

Appendix C.
Air Quality Calculations



Appendices

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Demolition Volumes - Calculated from Google Earth 2007

				Total SQFT	Assumed Height
				9,600	14
Parcel 1					
Building Dimensions				<u>Total Demo Volumes For URBEMIS</u>	
	Length	Width	Sqft	Length	97.98
1.00	140.00	30.00	4,200	Width	97.98
2.00	120.00	45.00	5,400	<u>Daily Demo Volumes For URBEMIS</u>	
				Construction Period Days	80.00
				Length	10.95
				Width	10.95

Construction Localized Significance Thresholds - 109th Street Pool and Bathhouse

SRA No.	Acres	Source Receptor Distance (meters)
12	0.75	25

Source Receptor Area	South Central LA County		NOx	CO	PM10	PM2.5	
Distance (meters)	25						
NOx	137						
CO	151						
PM10	4						
PM2.5	3						
			Demolition	8	6	<1	<1
			Fine Grading	27	14	3	1.0
			Building Construction	1	4	<1	<1
			Asphalt Paving	2	9	1	1
			Achitectural Coatings	3	<1	0	0.0
			Demolition	8	6	<1	<1
			Fine Grading	27	14	3	1
			Building Construction	1	4	<1	<1
			Asphalt Paving	2	9	1	1
			Achitectural Coatings	3	<1	0	0
			LST Thresholds	137	151	4	3
			Amount Exceeding Thresholds	0	0	0	0
	Acres	25	50	100	200	500	
NOx	1	137	139	161	209	327	
	1	137	139	161	209	327	
		137	139	161	209	327	
CO	1	151	224	413	1010	3635	
	1	151	224	413	1010	3635	
		151	224	413	1010	3635	
PM10	1	4	12	26	54	139	
	1	4	12	26	54	139	
		4	12	26	54	139	
PM2.5	1	3	4	7	17	70	
	1	3	4	7	17	70	
		3	4	7	17	70	
South Central LA County							
	0.75 Acres						
NOx	137	139	161	209	327		
CO	151	224	413	1010	3635		
PM10	4	12	26	54	139		
PM2.5	3	4	7	17	70		

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
12	1	12	1
Distance Increment Below			
25			
Distance Increment Above			
50			

Updated: 4/2008 - Table C-1. 2003 – 2005

2010	0.09	0.37	0.25	0.00	0.00	0.03	0.03	0.00	0.03	0.03	36.72
Building 07/01/2009-06/01/2010	0.05	0.30	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	30.09
Building Off Road Diesel	0.04	0.30	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	28.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
Building Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
Asphalt 04/01/2010-04/15/2010	0.01	0.07	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	6.57
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	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.39
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
Coating 05/01/2010-06/01/2010	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Architectural Coating	0.04	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

Phase Assumptions

Phase: Demolition 2/1/2009 - 5/31/2009 - Default Demolition Description

Building Volume Total (cubic feet): 134456

Building Volume Daily (cubic feet): 1694

On Road Truck Travel (VMT): 23.53

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 6/1/2009 - 6/30/2009 - Type Your Description Here

Total Acres Disturbed: 0.75

Maximum Daily Acreage Disturbed: 0.19

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

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

2010	0.09	0.37	0.25	0.00	0.00	0.03	0.03	0.00	0.03	0.03	36.72
Building 07/01/2009-06/01/2010	0.05	0.30	0.20	0.00	0.00	0.02	0.02	0.00	0.02	0.02	30.09
Building Off Road Diesel	0.04	0.30	0.19	0.00	0.00	0.02	0.02	0.00	0.02	0.02	28.28
Building Vendor Trips	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
Building Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.43
Asphalt 04/01/2010-04/15/2010	0.01	0.07	0.05	0.00	0.00	0.01	0.01	0.00	0.01	0.01	6.57
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	0.01	0.07	0.04	0.00	0.00	0.01	0.01	0.00	0.01	0.01	5.39
Paving On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Paving Worker Trips	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.14
Coating 05/01/2010-06/01/2010	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05
Architectural Coating	0.04	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.05

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/1/2009 - 6/30/2009 - Type Your Description Here

