e-003**	**0.0278**	**0.0620**	**1.3000e-004**	**6.4500e-003**	**4.6000e-004**	**6.9000e-003**	**1.7500e-003**	**4.2000e-004**	**2.1800e-003**	**0.0000**	**10.1743**	**10.1743**	**2.3000e-004**	**0.0000**	**10.1789**

3.6 Phase 4b-Power line re-route: Install TSP - 2018

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					9.8000e-004	0.0000	9.8000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0647	0.7244	0.4846	7.5000e-004		0.0351	0.0351		0.0323	0.0323	0.0000	68.1003	68.1003	0.0211	0.0000	68.5425
Total	**0.0647**	**0.7244**	**0.4846**	**7.5000e-004**	**9.8000e-004**	**0.0351**	**0.0360**	**1.1000e-004**	**0.0323**	**0.0324**	**0.0000**	**68.1003**	**68.1003**	**0.0211**	**0.0000**	**68.5425**

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	3.4100e-003	0.0258	0.0432	8.0000e-005	2.0700e-003	4.3000e-004	2.5000e-003	5.9000e-004	3.9000e-004	9.9000e-004	0.0000	6.6868	6.6868	6.0000e-005	0.0000	6.6880
Worker	1.1400e-003	1.9800e-003	0.0187	5.0000e-005	4.3800e-003	3.0000e-005	4.4000e-003	1.1600e-003	3.0000e-005	1.1900e-003	0.0000	3.4875	3.4875	1.7000e-004	0.0000	3.4909
Total	**4.5500e-003**	**0.0278**	**0.0620**	**1.3000e-004**	**6.4500e-003**	**4.6000e-004**	**6.9000e-003**	**1.7500e-003**	**4.2000e-004**	**2.1800e-003**	**0.0000**	**10.1743**	**10.1743**	**2.3000e-004**	**0.0000**	**10.1789**

3.7 Phase 4c-Power line re-route: String Power line - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1553	0.0968	1.5000e-004		9.2700e-003	9.2700e-003		8.5300e-003	8.5300e-003	0.0000	13.9462	13.9462	4.3400e-003	0.0000	14.0374
Total	**0.0150**	**0.1553**	**0.0968**	**1.5000e-004**	**0.0000**	**9.2700e-003**	**9.2700e-003**	**0.0000**	**8.5300e-003**	**8.5300e-003**	**0.0000**	**13.9462**	**13.9462**	**4.3400e-003**	**0.0000**	**14.0374**

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	8.5000e-004	6.4600e-003	0.0108	2.0000e-005	5.2000e-004	1.1000e-004	6.2000e-004	1.5000e-004	1.0000e-004	2.5000e-004	0.0000	1.6717	1.6717	1.0000e-005	0.0000	1.6720
Worker	4.3000e-004	7.4000e-004	7.0300e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3078	1.3078	6.0000e-005	0.0000	1.3091
Total	**1.2800e-003**	**7.2000e-003**	**0.0178**	**4.0000e-005**	**2.1600e-003**	**1.2000e-004**	**2.2700e-003**	**5.9000e-004**	**1.1000e-004**	**7.0000e-004**	**0.0000**	**2.9795**	**2.9795**	**7.0000e-005**	**0.0000**	**2.9811**

3.7 Phase 4c-Power line re-route: String Power line - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0150	0.1553	0.0968	1.5000e-004		9.2700e-003	9.2700e-003		8.5300e-003	8.5300e-003	0.0000	13.9462	13.9462	4.3400e-003	0.0000	14.0374
Total	**0.0150**	**0.1553**	**0.0968**	**1.5000e-004**	**0.0000**	**9.2700e-003**	**9.2700e-003**	**0.0000**	**8.5300e-003**	**8.5300e-003**	**0.0000**	**13.9462**	**13.9462**	**4.3400e-003**	**0.0000**	**14.0374**

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	8.5000e-004	6.4600e-003	0.0108	2.0000e-005	5.2000e-004	1.1000e-004	6.2000e-004	1.5000e-004	1.0000e-004	2.5000e-004	0.0000	1.6717	1.6717	1.0000e-005	0.0000	1.6720
Worker	4.3000e-004	7.4000e-004	7.0300e-003	2.0000e-005	1.6400e-003	1.0000e-005	1.6500e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3078	1.3078	6.0000e-005	0.0000	1.3091
Total	**1.2800e-003**	**7.2000e-003**	**0.0178**	**4.0000e-005**	**2.1600e-003**	**1.2000e-004**	**2.2700e-003**	**5.9000e-004**	**1.1000e-004**	**7.0000e-004**	**0.0000**	**2.9795**	**2.9795**	**7.0000e-005**	**0.0000**	**2.9811**

3.8 Phase 4d-Power line re-route: Remove pull site and restore property - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.1000e-003	0.0000	3.1000e-003	3.3000e-004	0.0000	3.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1045	0.0964	1.3000e-004		7.1000e-003	7.1000e-003		6.5300e-003	6.5300e-003	0.0000	11.9246	11.9246	3.7100e-003	0.0000	12.0026
Total	**0.0102**	**0.1045**	**0.0964**	**1.3000e-004**	**3.1000e-003**	**7.1000e-003**	**0.0102**	**3.3000e-004**	**6.5300e-003**	**6.8600e-003**	**0.0000**	**11.9246**	**11.9246**	**3.7100e-003**	**0.0000**	**12.0026**

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	1.3400e-003	0.0101	0.0170	3.0000e-005	8.1000e-004	1.7000e-004	9.8000e-004	2.3000e-004	1.5000e-004	3.9000e-004	0.0000	2.6215	2.6215	2.0000e-005	0.0000	2.6220
Worker	3.7000e-004	6.5000e-004	6.1200e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1394	1.1394	5.0000e-005	0.0000	1.1405
Total	**1.7100e-003**	**0.0108**	**0.0231**	**5.0000e-005**	**2.2400e-003**	**1.8000e-004**	**2.4200e-003**	**6.1000e-004**	**1.6000e-004**	**7.8000e-004**	**0.0000**	**3.7609**	**3.7609**	**7.0000e-005**	**0.0000**	**3.7625**

3.8 Phase 4d-Power line re-route: Remove pull site and restore property - 2018

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.3900e-003	0.0000	1.3900e-003	1.5000e-004	0.0000	1.5000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0102	0.1045	0.0964	1.3000e-004		7.1000e-003	7.1000e-003		6.5300e-003	6.5300e-003	0.0000	11.9246	11.9246	3.7100e-003	0.0000	12.0026
Total	**0.0102**	**0.1045**	**0.0964**	**1.3000e-004**	**1.3900e-003**	**7.1000e-003**	**8.4900e-003**	**1.5000e-004**	**6.5300e-003**	**6.6800e-003**	**0.0000**	**11.9246**	**11.9246**	**3.7100e-003**	**0.0000**	**12.0026**

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	1.3400e-003	0.0101	0.0170	3.0000e-005	8.1000e-004	1.7000e-004	9.8000e-004	2.3000e-004	1.5000e-004	3.9000e-004	0.0000	2.6215	2.6215	2.0000e-005	0.0000	2.6220
Worker	3.7000e-004	6.5000e-004	6.1200e-003	2.0000e-005	1.4300e-003	1.0000e-005	1.4400e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1394	1.1394	5.0000e-005	0.0000	1.1405
Total	**1.7100e-003**	**0.0108**	**0.0231**	**5.0000e-005**	**2.2400e-003**	**1.8000e-004**	**2.4200e-003**	**6.1000e-004**	**1.6000e-004**	**7.8000e-004**	**0.0000**	**3.7609**	**3.7609**	**7.0000e-005**	**0.0000**	**3.7625**

3.9 Phase 5: Equipment Removal and Clean-up - 2018

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	0.1544	1.6181	1.1827	1.7700e-003		0.0887	0.0887		0.0821	0.0821	0.0000	160.8783	160.8783	0.0474	0.0000	161.8745
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1544**	**1.6181**	**1.1827**	**1.7700e-003**		**0.0887**	**0.0887**		**0.0821**	**0.0821**	**0.0000**	**160.8783**	**160.8783**	**0.0474**	**0.0000**	**161.8745**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1100e-003	0.0387	0.0648	1.1000e-004	3.1100e-003	6.4000e-004	3.7500e-003	8.9000e-004	5.9000e-004	1.4800e-003	0.0000	10.0302	10.0302	8.0000e-005	0.0000	10.0320
Worker	3.4100e-003	5.9500e-003	0.0562	1.5000e-004	0.0131	8.0000e-005	0.0132	3.4900e-003	8.0000e-005	3.5700e-003	0.0000	10.4624	10.4624	5.0000e-004	0.0000	10.4728
Total	**8.5200e-003**	**0.0447**	**0.1210**	**2.6000e-004**	**0.0162**	**7.2000e-004**	**0.0170**	**4.3800e-003**	**6.7000e-004**	**5.0500e-003**	**0.0000**	**20.4926**	**20.4926**	**5.8000e-004**	**0.0000**	**20.5048**

3.9 Phase 5: Equipment Removal and Clean-up - 2018

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	0.1544	1.6181	1.1827	1.7700e-003		0.0887	0.0887		0.0821	0.0821	0.0000	160.8781	160.8781	0.0474	0.0000	161.8743
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1544**	**1.6181**	**1.1827**	**1.7700e-003**		**0.0887**	**0.0887**		**0.0821**	**0.0821**	**0.0000**	**160.8781**	**160.8781**	**0.0474**	**0.0000**	**161.8743**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.1100e-003	0.0387	0.0648	1.1000e-004	3.1100e-003	6.4000e-004	3.7500e-003	8.9000e-004	5.9000e-004	1.4800e-003	0.0000	10.0302	10.0302	8.0000e-005	0.0000	10.0320
Worker	3.4100e-003	5.9500e-003	0.0562	1.5000e-004	0.0131	8.0000e-005	0.0132	3.4900e-003	8.0000e-005	3.5700e-003	0.0000	10.4624	10.4624	5.0000e-004	0.0000	10.4728
Total	**8.5200e-003**	**0.0447**	**0.1210**	**2.6000e-004**	**0.0162**	**7.2000e-004**	**0.0170**	**4.3800e-003**	**6.7000e-004**	**5.0500e-003**	**0.0000**	**20.4926**	**20.4926**	**5.8000e-004**	**0.0000**	**20.5048**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.438302	0.063917	0.163234	0.169914	0.042886	0.007084	0.019490	0.082149	0.002063	0.001756	0.006579	0.000764	0.001861

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	ROG	NOx	CO	SO2	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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

10.0 Vegetation

Sanger Substation Expansion Project

Fresno County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	7.00	0.00	0
Other Non-Asphalt Surfaces			11.00		0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on PEA, Section 2.0 Project Description, substation expansion will occur on 7 acres and will result in temporary disturbance to 11 acres.

