

APPENDIX C

**SOUTH COAST AIR QUALITY MANGEMENT DISTRICT
NATIONAL CORE (NCORE) MONITORING NETWORK PLAN**

JULY 2009

Prepared by

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Introduction

On October 17th, 2006 the Environmental Protection Agency (EPA) issued final amendments to the ambient air monitoring requirements for criteria pollutants contained in 40 CFR parts 50, 53 and 58. The purpose of the amendments are to enhance ambient air quality monitoring to better serve current and future air quality management and research needs. The final amendments detail a new ambient air monitoring requirement for states to establish and operate a network of National Core (NCore) multipollutant monitoring stations. The South Coast AQMD NCore monitoring network plan includes details for the implementation of the NCore monitoring locations to be operational by January 1, 2011.

Public Comments

Pursuant to Federal regulations, this plan is to be made available for public inspection and comments for at least 30 days prior to submission to U.S. EPA. Hard copies of this document were made available on June 1, 2009 at the South Coast AQMD Public Information Desk in Diamond Bar, CA. The document was also posted to the public South Coast AQMD website at www.aqmd.gov on June 1, 2009, with links under the South Coast AQMD home page titled “Current Programs, Events and Topics” Links to the document were also provided in the “Air Quality” area of the website. The draft document will also be made available to U.S. EPA during this period for review.

Monitoring Objectives

The goals for NCore multipollutant stations are to track long-term trends of emissions control programs; to support health assessments that contribute to ongoing reviews of the National Ambient Air Quality Standards (NAAQS); to aid in the development of emissions control strategies through air quality model evaluation and other observational methods; to support scientific studies ranging across technological, health, and atmospheric process disciplines; to support ecosystem assessments; to provide data for use in attainment and non-attainment designations and for public reporting and forecasting of the AQI.

Methodology

Methods employed in NCore multipollutant sites used to measure SO₂, CO, NO₂, O₃, and PM_{2.5} are reference or equivalent method samplers as defined in 40 CFR part 58.1 or Approved Regional Method (ARM) samplers as defined in appendix C to part 58 section 2.4. Instruments purchased by South Coast AQMD for use at NCore stations are included in Table 1.

Monitoring Requirements

NCore multipollutant sites measure multiple pollutants in order to support integrated air quality management data needs. NCore sites include neighborhood and urban scale measurements in metropolitan areas and rural areas. Sites are long term and sited away from direct emission sources that could impact the ability to detect area-wide concentrations. NCore sites for South Coast AQMD are shown in Table 2. Considerations in the site selection process include:

Siting Criteria – Sites selected as NCore stations are urban or rural locations. South Coast AQMD NCore sites are located in urban areas with monitors sited at neighborhood scales of representativeness. This provides the level of exposure consistent throughout

the metropolitan area. Siting specifications for Los Angeles (Main) and Rubidoux stations are detailed in site reports included as an attachment to appendix C.

Number of Stations – Each state is required to operate at least one NCore site. States such as California with multiple MSAs are required to identify one or two additional NCore sites in order to account for their unique situation. EPA guidance states that NCore stations should, when possible, be collocated with other multipollutant stations including Photochemical Assessment Monitoring Stations (PAMS), National Air Toxics Trends Stations (NATTS), and Speciation Trends Network (STN) sites to utilize the same monitoring platform and equipment to meet the objectives of multiple programs. The South Coast AQMD NCore monitoring network stations are to be located at Los Angeles (Main) and Rubidoux air monitoring sites. Selection of Los Angeles (Main) and Rubidoux sites for NCore stations will meet the EPA goal of collocation among multipollutant stations such as PAMS, NATTS, and STN. Site reports for both the Los Angeles (Main) and Rubidoux stations are included as an attachment to appendix C.