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%

Time Slice 4/1/2010-4/15/2010 Active	2.86	17.64	12.43	0.00	0.01	1.48	1.49	0.00	1.36	1.36	1,752.31
~ Asphalt 04/01/2010-04/15/2010	2.02	12.07	8.72	0.00	0.01	1.03	1.05	0.00	0.95	0.96	1,195.03
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	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.30
Paving Worker Trips	0.06	0.11	1.72	0.00	0.01	0.01	0.02	0.00	0.00	0.01	207.51
Building 07/01/2009-06/01/2010	0.84	5.58	3.70	0.00	0.00	0.44	0.44	0.00	0.41	0.41	557.28
Building Off Road Diesel	0.83	5.52	3.45	0.00	0.00	0.44	0.44	0.00	0.40	0.40	523.66
Building Vendor Trips	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.06
Building Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.56
Time Slice 4/16/2010-4/30/2010 Active	0.84	5.58	3.70	0.00	0.00	0.44	0.44	0.00	0.41	0.41	557.28
~ Building 07/01/2009-06/01/2010	0.84	5.58	3.70	0.00	0.00	0.44	0.44	0.00	0.41	0.41	557.28
Building Off Road Diesel	0.83	5.52	3.45	0.00	0.00	0.44	0.44	0.00	0.40	0.40	523.66
Building Vendor Trips	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.06
Building Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.56
Time Slice 5/3/2010-6/1/2010 Active	4.10	5.58	3.74	0.00	0.00	0.44	0.44	0.00	0.41	0.41	561.79
~ Building 07/01/2009-06/01/2010	0.84	5.58	3.70	0.00	0.00	0.44	0.44	0.00	0.41	0.41	557.28
Building Off Road Diesel	0.83	5.52	3.45	0.00	0.00	0.44	0.44	0.00	0.40	0.40	523.66
Building Vendor Trips	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.06
Building Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.56
Coating 05/01/2010-06/01/2010	3.26	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51
Architectural Coating	3.26	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	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51

Phase Assumptions

Phase: Demolition 2/1/2009 - 5/31/2009 - Default Demolition Description

Building Volume Total (cubic feet): 134456

Building Volume Daily (cubic feet): 1694

On Road Truck Travel (VMT): 23.53

Off-Road Equipment:

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

Phase: Fine Grading 6/1/2009 - 6/30/2009 - Type Your Description Here

Total Acres Disturbed: 0.75

Maximum Daily Acreage Disturbed: 0.19

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

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

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

Time Slice 1/1/2010-3/31/2010 Active	0.84	5.58	3.70	0.00	0.00	0.44	0.44	0.00	0.41	0.41	557.28
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- Asphalt 04/01/2010-04/15/2010	2.02	12.07	8.72	0.00	0.01	1.03	1.05	0.00	0.95	0.96	1,195.03
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	0.06	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.30
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Building Off Road Diesel	0.83	5.52	3.45	0.00	0.00	0.44	0.44	0.00	0.40	0.40	523.66
Building Vendor Trips	0.00	0.04	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	7.06
Building Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.56
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Building Worker Trips	0.01	0.01	0.22	0.00	0.00	0.00	0.00	0.00	0.00	0.00	26.56
Coating 05/01/2010-06/01/2010	3.26	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51
Architectural Coating	3.26	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	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/1/2009 - 6/30/2009 - Type Your Description Here

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%

Phase Assumptions

Phase: Demolition 2/1/2009 - 5/31/2009 - Default Demolition Description

Building Volume Total (cubic feet): 134456

Building Volume Daily (cubic feet): 1694

On Road Truck Travel (VMT): 23.53

Off-Road Equipment:

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Phase: Fine Grading 6/1/2009 - 6/30/2009 - Type Your Description Here

Total Acres Disturbed: 0.75

Maximum Daily Acreage Disturbed: 0.19

Fugitive Dust Level of Detail: Default

20 lbs per acre-day

On Road Truck Travel (VMT): 0

Off-Road Equipment:

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

Phase: Paving 4/1/2010 - 4/15/2010 - Type Your Description Here

Acres to be Paved: 0.06

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 7/1/2009 - 6/1/2010 - Default Building Construction Description

Off-Road Equipment:

- 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 5/1/2010 - 6/1/2010 - 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

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Coating 05/01/2010-06/01/2010	3.26	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51
Architectural Coating	3.26	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	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.51

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 6/1/2009 - 6/30/2009 - Type Your Description Here

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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:

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