

Appendix B

Air Emissions Calculations Output / Greenhouse Gas Emissions Reduction Plan

Appendix B-1
**Air Emissions Calculations
Output**

TO 24 - Geotech Investigations - Kings County, Annual

**TO 24 - Geotech Investigations
Kings County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Golf Course	4.13	Acre	4.13	179,902.80	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	37
Climate Zone	3			Operational Year	2022
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	283.4	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

TO 24 - Geotech Investigations - Kings County, Annual

Project Characteristics - projected EF based on RPS and historical EFs

Land Use - 600 boring sites x 300 sq ft per boring work pad = 180,000 sq ft = 4.13 acre

Construction Phase - Anticipated 6-month timeline, beginning in summer of 2021

Off-road Equipment - no arch. coating phase

Off-road Equipment - no equipment needed - just truck trips

Off-road Equipment - provided by DWR

Off-road Equipment - no equipment - truck trips only

Off-road Equipment - no paving phase

Off-road Equipment - creation of gravel access roads

Trips and VMT - max 10 workers on-site per day; drill work vendor trips = water trucks; mob/demob vendor trips = equipment delivery; assume 10 CY capacity per haul truck; materials from West Sac

Grading -

Vehicle Trips - no operational component

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	NumDays	5.00	2.00
tblConstructionPhase	NumDays	8.00	128.00
tblConstructionPhase	NumDays	5.00	1.00
tblConstructionPhase	NumDays	18.00	0.00
tblConstructionPhase	NumDays	18.00	0.00
tblGrading	MaterialImported	0.00	170.20
tblGrading	MaterialImported	0.00	24.70
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00

TO 24 - Geotech Investigations - Kings County, Annual

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	7.00
tblOffRoadEquipment	PhaseName		Drill Work
tblOffRoadEquipment	PhaseName		Mobilization
tblOffRoadEquipment	PhaseName		Drill Work
tblOffRoadEquipment	PhaseName		Mobilization
tblOffRoadEquipment	PhaseName		Site Prep
tblOffRoadEquipment	PhaseName		Demobilization
tblOffRoadEquipment	PhaseName		Drill Work
tblOffRoadEquipment	PhaseName		Drill Work
tblOffRoadEquipment	PhaseName		Site Prep
tblOffRoadEquipment	PhaseName		Demobilization
tblOffRoadEquipment	PhaseName		Drill Work
tblProjectCharacteristics	CO2IntensityFactor	641.35	283.4
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

TO 24 - Geotech Investigations - Kings County, Annual

tblTripsAndVMT	HaulingTripLength	20.00	196.00
tblTripsAndVMT	HaulingTripLength	20.00	196.00
tblTripsAndVMT	HaulingTripNumber	1.00	5.00
tblTripsAndVMT	HaulingTripNumber	3.00	34.00
tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripLength	16.80	25.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	5.00	20.00
tblTripsAndVMT	WorkerTripNumber	25.00	20.00
tblTripsAndVMT	WorkerTripNumber	0.00	20.00
tblTripsAndVMT	WorkerTripNumber	11.00	0.00
tblVehicleTrips	ST_TR	5.82	0.00
tblVehicleTrips	SU_TR	5.88	0.00
tblVehicleTrips	WD_TR	5.04	0.00

2.0 Emissions Summary

TO 24 - Geotech Investigations - Kings County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-1-2021	8-31-2021	1.9507	1.9507
2	9-1-2021	11-30-2021	1.9885	1.9885
3	12-1-2021	2-28-2022	0.0010	0.0010
		Highest	1.9885	1.9885

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	1.7000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
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	0.5724	0.0000	0.5724	0.0338	0.0000	1.4182
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.6243	1.6243	1.7000e-004	3.0000e-005	1.6387
Total	1.7000e-003	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5724	1.6244	2.1968	0.0340	3.0000e-005	3.0570

TO 24 - Geotech Investigations - Kings County, Annual

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	1.7000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
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	0.5724	0.0000	0.5724	0.0338	0.0000	1.4182
Water						0.0000	0.0000		0.0000	0.0000	0.0000	1.6243	1.6243	1.7000e-004	3.0000e-005	1.6387
Total	1.7000e-003	0.0000	4.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.5724	1.6244	2.1968	0.0340	3.0000e-005	3.0570

