Appendix A
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Appendix A. List of Preparers

A consultant team headed by Ecology and Environment, Inc. prepared this document under the direction of the California Public Utilities Commission. The preparers and reviewers of this document are provided below.

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Appendix B
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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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

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

2.2 Overall Operational

Mitigated Operational

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1-Substation Grading and Access	Grading	3/1/2017	5/31/2017	5	66	
2	Phase 2-Substation Foundations and Footings	Building Construction	6/1/2017	8/31/2017	5	66	
3	Phase 3-Substation Equipment Installation	Building Construction	9/1/2017	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 Footin	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 Fo	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 li	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 s	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

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

4.3 Trip Type Information

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

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

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
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

Mitigated

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

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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

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

Mitigated Operational

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1-Substation Grading and Access	Grading	3/1/2017	5/31/2017	5	66	
2	Phase 2-Substation Foundations and Footings	Building Construction	6/1/2017	8/31/2017	5	66	
3	Phase 3-Substation Equipment Installation	Building Construction	9/1/2017	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 Footin	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 Fo	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 li	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 s	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

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

4.3 Trip Type Information

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

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

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

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	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

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

Mitigated Operational

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

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Phase 1-Substation Grading and Access	Grading	3/1/2017	5/31/2017	5	66	
2	Phase 2-Substation Foundations and Footings	Building Construction	6/1/2017	8/31/2017	5	66	
3	Phase 3-Substation Equipment Installation	Building Construction	9/1/2017	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 Footin	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 Fo	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 li	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 s	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

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

4.3 Trip Type Information

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

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

4.4 Fleet Mix

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

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

10.0 Vegetation

Appendix D
Cultural Resources Consultation Documentation

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Native American Consultation Log

PG&E Sanger Substation Expansion Project

Organization	Contact	Letter	E-mail	Other	Comments
Native American Heritage Commission	Dave Singleton	12/6/2011	—	—	Sacred Lands File failed to indicate the presence of sacred sites in the project area. Provided a list of local Native American contacts.
Big Sandy Rancheria of Mono Indians	Chairperson, Liz Hutchins Kipp	3/7/2012	4/12/2012		
Cold Springs Rancheria of Mono	Chairperson, Robert Marquez	3/7/2012	4/12/2012		
Santa Rosa Rancheria	Chairperson, Rueben Barrios	3/7/2012	4/12/2012		
Sierra Nevada Native American Coalition	Chairperons, Lawrence Bill	3/7/2012		Phone	
Choinumni Tribe; Choinumni/ Mono	Lorrie Planas	3/7/2012	4/12/2012		Responded by e-mail (4/12/2012) that she has no issues or comments.
Table Mountain Rancheria	Bob Pennell, Cultural Resources Director	3/7/2012	4/12/2012		Received a letter dated 3/28/2012 declining participation at this time. However, would like to be notified in the unlikely event that cultural resources are identified.
Kings River Choinumni Farm Tribe	Chairperson, John Davis	3/7/2012		Phone	Attempted to call on 4/25/12, number incorrect.
Dunlap Band of Mono Historical Preservation Society	Chairperson, Mandy Marine	3/7/2012	4/12/2012		
Esohm Valley Band of Indians/ Wuksache Tribe	Chairperson, Kenneth Woodrow	3/7/2012	4/12/2012		
Choinumni Tribe of Yokuts	Chairperson, Rosemary Smith	3/7/2012	4/12/2012		
Traditional Choinumni Tribe	Chairperson, David Alvarez	3/7/2012	4/12/2012		
N/A	Frank Marquez	3/7/2012	4/12/2012	Phone	Called on 4/25/12 @ 10:50AM, message left.
Santa Rosa Tachi Rancheria	Lalo Fanco, Cultural Coordinator	3/7/2012	4/12/2012		Responded by e-mail (4/13/2012) with no immediate concerns; however, recommended construction be monitored by an archaeologist and that all parties be made aware of the recommended actions to be taken in the event of a discovery of any cultural features.
Dumna Wo Wah Tribe	Chairperson, Robert G. Ledger, Sr.	3/7/2012	—	—	

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
Web Site www.nahc.ca.gov
ds_nahc@pacbell.net

December 6, 2011

Mr. Andrew Monastero, Environmental Planner
Applied EarthWorks, Inc.
1391 West Shaw Avenue, Suite C
Fresno, CA 93711

