

Appendix D

SCAQMD Construction Emissions
Data: Project Site Air Quality Analysis
(Urbemis 2007 Version 9.2.4)

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Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: F:\Users\PLN\Shared\PA's\IPAs - 2008\PA2008-215\LDS Rectory Urbemis.urb924

Project Name: LDS Rectory

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>
2009 TOTALS (lbs/day unmitigated)	5.44	45.55	23.28	0.00	2.87	2.27	5.14	0.60	2.09	2.69	4,144.18
2009 TOTALS (lbs/day mitigated)	5.44	45.55	23.28	0.00	1.27	2.27	3.55	0.27	2.09	2.36	4,144.18
2010 TOTALS (lbs/day unmitigated)	2.01	12.02	8.59	0.00	0.01	1.03	1.04	0.00	0.95	0.95	1,134.92
2010 TOTALS (lbs/day mitigated)	2.01	12.02	8.59	0.00	0.01	1.03	1.04	0.00	0.95	0.95	1,134.92

AREA SOURCE 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)	0.26	0.03	1.07	0.00	0.17	0.16	49.65

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)	0.06	0.10	0.66	0.00	0.10	0.02	51.40

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)	0.32	0.13	1.73	0.00	0.27	0.18	101.05

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	<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>
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Time Slice 01/01/2010-01/29/2010 Active Days: 21	1.21	9.20	4.96	0.00	0.00	0.58	0.58	0.00	0.53	0.53	909.71
Building 12/01/2009-01/31/2010	1.21	9.20	4.96	0.00	0.00	0.58	0.58	0.00	0.53	0.53	909.71
Building Off Road Diesel	1.21	9.16	4.81	0.00	0.00	0.58	0.58	0.00	0.53	0.53	893.39
Building Vendor Trips	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
Building Worker Trips	0.00	0.01	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.77
Time Slice 02/01/2010-03/30/2010 Active Days: 42	1.24	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Coating 02/01/2010-03/30/2010	1.24	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Architectural Coating	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Time Slice 04/01/2010-05/31/2010 Active Days: 43	2.01	12.02	8.59	0.00	0.00	1.03	1.04	0.00	0.95	0.95	1,134.92
Asphalt 04/01/2010-05/31/2010	2.01	12.02	8.59	0.00	0.00	1.03	1.04	0.00	0.95	0.95	1,134.92
Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.95	11.89	6.98	0.00	0.00	1.03	1.03	0.00	0.94	0.94	979.23
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Paving Worker Trips	0.06	0.12	1.60	0.00	0.00	0.00	0.01	0.00	0.01	0.01	155.14

Phase Assumptions

Phase: Demolition 10/01/2009 - 10/01/2009 - Clearing and grubbing.

Building Volume Total (cubic feet): 0

Building Volume Daily (cubic feet): 0

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Fine Grading 10/03/2009 - 11/30/2009 - Rough grading, rough plumbing, and four concrete footings and slabs.

Total Acres Disturbed: 0.06

Maximum Daily Acreage Disturbed: 0.02

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 22.5 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 1.19

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 10/03/2009 - 11/30/2009 - Trench for foundation and underground utilities.

Off-Road Equipment:

- 2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 04/01/2010 - 05/31/2010 - Landscape, plumbing, electrical, and flatwork.

Acres to be Paved: 0.02

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 12/01/2009 - 01/31/2010 - Framing, trades plumbing/electrical/hvac, insulation, and lathing.

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

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2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day

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

Phase: Architectural Coating 02/01/2010 - 03/30/2010 - Roofing, stucco, drywall, cabinets, and stone/tile.

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Time Slice	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
10/01/2009-10/01/2009 Active Days: 1	1.27	8.23	5.77	0.00	0.00	0.64	0.65	0.00	0.59	0.59	789.02
Demolition 10/01/2009- 10/01/2009	1.27	8.23	5.77	0.00	0.00	0.64	0.65	0.00	0.59	0.59	789.02
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	1.23	8.15	4.78	0.00	0.00	0.64	0.64	0.00	0.59	0.59	700.30
Demo 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
Demo Worker Trips	0.04	0.08	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	88.72

