

# Appendix B

## Construction Emission Estimates



# **APPENDIX B**

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## **Construction Emission Estimates**

Urbemis 2007 Version 9.2.2

Detail Report for Annual Construction Unmitigated Emissions (Tons/Year)

File Name: C:\MATT\Morrison Creek Substation\Morrison.urb9

Project Name: Morrison Creek Substation Project

Project Location: Mendocino County APCD

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Annual Tons Per Year, Unmitigated)

<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10 Total</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5 Total</u>	<u>CO2</u>
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2008	0.04	0.39	0.30	0.00	0.08	0.02	0.10	0.02	0.01	0.03	45.38
Fine Grading 07/14/2008-07/18/2008	0.01	0.09	0.06	0.00	0.03	0.00	0.03	0.01	0.00	0.01	7.79
Fine Grading Dust	0.00	0.00	0.00	0.00	0.03	0.00	0.03	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.01	0.09	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.53
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
Fine Grading 07/21/2008-08/01/2008	0.01	0.12	0.05	0.00	0.04	0.00	0.05	0.01	0.00	0.01	13.57
Fine Grading Dust	0.00	0.00	0.00	0.00	0.04	0.00	0.04	0.01	0.00	0.01	0.00
Fine Grading Off Road Diesel	0.00	0.03	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.17
Fine Grading On Road Diesel	0.01	0.09	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	11.27
Fine Grading Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13
Building 08/04/2008-08/07/2008	0.00	0.03	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.97
Building Off Road Diesel	0.00	0.03	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.28
Building Vendor Trips	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.04
Building Worker Trips	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.65
Building 08/04/2008-09/05/2008	0.01	0.10	0.15	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16.44
Building Off Road Diesel	0.00	0.05	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	5.87
Building Vendor Trips	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.51
Building Worker Trips	0.00	0.01	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.06
Demolition 09/15/2008-09/19/2008	0.00	0.04	0.02	0.00	0.01	0.00	0.01	0.00	0.00	0.00	3.61
Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Demo Off Road Diesel	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85
Demo On Road Diesel	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.63
Demo Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.13

Phase Assumptions

Phase: Demolition 9/15/2008 - 9/19/2008 - Construction Demolition

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Building Volume Total (cubic feet): 12500

Building Volume Daily (cubic feet): 12500

On Road Truck Travel (VMT): 162.04

Off-Road Equipment:

1 Cranes (450 hp) operating at a 0.43 load factor for 4 hours per day

1 Graders (174 hp) operating at a 0.61 load factor for 4 hours per day

Phase: Fine Grading 7/14/2008 - 7/18/2008 - Site Preparation

Total Acres Disturbed: 1.75

Maximum Daily Acreage Disturbed: 0.5

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day

1 Off Highway Trucks (395 hp) operating at a 0.57 load factor for 3 hours per day

1 Rubber Tired Dozers (498 hp) operating at a 0.59 load factor for 8 hours per day

1 Tractors/Loaders/Backhoes (101 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Fine Grading 7/21/2008 - 8/1/2008 - Soil and Rock Import

Total Acres Disturbed: 1.75

Maximum Daily Acreage Disturbed: 0.44

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 560

Off-Road Equipment:

1 Rubber Tired Dozers (498 hp) operating at a 0.59 load factor for 2 hours per day

Phase: Building Construction 8/4/2008 - 8/7/2008 - Substation Construction

Off-Road Equipment:

1 Cranes (450 hp) operating at a 0.43 load factor for 4 hours per day

1 Off Highway Trucks (210 hp) operating at a 0.57 load factor for 6 hours per day

1 Rollers (133 hp) operating at a 0.56 load factor for 4 hours per day

Phase: Building Construction 8/4/2008 - 9/5/2008 - Trucks

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Off-Road Equipment:

1 Other Equipment (325 hp) operating at a 0.62 load factor for 3 hours per day