APPENDIX 8.1A

# Construction Emission Estimates and Dispersion Modeling

**APPENDIX 8.1A**

# Construction Emission Estimates and Dispersion Modeling

The contents of Appendix 8.1A include:

- Methodology used to estimate construction emissions and perform dispersion modeling,
- A summary of the ISCST3 model results (Table 8.1A.1),
- A summary of the construction emission calculations (Tables 8.1A.2a through 8.1A.5w),
- A summary of the emission rates and input summaries used for ISCST3 modeling (Tables 8.1A.6 and 8.1A.7),
- An excerpt from the electronic file used to convert 1-hour $NO_x$ to $NO_2$ using the SCAQMD "Localized Significance Threshold Methodology", June 2003 (Table 8.1A.8) (note: the complete electronic file is included in the modeling DVDs submitted as part of this application), and,
- All of the ISCST3 construction modeling files submitted on DVD

## Construction Emission Estimate Methodology

### Construction Emissions

The proposed power plant construction schedule plans for 24 months of construction. To evaluate the emissions expected to occur during the construction period, the emission sources were divided into two categories: sources within the boundary of the proposed power plant site (i.e., onsite) and activities related to the project which occur outside the boundary (i.e., offsite). Onsite construction emissions would be generated during power plant construction. Onsite emission sources include exhaust emissions from construction equipment and motorized vehicles, and fugitive dust emissions.

Offsite construction emissions would be generated during construction of the natural gas, recycled water, sewer and transmission lines, and offsite motorized vehicle travel resulting from power plant construction. Construction emissions associated with connecting the recycled water line to the city's existing line are included in the on-site construction emission calculations. Offsite emission sources include the exhaust emissions from construction equipment and motorized vehicles used to install the project related linears (i.e., the natural gas, sewer and transmission lines), as well as, the exhaust emissions from motor vehicles traveling to and from the proposed work site.

The offsite linear construction would include a 2,300 foot-long natural gas line (24-inch-diameter), a 2,400-foot long (18-inch diameter) sewer line and either a 4.4- or 4.8-mile-long transmission line. Construction emissions were estimated for the following sources:

- Onsite and offsite construction equipment engine exhaust.
- Fugitive $PM_{10}$ from bulldozing, vehicle travel on unpaved construction site areas, and storage pile wind erosion.
- Onsite and offsite motor vehicle engine exhaust and entrained paved road dust.

### Construction Activities and Equipment Requirements

Power plant construction activities are anticipated to take place over approximately 24 months, including the commissioning phase. Construction of the natural gas and sewer pipelines includes pavement removal, trenching, installing pipe, backfilling the trench, compaction and repaving. Construction of the transmission line includes pavement removal, augering, installing the foundation and poles, and stringing the transmission lines. The construction schedule for both onsite and offsite construction is based on one eight-hour shift per day, five days per week, and twenty-two days per month. A summary of the equipment and motor vehicle requirements for both onsite and offsite construction are contained in Tables 8.1A.4b-c, Table 8.1A.5a, Table 8.1A.5g, Table 8.1A.5m, and Table 8.1a.5s.

### Emission Factors

Construction emissions were based on the methodologies contained in the SCAQMD CEQA handbook (1993 and 2006) and the USEPA AP-42 guidance. A detailed breakdown of the algorithms and emission factors used to estimate construction emissions are included with Tables 8.1A.3e-f, Tables 8.1A.4d-e, Table 8.1A.5h, Table 8.1A.5n, and Table 8.1A.5t.

## Assessment of Construction Related Impacts on Ambient Air Quality

Onsite emissions from construction of the power plant were estimated for each month of the 24 month construction schedule. The peak monthly on-site emissions were identified and used to determine the emission rates for the dispersion modeling analysis. For all sources except for the on-site construction vehicles, the peak hourly emissions entered in ISCST3 were calculated by dividing the peak monthly emissions by the number of working days proposed (i.e., 22 days per month) and the proposed working hours in a day (i.e., 8 hours per day). For on-site vehicles, the maximum miles traveled in one hour were used to estimate hourly emission rates and the average miles traveled in one day were used to estimate daily emissions. The annual hourly emission rates entered into ISCST3 were determined by dividing the total annual emissions by 8,760 hours.

The EPA-approved ISCST3 model (version 02035) was used to estimate the ambient impacts from construction activity. ISCST3 default options were chosen with the exception of the CALMs processing routine. The SCAQMD 1981 meteorological data from the Vernon monitoring station was used for the modeling analysis. The construction site was

represented as an area source. For exhaust emissions, a plume height of 4.6 meters (15 feet) was used to represent an average release height from the construction equipment. For dust emissions, a release height of two meters was used. Emissions were divided into three categories: on-site exhaust, fugitive dust from vehicle and construction equipment, and windblown fugitive dust. A receptor grid was set up starting from the property boundary and extending to approximately two kilometers in all directions. Receptor spacing was 30 meters along the construction boundaries out to 500 meters and 100 meter spacing out to two kilometers. A summary of the emissions used for the dispersion modeling are located in Tables 8.1A.6 and 8.1A.7.

The high-first-high concentrations for each pollutant and averaging time from ISCST3 output were reported with the exception of the 1-hour $NO_2$ concentration. The maximum $NO_2$ concentration was derived from the highest predicted 1-hour $NO_x$ concentrations at each receptor and the $NO_x$ to $NO_2$ ratios as a function of downwind distance, as discussed in the SCAQMD "Localized Significance Threshold Methodology," June 2003. The $PM_{2.5}$ concentration from exhaust and fugitive sources assumes all PM from exhaust emissions are less than 2.5 micron and 21 percent of the fugitive PM emissions are less than 2.5 micron (SCAQMD LST, June 2003). The results of the analysis (Table 8.1A.1) indicate that the maximum construction impacts will be below the ambient air quality standards for each of the criteria pollutants and averaging periods with the exception of $PM_{10}$ and $PM_{2.5}$ impacts. Compared to the National Ambient Air Quality Standards (NAAQS), the 24-hour $PM_{2.5}$ and annual $PM_{2.5}$ impacts exceed the standards. Compared to the California Ambient Air Quality Standards (CAAQS), the 24-hour $PM_{10}$ and annual $PM_{10}$ impacts exceed the standards.

TABLE 8.1A.1
ISCST3 Results for On-site Power Plant Construction

| | Modeled Concentration - Construction (µg/m$^3$) | Background (µg/m$^3$) | Total Concentration (µg/m$^3$) | Ambient Air Quality Standard (µg/m$^3$) (CAAQS) | Ambient Air Quality Standard (µg/m$^3$) (NAAQS) | SCAQMD Significance Threshold (µg/m$^3$) | Exceeds? |
|---|---|---|---|---|---|---|---|
| **1-hour $NO_2$** | 89.94 | 244.6 | **335** | 470 | NA | na | No |
| **Annual $NO_2$** | 21.61 | 58.7 | **80** | 100 | 100 | na | No |
| **1-hour $SO_2$** | 3.08 | 209.4 | **212** | 655 | - | na | No |
| **3-hour $SO_2$** | 2.22 | 47.1 | **49** | - | 1,300 (secondary) | na | No |
| **24-hour $SO_2$** | 0.42 | 39.3 | **40** | 105 | 365 | na | No |
| **Annual $SO_2$** | 0.09 | 7.9 | **8** | - | 80 | na | No |
| **1-hour CO** | 281.35 | 13,742.3 | **14,024** | 23,000 | 40,000 | na | No |
| **8-hour CO** | 74.27 | 8,359.9 | **8,434** | 10,000 | 10,000 | na | No |
| **24-hour $PM_{10}$** | 34.55 | 81.0 | **116** | 50 | 150 | 10.4 | Yes |
| **Annual $PM_{10}$** | 10.05 | 34.6 | **45** | 20 | 50 | 1 | Yes |
| **24-hour $PM_{2.5}$** | 11.61 | 55.8 | **67** | - | 65 | na | Yes |
| **Annual $PM_{2.5}$** | 3.23 | 20.2 | **23** | 12 | 15 | na | Yes |

Notes:

- 1st highest modeled concentrations were used for all averaging periods
- The maximum 1-hour $NO_2$ concentration was derived from the predicted 1-hour $NO_x$ concentrations at each receptor and the $NO_2$ to $NO_x$ ratios as a function of downwind distance, as discussed in the SCAQMD "Localized Significance Threshold Methodology," June 2003
- Background concentrations were the highest concentrations monitored during 2003 – 2005
- Reported $PM_{2.5}$ concentration from exhaust and fugitive sources assumes all PM from exhaust emissions are less than 2.5 micron and for fugitive emissions, 21 percent of the fugitive PM emissions are less than 2.5 microns (SCAQMD "Localized Significance Threshold Methodology," June 2003).

The tables summarizing the construction emission calculations, ISCST3 inputs, and LST excerpts are included after the following table list.

## Onsite Construction Emissions Tables

Tables 8.1A.2a through 8.1A.2j summarize the onsite construction emissions from power plant construction:

- Table 8.1A.2a Onsite Power Plant Construction Equipment CO Emissions
- Table 8.1A.2b Onsite Power Plant Construction Equipment VOC Emissions
- Table 8.1A.2c Onsite Power Plant Construction Equipment $NO_x$ Emissions
- Table 8.1A.2d Onsite Power Plant Construction Equipment $SO_x$ Emissions
- Table 8.1A.2e Onsite Power Plant Construction Equipment $PM_{10}$ Emissions
- Table 8.1A.2f Onsite Power Plant Construction Motor Vehicle CO Emissions
- Table 8.1A.2g Onsite Power Plant Construction Motor Vehicle VOC Emissions
- Table 8.1A.2h Onsite Power Plant Construction Motor Vehicle $SO_x$ Emissions
- Table 8.1A.2i Onsite Power Plant Construction Motor Vehicle $NO_x$ Emissions
- Table 8.1A.2j Onsite Power Plant Construction Motor Vehicle $PM_{10}$ Emissions

Tables 8.1A.3a through 8.1A.3f summarize the fugitive dust emissions from power plant construction:

- Table 8.1A.3a Onsite Power Plant Construction Fugitive $PM_{10}$ Monthly Activity Levels
- Table 8.1A.3b Onsite Power Plant Construction Fugitive $PM_{10}$ Emissions
- Table 8.1A.3c Onsite Power Plant Construction Motor Vehicle Activity
- Table 8.1A.3d Onsite Power Plant Construction Motor Vehicle Fugitive $PM_{10}$ Emissions
- Table 8.1A.3e Fugitive $PM_{10}$ Emission Factors for Unpaved Roads
- Table 8.1A.3f Fugitive $PM_{10}$ Emission Factors for Bulldozing and Storage Pile Wind Erosion

Tables 8.1A.4a through 8.1A.4f contain the equations, number of equipment, and emission factors used to calculate onsite power plant construction emissions.

- Table 8.1A.4a Equations Used to Calculate Emissions
- Table 8.1A.4b Number of Onsite Power Plant Construction Equipment
- Table 8.1A.4c Number of Onsite Power Plant Construction Motor Vehicles
- Table 8.1A.4d Power Plant Construction Equipment Emission Factors
- Table 8.1A.4e Motor Vehicle Emission Factors
- Table 8.1A.4f Onsite Power Plant Construction Motor Vehicles Activity Assumptions

## Offsite Construction Emissions Tables

Tables 8.1A.5a through 8.1A.5w summarize the offsite motor vehicle emissions and offsite emissions from construction of the natural gas pipeline, the sewer water line and the transmission line.

- Table 8.1A.5a Offsite Motor Vehicle Usage during Power Plant Construction
- Table 8.1A.5b Offsite Motor Vehicle CO Emissions (Power Plant Construction)
- Table 8.1A.5c Offsite Motor Vehicle VOC Emissions (Power Plant Construction)
- Table 8.1A.5d Offsite Motor Vehicle $SO_x$ Emissions (Power Plant Construction)

- Table 8.1A.5e Offsite Motor Vehicle $NO_x$ Emissions (Power Plant Construction)
- Table 8.1A.5f Offsite Motor Vehicle $PM_{10}$ Emissions (Power Plant Construction)
- Table 8.1A.5g Offsite Natural Gas Pipeline Construction Equipment Requirements
- Table 8.1A.5h Offsite Natural Gas Pipeline Construction Equipment Emission Factors
- Table 8.1A.5i Equations Used to Calculate Emissions (Natural Gas Pipeline Construction)
- Table 8.1A.5j Offsite Emissions from Natural Gas Pipeline Construction
- Table 8.1A.5k Offsite VOC Emissions from Paving during Natural Gas Pipeline Construction
- Table 8.1A.5l Offsite Motor Vehicle Usage during Natural Gas Pipeline Construction
- Table 8.1A.5m Offsite Sewer Line Construction Equipment Requirements
- Table 8.1A.5n Offsite Sewer Line Construction Equipment Emission Factors
- Table 8.1A.5o Equations Used to Calculate Emissions (Sewer Line Construction)
- Table 8.1A.5p Offsite Emissions from Sewer Line Construction
- Table 8.1A.5q Offsite VOC Emissions from Paving during Sewer Line Construction
- Table 8.1A.5r Offsite Motor Vehicle Usage during Sewer Line Construction
- Table 8.1A.5s Offsite Transmission Line Construction Equipment Requirements
- Table 8.1A.5t Offsite Transmission Line Construction Equipment Emission Factors
- Table 8.1A.5u Equations Used to Calculate Emissions (Transmission Line Construction)
- Table 8.1A.5v Offsite Emissions from Transmission Line Construction
- Table 8.1A.5w Offsite Motor Vehicle Usage during Transmission Line Construction


## ISC Input Summary


- Table 8.1A.6 Summary of Emission Rates used for Dispersion Modeling
- Table 8.1A.7 ISC Construction Model Input Summary


## Localized Significance Threshold Methodology


- Table 8.1A.8 LST Conversion of 1-Hour $NO_x$ to $NO_2$ - Construction

**Table 8.1A.2a: Onsite Power Plant Construction Equipment CO Emissions**

| | CO Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite Equipment | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozer | 360.45 | 360.45 | 180.22 | 180.22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Excavator | 166.14 | 166.14 | 166.14 | 166.14 | 166.14 | 83.07 | 83.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grader | 96.10 | 96.10 | 96.10 | 96.10 | 96.10 | 96.10 | 96.10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forklift | 45.58 | 91.17 | 91.17 | 136.75 | 136.75 | 136.75 | 91.17 | 91.17 | 91.17 | 91.17 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 | 45.58 |
| Generator sets | 56.67 | 56.67 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 113.34 | 56.67 | 56.67 | 56.67 | 56.67 | 56.67 | 0 | 0 | 0 | 0 | 0 |
| Light Plant | 56.67 | 56.67 | 56.67 | 113.34 | 113.34 | 113.34 | 56.67 | 56.67 | 56.67 | 56.67 | 56.67 | 56.67 | 56.67 | 56.67 | 56.67 | 113.34 | 113.34 | 113.34 | 56.67 | 56.67 | 56.67 | 0 | 0 | 0 |
| Backhoe/Front End Loader | 147.49 | 147.49 | 147.49 | 147.49 | 73.74 | 73.74 | 73.74 | 73.74 | 73.74 | 73.74 | 0.00 | 0 | 0 | 0 | 73.74 | 73.74 | 73.74 | 73.74 | 73.74 | 73.74 | 73.74 | 73.74 | 0 | 0 |
| Rubber Tired Crane | 62.48 | 62.48 | 62.48 | 62.48 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 0 |
| Cherry Picker Hydraulic Crane | 0 | 0 | 62.48 | 62.48 | 62.48 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 124.96 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 |
| 300 Ton Cranes | 0 | 0 | 0 | 0 | 0 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 62.48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Concrete Vibrator | 85.96 | 114.61 | 114.61 | 114.61 | 114.61 | 85.96 | 57.31 | 57.31 | 57.31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Welding Machine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pipe Grinder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JLG Lift (Scissor Lift) | 0 | 0 | 0 | 0 | 45.58 | 45.58 | 91.17 | 91.17 | 136.75 | 136.75 | 182.34 | 182.34 | 182.34 | 91.17 | 91.17 | 91.17 | 91.17 | 91.17 | 91.17 | 91.17 | 91.17 | 91.17 | 45.58 | 45.58 |
| **Total (lbs/month, $E_m$)** | **1,077.54** | **1,151.78** | **1,090.71** | **1,192.96** | **1,047.06** | **1,060.29** | **974.97** | **795.80** | **841.39** | **784.08** | **710.34** | **647.86** | **585.38** | **494.21** | **511.28** | **505.47** | **505.47** | **505.47** | **448.80** | **392.13** | **392.13** | **335.46** | **216.13** | **153.65** |
| **Total (lbs/day, $E_d$)** | **48.98** | **52.35** | **49.58** | **54.23** | **47.59** | **48.20** | **44.32** | **36.17** | **38.24** | **35.64** | **32.29** | **29.45** | **26.61** | **22.46** | **23.24** | **22.98** | **22.98** | **22.98** | **20.40** | **17.82** | **17.82** | **15.25** | **9.82** | **6.98** |
| **Total (lbs/hr, $E_h$)** | **6.12** | **6.54** | **6.20** | **6.78** | **5.95** | **6.02** | **5.54** | **4.52** | **4.78** | **4.46** | **4.04** | **3.68** | **3.33** | **2.81** | **2.91** | **2.87** | **2.87** | **2.87** | **2.55** | **2.23** | **2.23** | **1.91** | **1.23** | **0.87** |
| **Year 1 Total (ton/yr, $E_t$)** | **5.69** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr, $E_t$)** | **2.52** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2b: Onsite Power Plant Construction Equipment VOC Emissions**