Measurements – EPA ambient air monitoring requirements specify that NCore stations must measure PM_{2.5} particle mass using continuous and integrated filter based samplers, speciated PM_{2.5}, PM_{10-2.5} (coarse) mass, speciated PM_{10-2.5} mass, O₃, trace-level SO₂, trace-level CO, NO/NO_y, wind speed and direction, relative humidity and ambient temperature. In addition to the previous requirements, the ten most populated MSA/CSA in each EPA region must measure lead (Pb) at the same site or elsewhere in the MSA/CSA boundary. South Coast AQMD currently meets the requirement for PM_{2.5}, O₃, wind speed and direction, relative humidity and ambient temperature at both the Los Angeles (Main) and Rubidoux stations. NO_y and trace level CO and SO₂ monitors have been purchased and are currently undergoing acceptance testing with installation planned during fiscal year (FY) 2009-10. Equipment purchases for PM_{10-2.5} mass and speciation are being delayed in anticipation of possible upcoming U.S. EPA federal equivalency designations and the prospect of additional funding. South Coast AQMD is committed to acquire and deploy the coarse PM instrumentation prior to January 1, 2011 statutory deadline. A comprehensive list of monitors at both the Los Angeles (Main) and Rubidoux stations are included in the site report as an attachment to appendix C.

Operating schedules – Manual PM_{2.5} samplers at NCore stations, and required regional background/transport sites must operate at least on a 1:3 day sampling frequency. Sampling frequencies for monitors at Los Angeles (Main) and Rubidoux are on a daily schedule and included in the site reports attached to appendix C.

During the coming year South Coast AQMD plans to complete acceptance testing for trace level CO, SO₂ and NO_y analyzers. Once completed, analyzers are to be installed at the Los Angeles (Main) and Rubidoux NCore stations during FY 2009-10. Additional supporting equipment to be purchased during FY 2009-10 includes zero air generators and data loggers with digital capabilities.

TABLE 1 New NCore Monitors

Monitor Type	Model\Manufacturer	Designation	Analysis Method	Sampling frequency
Trace-level CO	Teledyne API 300EU	NCore	Non-dispersive Infrared (NDIR)	Continuous
NO/NOy	Thermo Scientific 42iy	NCore	Chemiluminescence	Continuous
Trace-level SO2	Thermo Scientific 43i-TLE	NCore	Pulsed Fluorescence SO2 Analyzer	Continuous

