

DOCKETED

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| Docket Number: | 20-SPPE-01 |
| Project Title: | Great Oaks South Backup Generating Facility Small Power Plant Exemption |
| TN #: | 235566 |
| Document Title: | Revisde SV1 Supplemental DR-47 Response GOSBGF |
| Description: | *** THIS DOCUMENT SUPERSEDES TN 235547 *** |
| Filer: | Scott Galati |
| Organization: | DayZenLLC |
| Submitter Role: | Applicant Representative |
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| Docketed Date: | 11/10/2020 |



SUPPLEMENTAL RESPONSE TO CEC STAFF DATA REQUEST 47

Great Oaks South Backup Generating Facility (20-SPPE-01)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION

SUBMITTED BY: **SV1, LLC**

November 2020



INTRODUCTION

Attached is SV1, LLC's (SV1) Supplemental Response to Data Request 47 for the Great Oaks South Backup Generation Facility (GOSBGF) Application for Small Power Plant Exemption (SPPE) (20-SPPE-01).

Data Request 47 requested information about the location of the 21 kV underground feeders that PG&E will construct to serve the ultimate capacity of the three data center buildings. In the original response provided by PG&E and reproduced by SV1 in its Data Response Set 1 package, two potential routes (three trenches) were identified for the 5 new 21 kV feeders that may be constructed over the life of the Great Oaks South Data Center. CEC Staff requested that the construction emissions associated with these two routes as well as construction emissions for a sidewalk repair and replacement project requested by the City be provided. The following includes the construction emission information requested by CEC Staff and will be referred to as Supplemental Data Response 47.

Supplemental Data Response 47

The data and identification of these three (3) short linears was not included in the initial construction support data provided by PG&E. Data in Table 1 below represents the PG&E and SV1’s best estimates for the construction of the proposed electrical feed line linears for the project. Currently, the proposed electrical feed lines will be placed in three separate trenches to be built as needed. The three proposed routes are designated as Via Del Oro, Santa Teresa 1 (2101), and Santa Teresa 2 (2102). The data on each route and other related data used to support the emissions calculations is presented in Table 1. Each route is simply a trenching project which will require minimum equipment and work staff to complete. This data was input into CalEEMod and emissions were evaluated for construction only, as the underground feed lines will not result in any operational emissions.

The three feed line trenches will be constructed as needed, and the construction years in which each will be built are the best estimates based on forecasted need.

**Table 1 Equinix (Great Oaks South) Data Center Electrical Feeder Linears
Construction Data and Emissions Summary**

| Parameter | Del Oro Route | Santa Teresa Route 1 | Santa Teresa Route 2 |
|--------------------------------|---------------|----------------------|----------------------|
| Route (Trench) Length (ft) | 2920 | 5671 | 5671 |
| Trench Depth (ft) | 4 | 4 | 4 |
| Trench Width (ft) | 2 | 2 | 2 |
| # Distribution Lines in Trench | 2 | 2 | 1 |
| Project Months | 1.5 | 2.5 | 2.5 |
| Total Work Days | 33 | 55 | 55 |
| Hrs/day | 8 | 8 | 8 |
| Trench cut and fill (yd3) | 866 | 1681 | 1681 |
| Cut and fill balanced | Yes | Yes | Yes |
| # of Excavators | 1 | 1 | 1 |
| # of Backhoes | 1 | 1 | 1 |
| # Conduit trucks | 1 | 1 | 1 |
| # Other trucks | 2 | 2 | 2 |
| # Workers/day | 8 | 8 | 8 |
| Worker RTs/day | 8 | 8 | 8 |
| Trench Progress (ft/day) | 180 | 180 | 180 |
| Const Year | 2022 | 2024 | 2027 |
| Est const start date | 2-1-22 | 9-1-24 | 9-1-27 |

| | | | |
|---|----|----|----|
| Ops year | NA | NA | NA |
| Notes: | | | |
| <ol style="list-style-type: none"> 1. No operational emissions were calculated for these linear trenches. 2. Trench soil removed will be piled near the trench for use as backfill (balanced cut and fill). 3. Once excavation begins, feed line conduit will be concurrently laid in the trench, and then backfilling will occur as the line moves from the start to end point. 4. Trenching progress is the <u>average</u> daily value as derived from Southern Regional Water Pipeline Alliance, Trenching Guideline, March 2008. 5. Sidewalk demo and reconstruction is estimated to take place during Santa Teresa Route 2 phase. A total of 51 extra hauling trips are associated with this sidewalk, i.e., 36 hauls for concrete (285 yd3), and 15 haul trips to remove sidewalk demo debris. | | | |

Tables 2 through 4 present the emissions summaries as derived from the CalEEMod output. The CalEEMod input and output files are also supplied in electronic form as Attachment AIR SDR-47 to this response.