| | VOC Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Onsite Equipment** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozer | 74.27 | 74.27 | 37.14 | 37.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Excavator | 34.14 | 34.14 | 34.14 | 34.14 | 34.14 | 17.07 | 17.07 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grader | 21.82 | 21.82 | 21.82 | 21.82 | 21.82 | 21.82 | 21.82 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forklift | 13.90 | 27.81 | 27.81 | 41.71 | 41.71 | 41.71 | 27.81 | 27.81 | 27.81 | 27.81 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 | 13.90 |
| Generator sets | 16.54 | 16.54 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 33.09 | 16.54 | 16.54 | 16.54 | 16.54 | 16.54 | 0 | 0 | 0 | 0 | 0 |
| Light Plant | 16.54 | 16.54 | 16.54 | 33.09 | 33.09 | 33.09 | 16.54 | 16.54 | 16.54 | 16.54 | 16.54 | 16.54 | 16.54 | 16.54 | 16.54 | 33.09 | 33.09 | 33.09 | 16.54 | 16.54 | 16.54 | 0 | 0 | 0 |
| Backhoe/Front End Loader | 44.00 | 44.00 | 44.00 | 44.00 | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 | 0 | 0 | 0 | 0 | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 | 22.00 | 0 | 0 |
| Rubber Tired Crane | 15.14 | 15.14 | 15.14 | 15.14 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 0.0 |
| Cherry Picker Hydraulic Crane | 0 | 0 | 15.14 | 15.14 | 15.14 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 30.27 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 |
| 300 Ton Cranes | 0 | 0 | 0 | 0 | 0 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 15.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Concrete Vibrator | 15.63 | 20.84 | 20.84 | 20.84 | 20.84 | 15.63 | 10.42 | 10.42 | 10.42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Welding Machine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pipe Grinder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JLG Lift (Scissor Lift) | 0 | 0 | 0 | 0 | 13.90 | 13.90 | 27.81 | 27.81 | 41.71 | 41.71 | 55.62 | 55.62 | 55.62 | 27.81 | 27.81 | 27.81 | 27.81 | 27.81 | 27.81 | 27.81 | 27.81 | 27.81 | 13.90 | 13.90 |
| **Total (lbs/month, $E_m$)** | **252.00** | **271.11** | **265.65** | **296.10** | **266.01** | **274.00** | **252.24** | **213.35** | **227.25** | **216.83** | **194.83** | **179.70** | **164.56** | **136.75** | **142.21** | **143.62** | **143.62** | **143.62** | **127.07** | **110.53** | **110.53** | **93.98** | **58.08** | **42.94** |
| **Total (lbs/day, $E_d$)** | **11.45** | **12.32** | **12.08** | **13.46** | **12.09** | **12.45** | **11.47** | **9.70** | **10.33** | **9.86** | **8.86** | **8.17** | **7.48** | **6.22** | **6.46** | **6.53** | **6.53** | **6.53** | **5.78** | **5.02** | **5.02** | **4.27** | **2.64** | **1.95** |
| **Total (lbs/hr, $E_h$)** | **1.43** | **1.54** | **1.51** | **1.68** | **1.51** | **1.56** | **1.43** | **1.21** | **1.29** | **1.23** | **1.11** | **1.02** | **0.94** | **0.78** | **0.81** | **0.82** | **0.82** | **0.82** | **0.72** | **0.63** | **0.63** | **0.53** | **0.33** | **0.24** |
| **Year 1 Total (ton/yr, $E_t$)** | **1.45** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr, $E_t$)** | **0.71** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2c: Onsite Power Plant Construction Equipment NOx Emissions**

| Onsite Equipment | $NO_X$ Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozer | 991.58 | 991.58 | 495.79 | 495.79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Excavator | 400.58 | 400.58 | 400.58 | 400.58 | 400.58 | 200.29 | 200.29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grader | 253.79 | 253.79 | 253.79 | 253.79 | 253.79 | 253.79 | 253.79 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forklift | 80.43 | 160.86 | 160.86 | 241.30 | 241.30 | 241.30 | 160.86 | 160.86 | 160.86 | 160.86 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 | 80.43 |
| Generator sets | 115.46 | 115.46 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 230.91 | 115.46 | 115.46 | 115.46 | 115.46 | 115.46 | 0 | 0 | 0 | 0 | 0 |
| Light Plant | 115.46 | 115.46 | 115.46 | 230.91 | 230.91 | 230.91 | 115.46 | 115.46 | 115.46 | 115.46 | 115.46 | 115.46 | 115.46 | 115.46 | 115.46 | 230.91 | 230.91 | 230.91 | 115.46 | 115.46 | 115.46 | 0 | 0 | 0 |
| Backhoe/Front End Loader | 287.23 | 287.23 | 287.23 | 287.23 | 143.62 | 143.62 | 143.62 | 143.62 | 143.62 | 143.62 | 0.00 | 0.00 | 0.00 | 0.00 | 143.62 | 143.62 | 143.62 | 143.62 | 143.62 | 143.62 | 143.62 | 143.62 | 0 | 0 |
| Rubber Tired Crane | 180.05 | 180.05 | 180.05 | 180.05 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 0 |
| Cherry Picker Hydraulic Crane | 0 | 0 | 180.05 | 180.05 | 180.05 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 360.10 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 |
| 300 Ton Cranes | 0 | 0 | 0 | 0 | 0 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 180.05 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Concrete Vibrator | 140.66 | 187.55 | 187.55 | 187.55 | 187.55 | 140.66 | 93.77 | 93.77 | 93.77 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Welding Machine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pipe Grinder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JLG Lift (Scissor Lift) | 0 | 0 | 0 | 0 | 80.43 | 80.43 | 160.86 | 160.86 | 241.30 | 241.30 | 321.73 | 321.73 | 321.73 | 160.86 | 160.86 | 160.86 | 160.86 | 160.86 | 160.86 | 160.86 | 160.86 | 160.86 | 80.43 | 80.43 |
| **Total (lbs/month, $E_m$)** | **2,565.24** | **2,692.55** | **2,492.27** | **2,688.15** | **2,309.23** | **2,422.15** | **2,259.80** | **1,805.72** | **1,886.16** | **1,792.38** | **1,648.77** | **1,468.72** | **1,288.67** | **1,127.81** | **1,155.97** | **1,091.38** | **1,091.38** | **1,091.38** | **975.92** | **860.46** | **860.46** | **745.01** | **520.96** | **340.91** |
| **Total (lbs/day, $E_d$)** | **116.60** | **122.39** | **113.28** | **122.19** | **104.96** | **110.10** | **102.72** | **82.08** | **85.73** | **81.47** | **74.94** | **66.76** | **58.58** | **51.26** | **52.54** | **49.61** | **49.61** | **49.61** | **44.36** | **39.11** | **39.11** | **33.86** | **23.68** | **15.50** |
| **Total (lbs/hr, $E_h$)** | **14.58** | **15.30** | **14.16** | **15.27** | **13.12** | **13.76** | **12.84** | **10.26** | **10.72** | **10.18** | **9.37** | **8.35** | **7.322** | **6.408** | **6.568** | **6.201** | **6.201** | **6.201** | **5.545** | **4.889** | **4.889** | **4.233** | **2.96** | **1.937** |
| **Year 1 Total (ton/yr, $E_t$)** | **13.02** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr, $E_t$)** | **5.58** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2d: Onsite Power Plant Construction Equipment SOx Emissions**

| Onsite Equipment | $SO_X$ Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozer | 4.77 | 4.77 | 2.39 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Excavator | 2.57 | 2.57 | 2.57 | 2.57 | 2.57 | 1.28 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grader | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forklift | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Generator sets | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 0 | 0 | 0 | 0 |
| Light Plant | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 | 0 | 0 | 0 |
| Backhoe/Front End Loader | 1.21 | 1.21 | 1.21 | 1.21 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0 | 0 | 0 | 0 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0 | 0 |
| Rubber Tired Crane | 1.03 | 1.03 | 1.03 | 1.03 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 0 |
| Cherry Picker Hydraulic Crane | 0 | 0 | 1.03 | 1.03 | 1.03 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 2.07 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| 300 Ton Cranes | 0 | 0 | 0 | 0 | 0 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Concrete Vibrator | 1.56 | 2.08 | 2.08 | 2.08 | 2.08 | 1.56 | 1.04 | 1.04 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Welding Machine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pipe Grinder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JLG Lift (Scissor Lift) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total (lbs/month, $E_m$)** | **12.62** | **13.14** | **11.79** | **11.80** | **9.84** | **10.11** | **9.58** | **6.84** | **6.84** | **5.80** | **5.19** | **4.16** | **3.12** | **3.12** | **3.72** | **2.69** | **2.69** | **2.69** | **2.69** | **2.68** | **2.68** | **2.68** | **2.07** | **1.03** |
| **Total (lbs/day, $E_d$)** | **0.57** | **0.60** | **0.54** | **0.54** | **0.45** | **0.46** | **0.44** | **0.31** | **0.31** | **0.26** | **0.24** | **0.19** | **0.14** | **0.14** | **0.17** | **0.12** | **0.12** | **0.12** | **0.12** | **0.12** | **0.12** | **0.12** | **0.09** | **0.05** |
| **Total (lbs/hr, $E_h$)** | **0.072** | **0.075** | **0.067** | **0.067** | **0.056** | **0.057** | **0.0544** | **0.039** | **0.039** | **0.033** | **0.029** | **0.024** | **0.02** | **0.02** | **0.02** | **0.02** | **0.02** | **0.02** | **0.02** | **0.02** | **0.02** | **0.02** | **0.01** | **0.01** |
| **Year 1 Total (ton/yr, $E_t$)** | **0.05** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2Total (ton/yr, $E_t$)** | **0.02** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2e: Onsite Power Plant Construction Equipment $PM_{10}$ Emissions**

| Onsite Equipment | $PM_{10}$ Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozer | 39.42 | 39.42 | 19.71 | 19.71 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Excavator | 21.12 | 21.12 | 21.12 | 21.12 | 21.12 | 10.56 | 10.56 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Grader | 13.02 | 13.02 | 13.02 | 13.02 | 13.02 | 13.02 | 13.02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forklift | 8.80 | 17.60 | 17.60 | 26.40 | 26.40 | 26.40 | 17.60 | 17.60 | 17.60 | 17.60 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 | 8.80 |
| Generator sets | 8.45 | 8.45 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 16.90 | 8.45 | 8.45 | 8.45 | 8.45 | 8.45 | 0 | 0 | 0 | 0 | 0 |
| Light Plant | 8.45 | 8.45 | 8.45 | 16.90 | 16.90 | 16.90 | 8.45 | 8.45 | 8.45 | 8.45 | 8.45 | 8.45 | 8.45 | 8.45 | 8.45 | 16.90 | 16.90 | 16.90 | 8.45 | 8.45 | 8.45 | 0 | 0 | 0 |
| Backhoe/Front End Loader | 29.22 | 29.22 | 29.22 | 29.22 | 14.61 | 14.61 | 14.61 | 14.61 | 14.61 | 14.61 | 0.00 | 0.00 | 0.00 | 0.00 | 14.61 | 14.61 | 14.61 | 14.61 | 14.61 | 14.61 | 14.61 | 14.61 | 0 | 0 |
| Rubber Tired Crane | 9.15 | 9.15 | 9.15 | 9.15 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 0 |
| Cherry Picker Hydraulic Crane | 0 | 0 | 9.15 | 9.15 | 9.15 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 18.30 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 |
| 300 Ton Cranes | 0 | 0 | 0 | 0 | 0 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 9.15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Concrete Vibrator | 7.81 | 10.42 | 10.42 | 10.42 | 10.42 | 7.81 | 5.21 | 5.21 | 5.21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Welding Machine | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pipe Grinder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| JLG Lift (Scissor Lift) | 0 | 0 | 0 | 0 | 8.80 | 8.80 | 17.60 | 17.60 | 26.40 | 26.40 | 35.20 | 35.20 | 35.20 | 17.60 | 17.60 | 17.60 | 17.60 | 17.60 | 17.60 | 17.60 | 17.60 | 17.60 | 8.80 | 8.80 |
| **Total (lbs/month, $E_m$)** | **145.45** | **156.85** | **154.74** | **171.99** | **155.62** | **160.76** | **149.71** | **126.12** | **134.92** | **129.71** | **115.10** | **105.95** | **96.80** | **79.20** | **85.36** | **84.66** | **84.66** | **84.66** | **76.21** | **67.76** | **67.76** | **59.31** | **35.90** | **26.75** |
| **Total (lbs/day, $E_d$)** | **6.61** | **7.13** | **7.03** | **7.82** | **7.07** | **7.31** | **6.80** | **5.73** | **6.13** | **5.90** | **5.23** | **4.82** | **4.40** | **3.60** | **3.88** | **3.85** | **3.85** | **3.85** | **3.46** | **3.08** | **3.08** | **2.70** | **1.63** | **1.22** |
| **Total (lbs/hr, $E_h$)** | **0.83** | **0.89** | **0.88** | **0.98** | **0.88** | **0.91** | **0.85** | **0.72** | **0.77** | **0.74** | **0.65** | **0.60** | **0.55** | **0.45** | **0.49** | **0.48** | **0.48** | **0.48** | **0.43** | **0.39** | **0.39** | **0.34** | **0.20** | **0.15** |
| **Year 1 Total (ton/yr, $E_t$)** | **0.85** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr, $E_t$)** | **0.42** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2f: Onsite Power Plant Construction Motor Vehicle CO Emissions**

| Vehicle Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **CO Emissions ($E_h$, lbs/hr)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.017 | 0.034 | 0.034 | 0.034 | 0.034 | 0.052 | 0.052 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.052 | 0.052 | 0.034 | 0.034 | 0.034 | 0.034 | 0.034 | 0.034 |
| Onsite Dump Truck | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 | 0.011 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0 | 0.005 | 0.005 | 0.005 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.010 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0.005 | 0 |
| **Total (lbs/hr)** | **0.034** | **0.051** | **0.051** | **0.051** | **0.051** | **0.068** | **0.068** | **0.085** | **0.085** | **0.090** | **0.090** | **0.090** | **0.090** | **0.090** | **0.090** | **0.090** | **0.073** | **0.068** | **0.051** | **0.051** | **0.051** | **0.051** | **0.051** | **0.046** |
| | **CO Emissions ($E_d$, lbs/day)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.092 | 0.183 | 0.183 | 0.183 | 0.183 | 0.275 | 0.275 | 0.366 | 0.366 | 0.366 | 0.366 | 0.366 | 0.366 | 0.366 | 0.366 | 0.366 | 0.275 | 0.275 | 0.183 | 0.183 | 0.183 | 0.183 | 0.183 | 0.183 |
| Onsite Dump Truck | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 | 0.069 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0 | 0.020 | 0.020 | 0.020 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0 |
| **Total (lbs/day)** | **0.180** | **0.271** | **0.271** | **0.271** | **0.271** | **0.363** | **0.363** | **0.455** | **0.455** | **0.474** | **0.474** | **0.474** | **0.474** | **0.474** | **0.474** | **0.474** | **0.383** | **0.363** | **0.271** | **0.271** | **0.271** | **0.271** | **0.271** | **0.252** |
| | **CO Emissions ($E_m$, lbs/month)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 2.01 | 4.03 | 4.03 | 4.03 | 4.03 | 6.04 | 6.04 | 8.06 | 8.06 | 8.06 | 8.06 | 8.06 | 8.06 | 8.06 | 8.06 | 8.06 | 6.04 | 6.04 | 4.03 | 4.03 | 4.03 | 4.03 | 4.03 | 4.03 |
| Onsite Dump Truck | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 | 1.51 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0 | 0.43 | 0.43 | 0.43 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0 |
| **Total (lbs/month)** | **3.96** | **5.97** | **5.97** | **5.97** | **5.97** | **7.99** | **7.99** | **10.00** | **10.00** | **10.43** | **10.43** | **10.43** | **10.43** | **10.43** | **10.43** | **10.43** | **8.42** | **7.99** | **5.97** | **5.97** | **5.97** | **5.97** | **5.97** | **5.54** |
| **Year 1 Total (ton/yr)** | **0.048** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 1 Total (ton/yr)** | **0.047** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2g: Onsite Power Plant Construction Motor Vehicle VOC Emissions**