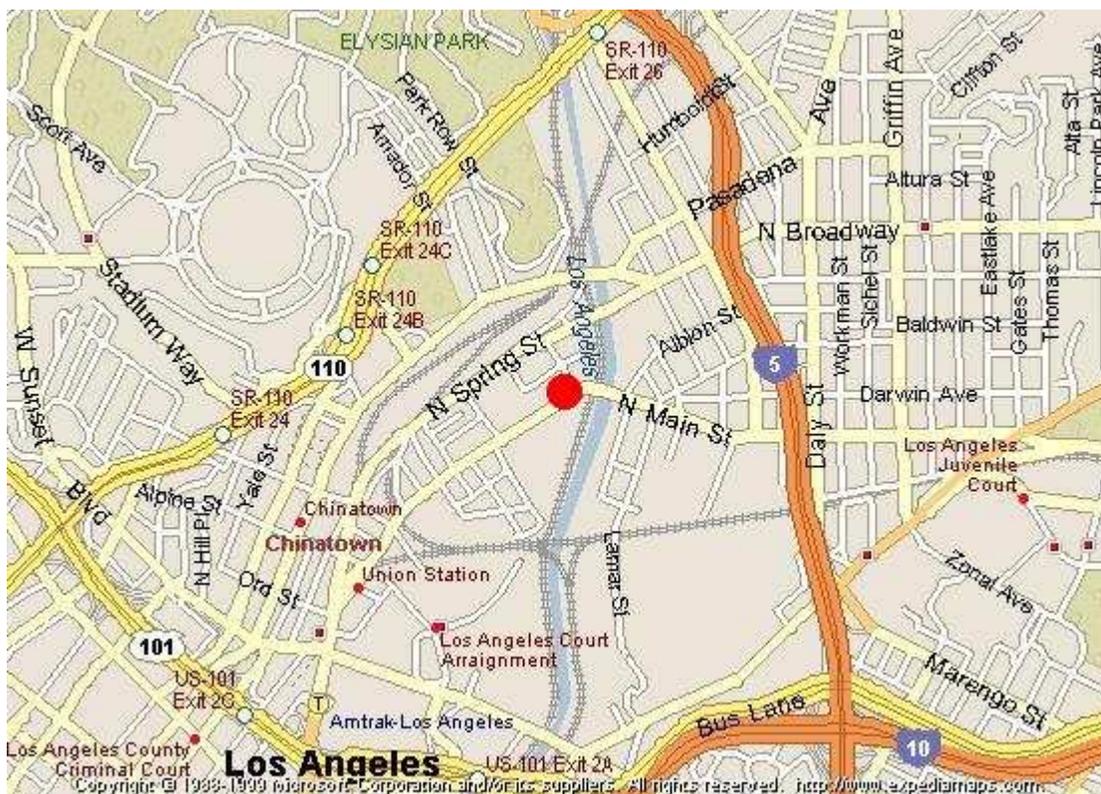
TABLE 2 NCore Monitoring Locations

Station	AQS	Monitors	Programs
Los Angeles ¹ (Main)	060371103	CO,NO2,SO2,O3,PM10,Pb,PM2.5,SO4	NCORE, PAMS, NATTS, STN
Rubidoux ¹	060658001	CO,NO2,SO2,O3,PM10,Pb,PM2.5,SO4	NCORE, PAMS, NATTS, STN

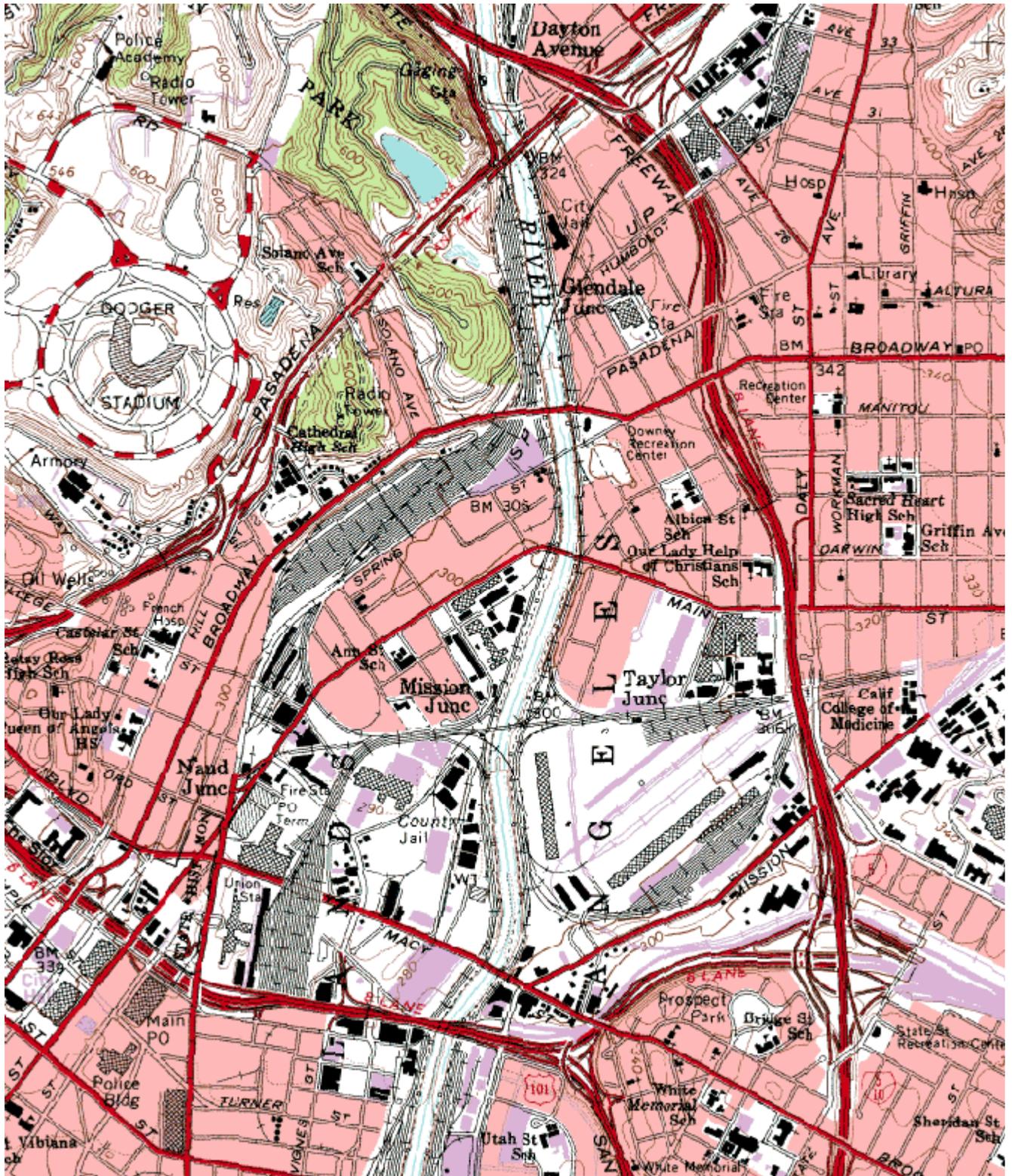
1 – New PAMS sites to begin July 1st, 2009