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Time Slice 02/01/2010-03/30/2010 Active Days: 42	1.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Coating 02/01/2010-03/30/2010	1.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Architectural Coating	1.12	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
Coating Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Time Slice 04/01/2010-05/31/2010 Active Days: 43	<u>2.01</u>	<u>12.02</u>	<u>8.59</u>	<u>0.00</u>	<u>0.01</u>	<u>1.03</u>	<u>1.04</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.95</u>	<u>0.95</u>	<u>1,134.92</u>
Asphalt 04/01/2010-05/31/2010	2.01	12.02	8.59	0.00	0.01	1.03	1.04	0.00	0.00	0.00	0.00	0.00	0.00	0.95	0.95	1,134.92
Paving Off-Gas	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
Paving Off Road Diesel	1.95	11.89	6.98	0.00	0.00	1.03	1.03	0.00	0.00	0.00	0.00	0.00	0.00	0.94	0.94	979.23
Paving 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	0.00	0.00	0.00	0.00	0.56
Paving Worker Trips	0.06	0.12	1.60	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	155.14

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 10/03/2009 - 11/30/2009 - Rough grading, rough plumbing, and four concrete footings and slabs.

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

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

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Architectural Coating 02/01/2010 - 03/30/2010 - Roofing, stucco, drywall, cabinets, and stone/tile.

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.01	0.01	0.00	0.00	0.00	16.00
Hearth	0.20	0.02	1.06	0.00	0.17	0.16	33.65
Landscaping - No Winter Emissions							
Consumer Products	0.05						
Architectural Coatings	0.01						
TOTALS (lbs/day, unmitigated)	0.26	0.03	1.07	0.00	0.17	0.16	49.65

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.06	0.10	0.66	0.00	0.10	0.02	51.40
TOTALS (lbs/day, unmitigated)	0.06	0.10	0.66	0.00	0.10	0.02	51.40

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 60 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
Single family housing	0.06	6.84	dwelling units	1.00	6.84	58.48
					6.84	58.48
<u>Vehicle Fleet Mix</u>						
Vehicle Type	Percent Type	Non-Catalyst		Catalyst	Diesel	
Light Auto	48.9	1.2		98.4	0.4	
Light Truck < 3750 lbs	10.9	2.8		91.7	5.5	
Light Truck 3751-5750 lbs	21.7	0.9		98.6	0.5	
Med Truck 5751-8500 lbs	9.5	1.1		98.9	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	0.6	0.0		50.0	50.0	
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	68.6		31.4	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			Commercial
Home-Work	Home-Shop	Home-Other	Non-Work
10.8	7.3	7.5	7.4
Commuter			Customer
9.5			7.4
Urban Trip Length (miles)			

	<u>Travel Conditions</u>				
	Home-Work	Residential	Home-Shop	Home-Other	Commercial
Rural Trip Length (miles)	16.8		7.1	7.9	
Trip speeds (mph)	35.0		35.0	35.0	
% of Trips - Residential	32.9		18.0	49.1	
				Commute	Customer
				14.7	6.6
				35.0	35.0
					6.6

% of Trips - Commercial (by land use)

Operational Changes to Defaults

Ambient summer temperature changed from 85 degrees F to 70 degrees F

Ambient winter temperature changed from 40 degrees F to 60 degrees F

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Combined Summer Emissions Reports (Pounds/Day)

File Name: F:\Users\PLN\Shared\PA's\IPAs - 2008\PA2008-215\LDS Rectory Urbemis.urb924

Project Name: LDS Rectory

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>
2009 TOTALS (lbs/day unmitigated)	5.44	45.55	23.28	0.00	2.87	2.27	5.14	0.60	2.09	2.69	4,144.18
2009 TOTALS (lbs/day mitigated)	5.44	45.55	23.28	0.00	1.27	2.27	3.55	0.27	2.09	2.36	4,144.18
2010 TOTALS (lbs/day unmitigated)	2.01	12.02	8.59	0.00	0.01	1.03	1.04	0.00	0.95	0.95	1,134.92
2010 TOTALS (lbs/day mitigated)	2.01	12.02	8.59	0.00	0.01	1.03	1.04	0.00	0.95	0.95	1,134.92

AREA SOURCE 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)	0.07	0.01	0.05	0.00	0.00	0.00	16.07

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)	0.06	0.09	0.62	0.00	0.10	0.02	52.11

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)	0.13	0.10	0.67	0.00	0.10	0.02	68.18

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

<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>
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Building Vendor Trips	0.00	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.55
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Coating 02/01/2010-03/30/2010	1.24	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Architectural Coating	1.24	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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Paving Off-Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	1.95	11.89	6.98	0.00	0.00	1.03	1.03	0.00	0.94	0.94	979.23
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.56
Paving Worker Trips	0.06	0.12	1.60	0.00	0.00	0.00	0.01	0.00	0.00	0.01	155.14

Phase Assumptions

Phase: Demolition 10/01/2009 - 10/01/2009 - Clearing and grubbing.