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

3.0 Construction Detail

Construction Phase

TO 24 - Geotech Investigations - Kings County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization	Site Preparation	6/1/2021	6/1/2021	5	1	
2	Site Prep	Site Preparation	6/2/2021	6/3/2021	5	2	
3	Drill Work	Grading	6/4/2021	11/30/2021	5	128	
4	Demobilization	Site Preparation	12/1/2021	12/1/2021	5	1	
5	Paving	Paving	6/3/2022	6/2/2022	5	0	
6	Architectural Coating	Architectural Coating	6/29/2022	6/28/2022	5	0	

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; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

TO 24 - Geotech Investigations - Kings County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization	Concrete/Industrial Saws	0	8.00	81	0.73
Mobilization	Excavators	0	8.00	158	0.38
Mobilization	Rubber Tired Dozers	0	8.00	247	0.40
Mobilization	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Prep	Excavators	0	8.00	158	0.38
Site Prep	Graders	0	8.00	187	0.41
Site Prep	Rubber Tired Dozers	0	8.00	247	0.40
Site Prep	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Drill Work	Bore/Drill Rigs	2	10.00	221	0.50
Drill Work	Cranes	0		231	0.29
Drill Work	Excavators	0	8.00	158	0.38
Drill Work	Forklifts	1	4.00	89	0.20
Drill Work	Generator Sets	0		84	0.74
Drill Work	Graders	0	8.00	187	0.41
Drill Work	Off-Highway Trucks	7	10.00	402	0.38
Drill Work	Rubber Tired Dozers	0	8.00	247	0.40
Demobilization	Excavators	0	8.00	158	0.38
Demobilization	Graders	0	8.00	187	0.41
Demobilization	Rubber Tired Dozers	0	8.00	247	0.40
Demobilization	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Paving	Cement and Mortar Mixers	0	6.00	9	0.56
Paving	Pavers	0	8.00	130	0.42
Paving	Paving Equipment	0	6.00	132	0.36
Paving	Rollers	0	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Architectural Coating	Air Compressors	0	6.00	78	0.48

TO 24 - Geotech Investigations - Kings County, Annual

3.2 Mobilization - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.2700e-003	2.5000e-004	0.0000	7.0000e-005	0.0000	8.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.3007	0.3007	4.0000e-005	0.0000	0.3016
Worker	8.0000e-005	7.0000e-005	6.1000e-004	0.0000	1.9000e-004	0.0000	1.9000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.1504	0.1504	0.0000	0.0000	0.1505
Total	1.2000e-004	1.3400e-003	8.6000e-004	0.0000	2.6000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.4511	0.4511	4.0000e-005	0.0000	0.4521

3.3 Site Prep - 2021

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	3.7000e-004	3.7900e-003	4.5200e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.1000e-004	2.1000e-004	0.0000	0.5459	0.5459	1.8000e-004	0.0000	0.5504
Total	3.7000e-004	3.7900e-003	4.5200e-003	1.0000e-005	0.0000	2.2000e-004	2.2000e-004	0.0000	2.1000e-004	2.1000e-004	0.0000	0.5459	0.5459	1.8000e-004	0.0000	0.5504

TO 24 - Geotech Investigations - Kings County, Annual

3.3 Site Prep - 2021

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	1.4000e-004	4.0500e-003	7.1000e-004	2.0000e-005	4.2000e-004	2.0000e-005	4.4000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.5633	1.5633	2.0000e-005	0.0000	1.5639
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.3000e-004	1.2200e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3008	0.3008	1.0000e-005	0.0000	0.3010
Total	3.0000e-004	4.1800e-003	1.9300e-003	2.0000e-005	7.9000e-004	2.0000e-005	8.1000e-004	2.2000e-004	2.0000e-005	2.3000e-004	0.0000	1.8641	1.8641	3.0000e-005	0.0000	1.8649

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	3.7000e-004	3.7900e-003	4.5200e-003	1.0000e-005		2.2000e-004	2.2000e-004		2.1000e-004	2.1000e-004	0.0000	0.5459	0.5459	1.8000e-004	0.0000	0.5504
Total	3.7000e-004	3.7900e-003	4.5200e-003	1.0000e-005	0.0000	2.2000e-004	2.2000e-004	0.0000	2.1000e-004	2.1000e-004	0.0000	0.5459	0.5459	1.8000e-004	0.0000	0.5504