Construction Phase - Based on Construction Equipment and Schedule by Phase table developed by PGE.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table. Puller and tensioner under "Other General Industrial Equipment."

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Grading - Phase 1 will result in 7 acres permanent disturbance of expanded substation. Phase 4b will temporarily disturb 4.11 acres for TSP sites, and Phase 4d will temporarily disturb 3.19 acres for pole and tower removals and 2.65 acres for pull sites. See PEA, Section 2.0 for additional details.

Trips and VMT - Vendor trips include trips associated with the following: water trucks, dump trucks, fuel trucks, concrete trucks, mechanics trucks, and aerial lift trucks as identified in the "Construction Equipment and Schedule by Phase" table.

Construction Off-road Equipment Mitigation - Water trucks will be used to reduce fugitive dust during ground disturbance.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	66.00
tblConstructionPhase	NumDays	230.00	261.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	PhaseEndDate	8/31/2018	9/1/2018
tblConstructionPhase	PhaseEndDate	6/29/2018	6/30/2018
tblConstructionPhase	PhaseEndDate	10/31/2018	4/30/2018

tblConstructionPhase	PhaseEndDate	12/3/2018	12/31/2018
tblConstructionPhase	PhaseStartDate	9/2/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	10/1/2018
tblGrading	AcresOfGrading	99.00	7.00
tblGrading	AcresOfGrading	66.00	4.11
tblLandUse	LotAcreage	0.00	7.00
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
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	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00

tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP

tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 4d-Power line re-route: Remove pull site and restore property
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	28.00

tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	12.00
tblTripsAndVMT	WorkerTripNumber	33.00	32.00

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					
2017	4.3538	45.8415	32.1204	0.0478	0.5364	2.3541	2.8905	0.1280	2.1665	2.2945	0.0000	4,782.7074	4,782.7074	1.2150	0.0000	4,808.2228
2018	4.9453	50.3315	39.3929	0.0623	0.7173	2.7091	3.2141	0.1606	2.5093	2.6451	0.0000	6,093.6059	6,093.6059	1.6039	0.0000	6,127.2886
Total	**9.2991**	**96.1731**	**71.5133**	**0.1101**	**1.2537**	**5.0632**	**6.1047**	**0.2886**	**4.6758**	**4.9396**	**0.0000**	**10,876.3133**	**10,876.3133**	**2.8190**	**0.0000**	**10,935.5115**

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					
2017	4.3538	45.8415	32.1204	0.0478	0.4746	2.3541	2.8287	0.1213	2.1665	2.2878	0.0000	4,782.7074	4,782.7074	1.2150	0.0000	4,808.2228
2018	4.9453	50.3315	39.3929	0.0623	0.5933	2.7091	3.2141	0.1547	2.5093	2.6451	0.0000	6,093.6059	6,093.6059	1.6039	0.0000	6,127.2886
Total	**9.2991**	**96.1731**	**71.5133**	**0.1101**	**1.0678**	**5.0632**	**6.0428**	**0.2760**	**4.6758**	**4.9329**	**0.0000**	**10,876.3132**	**10,876.3132**	**2.8190**	**0.0000**	**10,935.5115**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.83**	**0.00**	**1.01**	**4.35**	**0.00**	**0.14**	**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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1-Substation Grading and Access	Grading	3/1/2017	5/31/2017	5	66	
2	Phase 2-Substation Foundations and Footings	Building Construction	6/1/2017	8/31/2017	5	66	
3	Phase 3-Substation Equipment Installation	Building Construction	9/1/2017	9/1/2018	5	261	
4	Phase 4a-Power line re-route: Install TSP Foundations	Paving	3/1/2018	4/30/2018	5	43	
5	Phase 4b-Power line re-route: Install TSP	Grading	5/1/2018	6/30/2018	5	44	
6	Phase 4c-Power line re-route: String Power line	Site Preparation	7/1/2018	7/31/2018	5	22	
7	Phase 4d-Power line re-route: Remove pull site and restore property	Site Preparation	8/1/2018	8/31/2018	5	23	
8	Phase 5: Equipment Removal and Clean-up	Paving	10/1/2018	12/31/2018	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1-Substation Grading and Access	Excavators	0	8.00	162	0.38
Phase 1-Substation Grading and Access	Graders	1	8.00	174	0.41
Phase 1-Substation Grading and Access	Other Construction Equipment	1	8.00	171	0.42
Phase 1-Substation Grading and Access	Plate Compactors	1	8.00	8	0.43
Phase 1-Substation Grading and Access	Rollers	1	8.00	80	0.38
Phase 1-Substation Grading and Access	Rubber Tired Dozers	0	8.00	255	0.40
Phase 1-Substation Grading and Access	Scrapers	1	8.00	361	0.48
Phase 1-Substation Grading and Access	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Phase 2-Substation Foundations and Footings	Air Compressors	1	8.00	78	0.48
Phase 2-Substation Foundations and Footings	Bore/Drill Rigs	1	8.00	205	0.50
Phase 2-Substation Foundations and Footings	Cranes	0	7.00	226	0.29
Phase 2-Substation Foundations and Footings	Excavators	1	8.00	162	0.38
Phase 2-Substation Foundations and Footings	Forklifts	1	8.00	89	0.20
Phase 2-Substation Foundations and Footings	Generator Sets	0	8.00	84	0.74
Phase 2-Substation Foundations and Footings	Skid Steer Loaders	2	8.00	64	0.37
Phase 2-Substation Foundations and Footings	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 2-Substation Foundations and Footings	Welders	0	8.00	46	0.45
Phase 3-Substation Equipment Installation	Air Compressors	1	8.00	78	0.48
Phase 3-Substation Equipment Installation	Cranes	0	7.00	226	0.29
Phase 3-Substation Equipment Installation	Forklifts	1	8.00	89	0.20
Phase 3-Substation Equipment Installation	Generator Sets	0	8.00	84	0.74
Phase 3-Substation Equipment Installation	Other General Industrial Equipment	1	8.00	87	0.34
Phase 3-Substation Equipment Installation	Skid Steer Loaders	1	8.00	64	0.37

Phase 3-Substation Equipment Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Phase 3-Substation Equipment Installation	Welders	0	8.00	46	0.45
Phase 4a-Power line re-route: Install TSP Foundations	Bore/Drill Rigs	1	8.00	205	0.50
Phase 4a-Power line re-route: Install TSP Foundations	Cranes	1	8.00	226	0.29
Phase 4a-Power line re-route: Install TSP Foundations	Forklifts	0	8.00	89	0.20
Phase 4a-Power line re-route: Install TSP Foundations	Generator Sets	0	8.00	84	0.74
Phase 4a-Power line re-route: Install TSP Foundations	Skid Steer Loaders	1	8.00	64	0.37
Phase 4a-Power line re-route: Install TSP Foundations	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase 4a-Power line re-route: Install TSP Foundations	Welders	0	8.00	46	0.45
Phase 4b-Power line re-route: Install TSP	Graders	1	8.00	174	0.41
Phase 4b-Power line re-route: Install TSP	Other Construction Equipment	1	8.00	171	0.42
Phase 4b-Power line re-route: Install TSP	Pavers	0	8.00	125	0.42
Phase 4b-Power line re-route: Install TSP	Paving Equipment	0	8.00	130	0.36
Phase 4b-Power line re-route: Install TSP	Plate Compactors	1	8.00	8	0.43
Phase 4b-Power line re-route: Install TSP	Rollers	1	8.00	80	0.38
Phase 4b-Power line re-route: Install TSP	Scrapers	1	8.00	361	0.48
Phase 4b-Power line re-route: Install TSP	Skid Steer Loaders	1	8.00	64	0.37
Phase 4c-Power line re-route: String Power line	Aerial Lifts	1	8.00	62	0.31
Phase 4c-Power line re-route: String Power line	Air Compressors	0	6.00	78	0.48
Phase 4c-Power line re-route: String Power line	Cranes	1	8.00	226	0.29
Phase 4c-Power line re-route: String Power line	Forklifts	1	8.00	89	0.20
Phase 4c-Power line re-route: String Power line	Other General Industrial Equipment	2	8.00	87	0.34
Phase 4d-Power line re-route: Remove pull site and restore property	Skid Steer Loaders	1	8.00	64	0.37
Phase 4d-Power line re-route: Remove pull site and restore property	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Phase 5: Equipment Removal and Clean-up	Air Compressors	1	8.00	78	0.48
Phase 5: Equipment Removal and Clean-up	Forklifts	1	8.00	89	0.20
Phase 5: Equipment Removal and Clean-up	Graders	1	8.00	174	0.41
Phase 5: Equipment Removal and Clean-up	Other Construction Equipment	1	8.00	171	0.42
Phase 5: Equipment Removal and Clean-up	Pavers	1	8.00	125	0.42
Phase 5: Equipment Removal and Clean-up	Plate Compactors	1	8.00	8	0.43
Phase 5: Equipment Removal and Clean-up	Rollers	1	8.00	80	0.38
Phase 5: Equipment Removal and Clean-up	Scrapers	1	8.00	361	0.48
Phase 5: Equipment Removal and Clean-up	Skid Steer Loaders	2	8.00	64	0.37
Phase 5: Equipment Removal and Clean-up	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Phase 1-Substation Grading and Access	Skid Steer Loaders	1	8.00	64	0.37
Phase 4b-Power line re-route: Install TSP	Aerial Lifts	1	8.00	62	0.31

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
Phase 1-Substation Grading and Access	8	20.00	28.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2-Substation Foundations and Footin	7	16.00	24.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3-Substation Equipment Installation	4	10.00	20.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4a-Power line re-route: Install TSP Fo	3	8.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4b-Power line re-route: Install TSP	6	16.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4c-Power line re-route: String Power li	5	12.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4d-Power line re-route: Remove pull s	4	10.00	12.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5: Equipment Removal and Clean-up	13	32.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Phase 1-Substation Grading and Access - 2017

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					0.1125	0.0000	0.1125	0.0121	0.0000	0.0121			0.0000			0.0000
Off-Road	3.9763	43.5264	27.6336	0.0386		2.3154	2.3154		2.1309	2.1309		3,935.5961	3,935.5961	1.1989		3,960.7724
Total	**3.9763**	**43.5264**	**27.6336**	**0.0386**	**0.1125**	**2.3154**	**2.4279**	**0.0121**	**2.1309**	**2.1431**		**3,935.5961**	**3,935.5961**	**1.1989**		**3,960.7724**

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	0.2905	2.1987	3.0948	6.0700e-003	0.1685	0.0371	0.2056	0.0481	0.0341	0.0822		598.9930	598.9930	4.9300e-003		599.0965
Worker	0.0870	0.1165	1.3920	3.1500e-003	0.2555	1.6500e-003	0.2571	0.0678	1.5200e-003	0.0693		248.1184	248.1184	0.0112		248.3539
Total	**0.3774**	**2.3151**	**4.4868**	**9.2200e-003**	**0.4239**	**0.0387**	**0.4627**	**0.1159**	**0.0356**	**0.1514**		**847.1113**	**847.1113**	**0.0162**		**847.4504**