Table 2 Del Oro Route Mitigated Offsite Linear Construction Emissions Summary

| Parameter | ROG | NOx | CO | SOx | PM10 Exh | PM10 Fug | PM2.5 Exh | PM2.5 Fug |
|-------------|---------|--------|--------|---------|----------|----------|-----------|-----------|
| Tons/period | 0.00447 | 0.0194 | 0.2523 | 0.00034 | 0.00055 | 0.00116 | 0.00055 | 0.00031 |
| Avg Lbs/day | 0.271 | 1.176 | 15.29 | 0.021 | 0.033 | 0.07 | 0.033 | 0.019 |

Total period CO2e emissions = 30.3 MT

Table 3 Santa Teresa Route 1 Mitigated Offsite Linear Construction Emissions Summary

| Parameter | ROG | NOx | CO | SOx | PM10 Exh | PM10 Fug | PM2.5 Exh | PM2.5 Fug |
|-------------|---------|--------|--------|---------|----------|----------|-----------|-----------|
| Tons/period | 0.00735 | 0.0315 | 0.4198 | 0.00057 | 0.00091 | 0.00193 | 0.00091 | 0.00052 |
| Avg Lbs/day | 0.27 | 1.15 | 15.26 | 0.021 | 0.033 | 0.07 | 0.033 | 0.019 |

Total period CO2e emissions = 50.3 MT

Table 4 Santa Teresa Route 2 Mitigated Offsite Linear Construction Emissions Summary

| Parameter | ROG | NOx | CO | SOx | PM10 Exh | PM10 Fug | PM2.5 Exh | PM2.5 Fug |
|-------------|---------|--------|--------|---------|----------|----------|-----------|-----------|
| Tons/period | 0.00739 | 0.0351 | 0.4204 | 0.00058 | 0.00092 | 0.00236 | 0.00092 | 0.00064 |
| Avg Lbs/day | 0.269 | 1.28 | 15.29 | 0.021 | 0.033 | 0.086 | 0.033 | 0.023 |

Total period CO2e emissions = 52.0 MT

Attachment AIR SDR-47

GBOS Electrical Feeder Linears - Santa Clara County, Annual

GBOS Electrical Feeder Linears
Santa Clara County, Annual

1.0 Project Characteristics

1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|-------------------------|----------|-------------------|-------------|--------------------|------------|
| User Defined Commercial | 4,230.00 | User Defined Unit | 0.00 | 0.00 | 0 |

1.2 Other Project Characteristics

| | | | | | |
|--------------------------------|-------|--------------------------------|-------|----------------------------------|-------|
| Urbanization | Urban | Wind Speed (m/s) | 2.2 | Precipitation Freq (Days) | 58 |
| Climate Zone | 4 | | | Operational Year | 2028 |
| Utility Company | | | | | |
| CO2 Intensity (lb/MWhr) | 278 | CH4 Intensity (lb/MWhr) | 0.029 | N2O Intensity (lb/MWhr) | 0.006 |

1.3 User Entered Comments & Non-Default Data

GBOS Electrical Feeder Linears - Santa Clara County, Annual

Project Characteristics - Feeder lines will be installed at the end of each phase, i.e, 2022, 2024, and 2027. All data is Applicant best estimate.

Land Use - 4230 is the estimated volume (cubic yards) of trench material to be cut and filled.

Construction Phase - Applicant supplied best estimates.

Off-road Equipment - Applicant supplied best estimates. Other const equipment are 3 small diesel trucks, conduit roller truck and 2 support trucks.

Off-road Equipment - Same note as Del Oro route

Off-road Equipment - Same note as Santa Teresa 1.

Trips and VMT - Based on 8 workers per trench project each day. Vendor trips are for conduit delivery, etc. 36 trips on Santa Teresa Route 2 are for concrete deliveries of 285 yd3 for sidewalk construction, plus 15 haul trips to remove existing sidewalk demo debris.