TO 24 - Geotech Investigations - Kings County, Annual

3.3 Site Prep - 2021

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	1.4000e-004	4.0500e-003	7.1000e-004	2.0000e-005	4.2000e-004	2.0000e-005	4.4000e-004	1.2000e-004	2.0000e-005	1.3000e-004	0.0000	1.5633	1.5633	2.0000e-005	0.0000	1.5639
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6000e-004	1.3000e-004	1.2200e-003	0.0000	3.7000e-004	0.0000	3.7000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.3008	0.3008	1.0000e-005	0.0000	0.3010
Total	3.0000e-004	4.1800e-003	1.9300e-003	2.0000e-005	7.9000e-004	2.0000e-005	8.1000e-004	2.2000e-004	2.0000e-005	2.3000e-004	0.0000	1.8641	1.8641	3.0000e-005	0.0000	1.8649

3.4 Drill Work - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.3848	3.4689	2.3876	8.9500e-003		0.1255	0.1255		0.1154	0.1154	0.0000	786.2025	786.2025	0.2543	0.0000	792.5593
Total	0.3848	3.4689	2.3876	8.9500e-003	1.0000e-005	0.1255	0.1255	0.0000	0.1154	0.1154	0.0000	786.2025	786.2025	0.2543	0.0000	792.5593

TO 24 - Geotech Investigations - Kings County, Annual

3.4 Drill Work - 2021

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	9.7000e-004	0.0276	4.8300e-003	1.1000e-004	2.8600e-003	1.3000e-004	2.9900e-003	7.9000e-004	1.2000e-004	9.1000e-004	0.0000	10.6306	10.6306	1.5000e-004	0.0000	10.6344
Vendor	4.2000e-004	0.0136	2.6600e-003	3.0000e-005	7.7000e-004	4.0000e-005	8.1000e-004	2.2000e-004	4.0000e-005	2.6000e-004	0.0000	3.2074	3.2074	3.8000e-004	0.0000	3.2169
Worker	0.0102	8.4500e-003	0.0779	2.1000e-004	0.0238	1.5000e-004	0.0239	6.3200e-003	1.3000e-004	6.4500e-003	0.0000	19.2503	19.2503	6.2000e-004	0.0000	19.2659
Total	0.0116	0.0496	0.0854	3.5000e-004	0.0274	3.2000e-004	0.0277	7.3300e-003	2.9000e-004	7.6200e-003	0.0000	33.0884	33.0884	1.1500e-003	0.0000	33.1171

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	0.3848	3.4689	2.3876	8.9500e-003		0.1255	0.1255		0.1154	0.1154	0.0000	786.2015	786.2015	0.2543	0.0000	792.5584
Total	0.3848	3.4689	2.3876	8.9500e-003	0.0000	0.1255	0.1255	0.0000	0.1154	0.1154	0.0000	786.2015	786.2015	0.2543	0.0000	792.5584

TO 24 - Geotech Investigations - Kings County, Annual

3.7 Architectural Coating - 2022

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

TO 24 - Geotech Investigations - Kings County, Annual

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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Golf Course	0.492212	0.031147	0.169820	0.116157	0.015815	0.004502	0.033398	0.126328	0.002363	0.001519	0.005062	0.001083	0.000594

5.0 Energy Detail

Historical Energy Use: N

TO 24 - Geotech Investigations - Kings County, Annual

5.2 Energy by Land Use - Natural Gas

Mitigated

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

TO 24 - Geotech Investigations - Kings County, Annual

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	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	1.7000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Unmitigated	1.7000e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

TO 24 - Geotech Investigations - Kings County, Annual

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	1.6900e-003					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	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	1.6900e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

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	1.6900e-003					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	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005
Total	1.6900e-003	0.0000	4.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	7.0000e-005	7.0000e-005	0.0000	0.0000	8.0000e-005

7.0 Water Detail

TO 24 - Geotech Investigations - Kings County, Annual

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.6243	1.7000e-004	3.0000e-005	1.6387
Unmitigated	1.6243	1.7000e-004	3.0000e-005	1.6387

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 3.61019	1.6243	1.7000e-004	3.0000e-005	1.6387
Total		1.6243	1.7000e-004	3.0000e-005	1.6387