South Coast AQMD
Site Survey Report for Los Angeles-North Main Street

Last updated March 2009



AIRS Number	ARB Number	Site Start Date	Reporting Agency and Agency Code			
060371103	70087	09/79	South Coast AQMD (061)			
Site Address		County	Air Basin	Latitude	Longitude	Elevation
1630 North Main Street Los Angeles, CA 90012		Los Angeles	South Coast	34° 03' 59"	118° 13' 36"	89



Site Survey Report

Siting Information

Site Name: Los Angeles- North Main Street	Date: 03/10/09	State Code: 70087	AIRS Number: 060371103
Address: 1630 North Main St Los Angeles, CA 90012	Latitude: 34° 03' 59"	Longitude: 118° 13' 36"	Elevation (m): 89
	Senior AQIS: Albert Dietrich	Site Technician: Carl Thompson	Site Phone: (323) 225-0178
Operating Agency: South Coast AQMD			

General Siting Conditions

Station Temperature Controlled: Yes Recorded: Yes	Traffic Description: Commercial Distance: 40 meters Count (Veh/Day): 10000	Topography Site: Level	Predominant Wind Direction: W
		Region: Level	Arc Air Flow (Deg): 360 Degrees
		QA Manual	Probe Last Cleaned: 05/12/09
Meteorology Located With Instruments: Yes	Non-vehicular Local Sources Description: None Distance: N/A Direction: N/A	Approved: Yes	Manifold Clean: Yes
		Agency: South Coast AQMD	Cleaning Schedule: 6 Months
		Urbanization: Suburban	Autocalibrator Type: Environics 9100
		Ground Cover: Asphalt	Site Survey Complete: Yes Logbook Up To Date: Yes

Action Items

Comments

Detailed Site Information

Site Name	Los Angeles-North Main Street			
AQS ID (AIRS #)	060371103			
GIS coordinates	Latitude: 34° 03' 59" Longitude: 118° 13' 36"			
Location	DWP General Warehouse Building			
Address	1630 North Main Street, Los Angeles, CA 90012			
County	Los Angeles			
Dist. to road	40 meters			
Traffic count	10,000 veh/day			
Groundcover	Asphalt			
PEP audit?	05/19/09			
NPAP audit?	07/22/08			
Flow audit?	07/22/08			
Representative Area	31100-Los Angeles, Long Beach-Santa Ana, CA MSA			
Pollutant	Carbon Monoxide	Nitrogen Dioxide	Ozone	Sulfur Dioxide
Monitor obj	REPRESENTATIVE CONCENTRATION	HIGHEST CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	Horiba APMA-360	42i	API/Teledyne 400E	TECO 43i-TLE
Serial #	576876073	CM 08360037	520-S	0831832126
Property #	0016214	16730	N/A	16746
Last Calibration Date	03/10/09	03/03/09	12/12/08	02/10/09
Analysis method	N/A	N/A	N/A	N/A
Start date	03/79	03/79	03/79	03/79
Operation schedule	1:1	1:1	1:1	1:1
Sampling season	All Year	All Year	All Year	All Year
Probe height	12.3	12.3	12.3	12.3
Distance from supporting structure	2.0	2.0	2.0	2.0
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	N/A	N/A	N/A	N/A
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	Teflon	Teflon	Teflon	Teflon
Residence time	7.2	7.6	8.1	9.5
Will there be changes within the next 18 months?	No	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	N/A	N/A

Air Quality Monitoring Network Plan – July 2009

Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	Nightly	Nightly	Nightly	Nightly
Last Annual Performance Evaluation (gaseous)	07/17/08	02/25/09	07/13/08	02/05/09
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A