| Vehicle Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **VOC Emissions ($E_h$, lbs/hr)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.0019 | 0.0037 | 0.0037 | 0.0037 | 0.0037 | 0.0056 | 0.0056 | 0.0074 | 0.0074 | 0.0074 | 0.0074 | 0.0074 | 0.0074 | 0.0074 | 0.0074 | 0.0074 | 0.0056 | 0.0056 | 0.0037 | 0.0037 | 0.0037 | 0.0037 | 0.0037 | 0.0037 |
| Onsite Dump Truck | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 | 0.0025 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0022 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0 |
| **Total (lbs/hr)** | **0.005** | **0.007** | **0.007** | **0.007** | **0.007** | **0.009** | **0.009** | **0.011** | **0.011** | **0.012** | **0.012** | **0.012** | **0.012** | **0.012** | **0.012** | **0.012** | **0.010** | **0.009** | **0.007** | **0.007** | **0.007** | **0.007** | **0.007** | **0.006** |
| | **VOC Emissions ($E_d$, lbs/day)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.0099 | 0.020 | 0.020 | 0.020 | 0.020 | 0.030 | 0.030 | 0.040 | 0.040 | 0.040 | 0.040 | 0.040 | 0.040 | 0.040 | 0.040 | 0.040 | 0.030 | 0.030 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 |
| Onsite Dump Truck | 0.0044 | 0.0044 | 0.0044 | 0.0044 | 0.0044 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 | 0.015 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.0044 | 0.0044 | 0.0044 | 0.0044 | 0.0088 | 0.0088 | 0 | 0.0088 | 0.0088 | 0.0088 | 0.0088 | 0.0088 | 0.0044 | 0.0044 | 0.0044 | 0.0044 | 0.0044 | 0.0044 | 0 |
| **Total (lbs/day)** | **0.030** | **0.039** | **0.039** | **0.039** | **0.039** | **0.049** | **0.049** | **0.059** | **0.059** | **0.064** | **0.064** | **0.064** | **0.064** | **0.064** | **0.064** | **0.064** | **0.054** | **0.049** | **0.039** | **0.039** | **0.039** | **0.039** | **0.039** | **0.035** |
| | **VOC Emissions ($E_m$, lbs/month)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.22 | 0.43 | 0.43 | 0.43 | 0.43 | 0.65 | 0.65 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.65 | 0.65 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 |
| Onsite Dump Truck | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 | 0.34 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.10 | 0.10 | 0.10 | 0.10 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.19 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0 |
| **Total (lbs/month)** | **0.65** | **0.87** | **0.87** | **0.87** | **0.87** | **1.08** | **1.08** | **1.30** | **1.30** | **1.40** | **1.40** | **1.40** | **1.40** | **1.40** | **1.40** | **1.40** | **1.18** | **1.08** | **0.87** | **0.87** | **0.87** | **0.87** | **0.87** | **0.77** |
| **Year 1 Total (ton/yr)** | **0.007** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 1 Total (ton/yr)** | **0.006** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2h: Onsite Power Plant Construction Motor Vehicle SOx Emissions**

| Vehicle Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SOx Emissions ($E_h$, lbs/hr)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.000012 | 0.000024 | 0.000024 | 0.000024 | 0.000024 | 0.000036 | 0.000036 | 0.000048 | 0.000048 | 0.000048 | 0.000048 | 0.000048 | 0.000048 | 0.000048 | 0.000048 | 0.000048 | 0.000036 | 0.000036 | 0.000024 | 0.000024 | 0.000024 | 0.000024 | 0.000024 | 0.000024 |
| Onsite Dump Truck | 0.000041 | 0.000041 | 0.000041 | 0.000041 | 0.000041 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 | 0.000095 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.000041 | 0.000041 | 0.000041 | 0.000041 | 0.000082 | 0.000082 | 0.000082 | 0.000082 | 0.000082 | 0.000082 | 0.000082 | 0.000082 | 0.000041 | 0.000041 | 0.000041 | 0.000041 | 0.000041 | 0.000041 | 0 |
| **Total (lbs/hr)** | **0.000148** | **0.000160** | **0.000160** | **0.000160** | **0.000160** | **0.000172** | **0.000172** | **0.000184** | **0.000184** | **0.000225** | **0.000225** | **0.000225** | **0.00022** | **0.00022** | **0.00022** | **0.00022** | **0.00021** | **0.00017** | **0.00016** | **0.00016** | **0.00016** | **0.00016** | **0.00016** | **0.00012** |
| | **SOx Emissions ($E_d$, lbs/day)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.00006 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00019 | 0.00019 | 0.00026 | 0.00026 | 0.00026 | 0.00026 | 0.00026 | 0.00026 | 0.00026 | 0.00026 | 0.00026 | 0.00019 | 0.00019 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 | 0.00013 |
| Onsite Dump Truck | 0.00016 | 0.00016 | 0.00016 | 0.00016 | 0.00016 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 | 0.00057 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.00016 | 0.00016 | 0.00016 | 0.00016 | 0.00033 | 0.00033 | 0.00033 | 0.00033 | 0.00033 | 0.00033 | 0.00033 | 0.00033 | 0.00016 | 0.00016 | 0.00016 | 0.00016 | 0.00016 | 0.00016 | 0 |
| **Total (lbs/day)** | **0.00080** | **0.00086** | **0.00086** | **0.00086** | **0.00086** | **0.00092** | **0.00092** | **0.00099** | **0.00099** | **0.00115** | **0.00115** | **0.00115** | **0.00115** | **0.00115** | **0.00115** | **0.00115** | **0.00109** | **0.00092** | **0.00086** | **0.00086** | **0.00086** | **0.00086** | **0.00086** | **0.00070** |
| | **SOx Emissions ($E_m$, lbs/month)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.0014 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0042 | 0.0042 | 0.0057 | 0.0057 | 0.0057 | 0.0057 | 0.0057 | 0.0057 | 0.0057 | 0.0057 | 0.0057 | 0.0042 | 0.0042 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 | 0.0028 |
| Onsite Dump Truck | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.0125 | 0.0125 | 0.0125 | 0.0125 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 | 0.013 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0072 | 0.0072 | 0.0072 | 0.0072 | 0.0072 | 0.0072 | 0.0072 | 0.0072 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0 |
| **Total (lbs/month)** | **0.018** | **0.019** | **0.019** | **0.019** | **0.019** | **0.020** | **0.020** | **0.022** | **0.022** | **0.025** | **0.025** | **0.025** | **0.025** | **0.025** | **0.025** | **0.025** | **0.024** | **0.020** | **0.019** | **0.019** | **0.019** | **0.019** | **0.019** | **0.015** |
| **Year 1 Total (ton/yr)** | **0.0001** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 1 Total (ton/yr)** | **0.0001** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2i: Onsite Power Plant Construction Motor Vehicle NOx Emissions**

| Vehicle Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **NOx Emissions ($E_h$, lbs/hr)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.0018 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0055 | 0.0055 | 0.0073 | 0.0073 | 0.0073 | 0.0073 | 0.0073 | 0.0073 | 0.0073 | 0.0073 | 0.0073 | 0.0055 | 0.0055 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0036 | 0.0036 |
| Onsite Dump Truck | 0.0318 | 0.0318 | 0.0318 | 0.0318 | 0.0318 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 | 0.074 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.032 | 0.032 | 0.032 | 0.032 | 0.064 | 0.064 | 0.064 | 0.064 | 0.064 | 0.064 | 0.064 | 0.064 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0.032 | 0 |
| **Total (lbs/hr)** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.14** | **0.14** | **0.14** | **0.14** | **0.14** | **0.14** | **0.14** | **0.14** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.11** | **0.08** |
| | **NOx Emissions ($E_d$, lbs/day)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.010 | 0.019 | 0.019 | 0.019 | 0.019 | 0.029 | 0.029 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.039 | 0.029 | 0.029 | 0.019 | 0.019 | 0.019 | 0.019 | 0.019 | 0.019 |
| Onsite Dump Truck | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 | 0.44 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.13 | 0.13 | 0.13 | 0.13 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.00 |
| **Total (lbs/day)** | **0.58** | **0.59** | **0.59** | **0.59** | **0.59** | **0.60** | **0.60** | **0.61** | **0.61** | **0.74** | **0.74** | **0.74** | **0.74** | **0.74** | **0.74** | **0.74** | **0.73** | **0.60** | **0.59** | **0.59** | **0.59** | **0.59** | **0.59** | **0.46** |
| | **NOx Emissions ($E_m$, lbs/month)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.21 | 0.43 | 0.43 | 0.43 | 0.43 | 0.64 | 0.64 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.64 | 0.64 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 | 0.43 |
| Onsite Dump Truck | 2.80 | 2.80 | 2.80 | 2.80 | 2.80 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 9.74 | 9.74 | 9.74 | 9.74 | 9.74 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 | 9.7 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 2.8 | 2.8 | 2.8 | 2.8 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 0 |
| **Total (lbs/month)** | **12.76** | **12.97** | **12.97** | **12.97** | **12.97** | **13.18** | **13.18** | **13.40** | **13.40** | **16.20** | **16.20** | **16.20** | **16.20** | **16.20** | **16.20** | **16.20** | **15.98** | **13.18** | **12.97** | **12.97** | **12.97** | **12.97** | **12.97** | **10.17** |
| **Year 1 Total (ton/yr)** | **0.083** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 1 Total (ton/yr)** | **0.084** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.2j: Onsite Power Plant Construction Motor Vehicle $PM_{10}$ Emissions**

| Vehicle Type | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **$PM_{10}$ Emissions ($E_h$, lbs/hr)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.00011 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00032 | 0.00032 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00043 | 0.00032 | 0.00032 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00021 | 0.00021 |
| Onsite Dump Truck | 0.00058 | 0.00058 | 0.00058 | 0.00058 | 0.00058 | 0.0 | 0.0 | 0.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 | 0.0013 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0 | 0.00058 | 0.00058 | 0.00058 | 0.00115 | 0.00115 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0012 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0.0006 | 0 |
| **Total (lbs/hr)** | **0.0020** | **0.0021** | **0.0021** | **0.0021** | **0.0021** | **0.0022** | **0.0022** | **0.0023** | **0.0023** | **0.0029** | **0.0029** | **0.0029** | **0.0029** | **0.0029** | **0.0029** | **0.0029** | **0.0028** | **0.0022** | **0.0021** | **0.0021** | **0.0021** | **0.0021** | **0.0021** | **0.0015** |
| | **$PM_{10}$ Emissions ($E_d$, lbs/day)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.00057 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0017 | 0.0017 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0017 | 0.0017 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 | 0.0011 |
| Onsite Dump Truck | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 | 0.0080 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0046 | 0.0046 | 0.0046 | 0.0046 | 0.0046 | 0.0046 | 0.0046 | 0.0046 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0.0023 | 0 |
| **Total (lbs/day)** | **0.011** | **0.011** | **0.011** | **0.011** | **0.011** | **0.012** | **0.012** | **0.013** | **0.013** | **0.015** | **0.015** | **0.015** | **0.015** | **0.015** | **0.015** | **0.015** | **0.014** | **0.012** | **0.011** | **0.011** | **0.011** | **0.011** | **0.011** | **0.009** |
| | **$PM_{10}$ Emissions ($E_m$, lbs/month)** | | | | | | | | | | | | | | | | | | | | | | | |
| Onsite Pickup Truck | 0.013 | 0.025 | 0.025 | 0.025 | 0.025 | 0.038 | 0.038 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.050 | 0.038 | 0.04 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Onsite Dump Truck | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 | 0.18 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0.051 | 0.051 | 0.051 | 0.051 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 | 0.0 |
| **Total (lbs/month)** | **0.24** | **0.25** | **0.25** | **0.25** | **0.25** | **0.26** | **0.26** | **0.28** | **0.28** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.32** | **0.26** | **0.25** | **0.25** | **0.25** | **0.25** | **0.25** | **0.20** |
| **Year 1 Total (ton/yr)** | **0.0017** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 1 Total (ton/yr)** | **0.0017** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.3a: Onsite Power Plant Construction Fugitive $PM_{10}$ Monthly Activity Levels**

| Source | Monthly Activity Levels | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozing (hr) [a] | 352 | 352 | 176 | 176 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Backhoe/Loader on Unpaved Areas (miles) [b] | 176 | 176 | 176 | 176 | 88 | 88 | 88 | 88 | 88 | 88 | 0 | 0 | 0 | 0 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 88 | 0 | 0 |
| Storage Pile Wind Erosion (acres) | 0.5 | 0.5 | 0.5 | 0.5 | 0.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

[a] Assumes bulldozers operate for 8 hours/day, 22 days/month.

[b] Assumes backhoe/loaders drive 4 miles/day, 22 days/month.

**Table 8.1A.3b: Onsite Power Plant Construction Fugitive $PM_{10}$ Emissions**

| Source | Fugitive $PM_{10}$ Emissions (lb/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Bulldozing | 115.93 | 115.93 | 57.97 | 57.97 | 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 | 0.00 | 0.00 | 0.00 | 0.00 |
| Backhoe/Loader on Unpaved Areas[a] | 115.58 | 115.58 | 115.58 | 115.58 | 57.79 | 57.79 | 57.79 | 57.79 | 57.79 | 57.79 | 0.00 | 0.00 | 0.00 | 0.00 | 57.79 | 57.79 | 57.79 | 57.79 | 57.79 | 57.79 | 57.79 | 57.79 | 0.00 | 0.00 |
| Storage Pile Wind Erosion[b] | 26.81 | 26.81 | 26.81 | 26.81 | 26.81 | 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 | 0.00 | 0.00 | 0.00 |
| **Total (lbs/month)** | **258.33** | **258.33** | **200.36** | **200.36** | **84.61** | **57.79** | **57.79** | **57.79** | **57.79** | **57.79** | **0.00** | **0.00** | **0.00** | **0.00** | **57.79** | **57.79** | **57.79** | **57.79** | **57.79** | **57.79** | **57.79** | **57.79** | **0.00** | **0.00** |
| **Total (lbs/day)** | **11.42** | **11.42** | **8.78** | **8.78** | **3.52** | **2.63** | **2.63** | **2.63** | **2.63** | **2.63** | **0.00** | **0.00** | **0.00** | **0.00** | **2.63** | **2.63** | **2.63** | **2.63** | **2.63** | **2.63** | **2.63** | **2.63** | **0.00** | **0.00** |
| **Total (lbs/hr)** | **1.35** | **1.35** | **1.02** | **1.02** | **0.37** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.00** | **0.00** | **0.00** | **0.00** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.33** | **0.00** | **0.00** |

[a] Calculation based on highest (controlled) unpaved road emission factor of 0.66 lb/mile.

[b] Based on 30 days/month.

**Table 8.1A.3c: Onsite Power Plant Construction Motor Vehicle Activity[a]**

| Vehicle Type | Maximum Miles Traveled per Hour | Miles/Day | Working Days per Month |
|---|---|---|---|
| Onsite Pickup Truck | 1.3 | 7 | 22 |
| Onsite Dump Truck | 0.9 | 4 | 22 |
| Onsite Water Truck | 2.1 | 12 | 22 |
| Semi Tractor | 0.9 | 4 | 22 |

[a]See Onsite Vehicle Activity Assumption table for travel distances used to estimate maximum hourly and daily miles traveled.