Sent by FAX to: 559-229-2019
No. of Pages: 5

Re: Sacred Lands File Search and Native American Contacts list for the **"Proposed Pacific Gas & Electric Sanger Substation Expansion Project;"** located west of the Community of Sanger; Fresno County, California

Dear Mr. Monastero:

The Native American Heritage Commission (NAHC) conducted a Sacred Lands File search of the 'area of potential effect,' (APE) based on the USGS coordinates provided and **Native American cultural resources were not identified** in the project area of potential effect (e.g. APE): you specified. Also, please note; the NAHC Sacred Lands Inventory is not exhaustive and does not preclude the discovery of cultural resources during any project groundbreaking activity. This area of San Diego County is known to the NAHC to be very culturally sensitive.

California Public Resources Code §§5097.94 (a) and 5097.96 authorize the NAHC to establish a Sacred Land Inventory to record Native American sacred sites and burial sites. These records are exempt from the provisions of the California Public Records Act pursuant to. California Government Code §6254 (r). The purpose of this code is to protect such sites from vandalism, theft and destruction.

In the 1985 Appellate Court decision (170 Cal App 3rd 604), the court held that the NAHC has jurisdiction and special expertise, as a state agency, over affected Native American resources, impacted by proposed projects including archaeological, places of religious significance to Native Americans and burial sites

The California Environmental Quality Act (CEQA – CA Public Resources Code §§ 21000-21177, amendments effective 3/18/2010) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archaeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR) per the CEQA Guidelines defines a significant impact on the environment as 'a substantial, or potentially substantial, adverse change in any of physical conditions within an area affected by the proposed project, including ...objects of historic or aesthetic significance." In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE), and if so, to mitigate that effect. CA Government Code §65040.12(e) defines "environmental justice" provisions and is applicable to the environmental review processes.

Early consultation with Native American tribes in your area is the best way to avoid unanticipated discoveries once a project is underway. Local Native Americans may have knowledge of the religious and cultural significance of the historic properties of the proposed project for the area (e.g. APE). Consultation with Native American communities is also a matter of environmental justice as defined by California Government Code §65040.12(e). We urge consultation with those tribes and interested Native Americans on the list the NAHC has attached in order to see if your proposed project might impact Native American cultural resources. Lead agencies should consider avoidance as defined in §15370 of the CEQA Guidelines when significant cultural resources as defined by the CEQA Guidelines §15064.5 (b)(c)(f) may be affected by a proposed project. If so, Section 15382 of the CEQA Guidelines defines a significant impact on the environment as "substantial," and Section 2183.2 which requires documentation, data recovery of cultural resources.

The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The aforementioned Secretary of the Interior's *Standards* include recommendations for all 'lead agencies' to consider the historic context of proposed projects and to "research" the cultural landscape that might include the 'area of potential effect.'

Partnering with local tribes and interested Native American consulting parties, on the NAHC list, should be conducted in compliance with the requirements of federal NEPA (42 U.S.C 4321-43351) and Section 106 4(f), Section 110 (f)(k) of federal NHPA (16 U.S.C. 470 *et seq*), 36 CFR Part 800.3 (f) (2) & .5, the President's Council on Environmental Quality (CSQ, 42 U.S.C 4371 *et seq.* and NAGPRA (25 U.S.C. 3001-3013) as appropriate. The 1992 *Secretary of the Interiors Standards for the Treatment of Historic Properties* were revised so that they could be applied to all historic resource types included in the National Register of Historic Places and including cultural landscapes. Also, federal Executive Orders Nos. 11593 (preservation of cultural environment), 13175 (coordination & consultation) and 13007 (Sacred Sites) are helpful, supportive guides for Section 106 consultation. The NAHC remains concerned about the limitations and methods employed for NHPA Section 106 Consultation.

Also, California Public Resources Code Section 5097.98, California Government Code §27491 and Health & Safety Code Section 7050.5 provide for provisions for accidentally discovered archeological resources during construction and mandate the processes to be followed in the event of an accidental discovery of any human remains in a project location other than a 'dedicated cemetery', another important reason to have Native American Monitors on board with the project.

To be effective, consultation on specific projects must be the result of an ongoing relationship between Native American tribes and lead agencies, project proponents and their contractors, in the opinion of the NAHC. An excellent way to reinforce the relationship between a project and local tribes is to employ Native American Monitors in all phases of proposed projects including the planning phases.

