



APPENDIX 11.2

Air Modeling Data

**Parenthetical URBEMIS2007 (Version 9.2.4) Assumptions
For: UCR East Campus Infrastructure Improvements
Date: September 2008**

CONSTRUCTION SOURCES

| Year | Duration (months) | Development |
|------|-------------------|---|
| 2009 | 6 | Demolition, Grading, Trenching, Paving, and Building Construction |
| 2010 | 6 | Building Construction and Coatings |

Worker Trips per Day: 120

Phase 1 - Demolition:

| Year | Total Volume (cubic feet) | Daily Total Volume (cubic feet) |
|------|---------------------------|---------------------------------|
| 2009 | 229,280 | 8,818.46 |

Demolition Equipment (URBEMIS2007 Default):

| Quantity | Type | Hours of Daily Operation |
|----------|---------------------------|--------------------------|
| 1 | Rubber Tired Dozer | 8 |
| 3 | Tractors/Loaders/Backhoes | 8 |

Phase 2 - Site Grading:

| Year | Total Acreage Disturbed | Acreage Disturbed Daily | Cut/Fill Duration (days) | Fugitive Dust |
|------|-------------------------|-------------------------|--------------------------|---------------|
| 2009 | 5 | 0.5 | 108 | Default |

Fine Grading Equipment (URBEMIS2007 Default):

| Quantity | Type | Hours of Daily Operation |
|----------|------------------------|--------------------------|
| 1 | Grader | 6 |
| 1 | Rubber Tired Dozer | 6 |
| 1 | Tractor/Loader/Backhoe | 7 |
| 1 | Water Truck | 8 |

Phase 3 - Trenching:

| Year | Duration (months) |
|------|-------------------|
| 2009 | 1 |

Equipment (URBEMIS2007 Default):

| Quantity | Type | Hours of Daily Operation |
|----------|------------------------------------|--------------------------|
| 2 | Excavators | 8 |
| 1 | Other General Industrial Equipment | 8 |
| 1 | Tractor/Loader/Backhoe | 0 |

Phase 4 - Paving:

| Year | Duration (days) | Acres |
|------|-----------------|-------|
| 2009 | 22 | 0.08 |

Equipment (URBEMIS2007 Default):

| Quantity | Type | Hours of Daily Operation |
|----------|--------------------------|--------------------------|
| 4 | Cement and Mortar Mixers | 6 |
| 1 | Paver | 7 |
| 1 | Roller | 7 |
| 1 | Tractor/Loader/Backhoe | 7 |

Phase 5 – Building Construction

| Year | Duration (months) |
|------|-------------------|
| 2010 | 5 |

Equipment (URBEMIS2007 Default):

| Quantity | Type | Hours of Daily Operation |
|----------|------------------------|--------------------------|
| 1 | Crane | 7 |
| 2 | Forklifts | 7 |
| 1 | Generator Set | 8 |
| 1 | Tractor/Loader/Backhoe | 8 |
| 3 | Welders | 8 |

Sub-Phase 5 – Architectural Coatings:

Duration – 2 Months
Low VOC coatings (Pursuant to SCQAMD Rule 1113)
(URBEMIS2007 default all phases)

Sub-Phase 5 - Worker Commute

(URBEMIS2007 default all phases)

Construction Mitigation:

Refer to URBEMIS2007 file output.

Urbemis 2007 Version 9.2.4

Combined Summer Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\UCR Improvments.urb924

Project Name: UCR Improvements

Project Location: South Coast AQMD

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) | 3.70 | 32.23 | 16.83 | 0.01 | 10.03 | 1.74 | 11.61 | 2.10 | 1.60 | 3.55 | 3,078.88 |
| 2009 TOTALS (lbs/day mitigated) | 3.70 | 32.23 | 16.83 | 0.01 | 2.30 | 1.74 | 3.87 | 0.48 | 1.60 | 1.93 | 3,078.88 |
| 2010 TOTALS (lbs/day unmitigated) | 56.39 | 35.56 | 49.06 | 0.04 | 0.18 | 2.54 | 2.72 | 0.07 | 2.33 | 2.39 | 6,725.95 |
| 2010 TOTALS (lbs/day mitigated) | 51.25 | 35.56 | 49.06 | 0.04 | 0.18 | 2.54 | 2.72 | 0.07 | 2.33 | 2.39 | 6,725.95 |