Pollutant	PM10-SSI – A	PM10-SSI (Natts) – B	TSP (Lead) – B	TSP (Lead) – A
Monitor obj	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	T300-310	Tisch 300-310	Tisch 300-310	Tisch 300-310
Serial #	0516	0432	0568	0567
Property #	4935	50461	1573	4967
Last Calibration Date	03/27/09	06/04/08	03/27/09	03/27/09
Analysis method	Weighed by SCAQMD lab			
Start date	03/79	01/07	03/79	03/79
Operation schedule	1:6	6 per Year	1:6	1:6
Sampling season	All Year	All Year	All Year	All Year
Probe height	11.7	11.7	11.3	11.3
Distance from supporting structure	1.5	1.5	1.1	1.1
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2	2	2	2
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	Monthly	Monthly	N/A	N/A

Air Quality Monitoring Network Plan – July 2009

Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	05/11/09	05/11/09	N/A	N/A

Pollutant	PM10 BAM	BAM-PM2.5	SASS 2.5	SASS 2.5
Monitor obj	REPRESENTATIVE CONCENTRATION	HIGHEST CONCENTRATION	HIGHEST CONCENTRATION	HIGHEST CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	Andersen PM10 BAM	MetOne BAM 1020	MetOne SASS	MetOne SASS
Serial #	97	F8025	D8051	C4157
Property #	10590	164836 (USC)	E000289	E000229
Last Calibration Date	04/18/08	12/04/08	01/06/09	07/14/08
Analysis method	N/A	N/A	Analyzed by SCAQMD lab	Analyzed by SCAQMD lab
Start date	05/01/03	12/04/08	12/10/08	02/07
Operation schedule	1:1	1:1	1:3	1:6
Sampling season	All Year	All Year	All Year	All Year
Probe height	12.0	12.8	12.0	12.0
Distance from supporting structure	1.8	2.6	1.8	1.8
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2	2	2	2
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	Yes	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	Monthly	Monthly

Air Quality Monitoring Network Plan – July 2009

Frequency of flow rate verification for automated PM analyzers audit	Monthly	Bi-Weekly	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	04/18/08	N/A	04/18/08	04/18/08

Pollutant	SASS PM2.5 (EPA STN)	PM2.5	PM2.5	Xontech 910A (Natts)
Monitor obj	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	MetOne SASS	Andersen RAAS 2.5	Andersen RAAS 2.5	Xontech 910A
Serial #	A6186	305	347	4687
Property #	N/A	E000005	E000006	E000173
Last Calibration Date	03/27/09	12/23/08	04/14/09	02/11/09
Analysis method	EPA STN	Weighed by SCAQMD lab	Weighed by SCAQMD lab	Analyzed by SCAQMD lab
Start date	03/07/07	01/99	01/99	01/07
Operation schedule	1:6	1:1	1:6	1:6
Sampling season	All Year	All Year	All Year	All Year
Probe height	12.0	12.1	12.1	12.6
Distance from supporting structure	1.8	1.9	1.9	2.3
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2	2	2	2
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	N/A	N/A	N/A	SS
Residence time	N/A	N/A	N/A	5.7 / 2.7
Will there be changes within the next 18 months?	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	Yes	Yes	N/A

Air Quality Monitoring Network Plan – July 2009

Frequency of flow rate verification for manual PM samplers audit	Monthly	Monthly	Monthly	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	05/11/09	05/11/09	N/A
Last two semi-annual flow rate audits for PM monitors	04/18/08	12/08	12/08	N/A

Pollutant	Xontech 910B (Natts)	Xontech 920 (NATTS)	Xontech 920 (NATTS)	PUF (Natts)
Monitor obj	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	Xontech 910A	Xontech 920	Xontech 920	Tisch Puf
Serial #	3634	146	156	007
Property #	14392	15466	N/A	50493
Last Calibration Date	01/02/09	02/11/09	02/12/09	02/11/09
Analysis method	Analyzed by SCAQMD lab	Analyzed by SCAQMD lab	Analyzed by SCAQMD lab	Weighed by SCAQMD lab
Start date	01/07	01/07	01/07	11/19/04
Operation schedule	6 / Year	1:6	6 / Year	1:6
Sampling season	All Year	All Year	All Year	All Year
Probe height	12.6	11.5	11.5	11.3
Distance from supporting structure	2.3	1.3	1.3	1.1
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2	2	2	2
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	SS	N/A	N/A	N/A
Residence time	2.6	N/A	N/A	N/A
Will there be changes within the next 18 months?	No	No	No	No