Confidentiality of "historic properties of religious and cultural significance" may also be protected under Section 304 of he NHPA or at the Secretary of the Interior discretion if not eligible for listing on the National Register of Historic Places. The Secretary may also be advised by the federal Indian Religious Freedom Act (cf. 42 U.S.C., 1996) in issuing a decision

on whether or not to disclose items of religious and/or cultural significance identified in or near the APE and possibility threatened by proposed project activity.

If you have any questions about this response to your request, please do not hesitate to contact me at (916) 653-6251.

Sincerely,

Dave Singleton

Attachment: Native American Contact List

California Native American Contacts
Fresno County
December 6, 2011

Big Sandy Rancheria of Mono Indians
Liz Hutchins Kipp, Chairperson
P.O. Box 337 / 37302 Western Mono
Auberry , CA 93602
ck@bigsandyrancheria.com
(559) 855-4003
(559) 855-4129 Fax

Choinumni Tribe; Choinumni/Mono
Lorrie Planas
2736 Palo Alto Choinumni
Clovis , CA 93611 Mono

Cold Springs Rancheria of Mono Indians
Robert Marquez, Chairperson
P.O. Box 209 Mono
Tollhouse , CA 93667
(559) 855-5043
559-855-4445 - FAX

Table Mountain Rancheria
Bob Pennell, Cultural Resources Director
P.O. Box 410 Yokuts
Friant , CA 93626-0177
(559) 325-0351
(559) 217-9718 - cell
(559) 325-0394 FAX

Santa Rosa Rancheria
Rueben Barrios, Chairperson
P.O. Box 8 Tache
Lemoore , CA 93245 Tachi
(559) 924-1278 Yokut
(559) 924-3583 Fax

Kings River Choinumni Farm Tribe
John Davis, Chairman
1064 Oxford Avenue Foothill Yokuts
Clovis , CA 93612-2211 Choinumni
(669) 307-6430

Sierra Nevada Native American Coalition
Lawrence Bill, Interim Chairperson
P.O. 125 Mono
Dunlap , CA 93621 Foothill Yokuts
(559) 338-2354 Choinumni

Dunlap Band of Mono Historical Preservation Soc
Mandy Marine, Board Chairperson
P.O Box 18 Mono
Dunlap , CA 93621
mandy_marine@hotmail.com
559-274-1705
559-252-0198 - fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed PG&E Sanger Substation Expansion Project; located west of the Community of Sanger in southern Fresno County, California for which a Sacred Lands File search and Native American Contacts list were requested.

California Native American Contacts
Fresno County
December 6, 2011

Esohm Valley Band of Indians/Wuksache Tribe
Kenneth Woodrow, Chairperson
1179 Rock Haven Ct. — Foothill Yokuts
Salinas , CA 93906 — Mono
kwood8934@aol.com — Wuksache
831-443-9702

Santa Rosa Tachi Rancheria
Lalo Franco, Cultural Coordinator
P.O. Box 8 — Tachi
Lemoore , CA 93245 — Tache
(559) 924-1278 - Ext. 5 — Yokut
(559) 924-3583 - FAX

The Choinumni Tribe of Yokuts
Rosemary Smith, Chairperson
1505 Barstow — Choinumni
Clovis , CA 96311 — Foothill YoKut
monoclovis@yahoo.com
559-862-5757

Dumna Wo Wah Tribe
Robert G. Ledger, Sr. Chairman
2216 E. Hammond — Dumna/Foothill
Fresno , CA 93703
(559) 519-3988

Traditional Choinumni Tribe
David Alvarez, Chairperson
2415 E. Houston Avenue — Choinumni
Fresno , CA 93720
davealvarez@sbcglobal.net

(559) 323-6231
(559) 292-5057 FAX

Frank Marquez
P.O. Box 565 — Mono
Friant , CA 93626 — Foothill Yokut
francomarquez@pmr.org
559-213-6543 - cell
559-822-3785

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of the statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is applicable for contacting local Native Americans with regard to cultural resources for the proposed PG&E Sanger Substation Expansion Project; located west of the Community of Sanger in southern Fresno County, California for which a Sacred Lands File search and Native American Contacts list were requested.

Applied EARTHWORKS Inc.