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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| | | | | | | | | | | | |
|---|-------------|--------------|--------------|-------------|--------------|-------------|--------------|-------------|-------------|-------------|-----------------|
| Time Slice 7/1/2009-8/5/2009 Active Days: 26 | <u>3.70</u> | 27.37 | <u>16.83</u> | 0.00 | 0.01 | <u>1.74</u> | 1.74 | 0.00 | <u>1.60</u> | 1.60 | 2,352.40 |
| Demolition 07/01/2009-08/05/2009 | 3.70 | 27.37 | 16.83 | 0.00 | 0.01 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,352.40 |
| 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 | 3.67 | 27.30 | 15.70 | 0.00 | 0.00 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,227.97 |
| 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 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/6/2009-12/31/2009 Active Days: 106 | 3.65 | <u>32.23</u> | 16.29 | <u>0.01</u> | <u>10.03</u> | 1.58 | <u>11.61</u> | <u>2.10</u> | 1.45 | <u>3.55</u> | <u>3,078.88</u> |
| Fine Grading 08/06/2009-12/31/2009 | 3.65 | 32.23 | 16.29 | 0.01 | 10.03 | 1.58 | 11.61 | 2.10 | 1.45 | 3.55 | 3,078.88 |
| Fine Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 10.00 | 0.00 | 10.00 | 2.09 | 0.00 | 2.09 | 0.00 |
| Fine Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| Fine Grading On Road Diesel | 0.43 | 5.70 | 2.19 | 0.01 | 0.02 | 0.24 | 0.26 | 0.01 | 0.22 | 0.23 | 707.13 |
| Fine Grading Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 1/1/2010-1/29/2010 Active Days: 21 | 2.09 | 17.75 | 9.26 | 0.00 | 0.01 | 0.88 | 0.89 | 0.00 | 0.81 | 0.81 | 1,839.03 |
| Trenching 01/01/2010-01/29/2010 | 2.09 | 17.75 | 9.26 | 0.00 | 0.01 | 0.88 | 0.89 | 0.00 | 0.81 | 0.81 | 1,839.03 |
| Trenching Off Road Diesel | 2.06 | 17.69 | 8.22 | 0.00 | 0.00 | 0.88 | 0.88 | 0.00 | 0.81 | 0.81 | 1,714.64 |
| Trenching Worker Trips | 0.03 | 0.06 | 1.05 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.39 |

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| | | | | | | | | | | | |
|--------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Time Slice 2/1/2010-2/26/2010 | 6.97 | <u>35.56</u> | <u>49.06</u> | 0.04 | 0.18 | <u>2.54</u> | <u>2.72</u> | 0.06 | <u>2.33</u> | <u>2.39</u> | <u>6.725.95</u> |
| Active Days: 20 | | | | | | | | | | | |
| Asphalt 02/01/2010-02/28/2010 | 2.02 | 12.04 | 8.83 | 0.00 | 0.01 | 1.03 | 1.04 | 0.00 | 0.95 | 0.95 | 1,203.00 |
| Paving Off-Gas | 0.01 | 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 | 0.04 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.09 |
| Paving Worker Trips | 0.06 | 0.11 | 1.83 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.69 |
| Building 02/01/2010-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Time Slice 3/1/2010-4/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Active Days: 45 | | | | | | | | | | | |
| Building 02/01/2010-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Time Slice 5/3/2010-6/30/2010 | <u>56.39</u> | 23.66 | 42.70 | <u>0.04</u> | <u>0.18</u> | 1.51 | 1.70 | <u>0.07</u> | 1.38 | 1.45 | 5,816.44 |
| Active Days: 43 | | | | | | | | | | | |
| Building 02/01/2010-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Coating 05/03/2010-06/30/2010 | 51.44 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |
| Architectural Coating | 51.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Coating Worker Trips | 0.08 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |

Phase Assumptions

Phase: Demolition 7/1/2009 - 8/5/2009 - Default Demolition Description

Building Volume Total (cubic feet): 229280

Building Volume Daily (cubic feet): 0

On Road Truck Travel (VMT): 0

Off-Road Equipment:

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

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

Phase: Fine Grading 8/6/2009 - 12/31/2009 - Default Fine Site Grading/Excavation Description

Total Acres Disturbed: 5

Maximum Daily Acreage Disturbed: 0.5

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 166.84

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 1/1/2010 - 1/29/2010 - Default Trenching Description

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 2/1/2010 - 2/28/2010 - Default Paving Description

Acres to be Paved: 0.08

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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 2/1/2010 - 6/30/2010 - Default Building Construction Description

Off-Road Equipment:

- 1 Cranes (399 hp) operating at a 0.43 load factor for 7 hours per day
- 2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day
- 1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
- 1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
- 3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 5/3/2010 - 6/30/2010 - Default Architectural Coating Description

- Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
- Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
- Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
- Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
- Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
- Rule: Nonresidential Exterior Coatings begins 1/1/2005 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> |
|------------|------------|-----------|------------|------------------|---------------------|-------------|-------------------|----------------------|--------------|------------|

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| | | | | | | | | | | | |
|---|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Time Slice 7/1/2009-8/5/2009 Active Days: 26 | <u>3.70</u> | 27.37 | <u>16.83</u> | 0.00 | 0.01 | <u>1.74</u> | 1.74 | 0.00 | <u>1.60</u> | 1.60 | 2,352.40 |
| Demolition 07/01/2009-08/05/2009 | 3.70 | 27.37 | 16.83 | 0.00 | 0.01 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,352.40 |
| 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 | 3.67 | 27.30 | 15.70 | 0.00 | 0.00 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,227.97 |
| 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 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/6/2009-12/31/2009 Active Days: 106 | 3.65 | <u>32.23</u> | 16.29 | <u>0.01</u> | <u>2.30</u> | 1.58 | <u>3.87</u> | <u>0.48</u> | 1.45 | <u>1.93</u> | <u>3,078.88</u> |
| Fine Grading 08/06/2009-12/31/2009 | 3.65 | 32.23 | 16.29 | 0.01 | 2.30 | 1.58 | 3.87 | 0.48 | 1.45 | 1.93 | 3,078.88 |
| Fine Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 2.27 | 0.00 | 2.27 | 0.47 | 0.00 | 0.47 | 0.00 |
| Fine Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| Fine Grading On Road Diesel | 0.43 | 5.70 | 2.19 | 0.01 | 0.02 | 0.24 | 0.26 | 0.01 | 0.22 | 0.23 | 707.13 |
| Fine Grading Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 1/1/2010-1/29/2010 Active Days: 21 | 2.09 | 17.75 | 9.26 | 0.00 | 0.01 | 0.88 | 0.89 | 0.00 | 0.81 | 0.81 | 1,839.03 |
| Trenching 01/01/2010-01/29/2010 | 2.09 | 17.75 | 9.26 | 0.00 | 0.01 | 0.88 | 0.89 | 0.00 | 0.81 | 0.81 | 1,839.03 |
| Trenching Off Road Diesel | 2.06 | 17.69 | 8.22 | 0.00 | 0.00 | 0.88 | 0.88 | 0.00 | 0.81 | 0.81 | 1,714.64 |
| Trenching Worker Trips | 0.03 | 0.06 | 1.05 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.39 |

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|--------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Time Slice 2/1/2010-2/26/2010 | 6.97 | <u>35.56</u> | <u>49.06</u> | 0.04 | 0.18 | <u>2.54</u> | <u>2.72</u> | 0.06 | <u>2.33</u> | <u>2.39</u> | <u>6.725.95</u> |
| Active Days: 20 | | | | | | | | | | | |
| Asphalt 02/01/2010-02/28/2010 | 2.02 | 12.04 | 8.83 | 0.00 | 0.01 | 1.03 | 1.04 | 0.00 | 0.95 | 0.95 | 1,203.00 |
| Paving Off-Gas | 0.01 | 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 | 0.04 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.09 |
| Paving Worker Trips | 0.06 | 0.11 | 1.83 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.69 |
| Building 02/01/2010-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Time Slice 3/1/2010-4/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Active Days: 45 | | | | | | | | | | | |
| Building 02/01/2010-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Time Slice 5/3/2010-6/30/2010 | <u>51.25</u> | 23.66 | 42.70 | <u>0.04</u> | <u>0.18</u> | 1.51 | 1.70 | <u>0.07</u> | 1.38 | 1.45 | 5,816.44 |
| Active Days: 43 | | | | | | | | | | | |
| Building 02/01/2010-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Coating 05/03/2010-06/30/2010 | 46.30 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |
| Architectural Coating | 46.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Coating Worker Trips | 0.08 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 8/6/2009 - 12/31/2009 - Default Fine Site Grading/Excavation Description

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

PM10: 84% PM25: 84%

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 Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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 5/3/2010 - 6/30/2010 - Default Architectural Coating Description

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%

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

ROG: 10%

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

ROG: 10%

Urbemis 2007 Version 9.2.4

Combined Winter Emissions Reports (Pounds/Day)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\UCR Improvments.urb924