Vehicle Trips - Applicant data

Vehicle Emission Factors - No OPs emissions are calculated for these linear projects.

Vehicle Emission Factors - No OPs emissions calculated.

Vehicle Emission Factors - No OPs emissions calculated.

Road Dust - Unpaved road travel is assumed to be "zero" for these linear projects.

Consumer Products - Applicant best estimate.

Landscape Equipment - Applicant data.

Energy Use -

Water And Wastewater - No OPs emissions for these linear projects.

Solid Waste - NA

Construction Off-road Equipment Mitigation - Applicant best estimate. T4 final assumed as best choice for const years noted.

Area Mitigation - NA

Energy Mitigation - NA

Water Mitigation - NA

Waste Mitigation - NA

Operational Off-Road Equipment - NA

Fleet Mix - No OPs emissions calculated.

| Table Name | Column Name | Default Value | New Value |
|------------------------|--------------------|---------------|-----------|
| tblApplianceMitigation | PercentImprovement | 30.00 | 0.00 |

GBOS Electrical Feeder Linears - Santa Clara County, Annual

| | | | |
|---------------------------|--|-----------|--------------|
| tblApplianceMitigation | PercentImprovement | 15.00 | 0.00 |
| tblApplianceMitigation | PercentImprovement | 50.00 | 0.00 |
| tblApplianceMitigation | PercentImprovement | 15.00 | 0.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 9.00 |
| tblConstEquipMitigation | NumberOfEquipmentMitigated | 0.00 | 3.00 |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblConstEquipMitigation | Tier | No Change | Tier 4 Final |
| tblProjectCharacteristics | CH4IntensityFactor | 0 | 0.029 |
| tblProjectCharacteristics | CO2IntensityFactor | 0 | 278 |
| tblProjectCharacteristics | N2OIntensityFactor | 0 | 0.006 |
| tblRoadDust | MeanVehicleSpeed | 40 | 15 |
| tblSolidWaste | LandfillCaptureGasFlare | 94.00 | 0.00 |
| tblSolidWaste | LandfillNoGasCapture | 6.00 | 0.00 |
| tblTripsAndVMT | HaulingTripNumber | 0.00 | 51.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 8.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 8.00 |
| tblTripsAndVMT | WorkerTripNumber | 13.00 | 8.00 |
| tblVehicleTrips | CC_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |
| tblWater | ElectricityIntensityFactorForWastewaterTreatment | 1,911.00 | 0.00 |
| tblWater | ElectricityIntensityFactorToDistribute | 1,272.00 | 0.00 |

GBOS Electrical Feeder Linears - Santa Clara County, Annual

| | | | |
|----------|------------------------------------|----------|------|
| tblWater | ElectricityIntensityFactorToSupply | 2,117.00 | 0.00 |
| tblWater | ElectricityIntensityFactorToTreat | 111.00 | 0.00 |

2.0 Emissions Summary

GBOS Electrical Feeder Linears - Santa Clara County, Annual

2.1 Overall Construction
Unmitigated Construction

| Year | tons/yr | | | | | | | | | | MT/yr | | | | |
|---------|---------|--------|--------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-----------|-----------|-----|-----|---------|
| ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
| 2022 | 0.0181 | 0.1769 | 0.2182 | 3.4000e-004 | 1.1600e-003 | 9.0700e-003 | 0.0102 | 3.1000e-004 | 8.3500e-003 | 8.6600e-003 | | | | | 30.2785 |
| 2024 | 0.0267 | 0.2463 | 0.3627 | 5.7000e-004 | 1.9300e-003 | 0.0123 | 0.0142 | 5.2000e-004 | 0.0113 | 0.0118 | | | | | 50.3493 |
| 2027 | 0.0243 | 0.2187 | 0.3621 | 5.8000e-004 | 2.3600e-003 | 0.0105 | 0.0129 | 6.4000e-004 | 9.6800e-003 | 0.0103 | | | | | 51.9989 |
| Maximum | 0.0267 | 0.2463 | 0.3627 | 5.8000e-004 | 2.3600e-003 | 0.0123 | 0.0142 | 6.4000e-004 | 0.0113 | 0.0118 | | | | | 51.9989 |