TO 24 - Geotech Investigations - Kings County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 3.61019	1.6243	1.7000e-004	3.0000e-005	1.6387
Total		1.6243	1.7000e-004	3.0000e-005	1.6387

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.5724	0.0338	0.0000	1.4182
Unmitigated	0.5724	0.0338	0.0000	1.4182

TO 24 - Geotech Investigations - Kings County, Annual

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	2.82	0.5724	0.0338	0.0000	1.4182
Total		0.5724	0.0338	0.0000	1.4182

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	2.82	0.5724	0.0338	0.0000	1.4182
Total		0.5724	0.0338	0.0000	1.4182

9.0 Operational Offroad

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

TO 24 - Geotech Investigations - Kings County, Annual

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

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

11.0 Vegetation

Appendix B-2
**Greenhouse Gas Emissions
Reduction Plan**

Greenhouse Gas(GHG) Emissions Reduction Plan Consistency Determination

For Projects Using Contractors or Other Outside Labor

This form is to be used by DWR project managers to document a DWR CEQA project’s consistency with the DWR Greenhouse Gas Emissions Reduction Plan. This form is to be used only when DWR is the Lead Agency and when contractors or outside labor and equipment are used to implement the project.

Additional Guidance on filling out this form can be found at:
http://dwrclimatechange.water.ca.gov/guidance_resources.cfm

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:
<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan>

Project Name:	San Luis Canal Geotechnical Investigations Project
Environmental Document Type:	Environmental Assessment/Initial Study and Mitigated Negative Declaration
Manager’s Name:	
Manager’s E-mail:	
Division:	
Office, Branch, or Field Division:	

Short Project Description:
The primary purpose of the proposed project is to provide geologic information needed to inform engineering and design plans for the proposed San Luis Canal Embankment and Liner Raise Project.

Project GHG Emissions Summary:		
Total Construction Emissions	822.6031	mtCO ₂ e
Maximum Annual Construction Emissions	822.6031	mtCO ₂ e
<input checked="" type="checkbox"/> All other emissions from the project not accounted for above will occur as ongoing operational, maintenance, or business activity emissions and therefore have already been accounted for and analyzed in the GGERP.		

Extraordinary Construction Project Determination:
Do total project construction emissions exceed 25,000 mtCO ₂ e for the entire construction phase or exceed 12,500 mtCO ₂ e in any single year of construction?
<input checked="" type="checkbox"/> No- Additional analysis not required <input type="checkbox"/> Yes - Project specific emissions mitigation measures have been included in the environmental analysis document for the project

<p>Project GHG Reduction Plan Checklist:</p> <p><input type="checkbox"/> All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project. (Project Level GHG Emissions Reduction Measures)</p> <p style="text-align: center;">Or</p> <p><input type="checkbox"/> All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and Measures not incorporated have been listed and determined not to apply to the proposed project (include as an attachment)</p>
<p><input type="checkbox"/> Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures (Specific Action GHG Emissions Reduction Measures)</p>
<p>Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If you answered Yes, attach a letter documenting that the project has consulted with the DWR SWP Power and Risk Office regarding the additional power requirements of the project.</p>
<p>Is there substantial evidence that the effects of the proposed project may be cumulatively considerable notwithstanding the proposed project's compliance with the requirements of the DWR GHG Reduction Plan?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If you answered Yes, the project is not eligible for streamlined analysis of GHG emissions using the DWR GHG Emissions Reduction Plan. (See CEQA Guidelines, section 15183.5, subdivision (b)(2).)</p>

Based on the information provided above and information provided in associated environmental documentation completed pursuant to the above referenced project, the DWR CEQA Climate Change Committee has determined that:

- The entire proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis.

The operational and maintenance phase of the project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis. Emissions from the construction phase of the project are not covered by the DWR Greenhouse Gas Emissions Reduction Plan and will be mitigated as part of the project.

Project Manager Signature: _____ Date: _____

C4 Approval Signature: _____ Date: _____

Attachments:

- GHG Emissions Inventory
- List and Explanation of excluded Project level GHG Emissions Reduction Measures
- SWP Power and Risk Office Consultation Letter

Links:
<https://current.water.ca.gov/programs/icc/SitePages/Home.aspx>
<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program>