**Table 8.1A.3d: Onsite Power Plant Construction Motor Vehicle Fugitive $PM_{10}$ Emissions**

| Vehicle Type | Maximum Hourly Fugitive $PM_{10}$ Emissions (lb/hr) for Each Month | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Onsite Pickup Truck | 0.88 | 1.60 | 1.60 | 1.60 | 1.60 | 2.25 | 2.25 | 2.85 | 2.85 | 3.06 | 3.06 | 3.06 | 3.06 | 3.06 | 3.06 | 3.06 | 2.40 | 2.25 | 1.60 | 1.60 | 1.60 | 1.60 | 1.60 | 1.42 |
| Onsite Dump Truck | 0.59 | 0.53 | 0.53 | 0.53 | 0.53 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 1.36 | 1.24 | 1.24 | 1.24 | 1.24 | 1.16 | 1.16 | 1.10 | 1.10 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.24 | 1.16 | 1.24 | 1.24 | 1.24 | 1.24 | 1.24 | 1.10 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.02 | 1.07 | 0.50 | 0.53 | 0.53 | 0.53 | 0.53 | 0.53 | 0 |
| **Total (lbs/hr)** | **2.83** | **3.38** | **3.38** | **3.38** | **3.38** | **3.91** | **3.91** | **4.42** | **4.42** | **5.26** | **5.26** | **5.26** | **5.26** | **5.26** | **5.26** | **5.26** | **4.71** | **3.91** | **3.38** | **3.38** | **3.38** | **3.38** | **3.38** | **2.52** |
| **Vehicle Type** | **Daily Fugitive $PM_{10}$ Emissions (lb/day) for Each Month** | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Onsite Pickup Truck | 4.69 | 8.54 | 8.54 | 8.54 | 8.54 | 11.99 | 11.99 | 15.19 | 15.19 | 16.31 | 16.31 | 16.31 | 16.31 | 16.31 | 16.31 | 16.31 | 12.82 | 11.99 | 8.54 | 8.54 | 8.54 | 8.54 | 8.54 | 7.59 |
| Onsite Dump Truck | 2.35 | 2.14 | 2.14 | 2.14 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 8.16 | 7.43 | 7.43 | 7.43 | 7.43 | 6.95 | 6.95 | 6.61 | 6.61 | 7.09 | 7.09 | 7.09 | 7.09 | 7.09 | 7.09 | 7.09 | 7.43 | 6.95 | 7.43 | 7.43 | 7.43 | 7.43 | 7.43 | 6.61 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 2.00 | 2.00 | 1.90 | 1.90 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.08 | 4.27 | 2.00 | 2.14 | 2.14 | 2.14 | 2.14 | 2.14 | 0 |
| **Total (lbs/day)** | **15.20** | **18.11** | **18.11** | **18.11** | **18.11** | **20.93** | **20.93** | **23.69** | **23.69** | **27.48** | **27.48** | **27.48** | **27.48** | **27.48** | **27.48** | **27.48** | **24.52** | **20.93** | **18.11** | **18.11** | **18.11** | **18.11** | **18.11** | **14.20** |
| **Vehicle Type** | **Monthly Fugitive $PM_{10}$ Emissions (lb/month)** | | | | | | | | | | | | | | | | | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| Onsite Pickup Truck | 103.19 | 187.97 | 187.97 | 187.97 | 187.97 | 263.67 | 263.67 | 334.08 | 334.08 | 358.74 | 358.74 | 358.74 | 358.74 | 358.74 | 358.74 | 358.74 | 281.96 | 263.67 | 187.97 | 187.97 | 187.97 | 187.97 | 187.97 | 167.04 |
| Onsite Dump Truck | 51.60 | 46.99 | 46.99 | 46.99 | 46.99 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Onsite Water Truck | 179.57 | 163.55 | 163.55 | 163.55 | 163.55 | 152.94 | 152.94 | 145.34 | 145.34 | 156.06 | 156.06 | 156.06 | 156.06 | 156.06 | 156.06 | 156.06 | 163.55 | 152.94 | 163.55 | 163.55 | 163.55 | 163.55 | 163.55 | 145.34 |
| Semi Tractor | 0 | 0 | 0 | 0 | 0 | 43.95 | 43.95 | 41.76 | 41.76 | 89.68 | 89.68 | 89.68 | 89.68 | 89.68 | 89.68 | 89.68 | 93.99 | 43.95 | 46.99 | 46.99 | 46.99 | 46.99 | 46.99 | 0 |
| **Total (lb/month)** | **334.36** | **398.52** | **398.52** | **398.52** | **398.52** | **460.56** | **460.56** | **521.18** | **521.18** | **604.49** | **604.49** | **604.49** | **604.49** | **604.49** | **604.49** | **604.49** | **539.50** | **460.56** | **398.52** | **398.52** | **398.52** | **398.52** | **398.52** | **312.38** |
| **Year 1 Total (ton/yr)** | **2.853** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr)** | **2.861** | | | | | | | | | | | | | | | | | | | | | | | |

### Table 8.1A.3e: Fugitive $PM_{10}$ Emission Factors for Unpaved Roads

**Motor Vehicles and Equipment on Unpaved Surfaces**

Emission Factor [lb/mi] = 1.5 x (silt content [%] / 12)$^{0.9}$ x (average vehicle weight [tons] / 3)$^{0.45}$

Reference: AP-42, Section 13.2.2, March 2006

| Parameter | Value by Month | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Average Vehicle Weight (tons) by month | 12.00 | 9.75 | 9.75 | 9.75 | 9.75 | 8.40 | 8.40 | 7.50 | 7.50 | 8.79 | 8.79 | 8.79 | 8.79 | 8.79 | 8.79 | 8.79 | 9.75 | 8.40 | 9.75 | 9.75 | 9.75 | 9.75 | 9.75 | 7.50 |
| Silt Content | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 | 8.5 |
| **Emission Factor (Uncontrolled, lb/mile)** | 2.05 | 1.87 | 1.87 | 1.87 | 1.87 | 1.75 | 1.75 | 1.66 | 1.66 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.78 | 1.87 | 1.75 | 1.87 | 1.87 | 1.87 | 1.87 | 1.87 | 1.66 |
| **Reduction from Watering Twice/Day** | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% | 68% |
| **Controlled Emission Factor (lb/mile)** | 0.66 | 0.60 | 0.60 | 0.60 | 0.60 | 0.56 | 0.56 | 0.53 | 0.53 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.60 | 0.56 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 | 0.53 |

Reference for Silt Content: AP-42, Section 13.2.2, Table 13.2.2-1, Average for a Construction Site, Scraper Route

Reference for Control Efficiency: SCAQMD CEQA Handbook, Table 11-4

### Table 8.1A.3f: Fugitive $PM_{10}$ Emission Factors for Bulldozing and Storage Pile Wind Erosion

**Bulldozing**

Emission Factor [lb/hr] = 0.75 x (silt content [%])$^{1.5}$ / (moisture(%))$^{1.4}$

Reference: AP-42, Table 11.9-1, October 1998

| Parameter | Value | Basis |
|---|---|---|
| Silt Content | 8.50 | AP-42, Section 13.2.2, Table 13.2.2-1 |
| Moisture | 7.90 | AP-42, Section 11.9, Table 11.9-3 |

| | | |
|---|---|---|
| Emission Factor (Uncontrolled) | 1.03 lb/hr | |
| Reduction from Watering Twice/Day | 68% | Reference: SCAQMD CEQA Handbook, Table 11-4 |
| Controlled Emission Factor | 0.33 lb/hr | |

**Storage Pile Wind Erosion**

Emission Factor [lb/day-acre] = 1.7 x (silt content [%] / 1.5) x (365 - p / 235) x (% of time unobstructed wind exceeds 12 mph / 15)

Reference: SCAQMD CEQA Air Quality Handbook, November 1993. Table A9-9-E.

| Parameter | Value | Basis |
|---|---|---|
| Silt Content | 8.5 | AP-42, Section 13.2.2, Table 13.2.2-1 |
| Pct. time wind > 12 mph | 2.33 | Based on met data for 1981 used for modeling, SCAQMD website http://www.aqmd.gov/smog/metdata/MeteorologicalData.html |
| p (# of days of precipitation) | 34 | SCAQMD 1993 CEQA Air Quality Handbook |

| | | |
|---|---|---|
| Emission Factor (Uncontrolled) | 2.11 lb/day-acre | |
| Reduction from Watering Twice/Day | 68% | Reference: SCAQMD CEQA Handbook, Table 11-4 |
| Controlled Emission Factor | 1.79 lb/day-acre | |

**Table 8.1A.4a: Equations Used to Calculate Emissions**

| Emission Source | Pollutant(s) | Equation | Variables |
|---|---|---|---|
| Construction Equipment Exhaust | CO, VOC, NOx, SOx, and $PM_{10}$ | $E_m = N * EF * H * 22$ | $E_m$ = Emissions (lb/month)<br>N = number of pieces of equipment<br>EF = emission factor (lb/hr)<br>H = daily hours of operation, assumed to be 8 hr/day<br>22 = 22 construction days per month |
| | | $E_d = E_m / 22$ | $E_d$ = Emissions (lb/day)<br>$E_m$ = Emissions (lb/month)<br>22 = 22 construction days per month |
| | | $E_h = E_d / 8$ | $E_h$ = Emissions (lb/hr)<br>$E_d$ = Emissions (lb/day)<br>8 = 8 hours per work day |
| | | $Et = \Sigma E_m / 2000$ | $E_t$ = Emissions (ton/yr)<br>$E_m$ = Emissions (lb/month)<br>2000 = conversion from lbs to tons |
| Onsite Motor Vehicle Exhaust and Unpaved Road Fugitive $PM_{10}$ | CO, VOC, NOx, SOx, $PM_{10}$ | $E_h = N * M * EF$ | $E_h$ = Emissions (lb/hr)<br>N = number of vehicles<br>M = maximum miles traveled in one hour (miles/hour)<br>EF =EMFAC2002 emission factor (lb/mile). For fugitive $PM_{10}$, Unpaved road dust emission factor based on equation in AP-42, ch. 13.2.2, March 2006 (lb/mile) |
| | | $E_d = N * VMT * EF$ | $E_d$ = Emissions (lb/day)<br>N = number of vehicles<br>VMT = vehicle miles traveled per day (miles/day)<br>EF =EMFAC2002 emission factor (lb/mile). For fugitive $PM_{10}$, Unpaved road dust emission factor based on equation in AP-42, ch. 13.2.2, March 2006 (lb/mile) |
| | | $E_m = E_d * D$ | $E_d$ = Emissions (lb/day)<br>D = number of construction days (days/month) |
| Offsite Motor Vehicle Exhaust | CO, VOC, NOx, SOx, and $PM_{10}$ | $E_m = N * TL * EF * 22$ | $E_m$ = Emissions (lb/month)<br>N = number of vehicles<br>TL = trip length (miles/day)<br>EF = emission factor (lb/mile)<br>22 = 22 construction days per month |
| | | $E_d = E_m / 22$ | $E_d$ = Emissions (lb/day)<br>$E_m$ = Emissions (lb/month)<br>22 = 22 construction days per month |
| | | $E_h = E_d / 8$ | $E_h$ = Emissions (lb/hr)<br>$E_d$ = Emissions (lb/day)<br>8 = 8 hours per work day |
| Offsite Motor Vehicle Paved Road Fugitive $PM_{10}$ | $PM_{10}$ | $E_m = N * TL * EF * 22$ | $E_m$ = Emissions (lb/month)<br>N = number of vehicles<br>TL = trip length (miles/day)<br>EF = emission factor (lb/mile) from AP-42, ch. 13.2.1, fugitive dust from paved roads<br>22 = 22 construction days per month |
| | | $E_d = E_m / 22$ | $E_d$ = Emissions (lb/day)<br>$E_m$ = Emissions (lb/month)<br>22 = 22 construction days per month |
| | | $E_h = E_d / 8$ | $E_h$ = Emissions (lb/hr)<br>$E_d$ = Emissions (lb/day)<br>8 = 8 hours per work day |

Note: Tables 8.1A.3e and 8.1A.3f contain the equations used to calculate fugitive dust emissions.

Reference: SCAQMD CEQA Handbook online, http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html for construction equipment exhaust emissions and http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html for vehicle exhaust.

**Table 8.1A.4b: Number of Onsite Power Plant Construction Equipment**

| | Number of Equipment (N) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Onsite Equipment** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Bulldozer | 2 | 2 | 1 | 1 | | | | | | | | | | | | | | | | | | | | |
| Excavator | 2 | 2 | 2 | 2 | 2 | 1 | 1 | | | | | | | | | | | | | | | | | |
| Grader | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | |
| Forklift | 1 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Generator sets | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | | | | | |
| Light Plant | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | | | |
| Backhoe/Front End Loader | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | |
| Rubber Tired Crane | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| Cherry Picker Hydraulic Crane | | | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 300 Ton Cranes | | | | | | 1 | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | |
| Concrete Vibrator[a] | 3 | 4 | 4 | 4 | 4 | 3 | 2 | 2 | 2 | | | | | | | | | | | | | | | |
| Welding Machine | | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | |
| Pipe Grinder | | 4 | 9 | 14 | 14 | 14 | 18 | 18 | 24 | 24 | 24 | 24 | 18 | 18 | 18 | 15 | 15 | 12 | 12 | 6 | 6 | 6 | | |
| JLG Lift (Scissor Lift) | | | | | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 |

[a] Assumes 2 concrete vibrators use one generator.

**Table 8.1A.4c: Number of Onsite Power Plant Construction Motor Vehicles**

| | Number Used Each Month (N) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Onsite Pickup Truck | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 3 | 3 | 2 | 2 | 2 | 2 | 2 | 2 |
| Onsite Dump Truck | 1 | 1 | 1 | 1 | 1 | | | | | | | | | | | | | | | | | | | |
| Onsite Water Truck | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Semi Tractor | | | | | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | |

**Table 8.1A.4d Power Plant Construction Equipment Emission Factors**

| | Fuel Type | Emission Factors, EF (lb/hr)[a] | | | | |
|---|---|---|---|---|---|---|
| | | CO | VOC | $NO_X$ | $SO_X$[b] | $PM_{10}$ |
| Bulldozer | diesel | 1.024 | 0.211 | 2.817 | 0.014 | 0.112 |
| Excavator | diesel | 0.472 | 0.097 | 1.138 | 0.0073 | 0.06 |
| Grader | diesel | 0.546 | 0.124 | 1.442 | 0.0083 | 0.074 |
| Forklift | diesel | 0.259 | 0.079 | 0.457 | 0 | 0.05 |
| Generator sets | diesel | 0.322 | 0.094 | 0.656 | 0.00003 | 0.048 |
| Light Plant[c] | diesel | 0.322 | 0.094 | 0.656 | 0.00003 | 0.048 |
| Backhoe/Front End Loader | diesel | 0.419 | 0.125 | 0.816 | 0.0035 | 0.083 |
| Rubber Tired Crane | diesel | 0.355 | 0.086 | 1.023 | 0.0059 | 0.052 |
| Cherry Picker Hydraulic Crane | diesel | 0.355 | 0.086 | 1.023 | 0.0059 | 0.052 |
| 300 Ton Crane | diesel | 0.355 | 0.086 | 1.023 | 0.0059 | 0.052 |
| Concrete Vibrator[d] | diesel | 0.163 | 0.030 | 0.266 | 0.003 | 0.015 |
| Welding Machine | electric | 0 | 0 | 0 | 0 | 0 |
| Pipe Grinder | electric | 0 | 0 | 0 | 0 | 0 |
| JLG Lift (Scissor Lift) | diesel | 0.259 | 0.079 | 0.457 | 0 | 0.05 |

[a] Offroad mobile source emission factors from SCAQMD website (http://www.aqmd.gov/ceqa/handbook/offroad/offroad.html). To be conservative, the emission factors for the year 2007 were used for the construction equipment exhaust emission calculations although construction activities may occur after 2007.

[b] According to SCAQMD Rule 431.2 ( c)(3), on or after January 1, 2005, the sulfur content of diesel fuel supplied for mobile sources shall not exceed 15 ppm by weight. Therefore, the SOx emission factors were reduced by 97% to account for the change in diesel fuel sulfur content from 500 ppm to 15 ppm.

[c] Assumed the emission factors for the light plant were the same as the generator.

[d] Assumes emission factor for generator <50hp from SCAQMD CEQA Hanbook, Table A9-8-B, using 20 hp and 74% load.

**Table 8.1A.4e: Motor Vehicle Emission Factors [a]**

| Vehicle Type | Vehicle Class | Mean Vehicle Weight (tons)[b] | Silt loading ($g/m^2$)[c] | CO | VOC | $SO_X$ | $NO_X$ | $PM_{10}$ | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Exhaust lb/mi | Exhaust lb/mi | Exhaust lb/mile | Exhaust lb/mi | Exhaust lb/mi | Paved Road Dust[d,e] lb/mi |
| Onsite Pickup Truck | Passenger Vehicle (<8500 lbs), gasoline | 3 | 0.6 | 0.0128 | 0.0014 | 0.000009 | 0.0014 | 0.00008 | N/A |
| Onsite Dump /Water Truck / Semi Tractor | Heavy heavy-duty truck, diesel | 16.5 | 0.6 | 0.0055 | 0.0012 | 0.000046 | 0.0356 | 0.00064 | N/A |
| Offsite Construction Commuter | Passenger Vehicle (<8500 lbs), gasoline | 3 | 0.6 | 0.0128 | 0.0014 | 0.000009 | 0.0014 | 0.00008 | 0.0067 |
| Offsite Miscellaneous Noncommute | Passenger Vehicle (<8500 lbs), gasoline | 3 | 0.6 | 0.0128 | 0.0014 | 0.000009 | 0.0014 | 0.00008 | 0.0067 |
| Offsite Delivery/Haul Truck | Heavy heavy-duty truck, diesel | 16.5 | 0.6 | 0.0055 | 0.0012 | 0.000046 | 0.0356 | 0.00064 | 0.0917 |

[a] All emission factors, except paved road dust, are from the SCAQMD EMFAC2002 v 2.2 summary table (http://www.aqmd.gov/ceqa/handbook/onroad/onroad.html), for calendar year 2007. The emission factors account for emissions from start, running, and idling exhaust. In addition, the ROG (VOC) emission factors take into account diurnal, hot soak, running and resting emissions, and PM10 emission factor takes into account the tire and brake wear.