EXAMPLE

1391 W. Shaw Ave., Suite C
Fresno, CA 93711-3600
O: (559) 229-1856 | F: (559) 229-2019

March 07, 2012

Dumna Wo Wah Tribe
Robert G. Ledger, Sr., Chairman
2216 E. Hammond
Fresno, CA 93703

RE: Pacific Gas and Electric Company Sanger Substation Project, Fresno County, California

Dear Mr. Ledger:

Applied Earthworks, Inc. (Æ) is currently providing cultural resource services in support of Pacific Gas and Electric Company's (PG&E) Sanger Substation Project located west of the City of Sanger and southeast of the City of Fresno (Figure 1) in unincorporated Fresno County. The project will include the replacement of nine breakers, 24 switches/disconnects, 18 structures, and the control building at the existing Sanger Substation. Due to congestion and a lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures and switch replacement work, PG&E proposes to build the new substation on an adjacent site approximately 9 acres in size. As part of these services, Æ is conducting a records search, Native American consultation, and a cultural resources survey of the project area. The Native American Heritage Commission has provided your name as a person who may have knowledge of cultural resources in the project area. This is why we are contacting you at this time.

The Sanger Substation occupies a 4.5-acre parcel at the intersection of East Jensen Avenue and South McCall Avenue.. Specifically, it lies within Township 14 South, Range 22 East, Section 18 as shown on the Sanger CA 7.5 minute USGS quadrangle (Figure 2). Current plans propose to build the new substation on lands directly adjacent and north of the existing substation. Alternatively, the substation expansion may occur adjacent to the west.

If you have and are willing to share information on any cultural resources (e.g., former village sites, traditional food gathering places, sacred sites, etc.) within the project area, please contact me by mail (see address above), email (mbaloian@appliedearthworks.com) or by phone (559 229 1856, Ext. 11). I would be most grateful for any information you might provide. Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public. Thank you for your assistance.