3.2 Phase 1-Substation Grading and Access - 2017

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					0.0506	0.0000	0.0506	5.4700e-003	0.0000	5.4700e-003			0.0000			0.0000
Off-Road	3.9763	43.5264	27.6336	0.0386		2.3154	2.3154		2.1309	2.1309	0.0000	3,935.5960	3,935.5960	1.1989		3,960.7724
Total	**3.9763**	**43.5264**	**27.6336**	**0.0386**	**0.0506**	**2.3154**	**2.3660**	**5.4700e-003**	**2.1309**	**2.1364**	**0.0000**	**3,935.5960**	**3,935.5960**	**1.1989**		**3,960.7724**

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	0.2905	2.1987	3.0948	6.0700e-003	0.1685	0.0371	0.2056	0.0481	0.0341	0.0822		598.9930	598.9930	4.9300e-003		599.0965
Worker	0.0870	0.1165	1.3920	3.1500e-003	0.2555	1.6500e-003	0.2571	0.0678	1.5200e-003	0.0693		248.1184	248.1184	0.0112		248.3539
Total	**0.3774**	**2.3151**	**4.4868**	**9.2200e-003**	**0.4239**	**0.0387**	**0.4627**	**0.1159**	**0.0356**	**0.1514**		**847.1113**	**847.1113**	**0.0162**		**847.4504**

3.3 Phase 2-Substation Foundations and Footings - 2017

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	1.8599	19.1037	14.3191	0.0267		1.0869	1.0869		1.0184	1.0184		2,700.5888	2,700.5888	0.7521		2,716.3828
Total	**1.8599**	**19.1037**	**14.3191**	**0.0267**		**1.0869**	**1.0869**		**1.0184**	**1.0184**		**2,700.5888**	**2,700.5888**	**0.7521**		**2,716.3828**

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	0.2490	1.8846	2.6527	5.2100e-003	0.1444	0.0318	0.1762	0.0412	0.0292	0.0704		513.4225	513.4225	4.2300e-003		513.5113
Worker	0.0696	0.0932	1.1136	2.5200e-003	0.2044	1.3200e-003	0.2057	0.0542	1.2100e-003	0.0554		198.4947	198.4947	8.9700e-003		198.6831
Total	**0.3186**	**1.9777**	**3.7663**	**7.7300e-003**	**0.3488**	**0.0331**	**0.3819**	**0.0954**	**0.0304**	**0.1258**		**711.9172**	**711.9172**	**0.0132**		**712.1944**

3.3 Phase 2-Substation Foundations and Footings - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8599	19.1037	14.3191	0.0267		1.0869	1.0869		1.0184	1.0184	0.0000	2,700.5888	2,700.5888	0.7521		2,716.3828
Total	**1.8599**	**19.1037**	**14.3191**	**0.0267**		**1.0869**	**1.0869**		**1.0184**	**1.0184**	**0.0000**	**2,700.5888**	**2,700.5888**	**0.7521**		**2,716.3828**

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	0.2490	1.8846	2.6527	5.2100e-003	0.1444	0.0318	0.1762	0.0412	0.0292	0.0704		513.4225	513.4225	4.2300e-003		513.5113
Worker	0.0696	0.0932	1.1136	2.5200e-003	0.2044	1.3200e-003	0.2057	0.0542	1.2100e-003	0.0554		198.4947	198.4947	8.9700e-003		198.6831
Total	**0.3186**	**1.9777**	**3.7663**	**7.7300e-003**	**0.3488**	**0.0331**	**0.3819**	**0.0954**	**0.0304**	**0.1258**		**711.9172**	**711.9172**	**0.0132**		**712.1944**

3.4 Phase 3-Substation Equipment Installation - 2017

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	1.1050	9.0971	7.2117	0.0101		0.7010	0.7010		0.6634	0.6634		998.4634	998.4634	0.2306		1,003.3053
Total	**1.1050**	**9.0971**	**7.2117**	**0.0101**		**0.7010**	**0.7010**		**0.6634**	**0.6634**		**998.4634**	**998.4634**	**0.2306**		**1,003.3053**

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	0.2075	1.5705	2.2106	4.3400e-003	0.1203	0.0265	0.1468	0.0344	0.0243	0.0587		427.8521	427.8521	3.5200e-003		427.9261
Worker	0.0435	0.0582	0.6960	1.5800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		124.0592	124.0592	5.6100e-003		124.1769
Total	**0.2510**	**1.6287**	**2.9066**	**5.9200e-003**	**0.2481**	**0.0273**	**0.2754**	**0.0682**	**0.0251**	**0.0933**		**551.9113**	**551.9113**	**9.1300e-003**		**552.1030**

3.4 Phase 3-Substation Equipment Installation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1050	9.0971	7.2117	0.0101		0.7010	0.7010		0.6634	0.6634	0.0000	998.4634	998.4634	0.2306		1,003.3053
Total	**1.1050**	**9.0971**	**7.2117**	**0.0101**		**0.7010**	**0.7010**		**0.6634**	**0.6634**	**0.0000**	**998.4634**	**998.4634**	**0.2306**		**1,003.3053**

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	0.2075	1.5705	2.2106	4.3400e-003	0.1203	0.0265	0.1468	0.0344	0.0243	0.0587		427.8521	427.8521	3.5200e-003		427.9261
Worker	0.0435	0.0582	0.6960	1.5800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		124.0592	124.0592	5.6100e-003		124.1769
Total	**0.2510**	**1.6287**	**2.9066**	**5.9200e-003**	**0.2481**	**0.0273**	**0.2754**	**0.0682**	**0.0251**	**0.0933**		**551.9113**	**551.9113**	**9.1300e-003**		**552.1030**

3.4 Phase 3-Substation Equipment Installation - 2018

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	0.9572	8.0281	7.0765	0.0101		0.5891	0.5891		0.5581	0.5581		988.4721	988.4721	0.2266		993.2298
Total	**0.9572**	**8.0281**	**7.0765**	**0.0101**		**0.5891**	**0.5891**		**0.5581**	**0.5581**		**988.4721**	**988.4721**	**0.2266**		**993.2298**

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	0.1786	1.4126	1.9529	4.3200e-003	0.1203	0.0242	0.1446	0.0344	0.0223	0.0566		420.2889	420.2889	3.4300e-003		420.3608
Worker	0.0383	0.0523	0.6222	1.5800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		119.8431	119.8431	5.1800e-003		119.9518
Total	**0.2170**	**1.4649**	**2.5751**	**5.9000e-003**	**0.2481**	**0.0250**	**0.2731**	**0.0682**	**0.0230**	**0.0913**		**540.1320**	**540.1320**	**8.6100e-003**		**540.3126**

3.4 Phase 3-Substation Equipment Installation - 2018

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	0.9572	8.0281	7.0765	0.0101		0.5891	0.5891		0.5581	0.5581	0.0000	988.4721	988.4721	0.2266		993.2298
Total	**0.9572**	**8.0281**	**7.0765**	**0.0101**		**0.5891**	**0.5891**		**0.5581**	**0.5581**	**0.0000**	**988.4721**	**988.4721**	**0.2266**		**993.2298**

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	0.1786	1.4126	1.9529	4.3200e-003	0.1203	0.0242	0.1446	0.0344	0.0223	0.0566		420.2889	420.2889	3.4300e-003		420.3608
Worker	0.0383	0.0523	0.6222	1.5800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		119.8431	119.8431	5.1800e-003		119.9518
Total	**0.2170**	**1.4649**	**2.5751**	**5.9000e-003**	**0.2481**	**0.0250**	**0.2731**	**0.0682**	**0.0230**	**0.0913**		**540.1320**	**540.1320**	**8.6100e-003**		**540.3126**

3.5 Phase 4a-Power line re-route: Install TSP Foundations - 2018

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	0.9279	11.7599	5.7783	0.0164		0.4572	0.4572		0.4206	0.4206		1,648.6993	1,648.6993	0.5133		1,659.4778
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9279**	**11.7599**	**5.7783**	**0.0164**		**0.4572**	**0.4572**		**0.4206**	**0.4206**		**1,648.6993**	**1,648.6993**	**0.5133**		**1,659.4778**

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	0.0715	0.5650	0.7812	1.7300e-003	0.0481	9.7000e-003	0.0578	0.0137	8.9200e-003	0.0227		168.1155	168.1155	1.3700e-003		168.1443
Worker	0.0307	0.0419	0.4978	1.2600e-003	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		95.8745	95.8745	4.1400e-003		95.9614
Total	**0.1021**	**0.6069**	**1.2789**	**2.9900e-003**	**0.1503**	**0.0103**	**0.1607**	**0.0408**	**9.5100e-003**	**0.0504**		**263.9900**	**263.9900**	**5.5100e-003**		**264.1058**

3.5 Phase 4a-Power line re-route: Install TSP Foundations - 2018

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	0.9279	11.7599	5.7783	0.0164		0.4572	0.4572		0.4206	0.4206	0.0000	1,648.6993	1,648.6993	0.5133		1,659.4778
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9279**	**11.7599**	**5.7783**	**0.0164**		**0.4572**	**0.4572**		**0.4206**	**0.4206**	**0.0000**	**1,648.6993**	**1,648.6993**	**0.5133**		**1,659.4778**

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	0.0715	0.5650	0.7812	1.7300e-003	0.0481	9.7000e-003	0.0578	0.0137	8.9200e-003	0.0227		168.1155	168.1155	1.3700e-003		168.1443
Worker	0.0307	0.0419	0.4978	1.2600e-003	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		95.8745	95.8745	4.1400e-003		95.9614
Total	**0.1021**	**0.6069**	**1.2789**	**2.9900e-003**	**0.1503**	**0.0103**	**0.1607**	**0.0408**	**9.5100e-003**	**0.0504**		**263.9900**	**263.9900**	**5.5100e-003**		**264.1058**

3.6 Phase 4b-Power line re-route: Install TSP - 2018

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					0.0991	0.0000	0.0991	0.0107	0.0000	0.0107			0.0000			0.0000
Off-Road	2.9424	32.9274	22.0283	0.0340		1.5932	1.5932		1.4665	1.4665		3,412.1736	3,412.1736	1.0551		3,434.3308
Total	**2.9424**	**32.9274**	**22.0283**	**0.0340**	**0.0991**	**1.5932**	**1.6923**	**0.0107**	**1.4665**	**1.4772**		**3,412.1736**	**3,412.1736**	**1.0551**		**3,434.3308**