[b] Weighted average assumes that autos/trucks weigh 3 tons and heavy duty trucks weigh 16.5 tons.

[c] Silt loading from AP-42, Ch. 13, Table 13.2.1-3, for average daily traffic <500.

[d] Paved Road Dust emission factor [lb/mi] = $[0.016\ (\text{Silt Loading}/2)^{0.65}\ (\text{Fleet Average Vehicle Weight}/3)^{1.5} - 0.00047] * [1 - \#\ \text{days precipitation}/(365\ \text{day/yr} * 4)]$, from AP-42, ch 13.2.1. The number of days of precipitation (34 days) taken from the SCAQMD CEQA Handbook (November, 1993) Table A9-9-D-4.

[e] Onsite Dump Trucks/Semi Tractors/Pickup Trucks/Water Trucks were assumed to travel only on unpaved roads.

**Table 8.1A.4f: Onsite Power Plant Construction Motor Vehicle Activity Assumptions**

| Truck Type | Distance Traveled (miles) per One-way Trip | Maximum Roundtrips per Hour | Average Roundtrips per Hour | Assumptions: Maximum Miles Traveled in One Hour | Assumptions: Average Miles Traveled per Hour | Assumptions: Working Hours per Day | Assumptions: Miles per Day | Assumptions: Working Days per Month | Notes | References |
|---|---|---|---|---|---|---|---|---|---|---|
| Onsite Pickup Truck | 0.1 | 6 | 4 | 1.3 | 0.9 | 8 | 7 | 22 | - Assumes length traveled is ~180 meters long (or ~360 meters roundtrip) | Dimensions from area used for modeling construction |
| Onsite Dump Truck | 0.1 | 4 | 2 | 0.9 | 0.4 | 8 | 4 | 22 | - Assumes length traveled is ~180 meters long (or ~360 meters roundtrip) | Dimensions from area used for modeling construction |
| Semi Tractor | 0.1 | 4 | 2 | 0.9 | 0.4 | 8 | 4 | 22 | - Assumes length traveled is ~180 meters long (or ~360 meters roundtrip) | Dimensions from area used for modeling construction |
| | **Width of Area (m)** | **Length of Area (m)*** | **Width of Sprayer (m)** | **Fraction of Area (8 acres) Watered per Hour** | **Maximum Miles Traveled in One Hour** | **Working Hours per Day** | **Miles per Day** | **Working Days per Month** | **Notes** | **References** |
| Onsite Water Truck | 180 | 187 | 3.66 | 0.4 | 2.1 | 6 | 12 | 22 | - Assumes water truck covers 2.9 acres/hour over the 8 acre site | Final BACM Technological and Economic Feasibility Analysis, SJVUAPCD, March 21, 2003 |
| | | | | | | | | | - Assumes 4,000 gallon water truck with water spray width of ~12 feet (~3.66m) | Width estimated from photos on http://www.dfiequipment.com/Water%20Trucks.htm |
| | | | | | | | | | - Assumes in 2.5 hours entire site is watered and this is done twice per day, for a total of 5 hours of watering and 1 hour for refilling water tank | Dimensions from area used for modeling construction |

* Assumes that the water truck waters approximately 1/2 the total area(16 acres)

**Table 8.1A.5a: Offsite Motor Vehicle Usage during Power Plant Construction**

| | Number of Vehicles (N) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Offsite Construction Commuter | 19 | 70 | 70 | 87 | 96 | 122 | 165 | 226 | 200 | 191 | 357 | 391 | 391 | 357 | 409 | 409 | 383 | 296 | 304 | 261 | 211 | 139 | 144 | 102 |
| Offsite Miscellaneous Noncommute | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| Offsite Delivery/Haul Truck | 10 | 4 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 5 | 7 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 7 | 5 | 3 | 3 | 3 | 3 |

**Table 8.1A.5b: Offsite Motor Vehicle CO Emissions (Power Plant Construction)**

| | CO Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Offsite Construction Commuter | 214.35 | 789.71 | 789.71 | 981.50 | 1083.03 | 1376.36 | 1861.46 | 2549.64 | 2256.32 | 2154.79 | 4027.53 | 4411.11 | 4411.11 | 4027.53 | 4614.17 | 4614.17 | 4320.85 | 3339.35 | 3429.61 | 2944.50 | 2380.42 | 1568.14 | 1624.55 | 1150.72 |
| Offsite Miscellaneous Noncommute | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 | 14.10 |
| Offsite Delivery/Haul Truck | 48.58 | 19.43 | 9.72 | 9.72 | 9.72 | 9.72 | 9.72 | 9.72 | 9.72 | 24.29 | 34.01 | 48.58 | 48.58 | 48.58 | 48.58 | 48.58 | 48.58 | 48.58 | 34.01 | 24.29 | 14.57 | 14.57 | 14.57 | 14.57 |
| **Total (lbs/month)** | **277.03** | **823.25** | **813.53** | **1005.32** | **1106.85** | **1400.17** | **1885.28** | **2573.46** | **2280.14** | **2193.18** | **4075.64** | **4473.79** | **4473.79** | **4090.21** | **4676.86** | **4676.86** | **4383.53** | **3402.03** | **3477.71** | **2982.89** | **2409.09** | **1596.82** | **1653.23** | **1179.40** |
| **Total (lbs/day)** | **12.59** | **37.42** | **36.98** | **45.70** | **50.31** | **63.64** | **85.69** | **116.98** | **103.64** | **99.69** | **185.26** | **203.35** | **203.35** | **185.92** | **212.58** | **212.58** | **199.25** | **154.64** | **158.08** | **135.59** | **109.50** | **72.58** | **75.15** | **53.61** |
| **Year 1 Total (ton/yr)** | **11.45** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr)** | **19.50** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.5c: Offsite Motor Vehicle VOC Emissions (Power Plant Construction)**

| | VOC Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Offsite Construction Commuter | 23.12 | 85.19 | 85.19 | 105.88 | 116.84 | 148.48 | 200.81 | 275.05 | 243.41 | 232.45 | 434.48 | 475.86 | 475.86 | 434.48 | 497.77 | 497.77 | 466.13 | 360.24 | 369.98 | 317.65 | 256.80 | 169.17 | 175.25 | 124.14 |
| Offsite Miscellaneous Noncommute | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 | 1.52 |
| Offsite Delivery/Haul Truck | 10.79 | 4.32 | 2.16 | 2.16 | 2.16 | 2.16 | 2.16 | 2.16 | 2.16 | 5.40 | 7.56 | 10.79 | 10.79 | 10.79 | 10.79 | 10.79 | 10.79 | 10.79 | 7.56 | 5.40 | 3.24 | 3.24 | 3.24 | 3.24 |
| **Total (lbs/month)** | **35.44** | **91.03** | **88.87** | **109.56** | **120.52** | **152.16** | **204.49** | **278.73** | **247.09** | **239.37** | **443.56** | **488.18** | **488.18** | **446.80** | **510.08** | **510.08** | **478.44** | **372.56** | **379.06** | **324.57** | **261.55** | **173.93** | **180.01** | **128.90** |
| **Total (lbs/day)** | **1.611** | **4.138** | **4.040** | **4.980** | **5.48** | **6.92** | **9.30** | **12.67** | **11.23** | **10.88** | **20.16** | **22.19** | **22.19** | **20.31** | **23.19** | **23.19** | **21.75** | **16.93** | **17.23** | **14.75** | **11.89** | **7.91** | **8.18** | **5.86** |
| **Year 1 Total (ton/yr)** | **1.25** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr)** | **2.13** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.5d: Offsite Motor Vehicle SOx Emissions (Power Plant Construction)**

| | $SO_X$ Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Offsite Construction Commuter | 0.15 | 0.55 | 0.55 | 0.69 | 0.76 | 0.97 | 1.31 | 1.79 | 1.58 | 1.51 | 2.83 | 3.10 | 3.10 | 2.83 | 3.24 | 3.24 | 3.03 | 2.34 | 2.41 | 2.07 | 1.67 | 1.10 | 1.14 | 0.81 |
| Offsite Miscellaneous Noncommute | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 | 0.0099 |
| Offsite Delivery/Haul Truck | 0.402 | 0.161 | 0.0805 | 0.0805 | 0.0805 | 0.0805 | 0.0805 | 0.0805 | 0.0805 | 0.2012 | 0.2816 | 0.4023 | 0.4023 | 0.4023 | 0.4023 | 0.4023 | 0.4023 | 0.4023 | 0.2816 | 0.2012 | 0.1207 | 0.1207 | 0.1207 | 0.1207 |
| **Total (lbs/month)** | **0.56** | **0.73** | **0.64** | **0.78** | **0.85** | **1.06** | **1.40** | **1.88** | **1.67** | **1.72** | **3.12** | **3.51** | **3.51** | **3.240** | **3.652** | **3.652** | **3.446** | **2.757** | **2.699** | **2.278** | **1.802** | **1.231** | **1.271** | **0.938** |
| **Total (lbs/day)** | **0.026** | **0.033** | **0.029** | **0.035** | **0.039** | **0.048** | **0.064** | **0.085** | **0.076** | **0.078** | **0.142** | **0.159** | **0.159** | **0.147** | **0.166** | **0.166** | **0.157** | **0.125** | **0.123** | **0.104** | **0.082** | **0.056** | **0.058** | **0.043** |
| **Year 1 Total (ton/yr)** | **0.009** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr)** | **0.015** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.5e: Offsite Motor Vehicle NOx Emissions (Power Plant Construction)**

| | $NO_X$ Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Offsite Construction Commuter | 22.76 | 83.84 | 83.84 | 104.20 | 114.98 | 146.12 | 197.62 | 270.68 | 239.54 | 228.76 | 427.57 | 468.29 | 468.29 | 427.57 | 489.85 | 489.85 | 458.71 | 354.51 | 364.09 | 312.59 | 252.71 | 166.48 | 172.47 | 122.16 |
| Offsite Miscellaneous Noncommute | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 | 1.50 |
| Offsite Delivery/Haul Truck | 313.58 | 125.43 | 62.72 | 62.72 | 62.72 | 62.72 | 62.72 | 62.72 | 62.72 | 156.79 | 219.51 | 313.58 | 313.58 | 313.58 | 313.58 | 313.58 | 313.58 | 313.58 | 219.51 | 156.79 | 94.08 | 94.08 | 94.08 | 94.08 |
| **Total (lbs/month)** | **337.84** | **210.77** | **148.05** | **168.41** | **179.19** | **210.33** | **261.83** | **334.89** | **303.75** | **387.05** | **648.58** | **783.37** | **783.37** | **742.65** | **804.93** | **804.93** | **773.79** | **669.60** | **585.10** | **470.88** | **348.28** | **262.05** | **268.04** | **217.74** |
| **Total (lbs/day)** | **15.36** | **9.58** | **6.73** | **7.66** | **8.15** | **9.56** | **11.90** | **15.22** | **13.81** | **17.59** | **29.48** | **35.61** | **35.61** | **33.76** | **36.59** | **36.59** | **35.17** | **30.44** | **26.60** | **21.40** | **15.83** | **11.91** | **12.18** | **9.90** |
| **Year 1 Total (ton/yr)** | **1.99** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr)** | **3.37** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.5f: Offsite Motor Vehicle $PM_{10}$ Emissions (Power Plant Construction)**

| | $PM_{10}$ Emissions (lbs/month) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Vehicle Type** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **17** | **18** | **19** | **20** | **21** | **22** | **23** | **24** |
| Offsite Construction Commuter | 113.13 | 416.79 | 416.79 | 518.01 | 571.60 | 726.41 | 982.44 | 1345.64 | 1190.84 | 1137.25 | 2125.64 | 2328.08 | 2328.08 | 2125.64 | 2435.26 | 2435.26 | 2280.45 | 1762.44 | 1810.07 | 1554.04 | 1256.33 | 827.63 | 857.40 | 607.33 |
| Offsite Miscellaneous Noncommute | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 | 7.44 |
| Offsite Delivery/Haul Truck | 812.67 | 325.07 | 162.53 | 162.53 | 162.53 | 162.53 | 162.53 | 162.53 | 162.53 | 406.33 | 568.87 | 812.67 | 812.67 | 812.67 | 812.67 | 812.67 | 812.67 | 812.67 | 568.87 | 406.33 | 243.80 | 243.80 | 243.80 | 243.80 |
| **Total (lbs/month)** | **933.24** | **749.30** | **586.77** | **687.99** | **741.58** | **896.39** | **1152.42** | **1515.62** | **1360.81** | **1551.02** | **2701.95** | **3148.19** | **3148.19** | **2945.75** | **3255.37** | **3255.37** | **3100.56** | **2582.55** | **2386.38** | **1967.82** | **1507.57** | **1078.87** | **1108.64** | **858.57** |
| **Total (lbs/day)** | **42.42** | **34.06** | **26.67** | **31.27** | **33.71** | **40.74** | **52.38** | **68.89** | **61.86** | **70.50** | **122.82** | **143.10** | **143.10** | **133.90** | **147.97** | **147.97** | **140.93** | **117.39** | **108.47** | **89.45** | **68.53** | **49.04** | **50.39** | **39.03** |
| **Year 1 Total (ton/yr)** | **8.01** | | | | | | | | | | | | | | | | | | | | | | | |
| **Year 2 Total (ton/yr)** | **13.60** | | | | | | | | | | | | | | | | | | | | | | | |

**Table 8.1A.5g: Offsite Natural Gas Pipeline Construction Equipment Requirements**

| Equipment | Peak Number |
|---|---|
| Compressor, 250 cfm | 1 |
| Tractor/Loader/Backhoe, 1/2 CY | 2 |
| Crane, 5 ton | 1 |
| Welder | 1 |
| Vibratory Compactor | 1 |
| Roller, 5 ton | 1 |
| Number of acres paved* | 0.16 |
| **Duration (months)** | 6 |

*Estimate based on approximately 2300 foot long, 3 foot wide trench.

**Table 8.1A.5h: Offsite Natural Gas Pipeline Construction Equipment Emission Factors**

| Equipment | CO (lbs/hr) | VOC (lbs/hr) | $NO_X$ (lbs/hr) | $SO_X$ (lbs/hr) | $PM_{10}$ (lbs/hr) |
|---|---|---|---|---|---|
| Compressor, 250 cfm | 0.23 | 0.079 | 0.32 | 0 | 0.034 |
| Tractor/Loader/Backhoe, 1/2 CY | 0.42 | 0.13 | 0.82 | 0.0035 | 0.083 |
| Crane, 5 ton | 0.36 | 0.086 | 1.02 | 0.0059 | 0.052 |
| Welder | 0.23 | 0.079 | 0.32 | 0 | 0.034 |
| Vibratory Compactor | 0.03 | 0.009 | 0.039 | 0 | 0.002 |
| Roller, 5 ton | 0.36 | 0.077 | 0.697 | 0.0042 | 0.051 |

**Table 8.1A.5i: Equations Used to Calculate Emissions (Natural Gas Pipeline Construction)**

| | |
|---|---|
| Construction Equipment<br>$E = N * EF * H$ | E = Equipment emissions (lb/day)<br>N = Number of pieces of equipment<br>EF = Emission factor (lb/hr)<br>H = Daily hours of operation, assumed to be 8 hr/day |
| Motor Vehicles<br>$C, T = N * VMT * EF$ | C and T = Commuter and delivery truck emissions (lb/day)<br>N = Number of vehicles<br>VMT = Vehicle miles traveled per day (miles/day)<br>EF = EMFAC2002 emission factor (lb/mile). |
| Maximum Motor Vehicles<br>$M_{max} = C_{max} + T_{max}$ | $M_{max}$ = Maximum motor vehicle emissions assuming only one construction activity occurs at a time (lb/day)<br>$C_{max}$ = Maximum commuter emissions (lb/day)<br>$T_{max}$ = Maximum delivery truck emissions (lb/day) |
| Emissions per day<br>$E_{combined} = M_{max} + E$ | $E_{combined}$ = Emissions from equipment and motor vehicles (lb/day)<br>E = Equipment emissions (lb/day)<br>$M_{max}$ = Maximum motor vehicle emissions (lb/day).<br>Included: VOCs from paving (lb/day) = Acres paved * EF (lb/acre) |
| Total Emissions<br>$E_{total} = E_{combined}*D/2000$ | $E_{total}$ = Total offsite emissions (tons)<br>$E_{combined}$ = Emissions from equipment and motor vehicles (lb/day)<br>D = Duration of off-site construction<br>2000 = Conversion from lbs to tons |

**Table 8.1A.5j: Offsite Emissions from Natural Gas Pipeline Construction**

| Construction Activity | CO (lbs/day) | VOC (lbs/day) | $NO_X$ (lbs/day) | $SO_X$ (lbs/day) | $PM_{10}$ (lbs/day) |
|---|---|---|---|---|---|
| Compressor, 250 cfm | 1.86 | 0.63 | 2.54 | 0 | 0.27 |
| Tractor/Loader/Backhoe, 1/2 CY | 6.70 | 2.00 | 13.06 | 0.055 | 1.33 |
| Crane, 5 ton | 2.84 | 0.69 | 8.18 | 0.047 | 0.42 |
| Welder | 1.86 | 0.63 | 2.54 | 0 | 0.27 |
| Vibratory Compactor | 0.21 | 0.072 | 0.31 | 0 | 0.016 |
| Roller, 5 ton | 2.91 | 0.62 | 5.58 | 0.033 | 0.41 |
| **Maximum Construction Equipment (lbs/day)[a]** | 16.38 | 4.64 | 32.22 | 0.14 | 2.71 |
| **Maximum Motor Vehicles (lbs/day)[b]** | 4.40 | 0.63 | 8.88 | 0.013 | 23.79 |
| **Combined Maximum (lbs/day)[c]** | 20.78 | 5.68 | 41.09 | 0.15 | 26.50 |
| **Total Offsite Construction (tons)[d]** | 1.37 | 0.35 | 2.71 | 0.01 | 1.75 |

[a] Assumes construction equipment operates 8 hours per day.