Mitigated Construction

| Year | tons/yr | | | | | | | | | | MT/yr | | | | |
|---------|---------|--------|--------|---------------|--------------|-------------|----------------|---------------|-------------|-------------|-----------|-----------|-----|-----|---------|
| ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
| 2022 | 0.0194 | 0.2523 | 0.4204 | 3.4000e-004 | 1.1600e-003 | 5.5000e-004 | 1.7000e-003 | 3.1000e-004 | 5.5000e-004 | 8.6000e-004 | | | | | 30.2785 |
| 2024 | 0.0315 | 0.4198 | 0.4204 | 5.7000e-004 | 1.9300e-003 | 9.1000e-004 | 2.8400e-003 | 9.1000e-004 | 1.4300e-003 | | | | | | 50.3492 |
| 2027 | 0.0351 | 0.4204 | 0.4204 | 5.8000e-004 | 2.3600e-003 | 9.2000e-004 | 3.2700e-003 | 6.4000e-004 | 9.2000e-004 | 1.5500e-003 | | | | | 51.9988 |
| Maximum | 0.0351 | 0.4204 | 0.4204 | 5.8000e-004 | 2.3600e-003 | 9.2000e-004 | 3.2700e-003 | 6.4000e-004 | 9.2000e-004 | 1.5500e-003 | | | | | 51.9988 |

GBOS Electrical Feeder Linears - Santa Clara 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 | 3.5700e-003 | 3.5000e-004 | 0.0388 | 0.0000 | | 1.4000e-004 | 1.4000e-004 | | 1.4000e-004 | 1.4000e-004 | | | | | | 0.0805 |
| Energy | 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 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | 0.0000 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | 0.0000 |
| Total | 3.5700e-003 | 3.5000e-004 | 0.0388 | 0.0000 | 0.0000 | 1.4000e-004 | 1.4000e-004 | 0.0000 | 1.4000e-004 | 1.4000e-004 | | | | | | 0.0805 |

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

3.0 Construction Detail

Construction Phase

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|--------------|----------------------|------------|------------|------------|---------------|----------|-------------------|
| 1 | Del Oro Route | Trenching | 3/1/2022 | 4/14/2022 | 5 | 33 | |
| 2 | Santa Teresa Route 1 | Trenching | 9/1/2024 | 11/15/2024 | 5 | 55 | |
| 3 | Santa Teresa Route 2 | Trenching | 9/1/2027 | 11/16/2027 | 5 | 55 | |

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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

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|----------------------|------------------------------|--------|-------------|-------------|-------------|
| Del Oro Route | Excavators | 1 | 8.00 | 158 | 0.38 |
| Del Oro Route | Other Construction Equipment | 3 | 5.00 | 172 | 0.42 |
| Del Oro Route | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Santa Teresa Route 1 | Excavators | 1 | 8.00 | 158 | 0.38 |
| Santa Teresa Route 1 | Other Construction Equipment | 3 | 5.00 | 172 | 0.42 |
| Santa Teresa Route 1 | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Santa Teresa Route 2 | Excavators | 1 | 8.00 | 158 | 0.38 |
| Santa Teresa Route 2 | Other Construction Equipment | 3 | 5.00 | 172 | 0.42 |
| Santa Teresa Route 2 | Tractors/Loaders/Backhoes | 1 | 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 |
|----------------------|-------------------------|--------------------|--------------------|---------------------|--------------------|--------------------|---------------------|----------------------|----------------------|-----------------------|
| Del Oro Route | 5 | 8.00 | 1.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Santa Teresa Route 1 | 5 | 8.00 | 1.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Santa Teresa Route 2 | 5 | 8.00 | 1.00 | 51.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

3.1 Mitigation Measures Construction

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3.4 Santa Teresa Route 2 - 2027

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 | 6.7300e-003 | 0.0292 | 0.4152 | 5.5000e-004 | | 9.0000e-004 | 9.0000e-004 | | 9.0000e-004 | 9.0000e-004 | | | | | | | 48.4077 |
| Total | 6.7300e-003 | 0.0292 | 0.4152 | 5.5000e-004 | | 9.0000e-004 | 9.0000e-004 | | 9.0000e-004 | 9.0000e-004 | | | | | | | 48.4077 |