Project Name: UCR Improvements

Project Location: South Coast AQMD

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) | 7.44 | 73.04 | 51.74 | 0.06 | 8,285.61 | 3.28 | 8,288.89 | 1,730.39 | 3.02 | 1,733.41 | 8,137.60 |
| 2009 TOTALS (lbs/day mitigated) | 7.44 | 73.04 | 51.74 | 0.06 | 1,878.92 | 3.28 | 1,882.21 | 392.42 | 3.02 | 395.44 | 8,137.60 |
| 2010 TOTALS (lbs/day unmitigated) | 56.39 | 23.66 | 42.70 | 0.04 | 0.18 | 1.51 | 1.70 | 0.07 | 1.38 | 1.45 | 5,816.44 |
| 2010 TOTALS (lbs/day mitigated) | 51.25 | 23.66 | 42.70 | 0.04 | 0.18 | 1.51 | 1.70 | 0.07 | 1.38 | 1.45 | 5,816.44 |

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 7/1/2009-8/5/2009 Active Days: 26 | 3.70 | 27.37 | 16.83 | 0.00 | 0.01 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,352.40 |
| Demolition 07/01/2009-08/05/2009 | 3.70 | 27.37 | 16.83 | 0.00 | 0.01 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,352.40 |
| 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 | 3.67 | 27.30 | 15.70 | 0.00 | 0.00 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,227.97 |
| 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 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/6/2009-8/24/2009 Active Days: 13 | 6.71 | 73.04 | 31.95 | 0.06 | 8,285.61 | 3.28 | 8,288.89 | 1,730.39 | 3.02 | 1,733.41 | 8,137.60 |
| Fine Grading 08/06/2009-08/24/2009 | 6.71 | 73.04 | 31.95 | 0.06 | 8,285.61 | 3.28 | 8,288.89 | 1,730.39 | 3.02 | 1,733.41 | 8,137.60 |
| Fine Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 8,285.41 | 0.00 | 8,285.41 | 1,730.33 | 0.00 | 1,730.33 | 0.00 |
| Fine Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| Fine Grading On Road Diesel | 3.49 | 46.51 | 17.85 | 0.05 | 0.19 | 1.94 | 2.14 | 0.06 | 1.79 | 1.85 | 5,765.86 |
| Fine Grading Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/25/2009-10/30/2009 Active Days: 49 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching 08/25/2009-10/30/2009 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching Off Road Diesel | 2.18 | 18.90 | 8.32 | 0.00 | 0.00 | 0.93 | 0.93 | 0.00 | 0.86 | 0.86 | 1,714.64 |
| Trenching Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 11/2/2009-11/23/2009 Active Days: 16 | 2.16 | 12.72 | 9.04 | 0.00 | 0.01 | 1.10 | 1.11 | 0.00 | 1.01 | 1.01 | 1,202.78 |
| Asphalt 11/02/2009-11/30/2009 | 2.16 | 12.72 | 9.04 | 0.00 | 0.01 | 1.10 | 1.11 | 0.00 | 1.01 | 1.01 | 1,202.78 |
| Paving Off-Gas | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving Off Road Diesel | 2.08 | 12.55 | 7.05 | 0.00 | 0.00 | 1.09 | 1.09 | 0.00 | 1.00 | 1.00 | 979.23 |
| Paving On Road Diesel | 0.00 | 0.05 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.80 |
| Paving Worker Trips | 0.06 | 0.12 | 1.97 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.75 |