[b] Represents the maximum combined (commute plus delivery truck) vehicle emissions.

[c] Combined total includes VOC emissions from paving.

[d] Conservatively assumes that construciton occurs 22 days/month throughout duration.

**Table 8.1A.5k: Offsite VOC Emissions from Paving during Natural Gas Pipeline Construction**

| | | |
|---|---|---|
| Emission Factor | 2.62 | lb ROG/acre |
| VOC Emissions (lb/day)* | 0.4150 | |

Reference: URBEMIS2002 version 8.7.

* Conservatively assumes all paving activity occurs in one day.

**Table 8.1A.5l: Offsite Motor Vehicle Usage During Natural Gas Pipeline Construction**

| Construction Activity | Number per Day | | Vehicle Miles Traveled | | Construction Commuter Emissions (lbs/day) | | | | | Delivery/Haul Truck Emissions (lbs/day) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Construction Commuter[a] | Delivery/ Haul Truck | Construction Commuter Miles/Day | Delivery/ Haul Truck Miles/Day | CO | VOC | SOx | NOx | $PM_{10}$ | CO | VOC | SOx | NOx | $PM_{10}$ |
| Pavement Removal | 6 | 5 | 40 | 40 | 3.08 | 0.33 | 0.0022 | 0.33 | 1.62 | 1.10 | 0.25 | 0.0091 | 7.13 | 18.47 |
| Trenching | 1 | 3 | 40 | 40 | 0.51 | 0.06 | 0.0004 | 0.05 | 0.27 | 0.66 | 0.15 | 0.0055 | 4.28 | 11.08 |
| Pipe Installation | 4 | 1 | 40 | 40 | 2.05 | 0.22 | 0.0014 | 0.22 | 1.08 | 0.22 | 0.05 | 0.0018 | 1.43 | 3.69 |
| Backfilling | 2 | 6 | 40 | 40 | 1.03 | 0.11 | 0.0007 | 0.11 | 0.54 | 1.32 | 0.29 | 0.0110 | 8.55 | 22.16 |
| Compaction | 4 | 6 | 40 | 40 | 2.05 | 0.22 | 0.0014 | 0.22 | 1.08 | 1.32 | 0.29 | 0.0110 | 8.55 | 22.16 |
| Repaving | 6 | 5 | 40 | 40 | 3.08 | 0.33 | 0.0022 | 0.33 | 1.62 | 1.10 | 0.25 | 0.0091 | 7.13 | 18.47 |

[a] Conservatively assumes maximum number of commuters for each construction activity

**Table 8.1A.5m: Offsite Sewer Line Construction Equipment Requirements**

| Equipment | Peak Number |
|---|---|
| Compressor, 250 cfm | 1 |
| Tractor/Loader/Backhoe, 1/2 CY | 1 |
| Grinder | 1 |
| Vibratory Compactor | 1 |
| Jackhammer | 1 |
| Roller | 1 |
| Number of acres paved* | 0.17 |
| **Duration (months)** | 5 |

*Estimate based on approximately 2400 foot long, 3 foot wide trench.

**Table 8.1A.5n: Offsite Sewer Line Construction Equipment Emission Factors**

| Equipment | CO (lbs/hr) | VOC (lbs/hr) | $NO_X$ (lbs/hr) | $SO_X$ (lbs/hr) | $PM_{10}$ (lbs/hr) |
|---|---|---|---|---|---|
| Compressor, 250 cfm | 0.23 | 0.08 | 0.32 | 0.00 | 0.03 |
| Tractor/Loader/Backhoe, 1/2 CY | 0.42 | 0.13 | 0.82 | 0.0035 | 0.08 |
| Grinder | 0.23 | 0.08 | 0.32 | 0.00 | 0.03 |
| Vibratory Compactor | 0.026 | 0.009 | 0.039 | 0.000 | 0.002 |
| Jackhammer | 0 | 0 | 0 | 0 | 0 |
| Roller | 0.364 | 0.077 | 0.697 | 0.004 | 0.051 |
| **Maximum Hourly (lbs/hour)** | **1.27** | **0.37** | **2.19** | **0.01** | **0.20** |

**Table 8.1A.5o: Equations Used to Calculate Emissions (Sewer Line Construction)**

| | |
|---|---|
| Construction Equipment<br>$E = N * EF * H$ | E = Equipment emissions (lb/day)<br>N = Number of pieces of equipment<br>EF = Emission factor (lb/hr)<br>H = Daily hours of operation, assumed to be 8 hr/day |
| Motor Vehicles<br>$C, T = N * VMT * EF$ | C and T = Commuter and delivery truck emissions (lb/day)<br>N = Number of vehicles<br>VMT = Vehicle miles traveled per day (miles/day)<br>EF = EMFAC2002 emission factor (lb/mile). |
| Maximum Motor Vehicles<br>$M_{max} = C_{max} + T_{max}$ | $M_{max}$ = Maximum motor vehicle emissions assuming only one construction<br>$C_{max}$ = Maximum commuter emissions (lb/day)<br>$T_{max}$ = Maximum delivery truck emissions (lb/day) |
| Emissions per day<br>$E_{combined} = M_{max} + E$ | $E_{combined}$ = Emissions from equipment and motor vehicles (lb/day)<br>E = Equipment emissions (lb/day)<br>$M_{max}$ = Maximum motor vehicle emissions (lb/day).<br>Included: VOCs from paving (lb/day) = Acres paved * EF (lb/acre) |
| Total Emissions<br>$E_{total} = E_{combined}*D/2000$ | $E_{total}$ = Total offsite emissions (tons)<br>$E_{combined}$ = Emissions from equipment and motor vehicles (lb/day)<br>D = Duration of off-site construction<br>2000 = Conversion from lbs to tons |

**Table 8.1A.5p: Offsite Emissions from Sewer Line Construction**

| Equipment | CO (lbs/day) | VOC (lbs/day) | $NO_X$ (lbs/day) | $SO_X$ (lbs/day) | $PM_{10}$ (lbs/day) |
|---|---|---|---|---|---|
| Compressor, 250 cfm | 1.86 | 0.63 | 2.54 | 0 | 0.27 |
| Tractor/Loader/Backhoe, 1/2 CY | 3.35 | 1.00 | 6.53 | 0.028 | 0.66 |
| Grinder | 1.86 | 0.63 | 2.54 | 0.000 | 0.27 |
| Vibratory Compactor | 0.21 | 0.07 | 0.31 | 0 | 0 |
| Jackhammer | 0 | 0 | 0 | 0 | 0 |
| Roller | 2.91 | 0.62 | 5.58 | 0.03 | 0.41 |
| **Maximum Construction Equipment (lbs/day)[a]** | **10.18** | **2.95** | **17.50** | **0.06** | **1.63** |
| **Maximum Motor Vehicles (lbs/day)[b]** | **4.84** | **0.55** | **1.92** | **0.005** | **6.13** |
| **Combined Maximum (lbs/day)[c]** | **15.02** | **3.93** | **19.42** | **0.07** | **7.76** |
| **Total Offsite Construction (tons)[d]** | **0.826** | **0.193** | **1.068** | **0.004** | **0.427** |

[a] Assumes construction equipment operates 8 hours per day.

[b] Represents the maximum combined (commute plus delivery truck) vehicle emissions.

[c] Combined total included VOC emissions from paving.

[d] Conservatively assumes that construciton occurs 22 days/month throughout duration.

**Table 8.1A.5q: Offsite VOC Emissions from Paving during Sewer Line Construction**

| | | |
|---|---|---|
| Emission Factor | 2.62 | lb ROG/acre |
| VOC Emissions (lb/day)* | 0.4331 | |

Reference: URBEMIS2002 version 8.7.

* Conservatively assumes all paving activity occurs in one day.

**Table 8.1A.5r: Offsite Motor Vehicle Usage During Sewer Line Construction**

| Construction Activity | Number per Day | | Vehicle Miles Traveled | | Construction Commuter Emissions (lbs/day) | | | | | Delivery/Haul Truck Emissions (lbs/day) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Construction Commuter[a] | Delivery/ Haul Truck | Construction Commuter Miles /Day | Delivery/ Haul Truck Miles /Day | CO | VOC | SOx | NOx | $PM_{10}$ | CO | VOC | SOx | NOx | $PM_{10}$ |
| Pavement Removal | 7 | 0 | 40 | 40 | 3.59 | 0.39 | 0.0025 | 0.38 | 1.89 | 0 | 0 | 0 | 0 | 0 |
| Trenching | 9 | 0 | 40 | 40 | 4.62 | 0.50 | 0.0032 | 0.49 | 2.44 | 0 | 0 | 0 | 0 | 0 |
| Pipe Installation | 1 | 0 | 40 | 40 | 0.51 | 0.06 | 0.0004 | 0.05 | 0.27 | 0 | 0 | 0 | 0 | 0 |
| Backfilling | 1 | 1 | 40 | 40 | 0.51 | 0.06 | 0.0004 | 0.05 | 0.27 | 0.22 | 0.049 | 0.0018 | 1.43 | 3.69 |
| Compaction | 1 | 1 | 40 | 40 | 0.51 | 0.06 | 0.0004 | 0.05 | 0.27 | 0.22 | 0.049 | 0.0018 | 1.43 | 3.69 |
| Repaving | 1 | 1 | 40 | 40 | 0.51 | 0.06 | 0.0004 | 0.05 | 0.27 | 0.22 | 0.049 | 0.0018 | 1.43 | 3.69 |

[a] Conservatively assumes maximum number of commuters for each construction activity.

**Table 8.1A.5s: Offsite Transmission Line Construction Equipment Requirements**

| Equipment | Peak Number |
|---|---|
| Compressor, 250 cfm | 1 |
| Tractor/Loader/Backhoe, 1/2 CY | 1 |
| Crane | 1 |
| Auger | 1 |
| Crawler Tractor | 1 |
| **Duration (months)** | 7 |

**Table 8.1A.5t: Offsite Transmission Line Construction Equipment Emission Factors**

| Equipment | CO (lbs/hr) | VOC (lbs/hr) | $NO_X$ (lbs/hr) | $SO_X$ (lbs/hr) | $PM_{10}$ (lbs/hr) |
|---|---|---|---|---|---|
| Compressor, 250 cfm | 0.23 | 0.08 | 0.32 | 0.00 | 0.03 |
| Tractor/Loader/Backhoe, 1/2 CY | 0.42 | 0.13 | 0.82 | 0.00 | 0.08 |
| Crane | 0.36 | 0.09 | 1.02 | 0.01 | 0.05 |
| Auger | 0.476 | 0.067 | 1.252 | 0.010 | 0.048 |
| Crawler Tractor | 0.63 | 0.16 | 1.52 | 0.01 | 0.10 |
| **Maximum Hourly (lbs/hour)** | **2.11** | **0.52** | **4.93** | **0.026** | **0.32** |

**Table 8.1A.5u: Equations Used to Calculate Emissions (Transmission Line Construction)**

| | |
|---|---|
| Construction Equipment<br>$E = N * EF * H$ | E = Equipment emissions (lb/day)<br>N = Number of pieces of equipment<br>EF = Emission factor (lb/hr)<br>H = Daily hours of operation, assumed to be 8 hr/day |
| Motor Vehicles<br>$C, T = N * VMT * EF$ | C and T = Commuter and delivery truck emissions (lb/day)<br>N = Number of vehicles<br>VMT = Vehicle miles traveled per day (miles/day)<br>EF = EMFAC2002 emission factor (lb/mile). |
| Maximum Motor Vehicles<br>$M_{max} = C_{max} + T_{max}$ | $M_{max}$ = Maximum motor vehicle emissions assuming only one construction activity occurs at a time (lb/day)<br>$C_{max}$ = Maximum commuter emissions (lb/day)<br>$T_{max}$ = Maximum delivery truck emissions (lb/day) |
| Emissions per day<br>$E_{combined} = M_{max} + E$ | $E_{combined}$ = Emissions from equipment and motor vehicles (lb/day)<br>E = Equipment emissions (lb/day)<br>$M_{max}$ = Maximum motor vehicle emissions (lb/day). |
| Total Emissions<br>$E_{total} = E_{combined}*D/2000$ | $E_{total}$ = Total offsite emissions (tons)<br>$E_{combined}$ = Emissions from equipment and motor vehicles (lb/day)<br>D = Duration of off-site construction<br>2000 = Conversion from lbs to tons |

**Table 8.1A.5v: Offsite Emissions from Transmission Line Construction**

| Equipment | CO (lbs/day) | VOC (lbs/day) | $NO_X$ (lbs/day) | $SO_X$ (lbs/day) | $PM_{10}$ (lbs/day) |
|---|---|---|---|---|---|
| Compressor, 250 cfm | 1.86 | 0.63 | 2.54 | 0 | 0.27 |
| Tractor/Loader/Backhoe, 1/2 CY | 3.35 | 1.00 | 6.53 | 0.028 | 0.66 |
| Crane | 2.84 | 0.69 | 8.18 | 0.047 | 0.42 |
| Auger | 3.81 | 0.54 | 10.02 | 0.08 | 0.38 |
| Crawler Tractor | 5.05 | 1.29 | 12.17 | 0.06 | 0.80 |
| **Maximum Construction Equipment (lbs/day)[a]** | **16.90** | **4.14** | **39.44** | **0.21** | **2.54** |
| **Maximum Motor Vehicles (lbs/day)[b]** | **6.37** | **0.71** | **2.08** | **0.006** | **6.94** |
| **Combined Maximum (lbs/day)** | **23.28** | **4.86** | **41.52** | **0.22** | **9.48** |
| **Total Offsite Construction (tons)[c]** | **1.79** | **0.37** | **3.20** | **0.02** | **0.73** |

[a] Assumes construction equipment operates 8 hours per day.

[b] Represents the maximum combined (commute plus delivery truck) vehicle emissions.

[c] Conservatively assumes that construciton occurs 22 days/month throughout duration.

**Table 8.1A.5w: Offsite Motor Vehicle Usage During Transmission Line Construction**

| Construction Activity | Number per Day | | Vehicle Miles Traveled | | Construction Commuter Emissions (lbs/day) | | | | | Delivery/Haul Truck Emissions (lbs/day) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Construction Commuter[a] | Delivery/ Haul Truck | Construction Commuter Miles /Day | Delivery/ Haul Truck Miles /Day | CO | VOC | SOx | NOx | $PM_{10}$ | CO | VOC | SOx | NOx | $PM_{10}$ |
| Pavement Removal | 12 | 1 | 40 | 40 | 6.15 | 0.66 | 0.0043 | 0.65 | 3.25 | 0 | 0 | 0 | 1 | 4 |
| Augering | 12 | 0 | 40 | 40 | 6.15 | 0.66 | 0.0043 | 0.65 | 3.25 | 0 | 0 | 0 | 0 | 0 |
| Foundation Installation | 12 | 0 | 40 | 40 | 6.15 | 0.66 | 0.0043 | 0.65 | 3.25 | 0 | 0 | 0 | 0 | 0 |
| Pole Installation | 12 | 1 | 40 | 40 | 6.15 | 0.66 | 0.0043 | 0.65 | 3.25 | 0.22 | 0.049 | 0.0018 | 1.43 | 3.69 |
| String Lines | 12 | 1 | 40 | 40 | 6.15 | 0.66 | 0.0043 | 0.65 | 3.25 | 0.22 | 0.049 | 0.0018 | 1.43 | 3.69 |

[a] Conservatively assumes maximum number of commuters for each construction ac

**Table 8.1A.6: Summary of Maximum Pollutant Emissions Used for Dispersion Modeling**
**Vernon Power Plant**

| Modeling Scenarios[a] | Maximum Pollutant Emissions | | | | | |
|---|---|---|---|---|---|---|
| | CO | NOx | SOx | $PM_{10\ Exhaust}$ | $PM_{10\ Fugitive}$ [c,d] | $PM_{10\ Windblown}$ [d] |
| **Power Plant Construction (Months 1-12)[b]** | | | | | | |
| Maximum 1-hour Emission Rate (lb/hr) | 6.83 | 15.41 | 0.075 | NA | NA | 0 |
| Daily 1-hour Emission Rate (lb/hr | 6.81 | NA | 0.075 | 0.98 | 3.76 | NA |
| Year 1 Annual Emission Rate (tons/yr | NA | 13.10 | 0.054 | 0.86 | 3.43 | 0.067 |

NA = Time period for pollutant not used for dispersion modeling.