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	0.1429	1.1301	1.5623	3.4600e-003	0.0963	0.0194	0.1157	0.0275	0.0178	0.0453		336.2311	336.2311	2.7400e-003		336.2886
Worker	0.0614	0.0837	0.9956	2.5300e-003	0.2044	1.2900e-003	0.2057	0.0542	1.1900e-003	0.0554		191.7490	191.7490	8.2800e-003		191.9229
Total	**0.2042**	**1.2138**	**2.5579**	**5.9900e-003**	**0.3006**	**0.0207**	**0.3213**	**0.0817**	**0.0190**	**0.1007**		**527.9801**	**527.9801**	**0.0110**		**528.2115**

3.6 Phase 4b-Power line re-route: Install TSP - 2018

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					0.0446	0.0000	0.0446	4.8100e-003	0.0000	4.8100e-003			0.0000			0.0000
Off-Road	2.9424	32.9274	22.0283	0.0340		1.5932	1.5932		1.4665	1.4665	0.0000	3,412.1736	3,412.1736	1.0551		3,434.3308
Total	**2.9424**	**32.9274**	**22.0283**	**0.0340**	**0.0446**	**1.5932**	**1.6378**	**4.8100e-003**	**1.4665**	**1.4713**	**0.0000**	**3,412.1736**	**3,412.1736**	**1.0551**		**3,434.3308**

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	0.1429	1.1301	1.5623	3.4600e-003	0.0963	0.0194	0.1157	0.0275	0.0178	0.0453		336.2311	336.2311	2.7400e-003		336.2886
Worker	0.0614	0.0837	0.9956	2.5300e-003	0.2044	1.2900e-003	0.2057	0.0542	1.1900e-003	0.0554		191.7490	191.7490	8.2800e-003		191.9229
Total	**0.2042**	**1.2138**	**2.5579**	**5.9900e-003**	**0.3006**	**0.0207**	**0.3213**	**0.0817**	**0.0190**	**0.1007**		**527.9801**	**527.9801**	**0.0110**		**528.2115**

3.7 Phase 4c-Power line re-route: String Power line - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.3594	14.1168	8.7966	0.0139		0.8425	0.8425		0.7751	0.7751		1,397.5514	1,397.5514	0.4351		1,406.6880
Total	**1.3594**	**14.1168**	**8.7966**	**0.0139**	**0.0000**	**0.8425**	**0.8425**	**0.0000**	**0.7751**	**0.7751**		**1,397.5514**	**1,397.5514**	**0.4351**		**1,406.6880**

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	0.0715	0.5650	0.7812	1.7300e-003	0.0481	9.7000e-003	0.0578	0.0137	8.9200e-003	0.0227		168.1155	168.1155	1.3700e-003		168.1443
Worker	0.0460	0.0628	0.7467	1.9000e-003	0.1533	9.6000e-004	0.1542	0.0407	8.9000e-004	0.0415		143.8118	143.8118	6.2100e-003		143.9422
Total	**0.1175**	**0.6278**	**1.5278**	**3.6300e-003**	**0.2014**	**0.0107**	**0.2121**	**0.0544**	**9.8100e-003**	**0.0642**		**311.9273**	**311.9273**	**7.5800e-003**		**312.0865**

3.7 Phase 4c-Power line re-route: String Power line - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.3594	14.1168	8.7966	0.0139		0.8425	0.8425		0.7751	0.7751	0.0000	1,397.5514	1,397.5514	0.4351		1,406.6880
Total	**1.3594**	**14.1168**	**8.7966**	**0.0139**	**0.0000**	**0.8425**	**0.8425**	**0.0000**	**0.7751**	**0.7751**	**0.0000**	**1,397.5514**	**1,397.5514**	**0.4351**		**1,406.6880**

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	0.0715	0.5650	0.7812	1.7300e-003	0.0481	9.7000e-003	0.0578	0.0137	8.9200e-003	0.0227		168.1155	168.1155	1.3700e-003		168.1443
Worker	0.0460	0.0628	0.7467	1.9000e-003	0.1533	9.6000e-004	0.1542	0.0407	8.9000e-004	0.0415		143.8118	143.8118	6.2100e-003		143.9422
Total	**0.1175**	**0.6278**	**1.5278**	**3.6300e-003**	**0.2014**	**0.0107**	**0.2121**	**0.0544**	**9.8100e-003**	**0.0642**		**311.9273**	**311.9273**	**7.5800e-003**		**312.0865**

3.8 Phase 4d-Power line re-route: Remove pull site and restore property - 2018

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					0.2693	0.0000	0.2693	0.0291	0.0000	0.0291			0.0000			0.0000
Off-Road	0.8885	9.0836	8.3809	0.0114		0.6173	0.6173		0.5679	0.5679		1,143.0123	1,143.0123	0.3558		1,150.4849
Total	**0.8885**	**9.0836**	**8.3809**	**0.0114**	**0.2693**	**0.6173**	**0.8866**	**0.0291**	**0.5679**	**0.5970**		**1,143.0123**	**1,143.0123**	**0.3558**		**1,150.4849**

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	0.1072	0.8475	1.1717	2.5900e-003	0.0722	0.0146	0.0868	0.0206	0.0134	0.0340		252.1733	252.1733	2.0600e-003		252.2165
Worker	0.0383	0.0523	0.6222	1.5800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		119.8431	119.8431	5.1800e-003		119.9518
Total	**0.1455**	**0.8999**	**1.7940**	**4.1700e-003**	**0.1999**	**0.0154**	**0.2153**	**0.0545**	**0.0141**	**0.0686**		**372.0164**	**372.0164**	**7.2400e-003**		**372.1683**

3.8 Phase 4d-Power line re-route: Remove pull site and restore property - 2018

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					0.1212	0.0000	0.1212	0.0131	0.0000	0.0131			0.0000			0.0000
Off-Road	0.8885	9.0836	8.3809	0.0114		0.6173	0.6173		0.5679	0.5679	0.0000	1,143.0123	1,143.0123	0.3558		1,150.4849
Total	**0.8885**	**9.0836**	**8.3809**	**0.0114**	**0.1212**	**0.6173**	**0.7385**	**0.0131**	**0.5679**	**0.5810**	**0.0000**	**1,143.0123**	**1,143.0123**	**0.3558**		**1,150.4849**

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	0.1072	0.8475	1.1717	2.5900e-003	0.0722	0.0146	0.0868	0.0206	0.0134	0.0340		252.1733	252.1733	2.0600e-003		252.2165
Worker	0.0383	0.0523	0.6222	1.5800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		119.8431	119.8431	5.1800e-003		119.9518
Total	**0.1455**	**0.8999**	**1.7940**	**4.1700e-003**	**0.1999**	**0.0154**	**0.2153**	**0.0545**	**0.0141**	**0.0686**		**372.0164**	**372.0164**	**7.2400e-003**		**372.1683**

3.9 Phase 5: Equipment Removal and Clean-up - 2018

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	4.6797	49.0341	35.8395	0.0538		2.6872	2.6872		2.4890	2.4890		5,373.8768	5,373.8768	1.5846		5,407.1542
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6797**	**49.0341**	**35.8395**	**0.0538**		**2.6872**	**2.6872**		**2.4890**	**2.4890**		**5,373.8768**	**5,373.8768**	**1.5846**		**5,407.1542**

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	0.1429	1.1301	1.5623	3.4600e-003	0.0963	0.0194	0.1157	0.0275	0.0178	0.0453		336.2311	336.2311	2.7400e-003		336.2886
Worker	0.1227	0.1674	1.9912	5.0600e-003	0.4087	2.5700e-003	0.4113	0.1084	2.3800e-003	0.1108		383.4980	383.4980	0.0166		383.8458
Total	**0.2656**	**1.2975**	**3.5535**	**8.5200e-003**	**0.5050**	**0.0220**	**0.5270**	**0.1359**	**0.0202**	**0.1561**		**719.7291**	**719.7291**	**0.0193**		**720.1344**

3.9 Phase 5: Equipment Removal and Clean-up - 2018

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	4.6797	49.0341	35.8395	0.0538		2.6872	2.6872		2.4890	2.4890	0.0000	5,373.8768	5,373.8768	1.5846		5,407.1542
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6797**	**49.0341**	**35.8395**	**0.0538**		**2.6872**	**2.6872**		**2.4890**	**2.4890**	**0.0000**	**5,373.8768**	**5,373.8768**	**1.5846**		**5,407.1542**

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	0.1429	1.1301	1.5623	3.4600e-003	0.0963	0.0194	0.1157	0.0275	0.0178	0.0453		336.2311	336.2311	2.7400e-003		336.2886
Worker	0.1227	0.1674	1.9912	5.0600e-003	0.4087	2.5700e-003	0.4113	0.1084	2.3800e-003	0.1108		383.4980	383.4980	0.0166		383.8458
Total	**0.2656**	**1.2975**	**3.5535**	**8.5200e-003**	**0.5050**	**0.0220**	**0.5270**	**0.1359**	**0.0202**	**0.1561**		**719.7291**	**719.7291**	**0.0193**		**720.1344**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.438302	0.063917	0.163234	0.169914	0.042886	0.007084	0.019490	0.082149	0.002063	0.001756	0.006579	0.000764	0.001861

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

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

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Sanger Substation Expansion Project

Fresno County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	0.00	1000sqft	7.00	0.00	0
Other Non-Asphalt Surfaces			11.00		0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	45
Climate Zone	3			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on PEA, Section 2.0 Project Description, substation expansion will occur on 7 acres and will result in temporary disturbance to 11 acres.

Construction Phase - Based on Construction Equipment and Schedule by Phase table developed by PGE.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table. Puller and tensioner under "Other General Industrial Equipment."

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Off-road Equipment - Construction equipment based on "Construction Equipment and Schedule by Phase" table.

Grading - Phase 1 will result in 7 acres permanent disturbance of expanded substation. Phase 4b will temporarily disturb 4.11 acres for TSP sites, and Phase 4d will temporarily disturb 3.19 acres for pole and tower removals and 2.65 acres for pull sites. See PEA, Section 2.0 for additional details.

Trips and VMT - Vendor trips include trips associated with the following: water trucks, dump trucks, fuel trucks, concrete trucks, mechanics trucks, and aerial lift trucks as identified in the "Construction Equipment and Schedule by Phase" table.

Construction Off-road Equipment Mitigation - Water trucks will be used to reduce fugitive dust during ground disturbance.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	66.00
tblConstructionPhase	NumDays	230.00	261.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	20.00	44.00
tblConstructionPhase	NumDays	20.00	43.00
tblConstructionPhase	NumDays	20.00	66.00
tblConstructionPhase	NumDays	10.00	22.00
tblConstructionPhase	NumDays	10.00	23.00
tblConstructionPhase	PhaseEndDate	8/31/2018	9/1/2018
tblConstructionPhase	PhaseEndDate	6/29/2018	6/30/2018
tblConstructionPhase	PhaseEndDate	10/31/2018	4/30/2018

tblConstructionPhase	PhaseEndDate	12/3/2018	12/31/2018
tblConstructionPhase	PhaseStartDate	9/2/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	10/1/2018
tblGrading	AcresOfGrading	99.00	7.00
tblGrading	AcresOfGrading	66.00	4.11
tblLandUse	LotAcreage	0.00	7.00
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Aerial Lifts
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	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00

tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4c-Power line re-route: String Power line
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP

tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 2-Substation Foundations and Footings
tblOffRoadEquipment	PhaseName		Phase 3-Substation Equipment Installation
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	PhaseName		Phase 4d-Power line re-route: Remove pull site and restore property
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 5: Equipment Removal and Clean-up
tblOffRoadEquipment	PhaseName		Phase 4a-Power line re-route: Install TSP Foundations
tblOffRoadEquipment	PhaseName		Phase 1-Substation Grading and Access
tblOffRoadEquipment	PhaseName		Phase 4b-Power line re-route: Install TSP
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	VendorTripNumber	0.00	28.00

tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	16.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	15.00	16.00
tblTripsAndVMT	WorkerTripNumber	13.00	12.00
tblTripsAndVMT	WorkerTripNumber	33.00	32.00

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					
2017	4.4119	45.9796	33.5367	0.0474	0.5364	2.3546	2.8911	0.1280	2.1670	2.2950	0.0000	4,746.8560	4,746.8560	1.2152	0.0000	4,772.3745
2018	4.9582	50.4207	40.0032	0.0616	0.7173	2.7094	3.2144	0.1606	2.5095	2.6454	0.0000	6,043.0948	6,043.0948	1.6040	0.0000	6,076.7793
Total	**9.3701**	**96.4003**	**73.5399**	**0.1090**	**1.2537**	**5.0641**	**6.1055**	**0.2886**	**4.6765**	**4.9404**	**0.0000**	**10,789.9508**	**10,789.9508**	**2.8192**	**0.0000**	**10,849.1538**

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					
2017	4.4119	45.9796	33.5367	0.0474	0.4746	2.3546	2.8292	0.1213	2.1670	2.2883	0.0000	4,746.8560	4,746.8560	1.2152	0.0000	4,772.3745
2018	4.9582	50.4207	40.0032	0.0616	0.5933	2.7094	3.2144	0.1547	2.5095	2.6454	0.0000	6,043.0948	6,043.0948	1.6040	0.0000	6,076.7793
Total	**9.3701**	**96.4003**	**73.5399**	**0.1090**	**1.0678**	**5.0641**	**6.0436**	**0.2760**	**4.6765**	**4.9337**	**0.0000**	**10,789.9508**	**10,789.9508**	**2.8192**	**0.0000**	**10,849.1538**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**14.83**	**0.00**	**1.01**	**4.35**	**0.00**	**0.14**	**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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1-Substation Grading and Access	Grading	3/1/2017	5/31/2017	5	66	
2	Phase 2-Substation Foundations and Footings	Building Construction	6/1/2017	8/31/2017	5	66	
3	Phase 3-Substation Equipment Installation	Building Construction	9/1/2017	9/1/2018	5	261	
4	Phase 4a-Power line re-route: Install TSP Foundations	Paving	3/1/2018	4/30/2018	5	43	
5	Phase 4b-Power line re-route: Install TSP	Grading	5/1/2018	6/30/2018	5	44	
6	Phase 4c-Power line re-route: String Power line	Site Preparation	7/1/2018	7/31/2018	5	22	
7	Phase 4d-Power line re-route: Remove pull site and restore property	Site Preparation	8/1/2018	8/31/2018	5	23	
8	Phase 5: Equipment Removal and Clean-up	Paving	10/1/2018	12/31/2018	5	66	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Phase 1-Substation Grading and Access	Excavators	0	8.00	162	0.38
Phase 1-Substation Grading and Access	Graders	1	8.00	174	0.41
Phase 1-Substation Grading and Access	Other Construction Equipment	1	8.00	171	0.42
Phase 1-Substation Grading and Access	Plate Compactors	1	8.00	8	0.43
Phase 1-Substation Grading and Access	Rollers	1	8.00	80	0.38
Phase 1-Substation Grading and Access	Rubber Tired Dozers	0	8.00	255	0.40
Phase 1-Substation Grading and Access	Scrapers	1	8.00	361	0.48
Phase 1-Substation Grading and Access	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Phase 2-Substation Foundations and Footings	Air Compressors	1	8.00	78	0.48
Phase 2-Substation Foundations and Footings	Bore/Drill Rigs	1	8.00	205	0.50
Phase 2-Substation Foundations and Footings	Cranes	0	7.00	226	0.29
Phase 2-Substation Foundations and Footings	Excavators	1	8.00	162	0.38
Phase 2-Substation Foundations and Footings	Forklifts	1	8.00	89	0.20
Phase 2-Substation Foundations and Footings	Generator Sets	0	8.00	84	0.74
Phase 2-Substation Foundations and Footings	Skid Steer Loaders	2	8.00	64	0.37
Phase 2-Substation Foundations and Footings	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Phase 2-Substation Foundations and Footings	Welders	0	8.00	46	0.45
Phase 3-Substation Equipment Installation	Air Compressors	1	8.00	78	0.48
Phase 3-Substation Equipment Installation	Cranes	0	7.00	226	0.29
Phase 3-Substation Equipment Installation	Forklifts	1	8.00	89	0.20
Phase 3-Substation Equipment Installation	Generator Sets	0	8.00	84	0.74
Phase 3-Substation Equipment Installation	Other General Industrial Equipment	1	8.00	87	0.34
Phase 3-Substation Equipment Installation	Skid Steer Loaders	1	8.00	64	0.37

Phase 3-Substation Equipment Installation	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Phase 3-Substation Equipment Installation	Welders	0	8.00	46	0.45
Phase 4a-Power line re-route: Install TSP Foundations	Bore/Drill Rigs	1	8.00	205	0.50
Phase 4a-Power line re-route: Install TSP Foundations	Cranes	1	8.00	226	0.29
Phase 4a-Power line re-route: Install TSP Foundations	Forklifts	0	8.00	89	0.20
Phase 4a-Power line re-route: Install TSP Foundations	Generator Sets	0	8.00	84	0.74
Phase 4a-Power line re-route: Install TSP Foundations	Skid Steer Loaders	1	8.00	64	0.37
Phase 4a-Power line re-route: Install TSP Foundations	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Phase 4a-Power line re-route: Install TSP Foundations	Welders	0	8.00	46	0.45
Phase 4b-Power line re-route: Install TSP	Graders	1	8.00	174	0.41
Phase 4b-Power line re-route: Install TSP	Other Construction Equipment	1	8.00	171	0.42
Phase 4b-Power line re-route: Install TSP	Pavers	0	8.00	125	0.42
Phase 4b-Power line re-route: Install TSP	Paving Equipment	0	8.00	130	0.36
Phase 4b-Power line re-route: Install TSP	Plate Compactors	1	8.00	8	0.43
Phase 4b-Power line re-route: Install TSP	Rollers	1	8.00	80	0.38
Phase 4b-Power line re-route: Install TSP	Scrapers	1	8.00	361	0.48
Phase 4b-Power line re-route: Install TSP	Skid Steer Loaders	1	8.00	64	0.37
Phase 4c-Power line re-route: String Power line	Aerial Lifts	1	8.00	62	0.31
Phase 4c-Power line re-route: String Power line	Air Compressors	0	6.00	78	0.48
Phase 4c-Power line re-route: String Power line	Cranes	1	8.00	226	0.29
Phase 4c-Power line re-route: String Power line	Forklifts	1	8.00	89	0.20
Phase 4c-Power line re-route: String Power line	Other General Industrial Equipment	2	8.00	87	0.34
Phase 4d-Power line re-route: Remove pull site and restore property	Skid Steer Loaders	1	8.00	64	0.37
Phase 4d-Power line re-route: Remove pull site and restore property	Tractors/Loaders/Backhoes	3	8.00	97	0.37

Phase 5: Equipment Removal and Clean-up	Air Compressors	1	8.00	78	0.48
Phase 5: Equipment Removal and Clean-up	Forklifts	1	8.00	89	0.20
Phase 5: Equipment Removal and Clean-up	Graders	1	8.00	174	0.41
Phase 5: Equipment Removal and Clean-up	Other Construction Equipment	1	8.00	171	0.42
Phase 5: Equipment Removal and Clean-up	Pavers	1	8.00	125	0.42
Phase 5: Equipment Removal and Clean-up	Plate Compactors	1	8.00	8	0.43
Phase 5: Equipment Removal and Clean-up	Rollers	1	8.00	80	0.38
Phase 5: Equipment Removal and Clean-up	Scrapers	1	8.00	361	0.48
Phase 5: Equipment Removal and Clean-up	Skid Steer Loaders	2	8.00	64	0.37
Phase 5: Equipment Removal and Clean-up	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Phase 1-Substation Grading and Access	Skid Steer Loaders	1	8.00	64	0.37
Phase 4b-Power line re-route: Install TSP	Aerial Lifts	1	8.00	62	0.31

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
Phase 1-Substation Grading and Access	8	20.00	28.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2-Substation Foundations and Footin	7	16.00	24.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3-Substation Equipment Installation	4	10.00	20.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4a-Power line re-route: Install TSP Fo	3	8.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4b-Power line re-route: Install TSP	6	16.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4c-Power line re-route: String Power li	5	12.00	8.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4d-Power line re-route: Remove pull s	4	10.00	12.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5: Equipment Removal and Clean-up	13	32.00	16.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Clean Paved Roads

3.2 Phase 1-Substation Grading and Access - 2017

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					0.1125	0.0000	0.1125	0.0121	0.0000	0.0121			0.0000			0.0000
Off-Road	3.9763	43.5264	27.6336	0.0386		2.3154	2.3154		2.1309	2.1309		3,935.5961	3,935.5961	1.1989		3,960.7724
Total	**3.9763**	**43.5264**	**27.6336**	**0.0386**	**0.1125**	**2.3154**	**2.4279**	**0.0121**	**2.1309**	**2.1431**		**3,935.5961**	**3,935.5961**	**1.1989**		**3,960.7724**

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	0.3612	2.3156	4.7262	6.0500e-003	0.1685	0.0376	0.2061	0.0481	0.0346	0.0827		593.9718	593.9718	5.0800e-003		594.0784
Worker	0.0743	0.1376	1.1768	2.7600e-003	0.2555	1.6500e-003	0.2571	0.0678	1.5200e-003	0.0693		217.2882	217.2882	0.0112		217.5237
Total	**0.4355**	**2.4532**	**5.9031**	**8.8100e-003**	**0.4239**	**0.0393**	**0.4632**	**0.1159**	**0.0361**	**0.1519**		**811.2599**	**811.2599**	**0.0163**		**811.6021**

3.2 Phase 1-Substation Grading and Access - 2017

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					0.0506	0.0000	0.0506	5.4700e-003	0.0000	5.4700e-003			0.0000			0.0000
Off-Road	3.9763	43.5264	27.6336	0.0386		2.3154	2.3154		2.1309	2.1309	0.0000	3,935.5960	3,935.5960	1.1989		3,960.7724
Total	**3.9763**	**43.5264**	**27.6336**	**0.0386**	**0.0506**	**2.3154**	**2.3660**	**5.4700e-003**	**2.1309**	**2.1364**	**0.0000**	**3,935.5960**	**3,935.5960**	**1.1989**		**3,960.7724**

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	0.3612	2.3156	4.7262	6.0500e-003	0.1685	0.0376	0.2061	0.0481	0.0346	0.0827		593.9718	593.9718	5.0800e-003		594.0784
Worker	0.0743	0.1376	1.1768	2.7600e-003	0.2555	1.6500e-003	0.2571	0.0678	1.5200e-003	0.0693		217.2882	217.2882	0.0112		217.5237
Total	**0.4355**	**2.4532**	**5.9031**	**8.8100e-003**	**0.4239**	**0.0393**	**0.4632**	**0.1159**	**0.0361**	**0.1519**		**811.2599**	**811.2599**	**0.0163**		**811.6021**

3.3 Phase 2-Substation Foundations and Footings - 2017

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	1.8599	19.1037	14.3191	0.0267		1.0869	1.0869		1.0184	1.0184		2,700.5888	2,700.5888	0.7521		2,716.3828
Total	**1.8599**	**19.1037**	**14.3191**	**0.0267**		**1.0869**	**1.0869**		**1.0184**	**1.0184**		**2,700.5888**	**2,700.5888**	**0.7521**		**2,716.3828**

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	0.3096	1.9848	4.0511	5.1800e-003	0.1444	0.0322	0.1767	0.0412	0.0296	0.0709		509.1187	509.1187	4.3500e-003		509.2100
Worker	0.0595	0.1101	0.9415	2.2100e-003	0.2044	1.3200e-003	0.2057	0.0542	1.2100e-003	0.0554		173.8305	173.8305	8.9700e-003		174.0190
Total	**0.3690**	**2.0949**	**4.9925**	**7.3900e-003**	**0.3488**	**0.0336**	**0.3823**	**0.0954**	**0.0308**	**0.1263**		**682.9492**	**682.9492**	**0.0133**		**683.2290**

3.3 Phase 2-Substation Foundations and Footings - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8599	19.1037	14.3191	0.0267		1.0869	1.0869		1.0184	1.0184	0.0000	2,700.5888	2,700.5888	0.7521		2,716.3828
Total	**1.8599**	**19.1037**	**14.3191**	**0.0267**		**1.0869**	**1.0869**		**1.0184**	**1.0184**	**0.0000**	**2,700.5888**	**2,700.5888**	**0.7521**		**2,716.3828**

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	0.3096	1.9848	4.0511	5.1800e-003	0.1444	0.0322	0.1767	0.0412	0.0296	0.0709		509.1187	509.1187	4.3500e-003		509.2100
Worker	0.0595	0.1101	0.9415	2.2100e-003	0.2044	1.3200e-003	0.2057	0.0542	1.2100e-003	0.0554		173.8305	173.8305	8.9700e-003		174.0190
Total	**0.3690**	**2.0949**	**4.9925**	**7.3900e-003**	**0.3488**	**0.0336**	**0.3823**	**0.0954**	**0.0308**	**0.1263**		**682.9492**	**682.9492**	**0.0133**		**683.2290**

3.4 Phase 3-Substation Equipment Installation - 2017

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	1.1050	9.0971	7.2117	0.0101		0.7010	0.7010		0.6634	0.6634		998.4634	998.4634	0.2306		1,003.3053
Total	**1.1050**	**9.0971**	**7.2117**	**0.0101**		**0.7010**	**0.7010**		**0.6634**	**0.6634**		**998.4634**	**998.4634**	**0.2306**		**1,003.3053**

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	0.2580	1.6540	3.3759	4.3200e-003	0.1203	0.0269	0.1472	0.0344	0.0247	0.0591		424.2656	424.2656	3.6300e-003		424.3417
Worker	0.0372	0.0688	0.5884	1.3800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		108.6441	108.6441	5.6100e-003		108.7619
Total	**0.2952**	**1.7228**	**3.9643**	**5.7000e-003**	**0.2481**	**0.0277**	**0.2758**	**0.0682**	**0.0255**	**0.0937**		**532.9096**	**532.9096**	**9.2400e-003**		**533.1035**

3.4 Phase 3-Substation Equipment Installation - 2017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1050	9.0971	7.2117	0.0101		0.7010	0.7010		0.6634	0.6634	0.0000	998.4634	998.4634	0.2306		1,003.3053
Total	**1.1050**	**9.0971**	**7.2117**	**0.0101**		**0.7010**	**0.7010**		**0.6634**	**0.6634**	**0.0000**	**998.4634**	**998.4634**	**0.2306**		**1,003.3053**

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	0.2580	1.6540	3.3759	4.3200e-003	0.1203	0.0269	0.1472	0.0344	0.0247	0.0591		424.2656	424.2656	3.6300e-003		424.3417
Worker	0.0372	0.0688	0.5884	1.3800e-003	0.1277	8.2000e-004	0.1286	0.0339	7.6000e-004	0.0346		108.6441	108.6441	5.6100e-003		108.7619
Total	**0.2952**	**1.7228**	**3.9643**	**5.7000e-003**	**0.2481**	**0.0277**	**0.2758**	**0.0682**	**0.0255**	**0.0937**		**532.9096**	**532.9096**	**9.2400e-003**		**533.1035**

3.4 Phase 3-Substation Equipment Installation - 2018

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	0.9572	8.0281	7.0765	0.0101		0.5891	0.5891		0.5581	0.5581		988.4721	988.4721	0.2266		993.2298
Total	**0.9572**	**8.0281**	**7.0765**	**0.0101**		**0.5891**	**0.5891**		**0.5581**	**0.5581**		**988.4721**	**988.4721**	**0.2266**		**993.2298**

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	0.2188	1.4864	3.1226	4.3100e-003	0.1203	0.0246	0.1449	0.0344	0.0226	0.0570		416.7535	416.7535	3.5300e-003		416.8277
Worker	0.0323	0.0617	0.5205	1.3800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		104.9422	104.9422	5.1800e-003		105.0509
Total	**0.2511**	**1.5481**	**3.6431**	**5.6900e-003**	**0.2481**	**0.0254**	**0.2735**	**0.0682**	**0.0234**	**0.0916**		**521.6958**	**521.6958**	**8.7100e-003**		**521.8786**

3.4 Phase 3-Substation Equipment Installation - 2018

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	0.9572	8.0281	7.0765	0.0101		0.5891	0.5891		0.5581	0.5581	0.0000	988.4721	988.4721	0.2266		993.2298
Total	**0.9572**	**8.0281**	**7.0765**	**0.0101**		**0.5891**	**0.5891**		**0.5581**	**0.5581**	**0.0000**	**988.4721**	**988.4721**	**0.2266**		**993.2298**

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	0.2188	1.4864	3.1226	4.3100e-003	0.1203	0.0246	0.1449	0.0344	0.0226	0.0570		416.7535	416.7535	3.5300e-003		416.8277
Worker	0.0323	0.0617	0.5205	1.3800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		104.9422	104.9422	5.1800e-003		105.0509
Total	**0.2511**	**1.5481**	**3.6431**	**5.6900e-003**	**0.2481**	**0.0254**	**0.2735**	**0.0682**	**0.0234**	**0.0916**		**521.6958**	**521.6958**	**8.7100e-003**		**521.8786**

3.5 Phase 4a-Power line re-route: Install TSP Foundations - 2018

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	0.9279	11.7599	5.7783	0.0164		0.4572	0.4572		0.4206	0.4206		1,648.6993	1,648.6993	0.5133		1,659.4778
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9279**	**11.7599**	**5.7783**	**0.0164**		**0.4572**	**0.4572**		**0.4206**	**0.4206**		**1,648.6993**	**1,648.6993**	**0.5133**		**1,659.4778**

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	0.0875	0.5946	1.2490	1.7200e-003	0.0481	9.8400e-003	0.0580	0.0137	9.0500e-003	0.0228		166.7014	166.7014	1.4100e-003		166.7311
Worker	0.0259	0.0494	0.4164	1.1100e-003	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		83.9538	83.9538	4.1400e-003		84.0407
Total	**0.1134**	**0.6439**	**1.6655**	**2.8300e-003**	**0.1503**	**0.0105**	**0.1608**	**0.0408**	**9.6400e-003**	**0.0505**		**250.6552**	**250.6552**	**5.5500e-003**		**250.7718**

3.5 Phase 4a-Power line re-route: Install TSP Foundations - 2018

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	0.9279	11.7599	5.7783	0.0164		0.4572	0.4572		0.4206	0.4206	0.0000	1,648.6993	1,648.6993	0.5133		1,659.4778
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9279**	**11.7599**	**5.7783**	**0.0164**		**0.4572**	**0.4572**		**0.4206**	**0.4206**	**0.0000**	**1,648.6993**	**1,648.6993**	**0.5133**		**1,659.4778**

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	0.0875	0.5946	1.2490	1.7200e-003	0.0481	9.8400e-003	0.0580	0.0137	9.0500e-003	0.0228		166.7014	166.7014	1.4100e-003		166.7311
Worker	0.0259	0.0494	0.4164	1.1100e-003	0.1022	6.4000e-004	0.1028	0.0271	5.9000e-004	0.0277		83.9538	83.9538	4.1400e-003		84.0407
Total	**0.1134**	**0.6439**	**1.6655**	**2.8300e-003**	**0.1503**	**0.0105**	**0.1608**	**0.0408**	**9.6400e-003**	**0.0505**		**250.6552**	**250.6552**	**5.5500e-003**		**250.7718**

3.6 Phase 4b-Power line re-route: Install TSP - 2018

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					0.0991	0.0000	0.0991	0.0107	0.0000	0.0107			0.0000			0.0000
Off-Road	2.9424	32.9274	22.0283	0.0340		1.5932	1.5932		1.4665	1.4665		3,412.1736	3,412.1736	1.0551		3,434.3308
Total	**2.9424**	**32.9274**	**22.0283**	**0.0340**	**0.0991**	**1.5932**	**1.6923**	**0.0107**	**1.4665**	**1.4772**		**3,412.1736**	**3,412.1736**	**1.0551**		**3,434.3308**

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	0.1750	1.1891	2.4981	3.4500e-003	0.0963	0.0197	0.1159	0.0275	0.0181	0.0456		333.4028	333.4028	2.8200e-003		333.4621
Worker	0.0517	0.0987	0.8329	2.2100e-003	0.2044	1.2900e-003	0.2057	0.0542	1.1900e-003	0.0554		167.9076	167.9076	8.2800e-003		168.0815
Total	**0.2268**	**1.2879**	**3.3309**	**5.6600e-003**	**0.3006**	**0.0210**	**0.3216**	**0.0817**	**0.0193**	**0.1010**		**501.3104**	**501.3104**	**0.0111**		**501.5436**

3.6 Phase 4b-Power line re-route: Install TSP - 2018

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					0.0446	0.0000	0.0446	4.8100e-003	0.0000	4.8100e-003			0.0000			0.0000
Off-Road	2.9424	32.9274	22.0283	0.0340		1.5932	1.5932		1.4665	1.4665	0.0000	3,412.1736	3,412.1736	1.0551		3,434.3308
Total	**2.9424**	**32.9274**	**22.0283**	**0.0340**	**0.0446**	**1.5932**	**1.6378**	**4.8100e-003**	**1.4665**	**1.4713**	**0.0000**	**3,412.1736**	**3,412.1736**	**1.0551**		**3,434.3308**

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	0.1750	1.1891	2.4981	3.4500e-003	0.0963	0.0197	0.1159	0.0275	0.0181	0.0456		333.4028	333.4028	2.8200e-003		333.4621
Worker	0.0517	0.0987	0.8329	2.2100e-003	0.2044	1.2900e-003	0.2057	0.0542	1.1900e-003	0.0554		167.9076	167.9076	8.2800e-003		168.0815
Total	**0.2268**	**1.2879**	**3.3309**	**5.6600e-003**	**0.3006**	**0.0210**	**0.3216**	**0.0817**	**0.0193**	**0.1010**		**501.3104**	**501.3104**	**0.0111**		**501.5436**

3.7 Phase 4c-Power line re-route: String Power line - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.3594	14.1168	8.7966	0.0139		0.8425	0.8425		0.7751	0.7751		1,397.5514	1,397.5514	0.4351		1,406.6880
Total	**1.3594**	**14.1168**	**8.7966**	**0.0139**	**0.0000**	**0.8425**	**0.8425**	**0.0000**	**0.7751**	**0.7751**		**1,397.5514**	**1,397.5514**	**0.4351**		**1,406.6880**

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	0.0875	0.5946	1.2490	1.7200e-003	0.0481	9.8400e-003	0.0580	0.0137	9.0500e-003	0.0228		166.7014	166.7014	1.4100e-003		166.7311
Worker	0.0388	0.0741	0.6246	1.6600e-003	0.1533	9.6000e-004	0.1542	0.0407	8.9000e-004	0.0415		125.9307	125.9307	6.2100e-003		126.0611
Total	**0.1263**	**0.6686**	**1.8737**	**3.3800e-003**	**0.2014**	**0.0108**	**0.2122**	**0.0544**	**9.9400e-003**	**0.0643**		**292.6321**	**292.6321**	**7.6200e-003**		**292.7922**

3.7 Phase 4c-Power line re-route: String Power line - 2018

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.3594	14.1168	8.7966	0.0139		0.8425	0.8425		0.7751	0.7751	0.0000	1,397.5514	1,397.5514	0.4351		1,406.6880
Total	**1.3594**	**14.1168**	**8.7966**	**0.0139**	**0.0000**	**0.8425**	**0.8425**	**0.0000**	**0.7751**	**0.7751**	**0.0000**	**1,397.5514**	**1,397.5514**	**0.4351**		**1,406.6880**

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	0.0875	0.5946	1.2490	1.7200e-003	0.0481	9.8400e-003	0.0580	0.0137	9.0500e-003	0.0228		166.7014	166.7014	1.4100e-003		166.7311
Worker	0.0388	0.0741	0.6246	1.6600e-003	0.1533	9.6000e-004	0.1542	0.0407	8.9000e-004	0.0415		125.9307	125.9307	6.2100e-003		126.0611
Total	**0.1263**	**0.6686**	**1.8737**	**3.3800e-003**	**0.2014**	**0.0108**	**0.2122**	**0.0544**	**9.9400e-003**	**0.0643**		**292.6321**	**292.6321**	**7.6200e-003**		**292.7922**

3.8 Phase 4d-Power line re-route: Remove pull site and restore property - 2018

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					0.2693	0.0000	0.2693	0.0291	0.0000	0.0291			0.0000			0.0000
Off-Road	0.8885	9.0836	8.3809	0.0114		0.6173	0.6173		0.5679	0.5679		1,143.0123	1,143.0123	0.3558		1,150.4849
Total	**0.8885**	**9.0836**	**8.3809**	**0.0114**	**0.2693**	**0.6173**	**0.8866**	**0.0291**	**0.5679**	**0.5970**		**1,143.0123**	**1,143.0123**	**0.3558**		**1,150.4849**

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	0.1313	0.8918	1.8736	2.5800e-003	0.0722	0.0148	0.0870	0.0206	0.0136	0.0342		250.0521	250.0521	2.1200e-003		250.0966
Worker	0.0323	0.0617	0.5205	1.3800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		104.9422	104.9422	5.1800e-003		105.0509
Total	**0.1636**	**0.9535**	**2.3941**	**3.9600e-003**	**0.1999**	**0.0156**	**0.2155**	**0.0545**	**0.0143**	**0.0688**		**354.9944**	**354.9944**	**7.3000e-003**		**355.1475**

3.8 Phase 4d-Power line re-route: Remove pull site and restore property - 2018

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					0.1212	0.0000	0.1212	0.0131	0.0000	0.0131			0.0000			0.0000
Off-Road	0.8885	9.0836	8.3809	0.0114		0.6173	0.6173		0.5679	0.5679	0.0000	1,143.0123	1,143.0123	0.3558		1,150.4849
Total	**0.8885**	**9.0836**	**8.3809**	**0.0114**	**0.1212**	**0.6173**	**0.7385**	**0.0131**	**0.5679**	**0.5810**	**0.0000**	**1,143.0123**	**1,143.0123**	**0.3558**		**1,150.4849**

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	0.1313	0.8918	1.8736	2.5800e-003	0.0722	0.0148	0.0870	0.0206	0.0136	0.0342		250.0521	250.0521	2.1200e-003		250.0966
Worker	0.0323	0.0617	0.5205	1.3800e-003	0.1277	8.0000e-004	0.1285	0.0339	7.4000e-004	0.0346		104.9422	104.9422	5.1800e-003		105.0509
Total	**0.1636**	**0.9535**	**2.3941**	**3.9600e-003**	**0.1999**	**0.0156**	**0.2155**	**0.0545**	**0.0143**	**0.0688**		**354.9944**	**354.9944**	**7.3000e-003**		**355.1475**

3.9 Phase 5: Equipment Removal and Clean-up - 2018

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	4.6797	49.0341	35.8395	0.0538		2.6872	2.6872		2.4890	2.4890		5,373.8768	5,373.8768	1.5846		5,407.1542
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6797**	**49.0341**	**35.8395**	**0.0538**		**2.6872**	**2.6872**		**2.4890**	**2.4890**		**5,373.8768**	**5,373.8768**	**1.5846**		**5,407.1542**

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	0.1750	1.1891	2.4981	3.4500e-003	0.0963	0.0197	0.1159	0.0275	0.0181	0.0456		333.4028	333.4028	2.8200e-003		333.4621
Worker	0.1035	0.1975	1.6657	4.4200e-003	0.4087	2.5700e-003	0.4113	0.1084	2.3800e-003	0.1108		335.8152	335.8152	0.0166		336.1629
Total	**0.2785**	**1.3866**	**4.1638**	**7.8700e-003**	**0.5050**	**0.0223**	**0.5273**	**0.1359**	**0.0205**	**0.1563**		**669.2180**	**669.2180**	**0.0194**		**669.6251**

3.9 Phase 5: Equipment Removal and Clean-up - 2018

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	4.6797	49.0341	35.8395	0.0538		2.6872	2.6872		2.4890	2.4890	0.0000	5,373.8768	5,373.8768	1.5846		5,407.1542
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**4.6797**	**49.0341**	**35.8395**	**0.0538**		**2.6872**	**2.6872**		**2.4890**	**2.4890**	**0.0000**	**5,373.8768**	**5,373.8768**	**1.5846**		**5,407.1542**

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	0.1750	1.1891	2.4981	3.4500e-003	0.0963	0.0197	0.1159	0.0275	0.0181	0.0456		333.4028	333.4028	2.8200e-003		333.4621
Worker	0.1035	0.1975	1.6657	4.4200e-003	0.4087	2.5700e-003	0.4113	0.1084	2.3800e-003	0.1108		335.8152	335.8152	0.0166		336.1629
Total	**0.2785**	**1.3866**	**4.1638**	**7.8700e-003**	**0.5050**	**0.0223**	**0.5273**	**0.1359**	**0.0205**	**0.1563**		**669.2180**	**669.2180**	**0.0194**		**669.6251**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Light Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.438302	0.063917	0.163234	0.169914	0.042886	0.007084	0.019490	0.082149	0.002063	0.001756	0.006579	0.000764	0.001861

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

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

6.2 Area by SubCategory

Unmitigated

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

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					
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Vegetation

Attachment D

Response to #17

Native American Correspondence Logs

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Stan Alec	Time:	10:30am
Company:	Kings River Choinumni Farm Tribe	Project Name:	Sanger Substation
Phone No.:	559-647-3227 (cell)	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the number provided for Mr. Alec. Spoke with him briefly, he explained he received the letter and had no comments toward the Project.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Jerry Brown	Time:	10:35am
Company:	Chowchilla Tribe of Yokuts	Project Name:	Sanger Substation
Phone No.:	559-434-3160 changed to 559-284-6776	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called Mr. Brown at the phone number provided. Operator stated number had been changed (see above). Spoke with Mr. Brown briefly and he explained the Project does not pertain to his tribe since the Project location falls outside of his tribe's territory.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Benjamin Charley Sr., Chairperson	Time:	10:45am
Company:	Dunlap Band of Mono Indians	Project Name:	Sanger Substation
Phone No.:	559-338-2545	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Mr. Charley and left a voicemail on his answering machine explaining why I was calling and left my return phone number.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Tribal Administrator	Time:	10:55am
Company:	Cold Springs Rancheria of Mono Indians	Project Name:	Sanger Substation
Phone No.:	559-855-5043	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for the Tribal Administrator. Left a voicemail on the answering machine stating why I was calling and left a return phone number.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Florence Dick, Tribal Secretary	Time:	10:50am
Company:	Dunlap Band of Mono Indians	Project Name:	Sanger Substation
Phone No.:	559-338-2329	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Ms. Dick. Operator explained the phone number had been disconnected or was no longer in service.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Ron Goode, Chairperson	Time:	11:05am
Company:	North Fork Mono Tribe	Project Name:	Sanger Substation
Phone No.:	559-299-3729 (home), 559-355-1774 (cell)	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the cell phone number provided for Mr. Goode and spoke with him briefly. He stated he received the letter but had no comments, questions, or concerns otherwise he would have responded.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	John Ledger, Assistant Cultural Resource Manager	Time:	11:10am
Company:	Dumna Wo-Wah Tribal Government	Project Name:	Sanger Substation
Phone No.:	559-519-1742	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for J. Ledger. Spoke with Chairperson Ledger, he explained both J. Ledger and E. Smith were in the field and that he was not aware of any letter received pertaining to the Project. Chairperson Ledger asked that I email him a copy of the letter and Project map at ledgerrobert@ymail.com. I emailed Chairperson Ledger shortly after our phone conversation.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Jeffrey Lee, Chairperson	Time:	10:55am
Company:	Cold Springs Rancheria of Mono Indians	Project Name:	Sanger Substation
Phone No.:	559-855-5043	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Mr. Lee. Left a voicemail on the answering machine stating why I was calling and left a return phone number.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Reggie Lewis, Chairperson	Time:	11:25am
Company:	Picayune Rancheria of Chukchansi	Project Name:	Sanger Substation
Phone No.:	N/A	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

There was no contact information provided for R. Lewis- He was not contacted.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Mary Matola, THPO	Time:	11:25am
Company:	Picayune Rancheria of Chukchansi	Project Name:	Sanger Substation
Phone No.:		Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

There was no contact information provided for M. Matola- She was not contacted.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Michael Russell, Tribal Administrator	Time:	11:30am
Company:	Table Mountain Rancheria	Project Name:	Sanger Substation
Phone No.:	559-822-2587	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Mr. Russell. Secretary (Keri) explained that M. Russell was no longer a tribal administrator for the Table Mountain Rancheria and had not been with them for a while.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Jamie Smith, Environmental Coordinator	Time:	10:55am
Company:	Cold Springs Rancheria of Mono Indians	Project Name:	Sanger Substation
Phone No.:	559-855-5043	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Jamie Smith. Left a voicemail on the answering machine stating why I was calling and left a return phone number.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Eric Smith, Cultural Resource Manager	Time:	11:10am
Company:	Dumna Wo-Wah Tribal Government	Project Name:	Sanger Substation
Phone No.:	559-519-1742	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Mr. Smith. Spoke with Chairperson Ledger, he explained both J. Ledger and E. Smith were in the field and that he was not aware of any letter received pertaining to the Project. Chairperson Ledger asked that I email him a copy of the letter and Project map at ledgerrobert@ymail.com. I emailed Chairperson Ledger shortly after our phone conversation.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Jeneen Tex, Chief Executive Officer	Time:	10:45am
Company:	Dunlap Band of Mono Indians	Project Name:	Sanger Substation
Phone No.:	559-338-2545	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

The phone number provided for Ms. Tex is the same phone number for Benjamin Charley, Sr. Chairperson. Left a voicemail on answering machine regarding why I was calling and left a return phone number.

Follow-up:

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CONVERSATION RECORD

☒ Telephone

☐ Personal Contact (i.e., lunch, meeting, etc.)

Date:	11/04/2015	By:	M. Rossi
Conversed With:	Leanne Walker-Grant, Chairperson	Time:	11:30am
Company:	Table Mountain Rancheria	Project Name:	Sanger Substation
Phone No.:	559-822-2587	Project No.:	N/A

Subject: Follow-up phone calls to letters mailed out on September 16, 2015, regarding Pacific Gas & Electric Company's Sanger Substation Project

Remarks:

Called the phone number provided for Ms. Walker-Grant. She was unavailable and directed my call to their Cultural Resources Manager, Bob Panel. I left a voicemail on B. Panel's answering machine stating why I was calling and left a return phone number.

Follow-up:

Attachment E

Response to #22

Revised Sanger Transportation Table

[Note: Deficiency request is in italics, followed by PG&E's response.]

PG&E Revised PEA Text (Section 3.16, page 3-16-6):

a) Would the project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit? Less than Significant

During construction, trips would be generated by construction workers, equipment deliveries, and materials delivery trucks. Construction support trucks, including fuel trucks, rigging trucks, and water trucks will also be used during construction. These support trucks are anticipated to operate both on- and offsite, resupplying as needed. The amount of traffic will vary according to construction phase, as shown in Table 3.16-3. It is anticipated that during construction the maximum number of construction workers that would be required onsite at any given time would be 30. The entire project is anticipated to take approximately 21 months to complete, with gaps in the schedule due to equipment delivery logistics, power load consideration, and other factors. Moreover, temporary delays in construction could occur as a result of seasonal storm events. Types of trucks used throughout construction will vary by construction phase. It is assumed that equipment such as excavators and backhoes would remain onsite for use in other construction phases, and thus would not cumulatively add to daily truck traffic. Mobile construction support trucks, including ¾-ton pickup trucks and fuel trucks would be anticipated to travel daily from point of origin to the project area. Table 3.16-3 summarizes the estimated number of trips that will be completed by construction-related trucks during the project. Assumptions are listed at the bottom of the table. It is important to note that not all trucks will be required on all days and not all trips will occur at the same time. In addition, not all trips will affect the same roads. It is likely that most vehicles will access the project site from SR 180, exiting at McCall Avenue and heading south to the project site. Others may approach from East Jensen Avenue.

	Construction Phase							
	Phase 1 Site Grading, Access Roads, and Security Fence Installation	Phase 2 Foundations and Footings	Phase 3 Equipment and Component Installation	Phases 4a[1] Power Line Reroutes; Install TSP Foundations	Phases 4b[1] Power Line Reroutes; Install TSPs	Phases 4c[1] Power Line Reroutes; String Power Lines	Phases 4d[1] Power Line Reroutes; Remove Pull Sites and Restore Impacted Property	Phase 5 Equipment Removal/Cleanup
Worker Trips (Estimated)								
No. of Workers	30	30	30	30	30	30	30	30
Daily Worker Trips[2]	30 (am) 30 (pm)	30 (am) 30 (pm)	30 (am) 30 (pm)	30 (am) 30 (pm)	30 (am) 30 (pm)	30 (am) 30 (pm)	30 (am) 30 (pm)	30 (am) 30 (pm)
No. of Work Days[3]	60	60	240	40	40	20	20	60
Total Worker Truck Trips[4]	**3,600**	**3,600**	**14,400**	**2,400**	**2,400**	**1,200**	**1,200**	**3,600**
Construction Equipment Trips								
No. of Trucks to Deliver Equipment[5,6]	9	6	4	2	1	3	1	14
– No. of Work Days[7]	1	1	1	1	1	1	1	1
– Daily Trips	1 (drop-off equipment) 1 (leave site)	1 (drop-off equipment) 1 (leave site)	1 (drop-off equipment) 1 (leave site)	1 (drop-off equipment) 1 (leave site)	1 (drop-off equipment) 1 (pick-up equipment)	1 (drop-off equipment) 1 (pick-up equipment)	1 (drop-off equipment) 1 (pick-up equipment)	2 (drop-off equipment not previously used in other phases) 14 (pick-up all equipment)
Total Equipment-related	***18***	***12***	***8***	***4***	***2***	***6***	***2***	***224***

	Construction Phase							
	Phase 1 Site Grading, Access Roads, and Security Fence Installation	Phase 2 Foundations and Footings	Phase 3 Equipment and Component Installation	Phases 4a[1] Power Line Reroutes; Install TSP Foundations	Phases 4b[1] Power Line Reroutes; Install TSPs	Phases 4c[1] Power Line Reroutes; String Power Lines	Phases 4d[1] Power Line Reroutes; Remove Pull Sites and Restore Impacted Property	Phase 5 Equipment Removal/Cleanup
Delivery/Removal Trips[8]								
Other Construction Support Trucks[9]	8	8	5	4	11	4	6	6
– No. of Work Days	60	60	240	40	40	20	20	60
– Daily Trips (maximum)	8 (arrival) 8 (departure)	8 (arrival) 8 (departure)	5 (arrival) 5 (departure)	4 (arrival) 4 (departure)	11 (arrival) 11 (departure)	4 (arrival) 4 (departure)	6 (arrival) 6 (departure)	6 (arrival) 6 (departure)
Total Other Construction Support Truck Trips[10]	***960***	***960***	***2,400***	***320***	***880***	***160***	***240***	***720***
Total Construction Equipment Truck Trips[11]	**978**	**972**	**2,408**	**324**	**882**	**166**	**242**	**944**
TOTAL PROJECT TRUCK TRIPS[12]	**4,578**	**4,572**	**16,808**	**2,724**	**3,282**	**1,366**	**1,424**	**4,544**

Assumptions

[1]Work will be performed in parallel with Phase 3

[2]Workers would travel to the worksite individually.

[3]Work would occur five days per week (Monday through Friday).

[4]Total Worker Truck Trips = (No. of Daily Worker Trips x No. of Work Days)

[5]Heavy trucks (2-60 tons) (e.g., flatbeds, semi tractor-trailers). These trucks would move necessary construction equipment to the work site then return to haul equipment away after construction. Assume equipment from previous phase would remain onsite throughout construction (Equipment Removal/Cleanup phase).

[6]Number of trucks per phase assumes equipment delivered to project site for site grading and access would be used for other construction phases; thus, no additional truck trips would be necessary. Number of trucks to deliver equipment shown are not cumulative.

[7]Trucks would deliver equipment to remain onsite during construction and depart project site on same day

[8]Total Equipment-related Delivery/Removal Trips = (No. of Trucks to Deliver Equipment x No. of Work Days)

[9]Other trucks include support trucks (e.g., fuel trucks, mechanics trucks, water trucks, etc.) that could reasonably be expected to operate on- and offsite daily during project construction.

[10]Total Construction Truck Trips = (No. of Daily Trips x No. of Work Days)

[11]Total Project Truck Trips per Phase = (Total Equipment-related Delivery/Removal Trips + Total Other Construction Support Truck Trips)

[12]Total Project Truck Trips = (Total Worker Truck Trips + Total Construction Equipment Truck Trips)

Attachment F

Response to #23

Revised Sanger Transportation Table

[Note: Deficiency request is in italics, followed by PG&E's response.]

The table below summarizes the baseline traffic volumes immediately adjacent to the Sanger Substation, measured at the McCall Avenue/East Jensen intersection. Peak traffic volumes are based on information provided by the Fresno Council of Governments 2015 South East County map.

Baseline Traffic Volumes Adjacent to Sanger Substation (McCall Avenue/East Jensen Avenue Intersection)

Road	Direction of Travel	Peak AM	Peak PM	Total Average Daily Trips
McCall Avenue – North of East Jensen Avenue	Southbound lane	308	347	4,659
	Northbound lane	292	353	4,603
McCall Avenue – South of East Jensen Avenue	Southbound lane	406	497	6,585
	Northbound lane	445	475	6,501
East Jensen Avenue – West of McCall Avenue	Westbound lane	1,237	1,085	16,144
	Eastbound lane	850	1,388	16,111
East Jensen Avenue – East of McCall Avenue	Westbound lane	974	833	13,571
	Eastbound lane	642	1,107	13,509