Sincerely,

Mary Clark Baloian

Mary Clark Baloian, Ph.D., RPA
Senior Archaeologist

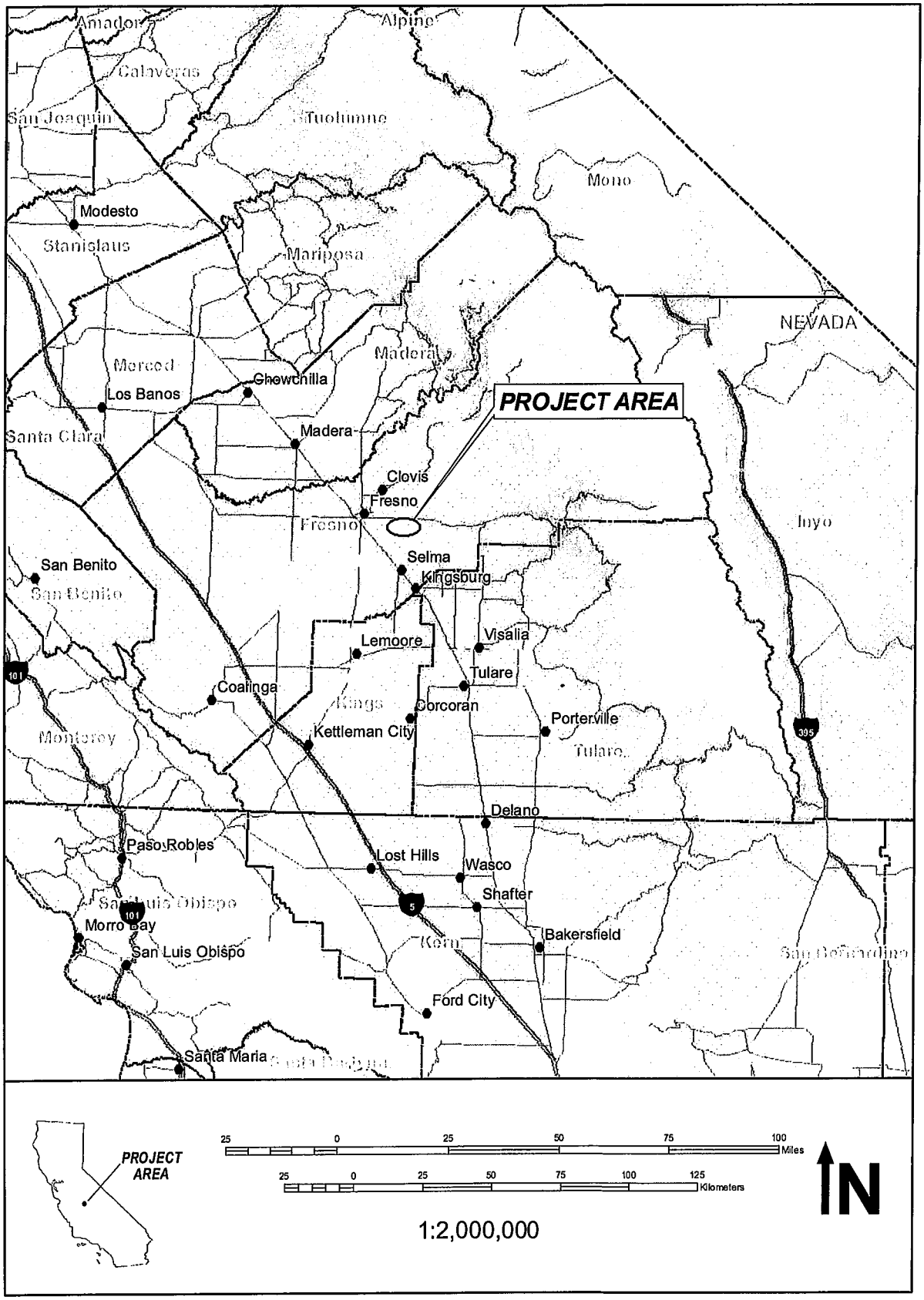
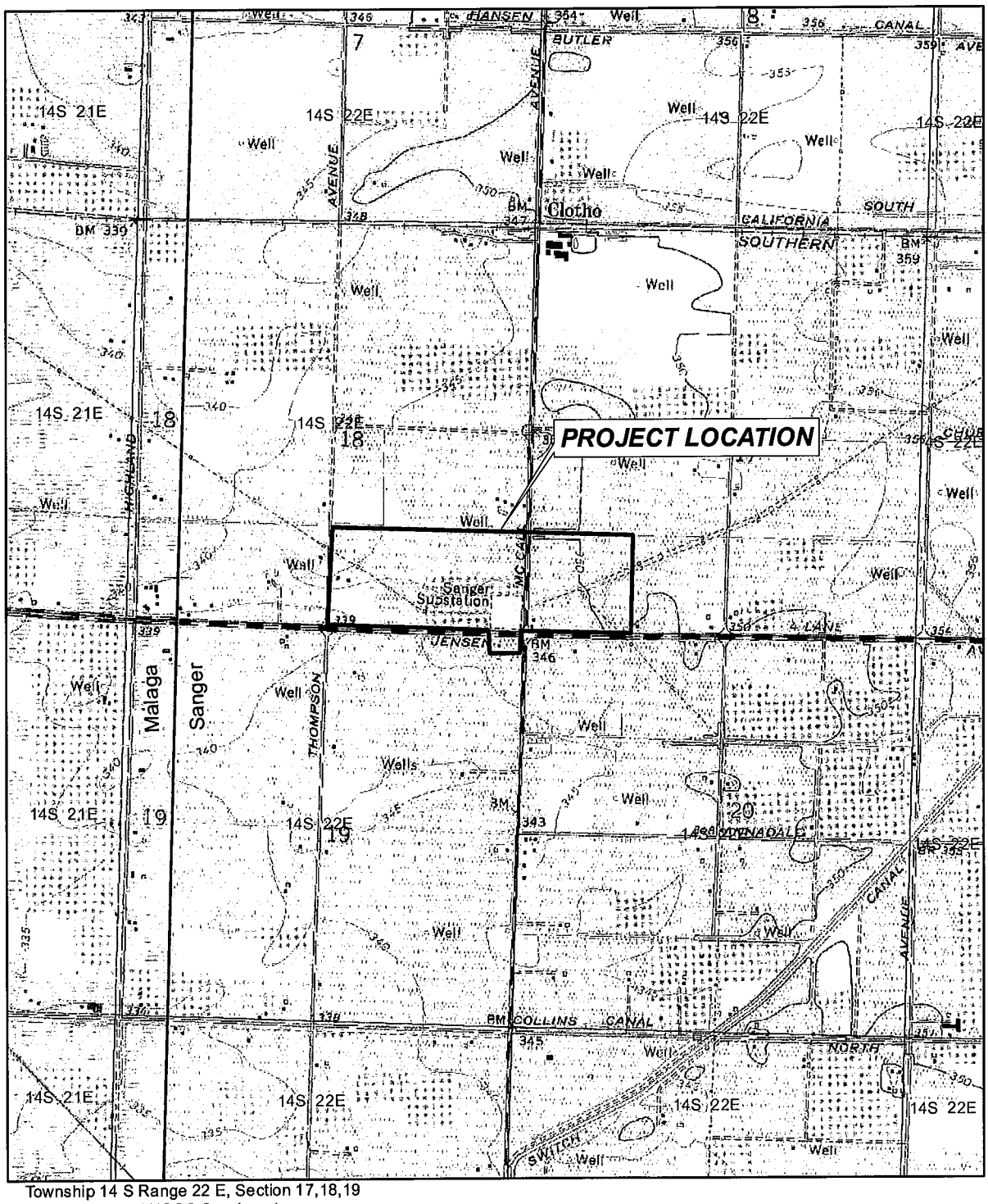