Notes:

[a] The maximum 1-hour emission rates were used to model the 1-hour and 3-hour concentrations. The daily 1-hour emission rates were used to model the 8-hour and 24-hour concentrations, assuming 8 hours per work day. The annual emission rates were used to model the annual concentrations.

[b] For power plant construction maximum emissions occur in in month 2 for NOx and SOx, in month 4 for CO, VOC, and $PM_{10\ Exhaust}$, and in month 10 for Total Fugitive $PM_{10}$.

[c] Includes fugitive emissions from equipment and vehicles only.

[d] 1-hour emission rates for $PM_{10\ Fugitive}$ and $PM_{10\ Windblown}$ are used for the month with the highest Total Fugitive $PM_{10}$ (month 10) although highest equipment/vehicle and windblown emissions occur during different months.

Total Fugitive $PM_{10}$ = $PM_{10\ Fugitive}$ + $PM_{10\ Windblown}$

**TABLE 8.1A.7: ISC Construction Model Input Summary**
**Vernon Power Plant**

| Annual Construction Impacts - Months 1 - 12 | | | | | | | | | Emission Rate | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Source ID | Description | UTM Easting (m) | UTM Northing (m) | elev (m) | release height (m) | x length (m) | y length (m) | degree rotation | NOx (lb/hr) | SOx (lb/hr) | CO (lb/hr) | PM10 (lb/hr) | NOx (g/s/m2) | SOx (g/s/m2) | CO (g/s/m2) | PM_10 (g/s/m2) |
| **Short Term - 1, 3, 8 and 24-Hour Impacts** | | | | | | | | | | | | | | | | |
| WINDDUST | Construction Wind Blown Dust | 388100 | 3761848.75 | 55.47 | 2 | 180.44 | 374 | -1 | 0 | 0 | 0 | 0 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 0.000E+00 |
| EQUIPFUG | Construction Equipment Fug dust | 388100 | 3761848.75 | 55.47 | 2 | 180.44 | 374 | -1 | 0 | 0 | 0 | 3.7629 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 7.026E-06 |
| EXHTPP | Construction Equipment Exhaust | 388100 | 3761848.75 | 55.47 | 4.57 | 180.44 | 374 | -1 | 15.4079 | 0.0748 | 6.8289 | 0.9786 | 2.877E-05 | 1.397E-07 | 1.275E-05 | 1.827E-06 |
| **Long Term - Annual Impact** | | **UTM Easting (m)** | **UTM Northing (m)** | **elev (m)** | **release height (m)** | **x length (m)** | **y length (m)** | **degree rotation** | **NOx (tpy)** | **SOx (tpy)** | **CO (tpy)** | **PM10 (tpy)** | **NOx (g/s/m2)** | **SOx (g/s/m2)** | **CO (g/s/m2)** | **PM_10 (g/s/m2)** |
| WINDDUST | Construction Wind Blown Dust | 388100 | 3761848.75 | 55.47 | 2 | 180.44 | 374 | -1 | 0 | 0 | 0 | 0.0670 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 2.858E-08 |
| EQUIPFUG | Construction Equipment Fug dust | 388100 | 3761848.75 | 55.47 | 2 | 180.44 | 374 | -1 | 0 | 0 | 0 | 3.4311 | 0.000E+00 | 0.000E+00 | 0.000E+00 | 1.463E-06 |
| EXHTPP | Construction Equipment Exhaust | 388100 | 3761848.75 | 55.47 | 4.57 | 180.44 | 374 | -1 | 13.0988 | 0.0540 | 0 | 0.8551 | 5.584E-06 | 2.301E-08 | 0.000E+00 | 3.645E-07 |

TABLE 8.1A.8

LST Conversion of 1-Hour $NO_x$ to $NO_2$ for Construction

*Vernon Power Plant*

**Receptor Distances: 0-100 meters**

| UTM Easting (m) | UTM Northing (m) | Modeled $NO_x$ ($\mu g/m^3$) | Adjusted $NO_2$ ($\mu g/m^3$) |
|---|---|---|---|
| 388288.4063 | 3761775 | 525.59375 | 38.8939375 |
| 388261.8125 | 3761780 | 543.55426 | 40.22301524 |
| 388235.1875 | 3761785 | 554.12042 | 41.00491108 |
| 388208.5938 | 3761790.25 | 567.89984 | 42.02458816 |
| 388182.0938 | 3761795.5 | 580.02399 | 42.92177526 |
| 388158.4063 | 3761801.75 | 595.68701 | 44.08083874 |
| 388146.4063 | 3761806 | 605.07465 | 44.7755241 |
| 388132.5 | 3761812 | 617.94684 | 45.72806616 |
| 388119.5938 | 3761820 | 626.78162 | 46.38183988 |
| 388108.0938 | 3761830 | 631.91034 | 46.76136516 |
| 388098.1875 | 3761841.5 | 624.38654 | 46.20460396 |
| 388090.1875 | 3761854.5 | 607.89264 | 44.98405536 |
| 388084.3125 | 3761868.5 | 583.66864 | 43.19147936 |
| 388080.5 | 3761883.25 | 565.67383 | 41.85986342 |
| 388079.0938 | 3761898.5 | 552.73981 | 40.90274594 |
| 388078.5938 | 3761919 | 540.36261 | 39.98683314 |
| 388078.1875 | 3761938.5 | 529.50891 | 39.18365934 |
| 388077.5938 | 3761966.5 | 512.96796 | 37.95962904 |
| 388077 | 3761994.75 | 495.10199 | 36.63754726 |
| 388076.4063 | 3762023 | 475.88287 | 35.21533238 |
| 388075.9063 | 3762051 | 468.33054 | 34.65645996 |
| 388075.3125 | 3762079.25 | 498.10049 | 36.85943626 |
| 388070.3125 | 3762098 | 497.58203 | 36.82107022 |
| 388068.6875 | 3762104 | 495.72739 | 36.68382686 |
| 388068.0938 | 3762132.5 | 508.66208 | 37.64099392 |
| 388067.5 | 3762161 | 514.69293 | 38.08727682 |
| 388067 | 3762184.25 | 517.64868 | 38.30600232 |
| 388066.4063 | 3762212 | 518.57233 | 38.37435242 |
| 388066.6875 | 3762215 | 519.67413 | 38.45588562 |
| 388067.5 | 3762217.75 | 522.09143 | 38.63476582 |
| 388068.8125 | 3762220.5 | 526.10175 | 38.9315295 |
| 388070.6875 | 3762222.75 | 534.4845 | 39.551853 |
| 388073 | 3762224.75 | 553.52087 | 40.96054438 |
| 388075.5938 | 3762226.25 | 573.65814 | 42.45070236 |
| 388078.4063 | 3762227 | 592.86639 | 43.87211286 |
| 388081.4063 | 3762227.5 | 617.776 | 45.715424 |
| 388109.6875 | 3762228 | 618.18774 | 45.74589276 |
| 388138 | 3762228.5 | 626.53479 | 46.36357446 |
| 388166.3125 | 3762229 | 605.87903 | 44.83504822 |
| 388194.6875 | 3762229.5 | 625.98462 | 46.32286188 |
| 388223 | 3762230.25 | 611.34528 | 45.23955072 |
| 388251.3125 | 3762230.75 | 616.19037 | 45.59808738 |
| 388279.5938 | 3762231.25 | 614.11267 | 45.44433758 |
| 388308 | 3762231.75 | 490.46915 | 36.2947171 |
| 388336.3125 | 3762232.5 | 370.98499 | 27.45288926 |
| 388336.8125 | 3762205.75 | 372.10034 | 27.53542516 |
| 388337.3125 | 3762179.25 | 372.02881 | 27.53013194 |
| 388337.8125 | 3762152.75 | 371.96292 | 27.52525608 |
| 388338.3125 | 3762126.25 | 371.89279 | 27.52006646 |
| 388309.6875 | 3762125.75 | 417.49161 | 30.89437914 |
| 388281.0938 | 3762125 | 532.01837 | 39.36935938 |
| 388281.5 | 3762102 | 504.68152 | 37.34643248 |
| 388282.0938 | 3762076.75 | 470.6857 | 34.8307418 |
| 388282.5938 | 3762051.5 | 432.61334 | 32.01338716 |
| 388283.0938 | 3762026.5 | 429.28055 | 31.7667607 |
| 388283.6875 | 3762001.25 | 467.31891 | 34.58159934 |
| 388284.1875 | 3761973.75 | 504.52667 | 37.33497358 |
| 388284.8125 | 3761946.5 | 537.05695 | 39.7422143 |
| 388285.4063 | 3761919 | 565.28986 | 41.83144964 |
| 388286 | 3761891.5 | 592.79736 | 43.86700464 |
| 388286.5 | 3761864 | 618.68207 | 45.78247318 |
| 388287.1875 | 3761834.5 | 628.72992 | 46.52601408 |
| 388287.8125 | 3761804.5 | 596.87354 | 44.16864196 |
| 388030 | 3761770 | 393.15735 | 29.0936439 |
| 388060 | 3761770 | 470.35751 | 34.80645574 |
| 388090 | 3761770 | 521.2951 | 38.5758374 |

**Receptor Distances: 101-200 meters**

| UTM Easting (m) | UTM Northing (m) | Modeled $NO_x$ ($\mu g/m^3$) | Adjusted $NO_2$ ($\mu g/m^3$) |
|---|---|---|---|
| 387910 | 3761650 | 225.50533 | 25.70760762 |
| 387940 | 3761650 | 246.7634 | 28.1310276 |
| 387970 | 3761650 | 269.65201 | 30.74032914 |
| 388000 | 3761650 | 292.74316 | 33.37272024 |
| 388030 | 3761650 | 317.10355 | 36.1498047 |
| 388060 | 3761650 | 334.36014 | 38.11705596 |
| 388090 | 3761650 | 333.81052 | 38.05439928 |
| 388120 | 3761650 | 352.33841 | 40.16657874 |
| 388150 | 3761650 | 354.38925 | 40.4003745 |
| 388180 | 3761650 | 352.38205 | 40.1715537 |
| 388210 | 3761650 | 353.79276 | 40.33237464 |
| 388240 | 3761650 | 344.73422 | 39.29970108 |
| 388270 | 3761650 | 349.48703 | 39.84152142 |
| 388300 | 3761650 | 341.94705 | 38.9819637 |
| 388330 | 3761650 | 329.81131 | 37.59848934 |
| 388360 | 3761650 | 305.70105 | 34.8499197 |
| 388390 | 3761650 | 284.16922 | 32.39529108 |
| 388420 | 3761650 | 232.4547 | 26.4998358 |
| 388450 | 3761650 | 175.97566 | 20.06122524 |
| 388480 | 3761650 | 125.60403 | 14.31885942 |
| 387910 | 3761680 | 229.33269 | 26.14392666 |
| 387940 | 3761680 | 250.55385 | 28.5631389 |
| 387970 | 3761680 | 277.20441 | 31.60130274 |
| 388000 | 3761680 | 303.75967 | 34.62860238 |
| 388030 | 3761680 | 337.36456 | 38.45955984 |
| 388060 | 3761680 | 362.6716 | 41.3445624 |
| 388090 | 3761680 | 370.67761 | 42.25724754 |
| 388120 | 3761680 | 384.38397 | 43.81977258 |
| 388150 | 3761680 | 385.69711 | 43.96947054 |
| 388180 | 3761680 | 383.79266 | 43.75236324 |
| 388210 | 3761680 | 384.91309 | 43.88009226 |
| 388240 | 3761680 | 376.80862 | 42.95618268 |
| 388270 | 3761680 | 380.82632 | 43.41420048 |
| 388300 | 3761680 | 373.07285 | 42.5303049 |
| 388330 | 3761680 | 354.83945 | 40.4516973 |
| 388360 | 3761680 | 331.56744 | 37.79868816 |
| 388390 | 3761680 | 283.26871 | 32.29263294 |
| 388420 | 3761680 | 217.96689 | 24.84822546 |
| 388450 | 3761680 | 158.26967 | 18.04274238 |
| 388480 | 3761680 | 116.16945 | 13.2433173 |
| 387910 | 3761710 | 230.44994 | 26.27129316 |
| 387940 | 3761710 | 255.50569 | 29.12764866 |
| 387970 | 3761710 | 285.12 | 32.50368 |
| 388000 | 3761710 | 322.65585 | 36.7827669 |
| 388030 | 3761710 | 360.95227 | 41.14855878 |
| 388060 | 3761710 | 396.04846 | 45.14952444 |
| 388090 | 3761710 | 412.91901 | 47.07276714 |
| 388120 | 3761710 | 422.57748 | 48.17383272 |
| 388150 | 3761710 | 423.10461 | 48.23392554 |
| 388180 | 3761710 | 421.27792 | 48.02568288 |
| 388210 | 3761710 | 422.0246 | 48.1108044 |
| 388240 | 3761710 | 416.26288 | 47.45396832 |
| 388270 | 3761710 | 417.89801 | 47.64037314 |
| 388300 | 3761710 | 407.70419 | 46.47827766 |
| 388330 | 3761710 | 375.86948 | 42.84912072 |
| 388360 | 3761710 | 346.25632 | 39.47322048 |
| 388390 | 3761710 | 271.69031 | 30.97269534 |
| 388420 | 3761710 | 199.67035 | 22.7624199 |
| 388450 | 3761710 | 139.0815 | 15.855291 |
| 388480 | 3761710 | 126.58347 | 14.43051558 |
| 387910 | 3761740 | 230.42387 | 26.26832118 |
| 387940 | 3761740 | 255.98479 | 29.18226606 |
| 387970 | 3761740 | 288.56168 | 32.89603152 |
| 388000 | 3761740 | 330.70157 | 37.69997898 |
| 388030 | 3761740 | 379.81793 | 43.29924402 |
| 388060 | 3761740 | 432.84512 | 49.34434368 |