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|----------------------------------|-------------|-------|--------------|------|------|------|------|------|------|------|----------|
| Time Slice 11/24/2009-11/30/2009 | <u>7.44</u> | 37.66 | <u>51.74</u> | 0.04 | 0.18 | 2.71 | 2.89 | 0.06 | 2.48 | 2.55 | 6,726.57 |
| Active Days: 5 | | | | | | | | | | | |
| Asphalt 11/02/2009-11/30/2009 | 2.16 | 12.72 | 9.04 | 0.00 | 0.01 | 1.10 | 1.11 | 0.00 | 1.01 | 1.01 | 1,202.78 |
| Paving Off-Gas | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving Off Road Diesel | 2.08 | 12.55 | 7.05 | 0.00 | 0.00 | 1.09 | 1.09 | 0.00 | 1.00 | 1.00 | 979.23 |
| Paving On Road Diesel | 0.00 | 0.05 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.80 |
| Paving Worker Trips | 0.06 | 0.12 | 1.97 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.75 |
| Building 11/24/2009-06/30/2010 | 5.28 | 24.95 | 42.70 | 0.04 | 0.17 | 1.61 | 1.78 | 0.06 | 1.48 | 1.54 | 5,523.79 |
| Building Off Road Diesel | 4.02 | 18.66 | 12.06 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 1,746.33 |
| Building Vendor Trips | 0.40 | 4.67 | 3.53 | 0.01 | 0.03 | 0.20 | 0.22 | 0.01 | 0.18 | 0.19 | 785.15 |
| Building Worker Trips | 0.87 | 1.62 | 27.11 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,992.31 |
| Time Slice 12/1/2009-12/31/2009 | 5.28 | 24.95 | 42.70 | 0.04 | 0.17 | 1.61 | 1.78 | 0.06 | 1.48 | 1.54 | 5,523.79 |
| Active Days: 23 | | | | | | | | | | | |
| Building 11/24/2009-06/30/2010 | 5.28 | 24.95 | 42.70 | 0.04 | 0.17 | 1.61 | 1.78 | 0.06 | 1.48 | 1.54 | 5,523.79 |
| Building Off Road Diesel | 4.02 | 18.66 | 12.06 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 1,746.33 |
| Building Vendor Trips | 0.40 | 4.67 | 3.53 | 0.01 | 0.03 | 0.20 | 0.22 | 0.01 | 0.18 | 0.19 | 785.15 |
| Building Worker Trips | 0.87 | 1.62 | 27.11 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,992.31 |
| Time Slice 1/1/2010-4/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Active Days: 86 | | | | | | | | | | | |
| Building 11/24/2009-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |

9/9/2008 3:46:52 PM

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|--------------------------------|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Time Slice 5/3/2010-6/30/2010 | <u>56.39</u> | <u>23.66</u> | <u>42.70</u> | <u>0.04</u> | <u>0.18</u> | <u>1.51</u> | <u>1.70</u> | <u>0.07</u> | <u>1.38</u> | <u>1.45</u> | <u>5,816.44</u> |
| Active Days: 43 | | | | | | | | | | | |
| Building 11/24/2009-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Coating 05/03/2010-06/30/2010 | 51.44 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |
| Architectural Coating | 51.36 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Coating Worker Trips | 0.08 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |

Phase Assumptions

- Phase: Demolition 7/1/2009 - 8/5/2009 - Default Demolition Description
- Building Volume Total (cubic feet): 229280
- Building Volume Daily (cubic feet): 0
- On Road Truck Travel (VMT): 0
- Off-Road Equipment:
- 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
- 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

- Phase: Fine Grading 8/6/2009 - 8/24/2009 - Default Fine Site Grading/Excavation Description
- Total Acres Disturbed: 5
- Maximum Daily Acreage Disturbed: 0.5
- Fugitive Dust Level of Detail: Low
- Onsite Cut/Fill: 70173 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day
- On Road Truck Travel (VMT): 1360.38
- 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

Page: 5

9/9/2008 3:46:52 PM

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 8/25/2009 - 10/30/2009 - Default Trenching Description

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 11/2/2009 - 11/30/2009 - Default Paving Description

Acres to be Paved: 0.08

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 11/24/2009 - 6/30/2010 - Default Building Construction Description

Off-Road Equipment:

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

2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day

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

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

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

Phase: Architectural Coating 5/3/2010 - 6/30/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