Figure 1 **Project area in Fresno County.**



Township 14 S Range 22 E, Section 17,18,19
Sanger, CA 7.5' USGS Quadrangle

Figure 2 Project location

EXAMPLE

From: Mary Baloian [mbaloian@appliedearthworks.com]
Sent: Thursday, April 12, 2012 12:43 PM
To: 'Robert Marquez'
Subject: PGE Sanger Substation Expansion Project

Dear Mr. Marquez,

Applied Earthworks, Inc. (Æ) recently sent you a letter (dated March 7, 2012) informing you about the PG&E's Sanger Substation Expansion Project in Sanger, Ca. The project will include the replacement of nine breakers, 24 switches/disconnects, 18 structures, and the control building at the existing Sanger Substation, the construction of a new substation on an adjacent site approximately 9 acres in size, and the replacement of transmission poles on the adjacent property. Æ is currently providing cultural resource services in support of the project and have contacted the Native American Heritage Commission (NAHC) regarding the potential for sacred sites in the project area. The NAHC has provided your name as a person who may have knowledge of cultural resources in the project area. That is why we contacted you in March.

I am now following up to inquire whether you wish to comment on this project or are willing to share any information you may have regarding cultural resources (e.g., former village sites, traditional food gathering places, sacred sites, etc.) within the project area. If so, please don't hesitate to contact me by mail (see address above), email (mbaloian@appliedearthworks.com) or by phone (559 229 1856, Ext. 11). I would be most grateful for any information you might provide. Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Thank you for your assistance,

Mary Clark Baloian, Ph.D., RPA | **Applied EarthWorks, Inc.**
Senior Archaeologist

1391 W. Shaw Ave., Ste. C
Fresno, CA 93711-3600
559.229.1856 x-11 office
559.801.1652 mobile

From: lplanas@comcast.net
Sent: Thursday, April 12, 2012 4:31 PM
To: Mary Baloian
Subject: Re: PGE Sanger Substation Expansion Project
I have no issues or comments. Lorrie

From: "Mary Baloian" <mbaloian@appliedearthworks.com>
To: lplanas@comcast.net
Sent: Thursday, April 12, 2012 12:46:46 PM
Subject: PGE Sanger Substation Expansion Project

Hi Lorrie,

Applied Earthworks, Inc. (Æ) recently sent you a letter (dated March 7, 2012) informing you about the PG&E's Sanger Substation Expansion Project in Sanger, Ca. The project will include the replacement of nine breakers, 24 switches/disconnects, 18 structures, and the control building at the existing Sanger Substation, the construction of a new substation on an adjacent site approximately 9 acres in size, and the replacement of transmission poles on the adjacent property. Æ is currently providing cultural resource services in support of the project and have contacted the Native American Heritage Commission (NAHC) regarding the potential for sacred sites in the project area. The NAHC has provided your name as a person who may have knowledge of cultural resources in the project area. That is why we contacted you in March.

I am now following up to inquire whether you wish to comment on this project or are willing to share any information you may have regarding cultural resources (e.g., former village sites, traditional food gathering places, sacred sites, etc.) within the project area. If so, please don't hesitate to contact me by mail (see address above), email (mbaloian@appliedearthworks.com) or by phone (559 229 1856, Ext. 11). I would be most grateful for any information you might provide. Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Thank you for your assistance,

Mary Clark Baloian, Ph.D., RPA | **Applied EarthWorks, Inc.**
Senior Archaeologist

1391 W. Shaw Ave., Ste. C
Fresno, CA 93711-3600
559.229.1856 x-11 office
559.801.1652 mobile

From: Hector Franco [HFranco@tachi-yokut.com]
Sent: Friday, April 13, 2012 10:30 AM
To: Mary Baloian
Subject: RE: PGE Sanger Substation Expansion Project

April 13, 2012

To: Mary Baloian. Applied Earth Works Analyst

From: Lalo Franco. Cultural Specialist/NAGPRA Coordinator
Santa Rosa Rancheria Tachi Yokut Tribe

Re: Sanger Sub Station Expansion Project

Dear Mary Baloian

The Santa Rosa Rancheria appreciates the opportunity to comment on the proposed Sanger Sub Station Expansion.