TABLE 8.1A.8

LST Conversion of 1-Hour $NO_x$ to $NO_2$ for Construction

*Vernon Power Plant*

**Receptor Distances: 201-500 meters**

| UTM Easting (m) | UTM Northing (m) | Modeled $NO_x$ ($\mu g/m^3$) | Adjusted $NO_2$ ($\mu g/m^3$) |
|---|---|---|---|
| 387610 | 3761350 | 109.85104 | 28.34156832 |
| 387640 | 3761350 | 113.95842 | 29.40127236 |
| 387670 | 3761350 | 117.18184 | 30.23291472 |
| 387700 | 3761350 | 121.62781 | 31.37997498 |
| 387730 | 3761350 | 127.05375 | 32.7798675 |
| 387760 | 3761350 | 130.97302 | 33.79103916 |
| 387790 | 3761350 | 136.87662 | 35.31416796 |
| 387820 | 3761350 | 134.8842 | 34.8001236 |
| 387850 | 3761350 | 146.04732 | 37.68020856 |
| 387880 | 3761350 | 152.35765 | 39.3082737 |
| 387910 | 3761350 | 158.44858 | 40.87973364 |
| 387940 | 3761350 | 163.51826 | 42.18771108 |
| 387970 | 3761350 | 166.48997 | 42.95441226 |
| 388000 | 3761350 | 170.66534 | 44.03165772 |
| 388030 | 3761350 | 158.88992 | 40.99359936 |
| 388060 | 3761350 | 178.29349 | 45.99972042 |
| 388090 | 3761350 | 181.35132 | 46.78864056 |
| 388120 | 3761350 | 184.69891 | 47.65231878 |
| 388150 | 3761350 | 185.55368 | 47.87284944 |
| 388180 | 3761350 | 182.02197 | 46.96166826 |
| 388210 | 3761350 | 185.74504 | 47.92222032 |
| 388240 | 3761350 | 185.08913 | 47.75299554 |
| 388270 | 3761350 | 169.46899 | 43.72299942 |
| 388300 | 3761350 | 180.48593 | 46.56536994 |
| 388330 | 3761350 | 178.76588 | 46.12159704 |
| 388360 | 3761350 | 171.24139 | 44.18027862 |
| 388390 | 3761350 | 171.47658 | 44.24095764 |
| 388420 | 3761350 | 165.86333 | 42.79273914 |
| 388450 | 3761350 | 160.85942 | 41.50173036 |
| 388480 | 3761350 | 146.82167 | 37.87999086 |
| 388510 | 3761350 | 151.66362 | 39.12921396 |
| 388540 | 3761350 | 145.30684 | 37.48916472 |
| 388570 | 3761350 | 129.92415 | 33.5204307 |
| 388600 | 3761350 | 109.22296 | 28.17952368 |
| 388630 | 3761350 | 86.8638 | 22.4108604 |
| 388660 | 3761350 | 70.78188 | 18.26172504 |
| 388690 | 3761350 | 67.51387 | 17.41857846 |
| 388720 | 3761350 | 61.78973 | 15.94175034 |
| 388750 | 3761350 | 54.46637 | 14.05232346 |
| 388780 | 3761350 | 46.40848 | 11.97338784 |
| 387610 | 3761380 | 111.28973 | 28.71275034 |
| 387640 | 3761380 | 115.983 | 29.923614 |
| 387670 | 3761380 | 120.79292 | 31.16457336 |
| 387700 | 3761380 | 123.72044 | 31.91987352 |
| 387730 | 3761380 | 130.28551 | 33.61366158 |
| 387760 | 3761380 | 134.60597 | 34.72834026 |
| 387790 | 3761380 | 141.33919 | 36.46551102 |
| 387820 | 3761380 | 144.81105 | 37.3612509 |
| 387850 | 3761380 | 146.8813 | 37.8953754 |
| 387880 | 3761380 | 159.17798 | 41.06791884 |
| 387910 | 3761380 | 163.46184 | 42.17315472 |
| 387940 | 3761380 | 169.44048 | 43.71564384 |
| 387970 | 3761380 | 173.80569 | 44.84186802 |
| 388000 | 3761380 | 180.97006 | 46.69027548 |
| 388030 | 3761380 | 172.99904 | 44.63375232 |
| 388060 | 3761380 | 186.24937 | 48.05233746 |
| 388090 | 3761380 | 192.17122 | 49.58017476 |
| 388120 | 3761380 | 194.90482 | 50.28544356 |
| 388150 | 3761380 | 195.75734 | 50.50539372 |
| 388180 | 3761380 | 192.49065 | 49.6625877 |
| 388210 | 3761380 | 196.04417 | 50.57939586 |
| 388240 | 3761380 | 195.07005 | 50.3280729 |
| 388270 | 3761380 | 179.69366 | 46.36096428 |
| 388300 | 3761380 | 191.42612 | 49.38793896 |
| 388330 | 3761380 | 187.00784 | 48.24802272 |
| 388360 | 3761380 | 182.93489 | 47.19720162 |

**Receptor Distances: 501-1,000 meters**

| UTM Easting (m) | UTM Northing (m) | Modeled $NO_x$ ($\mu g/m^3$) | Adjusted $NO_2$ ($\mu g/m^3$) |
|---|---|---|---|
| 387130 | 3760870 | 54.94414 | 25.65891338 |
| 387160 | 3760870 | 56.96403 | 26.60220201 |
| 387190 | 3760870 | 58.18706 | 27.17335702 |
| 387220 | 3760870 | 59.1953 | 27.6442051 |
| 387250 | 3760870 | 60.49884 | 28.25295828 |
| 387280 | 3760870 | 61.33866 | 28.64515422 |
| 387310 | 3760870 | 60.79629 | 28.39186743 |
| 387340 | 3760870 | 62.55054 | 29.21110218 |
| 387370 | 3760870 | 65.20844 | 30.45234148 |
| 387400 | 3760870 | 66.17925 | 30.90570975 |
| 387430 | 3760870 | 65.26422 | 30.47839074 |
| 387460 | 3760870 | 68.4964 | 31.9878188 |
| 387490 | 3760870 | 70.40788 | 32.88047996 |
| 387520 | 3760870 | 70.03791 | 32.70770397 |
| 387550 | 3760870 | 67.27396 | 31.41693932 |
| 387580 | 3760870 | 69.10818 | 32.27352006 |
| 387610 | 3760870 | 74.46706 | 34.77611702 |
| 387640 | 3760870 | 77.17163 | 36.03915121 |
| 387670 | 3760870 | 76.77052 | 35.85183284 |
| 387700 | 3760870 | 79.32405 | 37.04433135 |
| 387730 | 3760870 | 80.76482 | 37.71717094 |
| 387760 | 3760870 | 82.2899 | 38.4293833 |
| 387790 | 3760870 | 82.58718 | 38.56821306 |
| 387820 | 3760870 | 83.74031 | 39.10672477 |
| 387850 | 3760870 | 85.84438 | 40.08932546 |
| 387880 | 3760870 | 83.38255 | 38.93965085 |
| 387910 | 3760870 | 76.62305 | 35.78296435 |
| 387940 | 3760870 | 81.16312 | 37.90317704 |
| 387970 | 3760870 | 88.3282 | 41.2492694 |
| 388000 | 3760870 | 90.66855 | 42.34221285 |
| 388030 | 3760870 | 89.17921 | 41.64669107 |
| 388060 | 3760870 | 91.3246 | 42.6485882 |
| 388090 | 3760870 | 92.08202 | 43.00230334 |
| 388120 | 3760870 | 91.93127 | 42.93190309 |
| 388150 | 3760870 | 92.38626 | 43.14438342 |
| 388180 | 3760870 | 90.05753 | 42.05686651 |
| 388210 | 3760870 | 93.08447 | 43.47044749 |
| 388240 | 3760870 | 91.29047 | 42.63264949 |
| 388270 | 3760870 | 92.56393 | 43.22735531 |
| 388300 | 3760870 | 88.10847 | 41.14665549 |
| 388330 | 3760870 | 78.72361 | 36.76392587 |
| 388360 | 3760870 | 86.47821 | 40.38532407 |
| 388390 | 3760870 | 90.28909 | 42.16500503 |
| 388420 | 3760870 | 89.79468 | 41.93411556 |
| 388450 | 3760870 | 85.92745 | 40.12811915 |
| 388480 | 3760870 | 83.77486 | 39.12285962 |
| 388510 | 3760870 | 86.69559 | 40.48684053 |
| 388540 | 3760870 | 84.92179 | 39.65847593 |
| 388570 | 3760870 | 81.10487 | 37.87597429 |
| 388600 | 3760870 | 83.31758 | 38.90930986 |
| 388630 | 3760870 | 81.39571 | 38.01179657 |
| 388660 | 3760870 | 75.83086 | 35.41301162 |
| 388690 | 3760870 | 70.80709 | 33.06691103 |
| 388720 | 3760870 | 75.35777 | 35.19207859 |
| 388750 | 3760870 | 76.80177 | 35.86642659 |
| 388780 | 3760870 | 75.12672 | 35.08417824 |
| 388810 | 3760870 | 70.69405 | 33.01412135 |
| 388840 | 3760870 | 64.12119 | 29.94459573 |
| 388870 | 3760870 | 56.17765 | 26.23496255 |
| 388900 | 3760870 | 47.62135 | 22.23917045 |
| 388930 | 3760870 | 39.14545 | 18.28092515 |
| 388960 | 3760870 | 35.99805 | 16.81108935 |
| 388990 | 3760870 | 36.71888 | 17.14771696 |
| 389020 | 3760870 | 36.39797 | 16.99785199 |
| 389050 | 3760870 | 35.12535 | 16.40353845 |
| 389080 | 3760870 | 33.05612 | 15.43720804 |

TABLE 8.1A.8

LST Conversion of 1-Hour $NO_x$ to $NO_2$ for Construction

*Vernon Power Plant*

**Receptor Distances: 1,001-2,000 meters**

| UTM Easting (m) | UTM Northing (m) | Modeled $NO_x$ ($\mu g/m^3$) | Adjusted $NO_2$ ($\mu g/m^3$) |
|---|---|---|---|
| 386110 | 3759850 | 25.15702 | 18.867765 |
| 386140 | 3759850 | 25.27218 | 18.954135 |
| 386170 | 3759850 | 25.17593 | 18.8819475 |
| 386200 | 3759850 | 24.8637 | 18.647775 |
| 386230 | 3759850 | 25.64017 | 19.2301275 |
| 386260 | 3759850 | 26.21426 | 19.660695 |
| 386290 | 3759850 | 26.55821 | 19.9186575 |
| 386320 | 3759850 | 26.65438 | 19.990785 |
| 386350 | 3759850 | 26.74368 | 20.05776 |
| 386380 | 3759850 | 27.26122 | 20.445915 |
| 386410 | 3759850 | 27.50735 | 20.6305125 |
| 386440 | 3759850 | 27.79159 | 20.8436925 |
| 386470 | 3759850 | 27.88183 | 20.9113725 |
| 386500 | 3759850 | 27.66773 | 20.7507975 |
| 386530 | 3759850 | 27.14879 | 20.3615925 |
| 386560 | 3759850 | 26.69538 | 20.021535 |
| 386590 | 3759850 | 27.94613 | 20.9595975 |
| 386620 | 3759850 | 28.91094 | 21.683205 |
| 386650 | 3759850 | 29.55095 | 22.1632125 |
| 386680 | 3759850 | 29.83039 | 22.3727925 |
| 386710 | 3759850 | 29.72514 | 22.293855 |
| 386740 | 3759850 | 29.23295 | 21.9247125 |
| 386770 | 3759850 | 28.78727 | 21.5904525 |
| 386800 | 3759850 | 30.07817 | 22.5586275 |
| 386830 | 3759850 | 30.99575 | 23.2468125 |
| 386860 | 3759850 | 31.49061 | 23.6179575 |
| 386890 | 3759850 | 31.52411 | 23.6430825 |
| 386920 | 3759850 | 31.08327 | 23.3124525 |
| 386950 | 3759850 | 30.1744 | 22.6308 |
| 386980 | 3759850 | 28.83141 | 21.6235575 |
| 387010 | 3759850 | 27.09068 | 20.31801 |
| 387040 | 3759850 | 29.3085 | 21.981375 |
| 387070 | 3759850 | 31.24611 | 23.4345825 |
| 387100 | 3759850 | 32.7727 | 24.579525 |
| 387130 | 3759850 | 33.7659 | 25.324425 |
| 387160 | 3759850 | 34.18595 | 25.6394625 |
| 387190 | 3759850 | 33.98457 | 25.4884275 |
| 387220 | 3759850 | 33.15423 | 24.8656725 |
| 387250 | 3759850 | 34.09835 | 25.5737625 |
| 387280 | 3759850 | 35.11057 | 26.3329275 |
| 387310 | 3759850 | 35.46621 | 26.5996575 |
| 387340 | 3759850 | 35.09788 | 26.32341 |
| 387370 | 3759850 | 35.71634 | 26.787255 |
| 387400 | 3759850 | 36.24589 | 27.1844175 |
| 387430 | 3759850 | 36.01559 | 27.0116925 |
| 387460 | 3759850 | 35.0216 | 26.2662 |
| 387490 | 3759850 | 36.0307 | 27.023025 |
| 387520 | 3759850 | 37.07236 | 27.80427 |
| 387550 | 3759850 | 37.28756 | 27.96567 |
| 387580 | 3759850 | 36.66264 | 27.49698 |
| 387610 | 3759850 | 35.20996 | 26.40747 |
| 387640 | 3759850 | 33.02316 | 24.76737 |
| 387670 | 3759850 | 30.23408 | 22.67556 |
| 387700 | 3759850 | 31.25291 | 23.4396825 |
| 387730 | 3759850 | 34.27602 | 25.707015 |
| 387760 | 3759850 | 36.68476 | 27.51357 |
| 387790 | 3759850 | 38.30521 | 28.7289075 |
| 387820 | 3759850 | 39.00043 | 29.2503225 |
| 387850 | 3759850 | 39.08519 | 29.3138925 |
| 387880 | 3759850 | 38.36735 | 28.7755125 |
| 387910 | 3759850 | 37.11549 | 27.8366175 |
| 387940 | 3759850 | 38.82097 | 29.1157275 |
| 387970 | 3759850 | 39.56511 | 29.6738325 |
| 388000 | 3759850 | 39.34642 | 29.509815 |
| 388030 | 3759850 | 39.70348 | 29.77761 |
| 388060 | 3759850 | 39.21738 | 29.413035 |

**Receptor Distances: 2,001 + meters**

| UTM Easting (m) | UTM Northing (m) | Modeled $NO_x$ ($\mu g/m^3$) | Adjusted $NO_2$ ($\mu g/m^3$) |
|---|---|---|---|
| 386050 | 3759760 | 24.04872 | 24.04872 |
| 386080 | 3759760 | 23.98954 | 23.98954 |
| 386110 | 3759760 | 23.73508 | 23.73508 |
| 386140 | 3759760 | 24.18567 | 24.18567 |
| 386170 | 3759760 | 24.78287 | 24.78287 |
| 386200 | 3759760 | 25.17728 | 25.17728 |
| 386230 | 3759760 | 25.35171 | 25.35171 |
| 386260 | 3759760 | 25.29701 | 25.29701 |
| 386290 | 3759760 | 25.71682 | 25.71682 |
| 386320 | 3759760 | 26.07438 | 26.07438 |
| 386350 | 3759760 | 26.29477 | 26.29477 |
| 386380 | 3759760 | 26.5031 | 26.5031 |
| 386410 | 3759760 | 26.47416 | 26.47416 |
| 386440 | 3759760 | 26.17021 | 26.17021 |
| 386470 | 3759760 | 25.58926 | 25.58926 |
| 386500 | 3759760 | 25.63292 | 25.63292 |
| 386530 | 3759760 | 26.74763 | 26.74763 |
| 386560 | 3759760 | 27.59672 | 27.59672 |
| 386590 | 3759760 | 28.14543 | 28.14543 |
| 386620 | 3759760 | 28.36562 | 28.36562 |
| 386650 | 3759760 | 28.23807 | 28.23807 |
| 386680 | 3759760 | 27.76325 | 27.76325 |
| 386710 | 3759760 | 27.24716 | 27.24716 |
| 386740 | 3759760 | 28.4739 | 28.4739 |
| 386770 | 3759760 | 29.36688 | 29.36688 |
| 386800 | 3759760 | 29.88064 | 29.88064 |
| 386830 | 3759760 | 29.9822 | 29.9822 |
| 386860 | 3759760 | 29.65981 | 29.65981 |
| 386890 | 3759760 | 28.91887 | 28.91887 |
| 386920 | 3759760 | 27.76465 | 27.76465 |
| 386950 | 3759760 | 26.25044 | 26.25044 |
| 386980 | 3759760 | 26.88565 | 26.88565 |
| 387010 | 3759760 | 28.84489 | 28.84489 |
| 387040 | 3759760 | 30.45499 | 30.45499 |
| 387070 | 3759760 | 31.62629 | 31.62629 |
| 387100 | 3759760 | 32.315 | 32.315 |
| 387130 | 3759760 | 32.45879 | 32.45879 |
| 387160 | 3759760 | 32.03228 | 32.03228 |
| 387190 | 3759760 | 31.33709 | 31.33709 |
| 387220 | 3759760 | 32.6898 | 32.6898 |
| 387250 | 3759760 | 33.4784 | 33.4784 |
| 387280 | 3759760 | 33.6439 | 33.6439 |
| 387310 | 3759760 | 33.18676 | 33.18676 |
| 387340 | 3759760 | 33.9899 | 33.9899 |
| 387370 | 3759760 | 34.41742 | 34.41742 |
| 387400 | 3759760 | 34.14105 | 34.14105 |
| 387430 | 3759760 | 33.19009 | 33.19009 |
| 387460 | 3759760 | 34.11675 | 34.11675 |
| 387490 | 3759760 | 35.12563 | 35.12563 |
| 387520 | 3759760 | 35.39664 | 35.39664 |
| 387550 | 3759760 | 34.91049 | 34.91049 |
| 387580 | 3759760 | 33.67717 | 33.67717 |
| 387610 | 3759760 | 31.77279 | 31.77279 |
| 387640 | 3759760 | 29.30009 | 29.30009 |
| 387670 | 3759760 | 28.47503 | 28.47503 |
| 387700 | 3759760 | 31.43577 | 31.43577 |
| 387730 | 3759760 | 33.90707 | 33.90707 |
| 387760 | 3759760 | 35.73763 | 35.73763 |
| 387790 | 3759760 | 36.78643 | 36.78643 |
| 387820 | 3759760 | 37.0388 | 37.0388 |
| 387850 | 3759760 | 36.87331 | 36.87331 |
| 387880 | 3759760 | 35.80953 | 35.80953 |
| 387910 | 3759760 | 35.84661 | 35.84661 |
| 387940 | 3759760 | 37.14031 | 37.14031 |
| 387970 | 3759760 | 37.53796 | 37.53796 |
| 388000 | 3759760 | 37.47968 | 37.47968 |