Building Volume Total (cubic feet): 0

Building Volume Daily (cubic feet): 0

On Road Truck Travel (VMT): 0

Off-Road Equipment:

1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day

1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day

2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

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Phase: Fine Grading 10/03/2009 - 11/30/2009 - Rough grading, rough plumbing, and four concrete footings and slabs.

Total Acres Disturbed: 0.06

Maximum Daily Acreage Disturbed: 0.02

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 22.5 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 1.19

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
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- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 10/03/2009 - 11/30/2009 - Trench for foundation and underground utilities.

Off-Road Equipment:

- 2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 04/01/2010 - 05/31/2010 - Landscape, plumbing, electrical, and flatwork.

Acres to be Paved: 0.02

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 12/01/2009 - 01/31/2010 - Framing, trades plumbing/electrical/hvac, insulation, and lathing.

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day

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- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

- Phase: Architectural Coating 02/01/2010 - 03/30/2010 - Roofing, stucco, drywall, cabinets, and stone/tile.
- Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Summer Pounds Per Day, Mitigated

	<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 10/01/2009-10/01/2009 Active Days: 1	1.27	8.23	5.77	0.00	0.00	0.64	0.65	0.00	0.59	0.59	789.02
Demolition 10/01/2009- 10/01/2009	1.27	8.23	5.77	0.00	0.00	0.64	0.65	0.00	0.59	0.59	789.02
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	1.23	8.15	4.78	0.00	0.00	0.64	0.64	0.00	0.59	0.59	700.30
Demo 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
Demo Worker Trips	0.04	0.08	0.99	0.00	0.00	0.00	0.01	0.00	0.00	0.00	88.72

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Time Slice 02/01/2010-03/30/2010 Active Days: 42	1.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Coating 02/01/2010-03/30/2010	1.12	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Architectural Coating	1.12	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
Coating Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.28
Time Slice 04/01/2010-05/31/2010 Active Days: 43	<u>2.01</u>	<u>12.02</u>	<u>8.59</u>	<u>0.00</u>	<u>0.01</u>	<u>1.03</u>	<u>1.04</u>	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>1,134.92</u>
Asphalt 04/01/2010-05/31/2010	2.01	12.02	8.59	0.00	0.01	1.03	1.04	0.00	0.00	0.00	0.95	0.95	0.95	0.95	0.95	1,134.92
Paving Off-Gas	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
Paving Off Road Diesel	1.95	11.89	6.98	0.00	0.00	1.03	1.03	0.00	0.00	0.00	0.94	0.94	0.94	0.94	0.94	979.23
Paving 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	0.00	0.00	0.00	0.00	0.56
Paving Worker Trips	0.06	0.12	1.60	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	155.14

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 10/03/2009 - 11/30/2009 - Rough grading, rough plumbing, and four concrete footings and slabs.

For Soil Stabilizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 5% PM25: 5%

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

PM10: 69% PM25: 69%

The following mitigation measures apply to Phase: Architectural Coating 02/01/2010 - 03/30/2010 - Roofing, stucco, drywall, cabinets, and stone/tile.

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.00	0.01	0.01	0.00	0.00	0.00	16.00
Hearth - No Summer Emissions							
Landscape	0.01	0.00	0.04	0.00	0.00	0.00	0.07
Consumer Products	0.05						
Architectural Coatings	0.01						
TOTALS (lbs/day, unmitigated)	0.07	0.01	0.05	0.00	0.00	0.00	16.07

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Summer Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Single family housing	0.06	0.09	0.62	0.00	0.10	0.02	52.11
TOTALS (lbs/day, unmitigated)	0.06	0.09	0.62	0.00	0.10	0.02	52.11

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 70 Season: Summer

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acres	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.06	6.84 dwelling units		1.00	6.84	58.48
					6.84	58.48

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	48.9	1.2	98.4	0.4
Light Truck < 3750 lbs	10.9	2.8	91.7	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	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	0.6	0.0	50.0	50.0
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	68.6	31.4	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	Home-Work	Home-Shop	Home-Other	Commute	Commercial	Customer
	10.8	7.3	7.5	9.5	7.4	7.4
Urban Trip Length (miles)						