After a careful review of the information you have sent us and a careful review of our Tribal Records the Tachi Yokut Tribe has no immediate concerns that this project will impact any cultural features such as burial grounds or gathering areas. This not to say that no culture features may be encountered during the course of earth moving activities. The City of Sanger and this particular part of the county has a long history of occupation by the Chounumni Tribe.

Our recommendations are that Applied Earth Works urge the City of Sanger to proceed with caution during the course of construction and that they hire an Archeological Monitor to oversee the project and that all parties involved receive all the relative information that address the recommended actions to be taken in the event of a discovery of any cultural features (Public Resource Codes)

The Santa Rosa Rancheria is also available to consult with in the event of a discovery or if any cultural items may need to be curated.

Thank you for kind attention Mary.

Lalo Franco. Cultural Specialist/NAGPRA Coordinator
Santa Rasa Rancheria Tachi Yokut Tribe
(559) 924-1278 ext 4011

From: Mary Baloian [mailto:mbaloian@appliedearthworks.com]
Sent: Thursday, April 12, 2012 12:42 PM
To: Hector Franco
Subject: FW: PGE Sanger Substation Expansion Project

Dear Mr. Franco,

Applied Earthworks, Inc. (Æ) recently sent you a letter (dated March 7, 2012) informing you about the PG&E's Sanger Substation Expansion Project in Sanger, Ca. The project will include the replacement of nine breakers, 24 switches/disconnects, 18 structures, and the control building at the existing Sanger Substation, the construction of a new substation on an adjacent site approximately 9 acres in size, and the replacement of transmission poles on the adjacent property. Æ is currently providing cultural resource services in support of the project and have contacted the Native American Heritage Commission (NAHC) regarding the potential for sacred sites in the project area. The NAHC has provided your name as a person who may have knowledge of cultural resources in the project area. That is why we contacted you in March.

I am now following up to inquire whether you wish to comment on this project or are willing to share any information you may have regarding cultural resources (e.g., former village sites, traditional food gathering places, sacred sites, etc.) within the project area. If so, please don't hesitate to contact me by mail (see address above), email (mbaloian@appliedearthworks.com) or by phone (559 229 1856, Ext. 11). I would be most grateful for any information you might provide. Be assured that any locations of archaeological sites, cemeteries, or sacred places will be treated confidentially, as required by law, and not disclosed in any document available to the general public.

Thank you for your assistance,

Mary Clark Baloian, Ph.D., RPA | **Applied EarthWorks, Inc.**
Senior Archaeologist

1391 W. Shaw Ave., Ste. C
Fresno, CA 93711-3600
559.229.1856 x-11 office
559.801.1652 mobile

September 16, 2015

Kings River Choinumni Farm Tribe
Stan Alec
3515 East Fidora Avenue
Fresno, CA 93726

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Stan Alec:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Chowchilla Tribe of Yokuts
Jerry Brown
10553 N. Rice Road
Fresno, CA 93730

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone **916 923 1097**
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Jerry Brown:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Dunlap Band of Mono Indians
Benjamin Charley Sr., Chairperson
P.O. Box 45
Dunlap, CA 93621

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Chairperson Charley:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Cold Springs Rancheria of Mono Indians
Tribal Administrator
P.O. Box 209
Tollhouse, CA 93667

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Tribal Administrator:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

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Sacramento, CA 95825

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Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Dunlap Band of Mono Indians
Florence Dick, Tribal Secretary
P.O. Box 344
Dunlap, CA 93621

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Florence Dick:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

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Sacramento, CA 95825

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Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

North Fork Mono Tribe
Ron Goode, Chairperson
13396 Tollhouse Road
Clovis, CA 93619

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Chairperson Goode:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com