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 | 1.2000e-004 | 3.7700e-003 | 1.3600e-003 | 2.0000e-005 | 4.3000e-004 | 1.0000e-005 | 4.4000e-004 | 1.2000e-004 | 1.0000e-005 | 1.3000e-004 | | | | | | | 1.7732 |
| Vendor | 6.0000e-005 | 1.9200e-003 | 5.8000e-004 | 1.0000e-005 | 1.8000e-004 | 0.0000 | 1.8000e-004 | 5.0000e-005 | 0.0000 | 5.0000e-005 | | | | | | | 0.6693 |
| Worker | 4.8000e-004 | 2.6000e-004 | 3.1900e-003 | 1.0000e-005 | 1.7400e-003 | 1.0000e-005 | 1.7500e-003 | 4.6000e-004 | 1.0000e-005 | 4.7000e-004 | | | | | | | 1.1486 |
| Total | 6.6000e-004 | 5.9500e-003 | 5.1300e-003 | 4.0000e-005 | 2.3500e-003 | 2.0000e-005 | 2.3700e-003 | 6.3000e-004 | 2.0000e-005 | 6.5000e-004 | | | | | | | 3.5911 |

4.0 Operational Detail - Mobile

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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 |
| Unmitigated | 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 |
| User Defined Commercial | 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 |
| User Defined Commercial | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0 | 0 | 0 |

4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|-------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| User Defined Commercial | 0.620274 | 0.034449 | 0.180536 | 0.101790 | 0.012258 | 0.005041 | 0.012989 | 0.022505 | 0.002207 | 0.001488 | 0.005157 | 0.000643 | 0.000663 |

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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

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

| Land Use | | tons/yr | | | | | | | | | | | | | | | MT/yr | |
|-------------------------|--------|---------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|--------|-------|--|
| 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 | | |
| 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | 0.0000 | | |
| User Defined Commercial | 0 | 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 | | |

Mitigated

| Land Use | | tons/yr | | | | | | | | | | | | | | | MT/yr | |
|-------------------------|--------|---------|--------|--------|---------------|--------------|------------|----------------|---------------|-------------|----------|-----------|-----------|-----|-----|--------|-------|--|
| 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 | | |
| 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | | | | | 0.0000 | | |
| User Defined Commercial | 0 | 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 | | |

5.3 Energy by Land Use - Electricity

Unmitigated

| Land Use | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------------|-----------|-----|-----|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| User Defined Commercial | 0 | | | | 0.0000 |
| Total | | | | | 0.0000 |

Mitigated

| Land Use | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------------|-----------|-----|-----|---------------|
| Land Use | kWh/yr | MT/yr | | | |
| User Defined Commercial | 0 | | | | 0.0000 |
| Total | | | | | 0.0000 |

6.0 Area Detail

6.1 Mitigation Measures Area

GBOS Electrical Feeder Linears - Santa Clara County, Annual

6.2 Area by SubCategory

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 |
| Consumer Products | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | | | | 0.0000 |
| Landscaping | 3.5700e-003 | 3.5000e-004 | 0.0388 | 0.0000 | | 1.4000e-004 | 1.4000e-004 | | 1.4000e-004 | 1.4000e-004 | | | | | | 0.0805 |
| Total | 3.5700e-003 | 3.5000e-004 | 0.0388 | 0.0000 | | 1.4000e-004 | 1.4000e-004 | | 1.4000e-004 | 1.4000e-004 | | | | | | 0.0805 |

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|--------------------|-----------|-----|-----|---------------|
| Land Use | Mgal | MT/yr | | | |
| User Defined Commercial | 0 / 0 | | | | 0.0000 |
| Total | | | | | 0.0000 |

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7.2 Water by Land Use

Mitigated

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|--------------------|-----------|-----|-----|---------------|
| Land Use | Mgal | MT/yr | | | |
| User Defined Commercial | 0 / 0 | | | | 0.0000 |
| Total | | | | | 0.0000 |

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use
Unmitigated

| Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------|-------|-----|--------|
| Land Use | tons | MT/yr | | |
| User Defined Commercial | 0 | | | 0.0000 |
| Total | | | | 0.0000 |

Mitigated

| Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|-------------------------|-----------|-------|-----|--------|
| Land Use | tons | MT/yr | | |
| User Defined Commercial | 0 | | | 0.0000 |
| Total | | | | 0.0000 |

9.0 Operational Offroad

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

GBOS Electrical Feeder Linears - Santa Clara 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
