

Appendix C
Air Quality and Greenhouse Gas Emissions
Calculations

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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	0.00		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.

Trips and VMT - Trip information taken from Table 3.16-3: Estimated Truck Trips.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	66.00
tblConstructionPhase	NumDays	300.00	261.00
tblConstructionPhase	NumDays	30.00	66.00
tblConstructionPhase	NumDays	30.00	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	10/31/2018	4/30/2018
tblConstructionPhase	PhaseEndDate	12/3/2018	12/31/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	10/1/2018
tblConstructionPhase	PhaseStartDate	6/30/2018	7/1/2018

tblGrading	AcresOfGrading	99.00	7.00
tblGrading	AcresOfGrading	66.00	4.11
tblLandUse	LotAcreage	0.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	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	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	18.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00

tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	224.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	22.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	20.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	33.00	60.00

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	0.2814	2.6243	2.2905	3.8600e-003	0.0941	0.1450	0.2391	0.0246	0.1348	0.1594	0.0000	334.5546	334.5546	0.0710	0.0000	336.0453
2018	0.3945	3.7817	3.2798	5.6300e-003	0.1068	0.2051	0.3119	0.0283	0.1907	0.2190	0.0000	486.0469	486.0469	0.1083	0.0000	488.3222
Total	0.6759	6.4061	5.5703	9.4900e-003	0.2009	0.3501	0.5510	0.0529	0.3255	0.3784	0.0000	820.6015	820.6015	0.1793	0.0000	824.3674

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	0.2814	2.6243	2.2905	3.8600e-003	0.0941	0.1450	0.2391	0.0246	0.1348	0.1594	0.0000	334.5543	334.5543	0.0710	0.0000	336.0450
2018	0.3945	3.7817	3.2798	5.6300e-003	0.1068	0.2051	0.3119	0.0283	0.1907	0.2190	0.0000	486.0465	486.0465	0.1083	0.0000	488.3217
Total	0.6759	6.4061	5.5703	9.4900e-003	0.2009	0.3501	0.5510	0.0529	0.3255	0.3784	0.0000	820.6008	820.6008	0.1793	0.0000	824.3667

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

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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	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	8/31/2018	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	6/29/2018	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	Skid Steer Loaders	1	8.00	64	0.37
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	Aerial Lifts	1	8.00	62	0.31
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

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	60.00	16.00	18.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2-Substation Foundations and Footings	7	60.00	16.00	12.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3-Substation Equipment Installation	4	60.00	10.00	8.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4a-Power line re-route: Install TSP Equipment	3	0.00	8.00	4.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4b-Power line re-route: Install TSP Equipment	7	0.00	22.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4c-Power line re-route: String Power Lines	5	0.00	8.00	6.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4d-Power line re-route: Remove pull boxes	4	0.00	12.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5: Equipment Removal and Clean up	13	60.00	12.00	224.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	1.4366	0.9121	1.2700e-003		0.0764	0.0764		0.0703	0.0703	0.0000	117.8456	117.8456	0.0359	0.0000	118.5995
Total	0.1312	1.4366	0.9121	1.2700e-003	3.7100e-003	0.0764	0.0801	4.0000e-004	0.0703	0.0707	0.0000	117.8456	117.8456	0.0359	0.0000	118.5995

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	2.1000e-003	2.1200e-003	1.0000e-005	1.5000e-004	3.0000e-005	1.9000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.6044	0.6044	0.0000	0.0000	0.6045
Vendor	5.9700e-003	0.0431	0.0713	1.1000e-004	3.1100e-003	7.0000e-004	3.8100e-003	8.9000e-004	6.5000e-004	1.5400e-003	0.0000	10.2108	10.2108	9.0000e-005	0.0000	10.2126
Worker	7.3000e-003	0.0124	0.1184	2.8000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003	0.0000	20.3084	20.3084	1.0100e-003	0.0000	20.3295
Total	0.0135	0.0576	0.1919	4.0000e-004	0.0279	8.9000e-004	0.0288	7.4700e-003	8.3000e-004	8.3000e-003	0.0000	31.1236	31.1236	1.1000e-003	0.0000	31.1466

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					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	1.4366	0.9121	1.2700e-003		0.0764	0.0764		0.0703	0.0703	0.0000	117.8454	117.8454	0.0359	0.0000	118.5993
Total	0.1312	1.4366	0.9121	1.2700e-003	3.7100e-003	0.0764	0.0801	4.0000e-004	0.0703	0.0707	0.0000	117.8454	117.8454	0.0359	0.0000	118.5993

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.9000e-004	2.1000e-003	2.1200e-003	1.0000e-005	1.5000e-004	3.0000e-005	1.9000e-004	4.0000e-005	3.0000e-005	7.0000e-005	0.0000	0.6044	0.6044	0.0000	0.0000	0.6045
Vendor	5.9700e-003	0.0431	0.0713	1.1000e-004	3.1100e-003	7.0000e-004	3.8100e-003	8.9000e-004	6.5000e-004	1.5400e-003	0.0000	10.2108	10.2108	9.0000e-005	0.0000	10.2126
Worker	7.3000e-003	0.0124	0.1184	2.8000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003	0.0000	20.3084	20.3084	1.0100e-003	0.0000	20.3295
Total	0.0135	0.0576	0.1919	4.0000e-004	0.0279	8.9000e-004	0.0288	7.4700e-003	8.3000e-004	8.3000e-003	0.0000	31.1236	31.1236	1.1000e-003	0.0000	31.1466

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	1.3000e-004	1.4000e-003	1.4100e-003	0.0000	1.0000e-004	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.4029	0.4029	0.0000	0.0000	0.4030
Vendor	5.9700e-003	0.0431	0.0713	1.1000e-004	3.1100e-003	7.0000e-004	3.8100e-003	8.9000e-004	6.5000e-004	1.5400e-003	0.0000	10.2108	10.2108	9.0000e-005	0.0000	10.2126
Worker	7.3000e-003	0.0124	0.1184	2.8000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003	0.0000	20.3084	20.3084	1.0100e-003	0.0000	20.3295
Total	0.0134	0.0569	0.1912	3.9000e-004	0.0278	8.8000e-004	0.0287	7.4600e-003	8.2000e-004	8.2800e-003	0.0000	30.9221	30.9221	1.1000e-003	0.0000	30.9451

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	1.3000e-004	1.4000e-003	1.4100e-003	0.0000	1.0000e-004	2.0000e-005	1.2000e-004	3.0000e-005	2.0000e-005	5.0000e-005	0.0000	0.4029	0.4029	0.0000	0.0000	0.4030
Vendor	5.9700e-003	0.0431	0.0713	1.1000e-004	3.1100e-003	7.0000e-004	3.8100e-003	8.9000e-004	6.5000e-004	1.5400e-003	0.0000	10.2108	10.2108	9.0000e-005	0.0000	10.2126
Worker	7.3000e-003	0.0124	0.1184	2.8000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003	0.0000	20.3084	20.3084	1.0100e-003	0.0000	20.3295
Total	0.0134	0.0569	0.1912	3.9000e-004	0.0278	8.8000e-004	0.0287	7.4600e-003	8.2000e-004	8.2800e-003	0.0000	30.9221	30.9221	1.1000e-003	0.0000	30.9451

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	3.0000e-005	3.1000e-004	3.1000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0885	0.0885	0.0000	0.0000	0.0885
Vendor	4.8600e-003	0.0351	0.0581	9.0000e-005	2.5300e-003	5.7000e-004	3.1000e-003	7.2000e-004	5.3000e-004	1.2500e-003	0.0000	8.3157	8.3157	7.0000e-005	0.0000	8.3171
Worker	9.5200e-003	0.0162	0.1543	3.7000e-004	0.0321	2.1000e-004	0.0323	8.5200e-003	2.0000e-004	8.7200e-003	0.0000	26.4624	26.4624	1.3100e-003	0.0000	26.4900
Total	0.0144	0.0516	0.2127	4.6000e-004	0.0347	7.8000e-004	0.0354	9.2500e-003	7.3000e-004	9.9900e-003	0.0000	34.8666	34.8666	1.3800e-003	0.0000	34.8956

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	3.0000e-005	3.1000e-004	3.1000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.0885	0.0885	0.0000	0.0000	0.0885
Vendor	4.8600e-003	0.0351	0.0581	9.0000e-005	2.5300e-003	5.7000e-004	3.1000e-003	7.2000e-004	5.3000e-004	1.2500e-003	0.0000	8.3157	8.3157	7.0000e-005	0.0000	8.3171
Worker	9.5200e-003	0.0162	0.1543	3.7000e-004	0.0321	2.1000e-004	0.0323	8.5200e-003	2.0000e-004	8.7200e-003	0.0000	26.4624	26.4624	1.3100e-003	0.0000	26.4900
Total	0.0144	0.0516	0.2127	4.6000e-004	0.0347	7.8000e-004	0.0354	9.2500e-003	7.3000e-004	9.9900e-003	0.0000	34.8666	34.8666	1.3800e-003	0.0000	34.8956

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	5.0000e-005	5.6000e-004	5.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.1769	0.1769	0.0000	0.0000	0.1769
Vendor	8.4700e-003	0.0642	0.1075	1.9000e-004	5.1500e-003	1.0700e-003	6.2100e-003	1.4700e-003	9.8000e-004	2.4600e-003	0.0000	16.6221	16.6221	1.4000e-004	0.0000	16.6249
Worker	0.0170	0.0296	0.2794	7.6000e-004	0.0653	4.2000e-004	0.0657	0.0173	3.9000e-004	0.0177	0.0000	52.0147	52.0147	2.4600e-003	0.0000	52.0665
Total	0.0255	0.0943	0.3875	9.5000e-004	0.0705	1.5000e-003	0.0720	0.0188	1.3800e-003	0.0202	0.0000	68.8137	68.8137	2.6000e-003	0.0000	68.8683

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	5.0000e-005	5.6000e-004	5.9000e-004	0.0000	6.0000e-005	1.0000e-005	7.0000e-005	2.0000e-005	1.0000e-005	3.0000e-005	0.0000	0.1769	0.1769	0.0000	0.0000	0.1769
Vendor	8.4700e-003	0.0642	0.1075	1.9000e-004	5.1500e-003	1.0700e-003	6.2100e-003	1.4700e-003	9.8000e-004	2.4600e-003	0.0000	16.6221	16.6221	1.4000e-004	0.0000	16.6249
Worker	0.0170	0.0296	0.2794	7.6000e-004	0.0653	4.2000e-004	0.0657	0.0173	3.9000e-004	0.0177	0.0000	52.0147	52.0147	2.4600e-003	0.0000	52.0665
Total	0.0255	0.0943	0.3875	9.5000e-004	0.0705	1.5000e-003	0.0720	0.0188	1.3800e-003	0.0202	0.0000	68.8137	68.8137	2.6000e-003	0.0000	68.8683

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	4.0000e-005	4.2000e-004	4.4000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1319	0.1319	0.0000	0.0000	0.1319
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.7100e-003	0.0130	0.0216	4.0000e-005	1.0400e-003	2.2000e-004	1.2600e-003	3.0000e-004	2.0000e-004	5.0000e-004	0.0000	3.3993	3.3993	3.0000e-005	0.0000	3.3999

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	4.0000e-005	4.2000e-004	4.4000e-004	0.0000	3.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1319	0.1319	0.0000	0.0000	0.1319
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.7100e-003	0.0130	0.0216	4.0000e-005	1.0400e-003	2.2000e-004	1.2600e-003	3.0000e-004	2.0000e-004	5.0000e-004	0.0000	3.3993	3.3993	3.0000e-005	0.0000	3.3999

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	0.7245	0.4848	7.5000e-004		0.0351	0.0351		0.0323	0.0323	0.0000	68.1197	68.1197	0.0211	0.0000	68.5620
Total	0.0647	0.7245	0.4848	7.5000e-004	2.1800e-003	0.0351	0.0372	2.4000e-004	0.0323	0.0325	0.0000	68.1197	68.1197	0.0211	0.0000	68.5620

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	2.1000e-004	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0660	0.0660	0.0000	0.0000	0.0660
Vendor	4.6900e-003	0.0355	0.0594	1.0000e-004	2.8500e-003	5.9000e-004	3.4400e-003	8.2000e-004	5.4000e-004	1.3600e-003	0.0000	9.1944	9.1944	8.0000e-005	0.0000	9.1960
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7100e-003	0.0357	0.0597	1.0000e-004	2.8700e-003	5.9000e-004	3.4600e-003	8.2000e-004	5.4000e-004	1.3700e-003	0.0000	9.2603	9.2603	8.0000e-005	0.0000	9.2619

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					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	0.7245	0.4848	7.5000e-004		0.0351	0.0351		0.0323	0.0323	0.0000	68.1196	68.1196	0.0211	0.0000	68.5619
Total	0.0647	0.7245	0.4848	7.5000e-004	2.1800e-003	0.0351	0.0372	2.4000e-004	0.0323	0.0325	0.0000	68.1196	68.1196	0.0211	0.0000	68.5619

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	2.1000e-004	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0660	0.0660	0.0000	0.0000	0.0660
Vendor	4.6900e-003	0.0355	0.0594	1.0000e-004	2.8500e-003	5.9000e-004	3.4400e-003	8.2000e-004	5.4000e-004	1.3600e-003	0.0000	9.1944	9.1944	8.0000e-005	0.0000	9.1960
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.7100e-003	0.0357	0.0597	1.0000e-004	2.8700e-003	5.9000e-004	3.4600e-003	8.2000e-004	5.4000e-004	1.3700e-003	0.0000	9.2603	9.2603	8.0000e-005	0.0000	9.2619

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	6.0000e-005	6.3000e-004	6.5000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1979	0.1979	0.0000	0.0000	0.1979
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	0.0000	0.0000	0.0000	0.0000	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	9.1000e-004	7.0900e-003	0.0115	2.0000e-005	5.7000e-004	1.2000e-004	6.8000e-004	1.6000e-004	1.1000e-004	2.7000e-004	0.0000	1.8696	1.8696	1.0000e-005	0.0000	1.8699

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	6.0000e-005	6.3000e-004	6.5000e-004	0.0000	5.0000e-005	1.0000e-005	6.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1979	0.1979	0.0000	0.0000	0.1979
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	0.0000	0.0000	0.0000	0.0000	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	9.1000e-004	7.0900e-003	0.0115	2.0000e-005	5.7000e-004	1.2000e-004	6.8000e-004	1.6000e-004	1.1000e-004	2.7000e-004	0.0000	1.8696	1.8696	1.0000e-005	0.0000	1.8699

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					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	0.0102	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	0.0000	7.1000e-003	7.1000e-003	0.0000	6.5300e-003	6.5300e-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	2.0000e-005	2.1000e-004	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0660	0.0660	0.0000	0.0000	0.0660
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3600e-003	0.0103	0.0172	3.0000e-005	8.3000e-004	1.7000e-004	1.0000e-003	2.3000e-004	1.5000e-004	4.0000e-004	0.0000	2.6875	2.6875	2.0000e-005	0.0000	2.6880

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					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	0.0102	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	0.0000	7.1000e-003	7.1000e-003	0.0000	6.5300e-003	6.5300e-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	2.0000e-005	2.1000e-004	2.2000e-004	0.0000	2.0000e-005	0.0000	2.0000e-005	0.0000	0.0000	1.0000e-005	0.0000	0.0660	0.0660	0.0000	0.0000	0.0660
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.3600e-003	0.0103	0.0172	3.0000e-005	8.3000e-004	1.7000e-004	1.0000e-003	2.3000e-004	1.5000e-004	4.0000e-004	0.0000	2.6875	2.6875	2.0000e-005	0.0000	2.6880

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	2.0900e-003	0.0234	0.0244	8.0000e-005	1.9200e-003	3.9000e-004	2.3100e-003	5.3000e-004	3.6000e-004	8.9000e-004	0.0000	7.3875	7.3875	5.0000e-005	0.0000	7.3887
Vendor	3.8400e-003	0.0291	0.0486	9.0000e-005	2.3300e-003	4.8000e-004	2.8100e-003	6.7000e-004	4.4000e-004	1.1100e-003	0.0000	7.5227	7.5227	6.0000e-005	0.0000	7.5240
Worker	6.3900e-003	0.0112	0.1054	2.8000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003	0.0000	19.6170	19.6170	9.3000e-004	0.0000	19.6365
Total	0.0123	0.0636	0.1785	4.5000e-004	0.0289	1.0300e-003	0.0299	7.7400e-003	9.5000e-004	8.6900e-003	0.0000	34.5272	34.5272	1.0400e-003	0.0000	34.5491

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	2.0900e-003	0.0234	0.0244	8.0000e-005	1.9200e-003	3.9000e-004	2.3100e-003	5.3000e-004	3.6000e-004	8.9000e-004	0.0000	7.3875	7.3875	5.0000e-005	0.0000	7.3887
Vendor	3.8400e-003	0.0291	0.0486	9.0000e-005	2.3300e-003	4.8000e-004	2.8100e-003	6.7000e-004	4.4000e-004	1.1100e-003	0.0000	7.5227	7.5227	6.0000e-005	0.0000	7.5240
Worker	6.3900e-003	0.0112	0.1054	2.8000e-004	0.0246	1.6000e-004	0.0248	6.5400e-003	1.5000e-004	6.6900e-003	0.0000	19.6170	19.6170	9.3000e-004	0.0000	19.6365
Total	0.0123	0.0636	0.1785	4.5000e-004	0.0289	1.0300e-003	0.0299	7.7400e-003	9.5000e-004	8.6900e-003	0.0000	34.5272	34.5272	1.0400e-003	0.0000	34.5491

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

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	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

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-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

5.0 Energy Detail

4.4 Fleet Mix

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
Natural Gas 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
Natural Gas 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 - Natural Gas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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 - Natural Gas

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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
Other Non-Asphalt Surfaces	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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive 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					
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

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
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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	0.00		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.

Trips and VMT - Trip information taken from Table 3.16-3: Estimated Truck Trips.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	66.00
tblConstructionPhase	NumDays	300.00	261.00
tblConstructionPhase	NumDays	30.00	66.00
tblConstructionPhase	NumDays	30.00	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	10/31/2018	4/30/2018
tblConstructionPhase	PhaseEndDate	12/3/2018	12/31/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	10/1/2018
tblConstructionPhase	PhaseStartDate	6/30/2018	7/1/2018

tblGrading	AcresOfGrading	99.00	7.00
tblGrading	AcresOfGrading	66.00	4.11
tblLandUse	LotAcreage	0.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	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	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	18.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00

tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	224.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	22.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	20.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	33.00	60.00

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	4.4090	45.1985	33.6380	0.0518	0.9799	2.3428	3.3227	0.2442	2.1561	2.4003	0.0000	5,043.2842	5,043.2842	1.2357	0.0000	5,069.2348
2018	5.0768	50.8719	41.3567	0.0684	1.0595	2.7184	3.6164	0.2693	2.5178	2.7579	0.0000	6,592.1210	6,592.1210	1.6195	0.0000	6,626.1314
Total	9.4857	96.0705	74.9948	0.1201	2.0394	5.0612	6.9391	0.5135	4.6739	5.1582	0.0000	11,635.4052	11,635.4052	2.8553	0.0000	11,695.3662

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	4.4090	45.1985	33.6380	0.0518	0.9799	2.3428	3.3227	0.2442	2.1561	2.4003	0.0000	5,043.2842	5,043.2842	1.2357	0.0000	5,069.2348
2018	5.0768	50.8719	41.3567	0.0684	1.0595	2.7184	3.6164	0.2693	2.5178	2.7579	0.0000	6,592.1210	6,592.1210	1.6195	0.0000	6,626.1314
Total	9.4857	96.0705	74.9948	0.1201	2.0394	5.0612	6.9391	0.5135	4.6739	5.1582	0.0000	11,635.4052	11,635.4052	2.8553	0.0000	11,695.3662

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

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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	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	8/31/2018	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	6/29/2018	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	Skid Steer Loaders	1	8.00	64	0.37
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	Aerial Lifts	1	8.00	62	0.31
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

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	60.00	16.00	18.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2-Substation Foundations and Footing	7	60.00	16.00	12.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3-Substation Equipment Installation	4	60.00	10.00	8.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4a-Power line re-route: Install TSP	3	0.00	8.00	4.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4b-Power line re-route: Install TSP	7	0.00	22.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4c-Power line re-route: String Power Line	5	0.00	8.00	6.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4d-Power line re-route: Remove pull site	4	0.00	12.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5: Equipment Removal and Clean-up	13	60.00	12.00	224.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	3.9768	43.5320	27.6392	0.0386		2.3157	2.3157		2.1312	2.1312		3,936.4398	3,936.4398	1.1991		3,961.6216
Total	3.9768	43.5320	27.6392	0.0386	0.1125	2.3157	2.4282	0.0121	2.1312	2.1433		3,936.4398	3,936.4398	1.1991		3,961.6216

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	5.3400e-003	0.0608	0.0545	2.0000e-004	4.7800e-003	9.7000e-004	5.7500e-003	1.3100e-003	8.9000e-004	2.2000e-003		20.2077	20.2077	1.5000e-004		20.2107
Vendor	0.1660	1.2564	1.7685	3.4700e-003	0.0963	0.0212	0.1175	0.0275	0.0195	0.0470		342.2817	342.2817	2.8200e-003		342.3409
Worker	0.2608	0.3494	4.1759	9.4600e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		744.3551	744.3551	0.0337		745.0617
Total	0.4322	1.6666	5.9988	0.0131	0.8674	0.0271	0.8945	0.2320	0.0249	0.2569		1,106.8444	1,106.8444	0.0366		1,107.6133

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					0.1125	0.0000	0.1125	0.0121	0.0000	0.0121			0.0000			0.0000
Off-Road	3.9768	43.5320	27.6392	0.0386		2.3157	2.3157		2.1312	2.1312	0.0000	3,936.4398	3,936.4398	1.1991		3,961.6216
Total	3.9768	43.5320	27.6392	0.0386	0.1125	2.3157	2.4282	0.0121	2.1312	2.1433	0.0000	3,936.4398	3,936.4398	1.1991		3,961.6216

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	5.3400e-003	0.0608	0.0545	2.0000e-004	4.7800e-003	9.7000e-004	5.7500e-003	1.3100e-003	8.9000e-004	2.2000e-003		20.2077	20.2077	1.5000e-004		20.2107
Vendor	0.1660	1.2564	1.7685	3.4700e-003	0.0963	0.0212	0.1175	0.0275	0.0195	0.0470		342.2817	342.2817	2.8200e-003		342.3409
Worker	0.2608	0.3494	4.1759	9.4600e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		744.3551	744.3551	0.0337		745.0617
Total	0.4322	1.6666	5.9988	0.0131	0.8674	0.0271	0.8945	0.2320	0.0249	0.2569		1,106.8444	1,106.8444	0.0366		1,107.6133

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	3.5600e-003	0.0406	0.0363	1.4000e-004	3.1900e-003	6.5000e-004	3.8300e-003	8.7000e-004	6.0000e-004	1.4700e-003		13.4718	13.4718	1.0000e-004		13.4738
Vendor	0.1660	1.2564	1.7685	3.4700e-003	0.0963	0.0212	0.1175	0.0275	0.0195	0.0470		342.2817	342.2817	2.8200e-003		342.3409
Worker	0.2608	0.3494	4.1759	9.4600e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		744.3551	744.3551	0.0337		745.0617
Total	0.4304	1.6463	5.9807	0.0131	0.8658	0.0268	0.8926	0.2316	0.0246	0.2562		1,100.1085	1,100.1085	0.0366		1,100.8764

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	3.5600e-003	0.0406	0.0363	1.4000e-004	3.1900e-003	6.5000e-004	3.8300e-003	8.7000e-004	6.0000e-004	1.4700e-003		13.4718	13.4718	1.0000e-004		13.4738
Vendor	0.1660	1.2564	1.7685	3.4700e-003	0.0963	0.0212	0.1175	0.0275	0.0195	0.0470		342.2817	342.2817	2.8200e-003		342.3409
Worker	0.2608	0.3494	4.1759	9.4600e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		744.3551	744.3551	0.0337		745.0617
Total	0.4304	1.6463	5.9807	0.0131	0.8658	0.0268	0.8926	0.2316	0.0246	0.2562		1,100.1085	1,100.1085	0.0366		1,100.8764

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	6.0000e-004	6.8400e-003	6.1200e-003	2.0000e-005	1.3600e-003	1.1000e-004	1.4700e-003	3.5000e-004	1.0000e-004	4.5000e-004		2.2711	2.2711	2.0000e-005		2.2715
Vendor	0.1038	0.7852	1.1053	2.1700e-003	0.0602	0.0132	0.0734	0.0172	0.0122	0.0294		213.9261	213.9261	1.7600e-003		213.9630
Worker	0.2608	0.3494	4.1759	9.4600e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		744.3551	744.3551	0.0337		745.0617
Total	0.3652	1.1414	5.2873	0.0117	0.8279	0.0183	0.8462	0.2208	0.0168	0.2376		960.5522	960.5522	0.0354		961.2962

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	6.0000e-004	6.8400e-003	6.1200e-003	2.0000e-005	1.3600e-003	1.1000e-004	1.4700e-003	3.5000e-004	1.0000e-004	4.5000e-004		2.2711	2.2711	2.0000e-005		2.2715
Vendor	0.1038	0.7852	1.1053	2.1700e-003	0.0602	0.0132	0.0734	0.0172	0.0122	0.0294		213.9261	213.9261	1.7600e-003		213.9630
Worker	0.2608	0.3494	4.1759	9.4600e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		744.3551	744.3551	0.0337		745.0617
Total	0.3652	1.1414	5.2873	0.0117	0.8279	0.0183	0.8462	0.2208	0.0168	0.2376		960.5522	960.5522	0.0354		961.2962

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	5.4000e-004	6.1100e-003	5.5300e-003	2.0000e-005	7.4000e-004	1.1000e-004	8.4000e-004	2.0000e-004	1.0000e-004	2.9000e-004		2.2308	2.2308	2.0000e-005		2.2312
Vendor	0.0893	0.7063	0.9764	2.1600e-003	0.0602	0.0121	0.0723	0.0172	0.0111	0.0283		210.1444	210.1444	1.7100e-003		210.1804
Worker	0.2301	0.3139	3.7334	9.4800e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		719.0587	719.0587	0.0311		719.7108
Total	0.3199	1.0263	4.7154	0.0117	0.8273	0.0171	0.8443	0.2206	0.0157	0.2363		931.4340	931.4340	0.0328		932.1224

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	5.4000e-004	6.1100e-003	5.5300e-003	2.0000e-005	7.4000e-004	1.1000e-004	8.4000e-004	2.0000e-004	1.0000e-004	2.9000e-004		2.2308	2.2308	2.0000e-005		2.2312
Vendor	0.0893	0.7063	0.9764	2.1600e-003	0.0602	0.0121	0.0723	0.0172	0.0111	0.0283		210.1444	210.1444	1.7100e-003		210.1804
Worker	0.2301	0.3139	3.7334	9.4800e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		719.0587	719.0587	0.0311		719.7108
Total	0.3199	1.0263	4.7154	0.0117	0.8273	0.0171	0.8443	0.2206	0.0157	0.2363		931.4340	931.4340	0.0328		932.1224

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	1.6400e-003	0.0185	0.0168	7.0000e-005	1.6300e-003	3.2000e-004	1.9500e-003	4.5000e-004	3.0000e-004	7.5000e-004		6.7703	6.7703	5.0000e-005		6.7713
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	0.0000	0.0000	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	0.0731	0.5836	0.7979	1.8000e-003	0.0498	0.0100	0.0598	0.0142	9.2200e-003	0.0234		174.8858	174.8858	1.4200e-003		174.9156

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	1.6400e-003	0.0185	0.0168	7.0000e-005	1.6300e-003	3.2000e-004	1.9500e-003	4.5000e-004	3.0000e-004	7.5000e-004		6.7703	6.7703	5.0000e-005		6.7713
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	0.0000	0.0000	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	0.0731	0.5836	0.7979	1.8000e-003	0.0498	0.0100	0.0598	0.0142	9.2200e-003	0.0234		174.8858	174.8858	1.4200e-003		174.9156

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	2.9426	32.9315	22.0345	0.0341		1.5933	1.5933		1.4666	1.4666		3,413.1390	3,413.1390	1.0554		3,435.3025
Total	2.9426	32.9315	22.0345	0.0341	0.0991	1.5933	1.6924	0.0107	1.4666	1.4773		3,413.1390	3,413.1390	1.0554		3,435.3025

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	8.0000e-004	9.0600e-003	8.2000e-003	3.0000e-005	8.0000e-004	1.6000e-004	9.6000e-004	2.2000e-004	1.5000e-004	3.6000e-004		3.3082	3.3082	2.0000e-005		3.3087
Vendor	0.1965	1.5538	2.1482	4.7600e-003	0.1324	0.0267	0.1590	0.0378	0.0245	0.0623		462.3177	462.3177	3.7700e-003		462.3969
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.1973	1.5629	2.1564	4.7900e-003	0.1332	0.0268	0.1600	0.0380	0.0247	0.0627		465.6259	465.6259	3.7900e-003		465.7056

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					0.0991	0.0000	0.0991	0.0107	0.0000	0.0107			0.0000			0.0000
Off-Road	2.9426	32.9315	22.0345	0.0341		1.5933	1.5933		1.4666	1.4666	0.0000	3,413.1390	3,413.1390	1.0554		3,435.3025
Total	2.9426	32.9315	22.0345	0.0341	0.0991	1.5933	1.6924	0.0107	1.4666	1.4773	0.0000	3,413.1390	3,413.1390	1.0554		3,435.3025

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	8.0000e-004	9.0600e-003	8.2000e-003	3.0000e-005	8.0000e-004	1.6000e-004	9.6000e-004	2.2000e-004	1.5000e-004	3.6000e-004		3,3082	3,3082	2.0000e-005		3,3087
Vendor	0.1965	1.5538	2.1482	4.7600e-003	0.1324	0.0267	0.1590	0.0378	0.0245	0.0623		462.3177	462.3177	3.7700e-003		462.3969
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.1973	1.5629	2.1564	4.7900e-003	0.1332	0.0268	0.1600	0.0380	0.0247	0.0627		465.6259	465.6259	3.7900e-003		465.7056

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	4.8100e-003	0.0544	0.0492	2.0000e-004	4.7800e-003	9.5000e-004	5.7300e-003	1.3100e-003	8.8000e-004	2.1900e-003		19.8492	19.8492	1.4000e-004		19.8522
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	0.0000	0.0000	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	0.0763	0.6194	0.8303	1.9300e-003	0.0529	0.0107	0.0636	0.0151	9.8000e-003	0.0249		187.9647	187.9647	1.5100e-003		187.9965

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	4.8100e-003	0.0544	0.0492	2.0000e-004	4.7800e-003	9.5000e-004	5.7300e-003	1.3100e-003	8.8000e-004	2.1900e-003		19.8492	19.8492	1.4000e-004		19.8522
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	0.0000	0.0000	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	0.0763	0.6194	0.8303	1.9300e-003	0.0529	0.0107	0.0636	0.0151	9.8000e-003	0.0249		187.9647	187.9647	1.5100e-003		187.9965

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			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	0.0000	0.6173	0.6173	0.0000	0.5679	0.5679		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	1.5300e-003	0.0173	0.0157	6.0000e-005	1.5200e-003	3.0000e-004	1.8300e-003	4.2000e-004	2.8000e-004	7.0000e-004		6.3287	6.3287	5.0000e-005		6.3297
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	0.0000	0.0000	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	0.1087	0.8649	1.1874	2.6500e-003	0.0737	0.0149	0.0886	0.0210	0.0137	0.0347		258.5020	258.5020	2.1100e-003		258.5462

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			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	0.0000	0.6173	0.6173	0.0000	0.5679	0.5679	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	1.5300e-003	0.0173	0.0157	6.0000e-005	1.5200e-003	3.0000e-004	1.8300e-003	4.2000e-004	2.8000e-004	7.0000e-004		6.3287	6.3287	5.0000e-005		6.3297
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	0.0000	0.0000	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	0.1087	0.8649	1.1874	2.6500e-003	0.0737	0.0149	0.0886	0.0210	0.0137	0.0347		258.5020	258.5020	2.1100e-003		258.5462

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	0.0598	0.6764	0.6121	2.5300e-003	0.0595	0.0119	0.0713	0.0163	0.0109	0.0272		247.0121	247.0121	1.8000e-003		247.0498
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	0.2301	0.3139	3.7334	9.4800e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		719.0587	719.0587	0.0311		719.7108
Total	0.3971	1.8378	5.5173	0.0146	0.8980	0.0312	0.9293	0.2402	0.0287	0.2689		1,218.2442	1,218.2442	0.0349		1,218.9771

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	0.0598	0.6764	0.6121	2.5300e-003	0.0595	0.0119	0.0713	0.0163	0.0109	0.0272		247.0121	247.0121	1.8000e-003		247.0498
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	0.2301	0.3139	3.7334	9.4800e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		719.0587	719.0587	0.0311		719.7108
Total	0.3971	1.8378	5.5173	0.0146	0.8980	0.0312	0.9293	0.2402	0.0287	0.2689		1,218.2442	1,218.2442	0.0349		1,218.9771

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-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

5.0 Energy Detail

4.4 Fleet Mix

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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Mitigated

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

6.0 Area Detail

6.1 Mitigation Measures Area

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

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 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	0.00		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.

Trips and VMT - Trip information taken from Table 3.16-3: Estimated Truck Trips.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	300.00	66.00
tblConstructionPhase	NumDays	300.00	261.00
tblConstructionPhase	NumDays	30.00	66.00
tblConstructionPhase	NumDays	30.00	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	10/31/2018	4/30/2018
tblConstructionPhase	PhaseEndDate	12/3/2018	12/31/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	3/1/2018
tblConstructionPhase	PhaseStartDate	9/1/2018	10/1/2018
tblConstructionPhase	PhaseStartDate	6/30/2018	7/1/2018

tblGrading	AcresOfGrading	99.00	7.00
tblGrading	AcresOfGrading	66.00	4.11
tblLandUse	LotAcreage	0.00	7.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	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	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblProjectCharacteristics	OperationalYear	2014	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripNumber	0.00	18.00
tblTripsAndVMT	HaulingTripNumber	0.00	12.00
tblTripsAndVMT	HaulingTripNumber	0.00	8.00
tblTripsAndVMT	HaulingTripNumber	0.00	4.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00

tblTripsAndVMT	HaulingTripNumber	0.00	6.00
tblTripsAndVMT	HaulingTripNumber	0.00	2.00
tblTripsAndVMT	HaulingTripNumber	0.00	224.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	16.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	22.00
tblTripsAndVMT	VendorTripNumber	0.00	8.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	WorkerTripNumber	20.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	0.00	60.00
tblTripsAndVMT	WorkerTripNumber	8.00	0.00
tblTripsAndVMT	WorkerTripNumber	18.00	0.00
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblTripsAndVMT	WorkerTripNumber	10.00	0.00
tblTripsAndVMT	WorkerTripNumber	33.00	60.00

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	4.4124	45.3327	33.9483	0.0506	0.9799	2.3431	3.3230	0.2442	2.1564	2.4006	0.0000	4,947.8769	4,947.8769	1.2358	0.0000	4,973.8293
2018	5.0740	51.0166	41.7475	0.0672	1.0595	2.7186	3.6167	0.2693	2.5180	2.7582	0.0000	6,500.0138	6,500.0138	1.6196	0.0000	6,534.0260
Total	9.4865	96.3493	75.6958	0.1177	2.0394	5.0617	6.9397	0.5135	4.6744	5.1587	0.0000	11,447.8907	11,447.8907	2.8555	0.0000	11,507.8554

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	4.4124	45.3327	33.9483	0.0506	0.9799	2.3431	3.3230	0.2442	2.1564	2.4006	0.0000	4,947.8769	4,947.8769	1.2358	0.0000	4,973.8293
2018	5.0740	51.0166	41.7475	0.0672	1.0595	2.7186	3.6167	0.2693	2.5180	2.7582	0.0000	6,500.0138	6,500.0138	1.6196	0.0000	6,534.0260
Total	9.4865	96.3493	75.6958	0.1177	2.0394	5.0617	6.9397	0.5135	4.6744	5.1587	0.0000	11,447.8907	11,447.8907	2.8555	0.0000	11,507.8554

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

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	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	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	8/31/2018	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	6/29/2018	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	Skid Steer Loaders	1	8.00	64	0.37
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	Aerial Lifts	1	8.00	62	0.31
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

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	60.00	16.00	18.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 2-Substation Foundations and Footings	7	60.00	16.00	12.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 3-Substation Equipment Installation	4	60.00	10.00	8.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4a-Power line re-route: Install TSP Enclosure	3	0.00	8.00	4.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4b-Power line re-route: Install TSP Enclosure	7	0.00	22.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4c-Power line re-route: String Power Lines	5	0.00	8.00	6.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 4d-Power line re-route: Remove pull sites	4	0.00	12.00	2.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Phase 5: Equipment Removal and Clean up	13	60.00	12.00	224.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

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	3.9768	43.5320	27.6392	0.0386		2.3157	2.3157		2.1312	2.1312		3,936.4398	3,936.4398	1.1991		3,961.6216
Total	3.9768	43.5320	27.6392	0.0386	0.1125	2.3157	2.4282	0.0121	2.1312	2.1433		3,936.4398	3,936.4398	1.1991		3,961.6216

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	6.2800e-003	0.0648	0.0779	2.0000e-004	4.7800e-003	9.7000e-004	5.7500e-003	1.3100e-003	9.0000e-004	2.2100e-003		20.1602	20.1602	1.5000e-004		20.1633
Vendor	0.2064	1.3232	2.7007	3.4600e-003	0.0963	0.0215	0.1178	0.0275	0.0198	0.0472		339.4124	339.4124	2.9000e-003		339.4734
Worker	0.2230	0.4127	3.5305	8.2700e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		651.8645	651.8645	0.0337		652.5711
Total	0.4357	1.8007	6.3091	0.0119	0.8674	0.0274	0.8949	0.2320	0.0252	0.2572		1,011.4372	1,011.4372	0.0367		1,012.2078

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					0.1125	0.0000	0.1125	0.0121	0.0000	0.0121			0.0000			0.0000
Off-Road	3.9768	43.5320	27.6392	0.0386		2.3157	2.3157		2.1312	2.1312	0.0000	3,936.4398	3,936.4398	1.1991		3,961.6216
Total	3.9768	43.5320	27.6392	0.0386	0.1125	2.3157	2.4282	0.0121	2.1312	2.1433	0.0000	3,936.4398	3,936.4398	1.1991		3,961.6216

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	6.2800e-003	0.0648	0.0779	2.0000e-004	4.7800e-003	9.7000e-004	5.7500e-003	1.3100e-003	9.0000e-004	2.2100e-003		20.1602	20.1602	1.5000e-004		20.1633
Vendor	0.2064	1.3232	2.7007	3.4600e-003	0.0963	0.0215	0.1178	0.0275	0.0198	0.0472		339.4124	339.4124	2.9000e-003		339.4734
Worker	0.2230	0.4127	3.5305	8.2700e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		651.8645	651.8645	0.0337		652.5711
Total	0.4357	1.8007	6.3091	0.0119	0.8674	0.0274	0.8949	0.2320	0.0252	0.2572		1,011.4372	1,011.4372	0.0367		1,012.2078

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	4.1900e-003	0.0432	0.0519	1.4000e-004	3.1900e-003	6.5000e-004	3.8300e-003	8.7000e-004	6.0000e-004	1.4700e-003		13.4402	13.4402	1.0000e-004		13.4422
Vendor	0.2064	1.3232	2.7007	3.4600e-003	0.0963	0.0215	0.1178	0.0275	0.0198	0.0472		339.4124	339.4124	2.9000e-003		339.4734
Worker	0.2230	0.4127	3.5305	8.2700e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		651.8645	651.8645	0.0337		652.5711
Total	0.4336	1.7791	6.2832	0.0119	0.8658	0.0271	0.8929	0.2316	0.0249	0.2565		1,004.7171	1,004.7171	0.0367		1,005.4867

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	4.1900e-003	0.0432	0.0519	1.4000e-004	3.1900e-003	6.5000e-004	3.8300e-003	8.7000e-004	6.0000e-004	1.4700e-003		13.4402	13.4402	1.0000e-004		13.4422
Vendor	0.2064	1.3232	2.7007	3.4600e-003	0.0963	0.0215	0.1178	0.0275	0.0198	0.0472		339.4124	339.4124	2.9000e-003		339.4734
Worker	0.2230	0.4127	3.5305	8.2700e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		651.8645	651.8645	0.0337		652.5711
Total	0.4336	1.7791	6.2832	0.0119	0.8658	0.0271	0.8929	0.2316	0.0249	0.2565		1,004.7171	1,004.7171	0.0367		1,005.4867

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	7.1000e-004	7.2800e-003	8.7600e-003	2.0000e-005	1.3600e-003	1.1000e-004	1.4700e-003	3.5000e-004	1.0000e-004	4.5000e-004		2.2658	2.2658	2.0000e-005		2.2661
Vendor	0.1290	0.8270	1.6879	2.1600e-003	0.0602	0.0134	0.0736	0.0172	0.0124	0.0295		212.1328	212.1328	1.8100e-003		212.1708
Worker	0.2230	0.4127	3.5305	8.2700e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		651.8645	651.8645	0.0337		652.5711
Total	0.3527	1.2470	5.2272	0.0105	0.8279	0.0185	0.8464	0.2208	0.0170	0.2378		866.2630	866.2630	0.0355		867.0081

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	7.1000e-004	7.2800e-003	8.7600e-003	2.0000e-005	1.3600e-003	1.1000e-004	1.4700e-003	3.5000e-004	1.0000e-004	4.5000e-004		2.2658	2.2658	2.0000e-005		2.2661
Vendor	0.1290	0.8270	1.6879	2.1600e-003	0.0602	0.0134	0.0736	0.0172	0.0124	0.0295		212.1328	212.1328	1.8100e-003		212.1708
Worker	0.2230	0.4127	3.5305	8.2700e-003	0.7664	4.9500e-003	0.7713	0.2032	4.5500e-003	0.2078		651.8645	651.8645	0.0337		652.5711
Total	0.3527	1.2470	5.2272	0.0105	0.8279	0.0185	0.8464	0.2208	0.0170	0.2378		866.2630	866.2630	0.0355		867.0081

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	6.2000e-004	6.5100e-003	8.2300e-003	2.0000e-005	7.4000e-004	1.1000e-004	8.4000e-004	2.0000e-004	1.0000e-004	2.9000e-004		2.2256	2.2256	2.0000e-005		2.2259
Vendor	0.1094	0.7432	1.5613	2.1500e-003	0.0602	0.0123	0.0725	0.0172	0.0113	0.0285		208.3768	208.3768	1.7600e-003		208.4138
Worker	0.1940	0.3703	3.1232	8.2900e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		629.6534	629.6534	0.0311		630.3055
Total	0.3040	1.1200	4.6927	0.0105	0.8273	0.0172	0.8445	0.2206	0.0159	0.2365		840.2558	840.2558	0.0328		840.9453

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	6.2000e-004	6.5100e-003	8.2300e-003	2.0000e-005	7.4000e-004	1.1000e-004	8.4000e-004	2.0000e-004	1.0000e-004	2.9000e-004		2.2256	2.2256	2.0000e-005		2.2259
Vendor	0.1094	0.7432	1.5613	2.1500e-003	0.0602	0.0123	0.0725	0.0172	0.0113	0.0285		208.3768	208.3768	1.7600e-003		208.4138
Worker	0.1940	0.3703	3.1232	8.2900e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		629.6534	629.6534	0.0311		630.3055
Total	0.3040	1.1200	4.6927	0.0105	0.8273	0.0172	0.8445	0.2206	0.0159	0.2365		840.2558	840.2558	0.0328		840.9453

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	1.8900e-003	0.0197	0.0250	7.0000e-005	1.6300e-003	3.3000e-004	1.9600e-003	4.5000e-004	3.0000e-004	7.5000e-004		6.7544	6.7544	5.0000e-005		6.7554
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	0.0000	0.0000	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	0.0894	0.6143	1.2740	1.7900e-003	0.0498	0.0102	0.0599	0.0142	9.3500e-003	0.0235		173.4558	173.4558	1.4600e-003		173.4865

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	1.8900e-003	0.0197	0.0250	7.0000e-005	1.6300e-003	3.3000e-004	1.9600e-003	4.5000e-004	3.0000e-004	7.5000e-004		6.7544	6.7544	5.0000e-005		6.7554
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	0.0000	0.0000	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	0.0894	0.6143	1.2740	1.7900e-003	0.0498	0.0102	0.0599	0.0142	9.3500e-003	0.0235		173.4558	173.4558	1.4600e-003		173.4865

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	2.9426	32.9315	22.0345	0.0341		1.5933	1.5933		1.4666	1.4666		3,413.1390	3,413.1390	1.0554		3,435.3025
Total	2.9426	32.9315	22.0345	0.0341	0.0991	1.5933	1.6924	0.0107	1.4666	1.4773		3,413.1390	3,413.1390	1.0554		3,435.3025

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	9.2000e-004	9.6500e-003	0.0122	3.0000e-005	8.0000e-004	1.6000e-004	9.6000e-004	2.2000e-004	1.5000e-004	3.6000e-004		3.3004	3.3004	2.0000e-005		3.3009
Vendor	0.2407	1.6350	3.4348	4.7400e-003	0.1324	0.0271	0.1594	0.0378	0.0249	0.0627		458.4289	458.4289	3.8800e-003		458.5104
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.2416	1.6447	3.4470	4.7700e-003	0.1332	0.0272	0.1604	0.0380	0.0250	0.0630		461.7293	461.7293	3.9000e-003		461.8114

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					0.0991	0.0000	0.0991	0.0107	0.0000	0.0107			0.0000			0.0000
Off-Road	2.9426	32.9315	22.0345	0.0341		1.5933	1.5933		1.4666	1.4666	0.0000	3,413.1390	3,413.1390	1.0554		3,435.3025
Total	2.9426	32.9315	22.0345	0.0341	0.0991	1.5933	1.6924	0.0107	1.4666	1.4773	0.0000	3,413.1390	3,413.1390	1.0554		3,435.3025

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	9.2000e-004	9.6500e-003	0.0122	3.0000e-005	8.0000e-004	1.6000e-004	9.6000e-004	2.2000e-004	1.5000e-004	3.6000e-004		3.3004	3.3004	2.0000e-005		3.3009
Vendor	0.2407	1.6350	3.4348	4.7400e-003	0.1324	0.0271	0.1594	0.0378	0.0249	0.0627		458.4289	458.4289	3.8800e-003		458.5104
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.2416	1.6447	3.4470	4.7700e-003	0.1332	0.0272	0.1604	0.0380	0.0250	0.0630		461.7293	461.7293	3.9000e-003		461.8114

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	5.5500e-003	0.0579	0.0732	2.0000e-004	4.7800e-003	9.6000e-004	5.7300e-003	1.3100e-003	8.8000e-004	2.1900e-003		19.8025	19.8025	1.5000e-004		19.8056
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	0.0000	0.0000	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	0.0931	0.6524	1.3223	1.9200e-003	0.0529	0.0108	0.0637	0.0151	9.9300e-003	0.0250		186.5039	186.5039	1.5600e-003		186.5367

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	5.5500e-003	0.0579	0.0732	2.0000e-004	4.7800e-003	9.6000e-004	5.7300e-003	1.3100e-003	8.8000e-004	2.1900e-003		19.8025	19.8025	1.5000e-004		19.8056
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	0.0000	0.0000	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	0.0931	0.6524	1.3223	1.9200e-003	0.0529	0.0108	0.0637	0.0151	9.9300e-003	0.0250		186.5039	186.5039	1.5600e-003		186.5367

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			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	0.0000	0.6173	0.6173	0.0000	0.5679	0.5679		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	1.7700e-003	0.0185	0.0234	6.0000e-005	1.5200e-003	3.0000e-004	1.8300e-003	4.2000e-004	2.8000e-004	7.0000e-004		6.3139	6.3139	5.0000e-005		6.3148
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	0.0000	0.0000	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	0.1331	0.9103	1.8969	2.6400e-003	0.0737	0.0151	0.0888	0.0210	0.0139	0.0349		256.3660	256.3660	2.1700e-003		256.4114

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			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	0.0000	0.6173	0.6173	0.0000	0.5679	0.5679	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	1.7700e-003	0.0185	0.0234	6.0000e-005	1.5200e-003	3.0000e-004	1.8300e-003	4.2000e-004	2.8000e-004	7.0000e-004		6.3139	6.3139	5.0000e-005		6.3148
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	0.0000	0.0000	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	0.1331	0.9103	1.8969	2.6400e-003	0.0737	0.0151	0.0888	0.0210	0.0139	0.0349		256.3660	256.3660	2.1700e-003		256.4114

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	0.0690	0.7204	0.9113	2.5300e-003	0.0595	0.0119	0.0714	0.0163	0.0109	0.0272		246.4314	246.4314	1.8200e-003		246.4697
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	0.1940	0.3703	3.1232	8.2900e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		629.6534	629.6534	0.0311		630.3055
Total	0.3943	1.9825	5.9080	0.0134	0.8980	0.0315	0.9295	0.2402	0.0290	0.2691		1,126.1370	1,126.1370	0.0350		1,126.8718

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	0.0690	0.7204	0.9113	2.5300e-003	0.0595	0.0119	0.0714	0.0163	0.0109	0.0272		246.4314	246.4314	1.8200e-003		246.4697
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	0.1940	0.3703	3.1232	8.2900e-003	0.7664	4.8200e-003	0.7712	0.2032	4.4600e-003	0.2077		629.6534	629.6534	0.0311		630.3055
Total	0.3943	1.9825	5.9080	0.0134	0.8980	0.0315	0.9295	0.2402	0.0290	0.2691		1,126.1370	1,126.1370	0.0350		1,126.8718

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

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

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-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

5.0 Energy Detail

~~4.4 Fleet Mix~~

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	
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	
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	

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
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

6.1 Mitigation Measures Area

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

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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