Writer: MR

September 16, 2015

Dumna Wo-Wah Tribal Goverment
John Ledger, Assistant Cultural Resource Manager
2216 East Hammond Street
Fresno, CA 93602 (or 93703)

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear John Ledger:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Cold Springs Rancheria of Mono Indians
Jeffrey Lee, Chairperson
P.O. Box 209
Tollhouse, CA 93667

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Chairperson Lee:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Picayune Rancheria of Chukchansi
Reggie Lewis, Chairperson
8080 Palm Avenue, Suite 207
Fresno, CA 93711

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Chairperson Lewis:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Picayune Rancheria of Chukchansi
Mary Matola, THPO
8080 Palm Avenue, Suite 207
Fresno, CA 93711

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear THPO Matola:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

Joshua Peabody
Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Table Mountain Rancheria
Michael Russell, Tribal Administrator
P.O. Box 410
Friant, CA 93626

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Michael Russell:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

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Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Dumna Wo-Wah Tribal Goverment
Eric Smith, Cultural Resource Manager
2216 East Hammond Street
Fresno, CA 93602 (or 93703)

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Eric Smith:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

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Cardno, Inc.
701 University Avenue, Suite 200
Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Cold Springs Rancheria of Mono Indians
Jamie Smith, Environmental Coordinator
P.O. Box 209
Tollhouse, CA 93667

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Jamie Smith:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

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Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Dunlap Band of Mono Indians
Jeneen Tex, Chief Executive Officer
P.O. Box 44
Dunlap, CA 93621

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Jeneen Tex:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

If you have information about cultural resources within the project area or any questions please write to:

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Sacramento, CA 95825

Or email me at Joshua.peabody@cardno.com. You may also call me at (916)386-3826 if you have any questions.

Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

September 16, 2015

Table Mountain Rancheria
Leanne Walker-Grant, Chairperson
P.O. Box 410
Friant, CA 93626

Cardno

701 University Avenue
Suite 200
Sacramento, CA 95825
USA

Phone 916 923 1097
Toll-free 800 368 7511
Fax 916 923 6251
www.cardno.com

RE: Pacific Gas & Electric Company's Sanger Substation Project, Fresno County, California

Dear Chairperson Walker-Grant:

Cardno Inc. is currently providing cultural resource services in support of Pacific Gas & Electric Company's (PG&E) Sanger Substation Project, located west of the city of Sanger, Fresno County, California (see included map). The project will include the replacement of nine breakers, twenty-four switches/disconnects, eighteen structures, and the control building at the existing Sanger Substation. Due to congestion and lack of space inside the substation, and based on the major civil and electrical requirements of the breakers, structures, and switch replacement work, PG&E proposes to build a new substation on an adjacent location approximately nine acres in size. As part of these services, Cardno, Inc. requested a sacred lands search and list of individuals who may have knowledge of the cultural resources within the project area from the Native American Heritage Commission (NAHC). The sacred lands search did not indicate the presence of any areas of concern. Your name appears on the NAHC list of individuals who may know more about the cultural resources of the project area. Any information you have in this regard would greatly help our effort to identify all properties of concern for this project.

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Sacramento, CA 95825

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Sincerely,

Joshua Peabody
Senior Consultant/Cultural Resources Specialist
for Cardno, Inc.
Direct Line 916 386 3826
Email: joshua.peabody@cardno.com
Writer: MR

Cardno, Inc.
701 University Ave., Suite 200
Sacramento, CA 95825
(916)923-1097 | Fax (916) 923-6251
www.cardno.com

CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

Cardno, Inc.
701 University Ave., Suite 200
Sacramento, CA 95825
(916)923-1097 | Fax (916) 923-6251
www.cardno.com

CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

Cardno, Inc.
701 University Ave., Suite 200
Sacramento, CA 95825
(916)923-1097 | Fax (916) 923-6251
www.cardno.com

CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

Cardno, Inc.
701 University Ave., Suite 200
Sacramento, CA 95825
(916)923-1097 | Fax (916) 923-6251
www.cardno.com

CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

Cardno, Inc.
701 University Ave., Suite 200
Sacramento, CA 95825
(916)923-1097 | Fax (916) 923-6251
www.cardno.com

CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

Cardno, Inc.
701 University Ave., Suite 200
Sacramento, CA 95825
(916)923-1097 | Fax (916) 923-6251
www.cardno.com

CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up:

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CONVERSATION RECORD

☒ Telephone

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

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

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

Remarks:

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

Follow-up: