

# *Ldn Consulting, Inc.*

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August 5, 2013

Mr. Gregg Haggart  
Gildred Building Company, LLC  
550 West C Street, Suite 1820  
San Diego, CA 92101

**RE: Air Quality Comment Review - Ocotillo Wells Solar Farm (APN 253-390-57),  
(APN 253-290-58) – San Diego County**

The purpose of this letter is to respond to recent comments suggesting the proposed mitigation measures requiring contractors to wet the active construction site twice daily would not adequately reduce fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) to a levels considered less than significant. This letter will provide evidence that the control efficiency of 51% is acceptable and within industry standards. Also, this letter will demonstrate that that compliance is still achieved assuming wetting control efficiencies as low as 34%.

The air quality report as reviewed in the MND assumes a control efficiency of 51% and was modeled as such. Since the URBMIS 2007 default control efficiency is for the mitigation input "Water Exposed Surfaces 2X" at 55% a manual reduction input was required. The reason the model was changed to use 51% was to be consistent with industry standards within the County since the 51% measure is an average between published control efficiencies of 34% and 68% (Source: South Coast Air Quality Management Districts (SCAQMD) CEQA Handbook – 1993).

As an exercise to ease concern for the reviewer, LDN Consulting re-ran the models using an efficiency reduction of only 34% and fugitive dust emissions were still found to be less than significant by the County of San Diego. The results are shown in Table 1 on the following Page. Based on this, emissions would still be less than significant. The URBEMIS 2007 model as updated is attached to this letter.

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**Table 1: Mitigated Emissions Using a 34% Wetting Control Efficiency**

Year	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub> (Dust)	PM <sub>10</sub> (Exhaust)	PM <sub>10</sub> (Total)	PM <sub>2.5</sub> (Dust)	PM <sub>2.5</sub> (Exhaust)	PM <sub>2.5</sub> (Total)
2013 (lb/day) Unmitigated	17.69	159.37	106.84	0.13	782.70	7.10	789.80	163.53	6.53	170.06
2013 (lb/day) Mitigated	17.69	159.37	106.84	0.13	81.48	7.10	88.58	17.09	6.53	23.62
<b>Significance Threshold (lb/day)</b>	75	250	550	250	-	-	100	-	-	55
<b>SDAPCD Impact?</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	-	-	<b>No</b>	-	-	<b>No</b>

For purposes of the proposed project, no impacts are anticipated using acceptable average control efficiencies of 51% nor would fugitive dust impacts be expected using control efficiencies as low as 34%. Given this, no significant unmitigable impacts are expected. It should also be noted, as part of the grading operations, the project would be required to follow all San Diego Air Pollution Control District (SDAPCD) Rules such as standards 1 and 2 within Rule 55 which states no visible dust plumes will be allowed for more than 3 minutes within a 60 minute period and Track-Out/Carry-Out emissions will be minimized such that track-out dust is sufficiently removed.

District compliance will require wetting which is consistent with the recommendations set forth within the MND. The SDAPCD will likely visit this site to determine rule compliance as the agency is expected to randomly verify compliance. If you have any questions, please do not hesitate to contact me directly at (760) 473-1253.

Sincerely,  
 Ldn Consulting, Inc.

Jeremy Loudon

Attachment A: URBEMIS 2007 Output (Assuming 34% Wetting Control Efficiency)

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: C:\Urbemis\Gildred 11-30.urb924

Project Name: Gildred Solar Project

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2013 TOTALS (lbs/day unmitigated)	17.69	159.37	106.84	0.13	782.70	7.10	789.80	163.53	6.53	170.06	26,138.07
2013 TOTALS (lbs/day mitigated)	17.69	159.37	106.84	0.13	81.48	7.10	88.58	17.09	6.53	23.62	26,138.07

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	5.03	2.84	24.42	0.03	4.45	0.86	2,531.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	5.03	2.84	24.42	0.03	4.45	0.86	2,531.00

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

**6/23/2013 10:02:34 AM**

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/1/2013-4/8/2013 Active Days: 70	<b><u>17.69</u></b>	<b><u>159.37</u></b>	<b><u>106.84</u></b>	<b><u>0.13</u></b>	<b><u>782.70</u></b>	<b><u>7.10</u></b>	<b><u>789.80</u></b>	<b><u>163.53</u></b>	<b><u>6.53</u></b>	<b><u>170.06</u></b>	<b><u>26,138.07</u></b>
Mass Grading 01/01/2013-04/08/2013	17.69	159.37	106.84	0.13	782.70	7.10	789.80	163.53	6.53	170.06	26,138.07
Mass Grading Dust	0.00	0.00	0.00	0.00	782.16	0.00	782.16	163.35	0.00	163.35	0.00
Mass Grading Off Road Diesel	13.75	111.46	58.22	0.00	0.00	5.27	5.27	0.00	4.85	4.85	12,610.44
Mass Grading On Road Diesel	3.30	46.10	16.22	0.08	0.31	1.72	2.03	0.10	1.58	1.68	8,972.25
Mass Grading Worker Trips	0.64	1.81	32.40	0.04	0.23	0.11	0.34	0.08	0.10	0.19	4,555.38
Time Slice 4/9/2013-5/15/2013 Active Days: 27	7.94	53.48	42.67	0.02	0.09	3.33	3.42	0.03	3.06	3.09	7,855.28
Building 04/09/2013-11/15/2013	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Off Road Diesel	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenching 04/09/2013-05/15/2013	4.30	27.79	30.48	0.02	0.09	2.11	2.21	0.03	1.94	1.98	4,709.73
Trenching Off Road Diesel	4.05	27.07	17.53	0.00	0.00	2.07	2.07	0.00	1.90	1.90	2,887.58
Trenching Worker Trips	0.26	0.72	12.96	0.02	0.09	0.04	0.14	0.03	0.04	0.07	1,822.15
Time Slice 5/16/2013-11/15/2013 Active Days: 132	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building 04/09/2013-11/15/2013	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Off Road Diesel	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Mass Grading 1/1/2013 - 4/8/2013 - Grubbing and Mass Grading

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Total Acres Disturbed: 338

Maximum Daily Acreage Disturbed: 10

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 5781 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 2228.57

Off-Road Equipment:

5 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

3 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

8 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 4/9/2013 - 5/15/2013 - Trenching Phase One

Off-Road Equipment:

5 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 4/9/2013 - 11/15/2013 - Construction of PV systems Phase One

Off-Road Equipment:

1 Air Compressors (106 hp) operating at a 0.48 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

1 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Other General Industrial Equipment (291 hp) operating at a 0.75 load factor for 8 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

6/23/2013 10:02:34 AM

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/1/2013-4/8/2013 Active Days: 70	<b><u>17.69</u></b>	<b><u>159.37</u></b>	<b><u>106.84</u></b>	<b><u>0.13</u></b>	<b><u>81.48</u></b>	<b><u>7.10</u></b>	<b><u>88.58</u></b>	<b><u>17.09</u></b>	<b><u>6.53</u></b>	<b><u>23.62</u></b>	<b><u>26,138.07</u></b>
Mass Grading 01/01/2013-04/08/2013	17.69	159.37	106.84	0.13	81.48	7.10	88.58	17.09	6.53	23.62	26,138.07
Mass Grading Dust	0.00	0.00	0.00	0.00	80.94	0.00	80.94	16.90	0.00	16.90	0.00
Mass Grading Off Road Diesel	13.75	111.46	58.22	0.00	0.00	5.27	5.27	0.00	4.85	4.85	12,610.44
Mass Grading On Road Diesel	3.30	46.10	16.22	0.08	0.31	1.72	2.03	0.10	1.58	1.68	8,972.25
Mass Grading Worker Trips	0.64	1.81	32.40	0.04	0.23	0.11	0.34	0.08	0.10	0.19	4,555.38
Time Slice 4/9/2013-5/15/2013 Active Days: 27	7.94	53.48	42.67	0.02	0.09	3.33	3.42	0.03	3.06	3.09	7,855.28
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Building Off Road Diesel	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Trenching Off Road Diesel	4.05	27.07	17.53	0.00	0.00	2.07	2.07	0.00	1.90	1.90	2,887.58
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Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2013 - 4/8/2013 - Grubbing and Mass Grading

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For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 34% PM25: 34%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 34% PM25: 34%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
PV Park	5.03	2.84	24.42	0.03	4.45	0.86	2,531.00
TOTALS (lbs/day, unmitigated)	5.03	2.84	24.42	0.03	4.45	0.86	2,531.00

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 85 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
PV Park		0.07	acres	368.00	25.76	2,576.00
					25.76	2,576.00

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	1.0	98.8	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.0	0.5
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	62.9	37.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	100.0	0.0	100.0	100.0	100.0	100.0

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	90.0	0.0	10.0			
% of Trips - Commercial (by land use)						
PV Park				2.0	1.0	97.0

Operational Changes to Defaults

Home-based work urban trip length changed from 10.8 miles to 100 miles

Home-based shop urban trip length changed from 7.3 miles to 0 miles

Home-based other urban trip length changed from 7.5 miles to 100 miles

Commercial-based commute urban trip length changed from 9.5 miles to 100 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 100 miles

Commercial-based customer urban trip length changed from 7.35 miles to 100 miles

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Urbemis\Gildred 11-30.urb924

Project Name: Gildred Solar Project

Project Location: California State-wide

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
2013 TOTALS (lbs/day unmitigated)	17.69	159.37	106.84	0.13	782.70	7.10	789.80	163.53	6.53	170.06	26,138.07
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OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.13	4.16	24.02	0.02	4.45	0.86	2,193.92

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
TOTALS (lbs/day, unmitigated)	2.13	4.16	24.02	0.02	4.45	0.86	2,193.92

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

**6/23/2013 10:02:55 AM**

	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/1/2013-4/8/2013 Active Days: 70	<b>17.69</b>	<b>159.37</b>	<b>106.84</b>	<b>0.13</b>	<b>782.70</b>	<b>7.10</b>	<b>789.80</b>	<b>163.53</b>	<b>6.53</b>	<b>170.06</b>	<b>26,138.07</b>
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Building Off Road Diesel	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenching 04/09/2013-05/15/2013	4.30	27.79	30.48	0.02	0.09	2.11	2.21	0.03	1.94	1.98	4,709.73
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Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Phase Assumptions

Phase: Mass Grading 1/1/2013 - 4/8/2013 - Grubbing and Mass Grading

Page: 3

**6/23/2013 10:02:55 AM**

Total Acres Disturbed: 338

Maximum Daily Acreage Disturbed: 10

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 5781 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 2228.57

Off-Road Equipment:

5 Graders (174 hp) operating at a 0.61 load factor for 8 hours per day

3 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day

4 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

8 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 4/9/2013 - 5/15/2013 - Trenching Phase One

Off-Road Equipment:

5 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

2 Trenchers (63 hp) operating at a 0.75 load factor for 8 hours per day

1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Building Construction 4/9/2013 - 11/15/2013 - Construction of PV systems Phase One

Off-Road Equipment:

1 Air Compressors (106 hp) operating at a 0.48 load factor for 8 hours per day

2 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day

1 Forklifts (145 hp) operating at a 0.3 load factor for 8 hours per day

1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day

1 Other General Industrial Equipment (291 hp) operating at a 0.75 load factor for 8 hours per day

1 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

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	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10 Dust</u>	<u>PM10 Exhaust</u>	<u>PM10</u>	<u>PM2.5 Dust</u>	<u>PM2.5 Exhaust</u>	<u>PM2.5</u>	<u>CO2</u>
Time Slice 1/1/2013-4/8/2013 Active Days: 70	<b><u>17.69</u></b>	<b><u>159.37</u></b>	<b><u>106.84</u></b>	<b><u>0.13</u></b>	<b><u>81.48</u></b>	<b><u>7.10</u></b>	<b><u>88.58</u></b>	<b><u>17.09</u></b>	<b><u>6.53</u></b>	<b><u>23.62</u></b>	<b><u>26,138.07</u></b>
Mass Grading 01/01/2013-04/08/2013	17.69	159.37	106.84	0.13	81.48	7.10	88.58	17.09	6.53	23.62	26,138.07
Mass Grading Dust	0.00	0.00	0.00	0.00	80.94	0.00	80.94	16.90	0.00	16.90	0.00
Mass Grading Off Road Diesel	13.75	111.46	58.22	0.00	0.00	5.27	5.27	0.00	4.85	4.85	12,610.44
Mass Grading On Road Diesel	3.30	46.10	16.22	0.08	0.31	1.72	2.03	0.10	1.58	1.68	8,972.25
Mass Grading Worker Trips	0.64	1.81	32.40	0.04	0.23	0.11	0.34	0.08	0.10	0.19	4,555.38
Time Slice 4/9/2013-5/15/2013 Active Days: 27	7.94	53.48	42.67	0.02	0.09	3.33	3.42	0.03	3.06	3.09	7,855.28
Building 04/09/2013-11/15/2013	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Off Road Diesel	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Trenching 04/09/2013-05/15/2013	4.30	27.79	30.48	0.02	0.09	2.11	2.21	0.03	1.94	1.98	4,709.73
Trenching Off Road Diesel	4.05	27.07	17.53	0.00	0.00	2.07	2.07	0.00	1.90	1.90	2,887.58
Trenching Worker Trips	0.26	0.72	12.96	0.02	0.09	0.04	0.14	0.03	0.04	0.07	1,822.15
Time Slice 5/16/2013-11/15/2013 Active Days: 132	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building 04/09/2013-11/15/2013	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Off Road Diesel	3.63	25.69	12.18	0.00	0.00	1.21	1.21	0.00	1.12	1.12	3,145.55
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Building Worker Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Mass Grading 1/1/2013 - 4/8/2013 - Grubbing and Mass Grading

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For Soil Stabilizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 84% PM25: 84%

For Soil Stabilizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 34% PM25: 34%

For Soil Stabilizing Measures, the Equipment loading/unloading mitigation reduces emissions by:

PM10: 69% PM25: 69%

For Unpaved Roads Measures, the Reduce speed on unpaved roads to less than 15 mph mitigation reduces emissions by:

PM10: 44% PM25: 44%

For Unpaved Roads Measures, the Manage haul road dust 2x daily watering mitigation reduces emissions by:

PM10: 34% PM25: 34%

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
PV Park	2.13	4.16	24.02	0.02	4.45	0.86	2,193.92
TOTALS (lbs/day, unmitigated)	2.13	4.16	24.02	0.02	4.45	0.86	2,193.92

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2011 Temperature (F): 40 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
PV Park		0.07	acres	368.00	25.76	2,576.00
					25.76	2,576.00

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.6	1.0	98.8	0.2
Light Truck < 3750 lbs	10.9	1.8	93.6	4.6
Light Truck 3751-5750 lbs	21.8	0.5	99.0	0.5
Med Truck 5751-8500 lbs	9.6	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.7	0.0	76.5	23.5
Lite-Heavy Truck 10,001-14,000 lbs	0.7	0.0	42.9	57.1
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	62.9	37.1	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	0.0	90.0	10.0

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Urban Trip Length (miles)	100.0	0.0	100.0	100.0	100.0	100.0

Travel Conditions

	Residential			Commute	Commercial	
	Home-Work	Home-Shop	Home-Other		Non-Work	Customer
Rural Trip Length (miles)	16.8	7.1	7.9	14.7	6.6	6.6
Trip speeds (mph)	35.0	35.0	35.0	35.0	35.0	35.0
% of Trips - Residential	90.0	0.0	10.0			
% of Trips - Commercial (by land use)						
PV Park				2.0	1.0	97.0

Operational Changes to Defaults

Home-based work urban trip length changed from 10.8 miles to 100 miles

Home-based shop urban trip length changed from 7.3 miles to 0 miles

Home-based other urban trip length changed from 7.5 miles to 100 miles

Commercial-based commute urban trip length changed from 9.5 miles to 100 miles

Commercial-based non-work urban trip length changed from 7.35 miles to 100 miles

Commercial-based customer urban trip length changed from 7.35 miles to 100 miles