9/9/2008 3:46:52 PM

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter 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 7/1/2009-8/5/2009 Active Days: 26 | 3.70 | 27.37 | 16.83 | 0.00 | 0.01 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,352.40 |
| Demolition 07/01/2009-08/05/2009 | 3.70 | 27.37 | 16.83 | 0.00 | 0.01 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,352.40 |
| 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 | 3.67 | 27.30 | 15.70 | 0.00 | 0.00 | 1.74 | 1.74 | 0.00 | 1.60 | 1.60 | 2,227.97 |
| 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 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/6/2009-8/24/2009 Active Days: 13 | 6.71 | 73.04 | 31.95 | 0.06 | <u>1,878.92</u> | 3.28 | <u>1,882.21</u> | <u>392.42</u> | 3.02 | <u>395.44</u> | 8,137.60 |
| Fine Grading 08/06/2009-08/24/2009 | 6.71 | 73.04 | 31.95 | 0.06 | 1,878.92 | 3.28 | 1,882.21 | 392.42 | 3.02 | 395.44 | 8,137.60 |
| Fine Grading Dust | 0.00 | 0.00 | 0.00 | 0.00 | 1,878.73 | 0.00 | 1,878.73 | 392.35 | 0.00 | 392.35 | 0.00 |
| Fine Grading Off Road Diesel | 3.18 | 26.46 | 12.98 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 2,247.32 |
| Fine Grading On Road Diesel | 3.49 | 46.51 | 17.85 | 0.05 | 0.19 | 1.94 | 2.14 | 0.06 | 1.79 | 1.85 | 5,765.86 |
| Fine Grading Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |
| Time Slice 8/25/2009-10/30/2009 Active Days: 49 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching 08/25/2009-10/30/2009 | 2.22 | 18.96 | 9.45 | 0.00 | 0.01 | 0.93 | 0.94 | 0.00 | 0.86 | 0.86 | 1,839.07 |
| Trenching Off Road Diesel | 2.18 | 18.90 | 8.32 | 0.00 | 0.00 | 0.93 | 0.93 | 0.00 | 0.86 | 0.86 | 1,714.64 |
| Trenching Worker Trips | 0.04 | 0.07 | 1.13 | 0.00 | 0.01 | 0.00 | 0.01 | 0.00 | 0.00 | 0.00 | 124.43 |

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|----------------------------------|-------------|-------|--------------|------|------|------|------|------|------|------|----------|
| Time Slice 11/2/2009-11/23/2009 | 2.16 | 12.72 | 9.04 | 0.00 | 0.01 | 1.10 | 1.11 | 0.00 | 1.01 | 1.01 | 1,202.78 |
| Active Days: 16 | | | | | | | | | | | |
| Asphalt 11/02/2009-11/30/2009 | 2.16 | 12.72 | 9.04 | 0.00 | 0.01 | 1.10 | 1.11 | 0.00 | 1.01 | 1.01 | 1,202.78 |
| Paving Off-Gas | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving Off Road Diesel | 2.08 | 12.55 | 7.05 | 0.00 | 0.00 | 1.09 | 1.09 | 0.00 | 1.00 | 1.00 | 979.23 |
| Paving On Road Diesel | 0.00 | 0.05 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.80 |
| Paving Worker Trips | 0.06 | 0.12 | 1.97 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.75 |
| Time Slice 11/24/2009-11/30/2009 | <u>7.44</u> | 37.66 | <u>51.74</u> | 0.04 | 0.18 | 2.71 | 2.89 | 0.06 | 2.48 | 2.55 | 6,726.57 |
| Active Days: 5 | | | | | | | | | | | |
| Asphalt 11/02/2009-11/30/2009 | 2.16 | 12.72 | 9.04 | 0.00 | 0.01 | 1.10 | 1.11 | 0.00 | 1.01 | 1.01 | 1,202.78 |
| Paving Off-Gas | 0.01 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Paving Off Road Diesel | 2.08 | 12.55 | 7.05 | 0.00 | 0.00 | 1.09 | 1.09 | 0.00 | 1.00 | 1.00 | 979.23 |
| Paving On Road Diesel | 0.00 | 0.05 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 5.80 |
| Paving Worker Trips | 0.06 | 0.12 | 1.97 | 0.00 | 0.01 | 0.01 | 0.02 | 0.00 | 0.00 | 0.01 | 217.75 |
| Building 11/24/2009-06/30/2010 | 5.28 | 24.95 | 42.70 | 0.04 | 0.17 | 1.61 | 1.78 | 0.06 | 1.48 | 1.54 | 5,523.79 |
| Building Off Road Diesel | 4.02 | 18.66 | 12.06 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 1,746.33 |
| Building Vendor Trips | 0.40 | 4.67 | 3.53 | 0.01 | 0.03 | 0.20 | 0.22 | 0.01 | 0.18 | 0.19 | 785.15 |
| Building Worker Trips | 0.87 | 1.62 | 27.11 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,992.31 |
| Time Slice 12/1/2009-12/31/2009 | 5.28 | 24.95 | 42.70 | 0.04 | 0.17 | 1.61 | 1.78 | 0.06 | 1.48 | 1.54 | 5,523.79 |
| Active Days: 23 | | | | | | | | | | | |
| Building 11/24/2009-06/30/2010 | 5.28 | 24.95 | 42.70 | 0.04 | 0.17 | 1.61 | 1.78 | 0.06 | 1.48 | 1.54 | 5,523.79 |
| Building Off Road Diesel | 4.02 | 18.66 | 12.06 | 0.00 | 0.00 | 1.33 | 1.33 | 0.00 | 1.23 | 1.23 | 1,746.33 |
| Building Vendor Trips | 0.40 | 4.67 | 3.53 | 0.01 | 0.03 | 0.20 | 0.22 | 0.01 | 0.18 | 0.19 | 785.15 |
| Building Worker Trips | 0.87 | 1.62 | 27.11 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,992.31 |