	<u>Travel Conditions</u>					
	<u>Residential</u>			<u>Commercial</u>		
	Home-Work	Home-Shop	Home-Other	Commute	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	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Operational Changes to Defaults

Ambient summer temperature changed from 85 degrees F to 70 degrees F

Ambient winter temperature changed from 40 degrees F to 60 degrees F

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Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: F:\Users\PLN\Shared\PA's\IPAs - 2008\PA2008-215\LDS Rectory Urbemis.urb924

Project Name: LDS Rectory

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>
2009 TOTALS (tons/year unmitigated)	0.13	1.05	0.54	0.00	0.06	0.05	0.11	0.01	0.05	0.06	95.81
2009 TOTALS (tons/year mitigated)	0.13	1.05	0.54	0.00	0.03	0.05	0.08	0.01	0.05	0.06	95.81
Percent Reduction	0.00	0.00	0.00	0.00	55.53	0.00	28.87	55.37	0.00	10.96	0.00
2010 TOTALS (tons/year unmitigated)	0.08	0.35	0.24	0.00	0.00	0.03	0.03	0.00	0.03	0.03	33.98
2010 TOTALS (tons/year mitigated)	0.08	0.35	0.24	0.00	0.00	0.03	0.03	0.00	0.03	0.03	33.98
Percent Reduction	3.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

AREA SOURCE 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 (tons/year, unmitigated)	0.02	0.00	0.04	0.00	0.01	0.01	4.07

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 (tons/year, unmitigated)	0.01	0.02	0.12	0.00	0.02	0.00	9.47

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 (tons/year, unmitigated)	0.03	0.02	0.16	0.00	0.03	0.01	13.54

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

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Maximum Daily Acreage Disturbed: 0.02

Fugitive Dust Level of Detail: Low

Onsite Cut/Fill: 22.5 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day

On Road Truck Travel (VMT): 1.19

Off-Road Equipment:

- 1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
- 1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Trenching 10/03/2009 - 11/30/2009 - Trench for foundation and underground utilities.

Off-Road Equipment:

- 2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
- 1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 04/01/2010 - 05/31/2010 - Landscape, plumbing, electrical, and flatwork.

Acres to be Paved: 0.02

Off-Road Equipment:

- 4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
- 1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
- 1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 12/01/2009 - 01/31/2010 - Framing, trades plumbing/electrical/hvac, insulation, and lathing.

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 4 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

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Phase: Architectural Coating 02/01/2010 - 03/30/2010 - Roofing, stucco, drywall, cabinets, and stone/tile.

Rule: Residential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Interior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 01/01/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Annual Tons Per Year, Mitigated

<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>C.O₂</u>
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Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOx</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM2.5</u>	<u>CO2</u>
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	2.92
Hearth	0.01	0.00	0.04	0.00	0.01	0.01	1.14
Landscape	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Consumer Products	0.01						
Architectural Coatings	0.00						
TOTALS (tons/year, unmitigated)	0.02	0.00	0.04	0.00	0.01	0.01	4.07

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Annual Tons Per Year, Unmitigated

<u>Source</u>	<u>ROG</u>	<u>NOX</u>	<u>CO</u>	<u>SO2</u>	<u>PM10</u>	<u>PM25</u>	<u>CO2</u>
Single family housing	0.01	0.02	0.12	0.00	0.02	0.00	9.47
TOTALS (tons/year, unmitigated)	0.01	0.02	0.12	0.00	0.02	0.00	9.47

Operational Settings:

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Season: Annual

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreeage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Single family housing	0.06	6.84	dwelling units	1.00	6.84	58.48
					6.84	58.48

Vehicle Type	Vehicle Fleet Mix		Catalyst	Diesel
	Percent Type	Non-Catalyst		
Light Auto	48.9	1.2	98.4	0.4
Light Truck < 3750 lbs	10.9	2.8	91.7	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	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	0.6	0.0	50.0	50.0
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	68.6	31.4	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		Commercial
Home-Work	Home-Shop	Home-Other
10.8	7.3	7.5
		9.5
		7.4
		7.4
		Customer

Urban Trip Length (miles)

	<u>Travel Conditions</u>					
	<u>Residential</u>			<u>Commercial</u>		
	Home-Work	Home-Shop	Home-Other	Commute	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	32.9	18.0	49.1			

% of Trips - Commercial (by land use)

Operational Changes to Defaults

Ambient summer temperature changed from 85 degrees F to 70 degrees F

Ambient winter temperature changed from 40 degrees F to 60 degrees F