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|--|--------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-----------------|
| Time Slice 1/1/2010-4/30/2010 Active Days: 86 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building 11/24/2009-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Time Slice 5/3/2010-6/30/2010 Active Days: 43 | <u>51.25</u> | <u>23.66</u> | <u>42.70</u> | <u>0.04</u> | <u>0.18</u> | <u>1.51</u> | <u>1.70</u> | <u>0.07</u> | <u>1.38</u> | <u>1.45</u> | <u>5,816.44</u> |
| Building 11/24/2009-06/30/2010 | 4.95 | 23.52 | 40.22 | 0.04 | 0.17 | 1.50 | 1.67 | 0.06 | 1.38 | 1.44 | 5,522.94 |
| Building Off Road Diesel | 3.79 | 17.78 | 11.73 | 0.00 | 0.00 | 1.25 | 1.25 | 0.00 | 1.15 | 1.15 | 1,746.33 |
| Building Vendor Trips | 0.37 | 4.25 | 3.28 | 0.01 | 0.03 | 0.18 | 0.20 | 0.01 | 0.16 | 0.17 | 785.17 |
| Building Worker Trips | 0.79 | 1.49 | 25.21 | 0.03 | 0.14 | 0.08 | 0.22 | 0.05 | 0.07 | 0.12 | 2,991.44 |
| Coating 05/03/2010-06/30/2010 | 46.30 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |
| Architectural Coating | 46.22 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Coating Worker Trips | 0.08 | 0.15 | 2.47 | 0.00 | 0.01 | 0.01 | 0.02 | 0.01 | 0.01 | 0.01 | 293.49 |

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 8/6/2009 - 8/24/2009 - Default Fine Site Grading/Excavation Description

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

PM10: 84% PM25: 84%

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 Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 55% PM25: 55%

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 5/3/2010 - 6/30/2010 - Default Architectural Coating Description

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

Page: 9

9/9/2008 3:46:52 PM

ROG: 10%

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

ROG: 10%

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

ROG: 10%

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

ROG: 10%

Urbemis 2007 Version 9.2.4

Combined Annual Emissions Reports (Tons/Year)

File Name: I:\pdata\00000100\10P\WPWIN\EddieT\Programs\Air\URBEMIS\URBEMIS2007\UCR Improvments.urb924

Project Name: UCR Improvements

Project Location: South Coast AQMD

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) | 0.24 | 1.78 | 1.35 | 0.00 | 53.86 | 0.10 | 53.96 | 11.25 | 0.09 | 11.34 | 218.50 |
| 2009 TOTALS (tons/year mitigated) | 0.24 | 1.78 | 1.35 | 0.00 | 12.22 | 0.10 | 12.32 | 2.55 | 0.09 | 2.64 | 218.50 |
| Percent Reduction | 0.00 | 0.00 | 0.00 | 0.00 | 77.32 | 0.00 | 77.17 | 77.32 | 0.00 | 76.68 | 0.00 |
| 2010 TOTALS (tons/year unmitigated) | 1.43 | 1.52 | 2.65 | 0.00 | 0.01 | 0.10 | 0.11 | 0.00 | 0.09 | 0.09 | 362.54 |
| 2010 TOTALS (tons/year mitigated) | 1.31 | 1.52 | 2.65 | 0.00 | 0.01 | 0.10 | 0.11 | 0.00 | 0.09 | 0.09 | 362.54 |
| Percent Reduction | 7.75 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

Construction Unmitigated Detail Report:

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</u> | <u>PM2.5 Dust</u> | <u>PM2.5 Exhaust</u> | <u>PM2.5</u> | <u>CO2</u> |
|------------|------------|-----------|------------|------------------|---------------------|-------------|-------------------|----------------------|--------------|------------|
|------------|------------|-----------|------------|------------------|---------------------|-------------|-------------------|----------------------|--------------|------------|

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|--------------------------------|------|------|------|------|------|------|------|------|------|------|--------|
| 2010 | 1.43 | 1.52 | 2.65 | 0.00 | 0.01 | 0.10 | 0.11 | 0.00 | 0.09 | 0.09 | 362.54 |
| Building 11/24/2009-06/30/2010 | 0.32 | 1.52 | 2.59 | 0.00 | 0.01 | 0.10 | 0.11 | 0.00 | 0.09 | 0.09 | 356.23 |
| Building Off Road Diesel | 0.24 | 1.15 | 0.76 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.07 | 0.07 | 112.64 |
| Building Vendor Trips | 0.02 | 0.27 | 0.21 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 50.64 |
| Building Worker Trips | 0.05 | 0.10 | 1.63 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 192.95 |
| Coating 05/03/2010-06/30/2010 | 1.11 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.31 |
| Architectural Coating | 1.10 | 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 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.31 |

Phase Assumptions

Phase: Demolition 7/1/2009 - 8/5/2009 - Default Demolition Description
 Building Volume Total (cubic feet): 229280
 Building Volume Daily (cubic feet): 0
 On Road Truck Travel (VMT): 0
 Off-Road Equipment:
 1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 8 hours per day
 3 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day

Phase: Fine Grading 8/6/2009 - 8/24/2009 - Default Fine Site Grading/Excavation Description
 Total Acres Disturbed: 5
 Maximum Daily Acreage Disturbed: 0.5
 Fugitive Dust Level of Detail: Low
 Onsite Cut/Fill: 70173 cubic yards/day; Offsite Cut/Fill: 0 cubic yards/day
 On Road Truck Travel (VMT): 1360.38
 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

Page: 4

9/9/2008 3:47:01 PM

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

Phase: Trenching 8/25/2009 - 10/30/2009 - Default Trenching Description

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 11/2/2009 - 11/30/2009 - Default Paving Description

Acres to be Paved: 0.08

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 11/24/2009 - 6/30/2010 - Default Building Construction Description

Off-Road Equipment:

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

2 Forklifts (145 hp) operating at a 0.3 load factor for 7 hours per day

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

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

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

Phase: Architectural Coating 5/3/2010 - 6/30/2010 - Default Architectural Coating Description

Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100

Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50

Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250

Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100

Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

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|--------------------------------|------|------|------|------|------|------|------|------|------|------|--------|
| Asphalt 11/02/2009-11/30/2009 | 0.02 | 0.13 | 0.09 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 12.63 |
| 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 | 0.02 | 0.13 | 0.07 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 10.28 |
| Paving On Road Diesel | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.06 |
| Paving Worker Trips | 0.00 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.29 |
| Building 11/24/2009-06/30/2010 | 0.07 | 0.35 | 0.60 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02 | 77.33 |
| Building Off Road Diesel | 0.06 | 0.26 | 0.17 | 0.00 | 0.00 | 0.02 | 0.02 | 0.00 | 0.02 | 0.02 | 24.45 |
| Building Vendor Trips | 0.01 | 0.07 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 10.99 |
| Building Worker Trips | 0.01 | 0.02 | 0.38 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 41.89 |
| 2010 | 1.31 | 1.52 | 2.65 | 0.00 | 0.01 | 0.10 | 0.11 | 0.00 | 0.09 | 0.09 | 362.54 |
| Building 11/24/2009-06/30/2010 | 0.32 | 1.52 | 2.59 | 0.00 | 0.01 | 0.10 | 0.11 | 0.00 | 0.09 | 0.09 | 356.23 |
| Building Off Road Diesel | 0.24 | 1.15 | 0.76 | 0.00 | 0.00 | 0.08 | 0.08 | 0.00 | 0.07 | 0.07 | 112.64 |
| Building Vendor Trips | 0.02 | 0.27 | 0.21 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | 0.01 | 0.01 | 50.64 |
| Building Worker Trips | 0.05 | 0.10 | 1.63 | 0.00 | 0.01 | 0.01 | 0.01 | 0.00 | 0.00 | 0.01 | 192.95 |
| Coating 05/03/2010-06/30/2010 | 1.00 | 0.00 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.31 |
| Architectural Coating | 0.99 | 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 | 0.05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 6.31 |

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 8/6/2009 - 8/24/2009 - Default Fine Site Grading/Excavation Description

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

PM10: 84% PM25: 84%

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 Water exposed surfaces 2x daily watering mitigation reduces emissions by:

Page: 7

9/9/2008 3:47:01 PM

PM10: 55% PM25: 55%

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 5/3/2010 - 6/30/2010 - Default Architectural Coating Description

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%

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

ROG: 10%

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

ROG: 10%