Air Quality Monitoring Network Plan – July 2009

Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A

Pollutant	ARB Toxics	ARB Toxics	URG 2.5 (EPA STN)	
Monitor obj	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	
Sampling method	RM Environmental Systems Inc. 924	RM Environmental Systems Inc. 910PC	URG 3000N	
Serial #	9241002	6101	3N-B0143	
Property #	20021009 (ARB)	20062214 (ARB)	N/A	
Last Calibration Date	04/29/09	N/A	01/20/09	
Analysis method	Analyzed by CARB lab	Analyzed by CARB lab	Analyzed by SCAQMD lab	
Start date	08/07	08/07	03/07/07	
Operation schedule	1:12	1:12	1:6	
Sampling season	All Year	All Year	All Year	
Probe height	12.18	12.6	12.3	
Distance from supporting structure	1.9	2.3	2.0	
Distance from obstructions on roof	N/A	N/A	N/A	
Distance from obstructions not on roof	N/A	N/A	N/A	
Distance from trees	N/A	N/A	N/A	
Distance to furnace or incinerator flue	N/A	N/A	N/A	
Distance between collocated monitors	N/A	N/A	2	
Unrestricted airflow	Yes	Yes	Yes	
Probe material	Teflon	Teflon	N/A	
Residence time	N/A	N/A	N/A	

Air Quality Monitoring Network Plan – July 2009

Will there be changes within the next 18 months?	No	No	No	
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	
Frequency of flow rate verification for manual PM samplers audit	N/A	N/A	Monthly	
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	

**Los Angeles-North Main Street
Site Photos**



Looking North from the probe.



Looking East from the probe.



Looking South from the probe.



Looking West from the probe.

**Los Angeles-North Main Street
Site Photos (Cont.)**



Looking at the probe from the North.



Looking at the probe from the East.



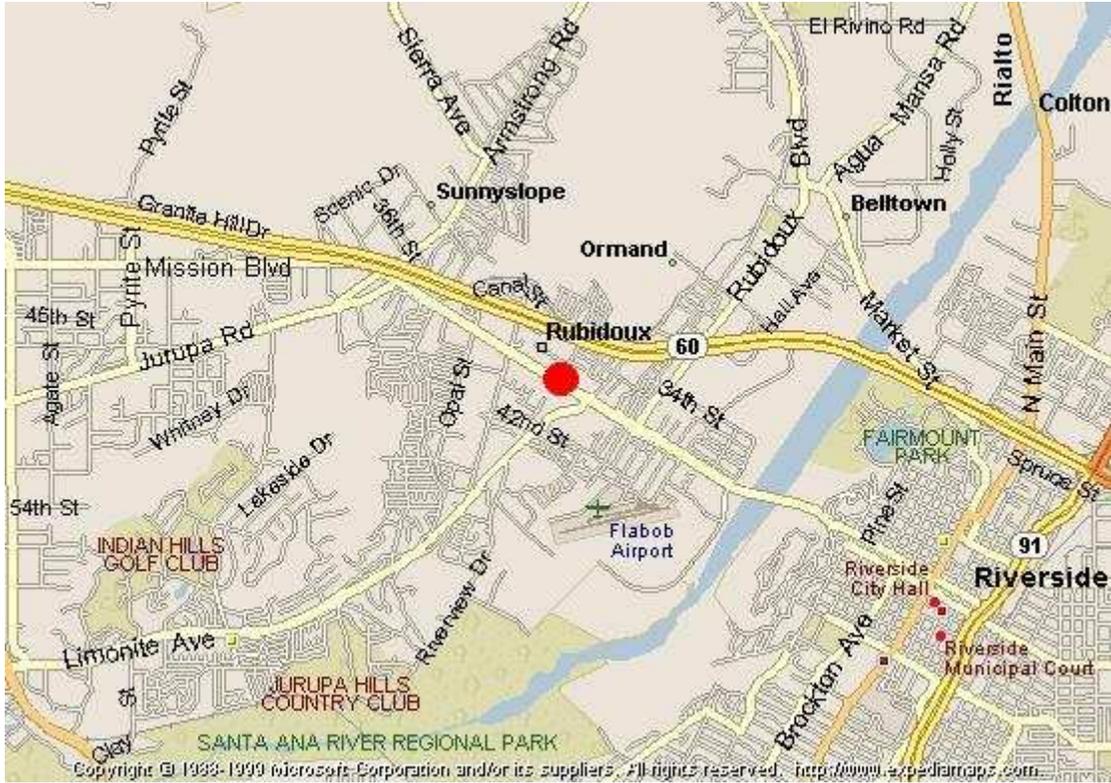
Looking at the probe from the South.



Looking at the probe from the West.

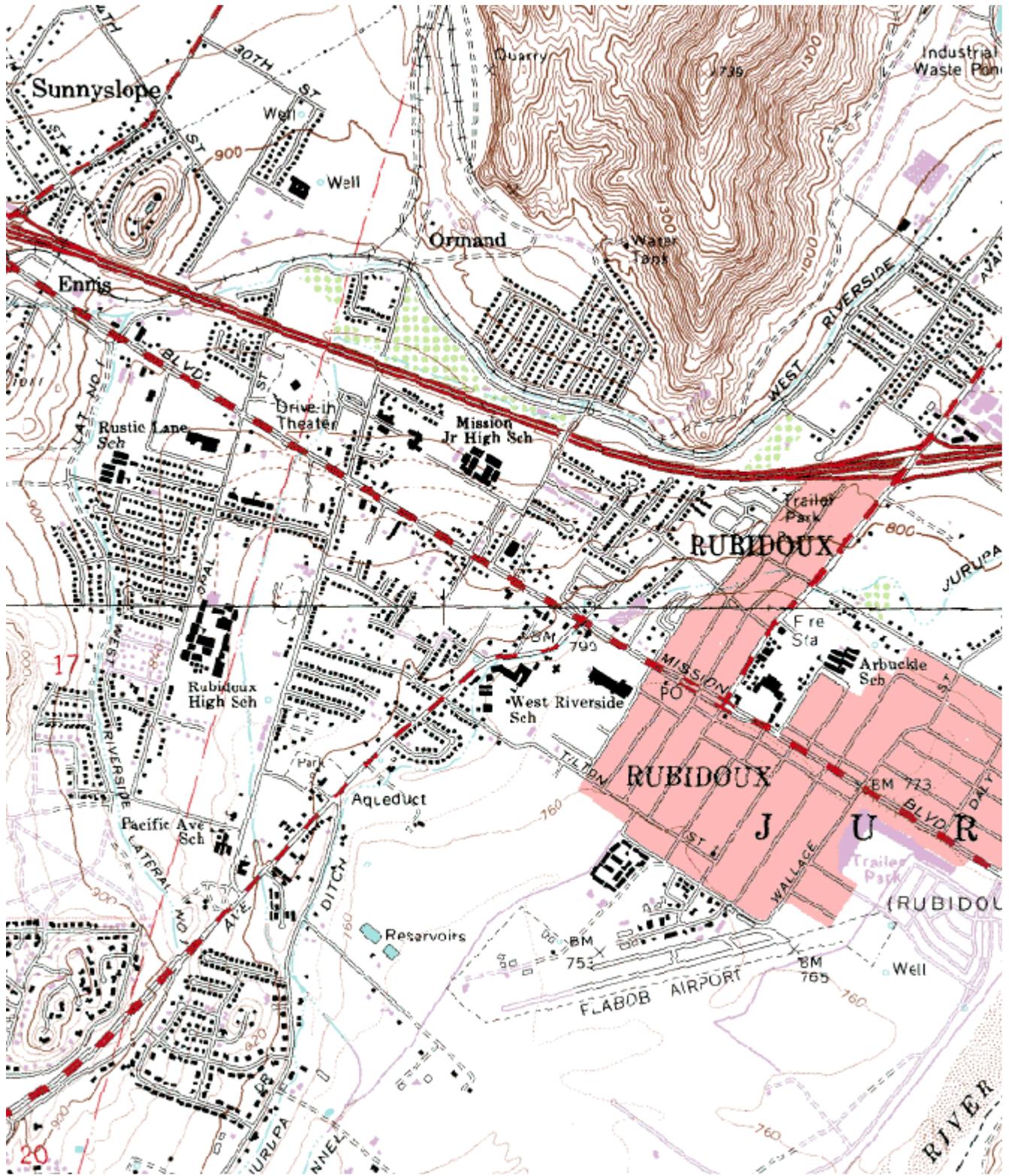
**Quality Assurance
Site Survey Report for Riverside-Rubidoux**

Last updated March 2009



AIRS Number	ARB Number	Site Start Date	Reporting Agency and Agency Code
060658001	33144	09/72	South Coast AQMD (061)

Site Address	County	Air Basin	Latitude	Longitude	Elevation
5888 Mission Blvd Riverside, CA 92509	Riverside	South Coast	33° 59' 58"	117° 24' 57"	248



Site Survey Report

Siting Information

Site Name: Riverside-Rubidoux	Date: 03/10/09	State Code: 33144	AIRS Number: 060658001
Address: 5888 Mission Blvd Riverside, CA 92509	Latitude: 33° 59' 58"	Longitude: 117° 24' 57"	Elevation (m): 248
	Senior AQIS: Keith Brown	Site Technician: Lila Enriquez	Site Phone: (951) 683-0211
Operating Agency: South Coast AQMD			

General Siting Conditions

Station Temperature Controlled: Yes Recorded: Yes	Traffic Description: Residential Distance: 25 meters Count (Veh/Day): 10000	Topography Site: Level Region: Level	Predominant Wind Direction: W
			Arc Air Flow (Deg): 360 Degrees
		Meteorology Located With Instruments: Yes	Non-vehicular Local Sources Description: None Distance: N/A Direction: N/A
Approved: Yes	Manifold Clean: Yes		
Agency: South Coast AQMD	Cleaning Schedule: 6 Months		
Urbanization: Rural	Autocalibrator Type: Environics 9100		
		Ground Cover: Gravel	Site Survey Complete: Yes
			Logbook Up To Date: Yes

Action Items

Comments

Detailed Site Information

Site Name	Riverside-Rubidoux			
AQS ID (AIRS #)	060658001			
GIS coordinates	Latitude: 33° 59' 58" Longitude: 117° 24' 57"			
Location	Vacant Lot			
Address	5888 Mission Blvd, Riverside, CA 92509			
County	Riverside			
Dist. to road	25 meters			
Traffic count	10,000 veh/day			
Groundcover	Gravel			
PEP audit?				
NPAP audit?	12/08			
Flow audit?	12/08			
Representative Area	40140-Riverside-San Bernardino-Ontario, CA MSA			
Pollutant	PM10-SSI	PM10-SSI	TEOM	PM2.5 (Collocated) (RAAS)
Monitor obj	HIGHEST CONCENTRATION	HIGHEST CONCENTRATION	HIGHEST CONCENTRATION	HIGHEST CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	SA 1200	SA 1200	R&P 1400	Andersen 300
Serial #	N/A	N/A	20013773	00112
Property #	4941	4992	ARB Unit	E000011
Last Calibration Date	02/03/09	02/03/09	02/10/09	01/06/09
Analysis method	Weighed by SCAQMD lab	Weighed by SCAQMD lab	N/A	Weighed by SCAQMD lab
Start date	01/14/97	01/14/97	12/03/04	12/04/98
Operation schedule	1:3	1:6	1:1	1:6
Sampling season	All Year	All Year	All Year	All Year
Probe height	4.5	4.5	5.0	4.8
Distance from supporting structure	1.6	1.6	1.6	1.6
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2.0	2.0	N/A	1.0
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	N/A	N/A		N/A
Residence time	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	Yes	Yes	Yes	Yes
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	Yes

Air Quality Monitoring Network Plan – July 2009

Frequency of flow rate verification for manual PM samplers audit	Monthly	Monthly	N/A	Monthly
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	Monthly	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	12/03/08, 05/06/09	12/03/08, 05/06/09	N/A	06/18/08, 12/03/08

Pollutant	PM2.5	Xontech 924	PM2.5 SASS	PM2.5 SASS
Monitor obj	HIGHEST CONCENTRATION	REPRESENTATIVE CONCENTRATION	HIGHEST CONCENTRATION	HIGHEST CONCENTRATION
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Sampling method	Andersen 300 RAAS	Xontech 924	MetOne SASS	MetOne SASS
Serial #	498	20021474	B3802	A5521
Property #	N/A	ARB Unit	E000178	
Last Calibration Date	01/06/09	01/04/09	12/31/08	12/09/08
Analysis method	Weighed by SCAQMD lab	Weighed by SCAQMD lab	Weighed by SCAQMD lab	EPA RTP STN
Start date	01/03/99	01/03/99	10/13/04	10/13/04
Operation schedule	1:1	1:12	1:3	1:3
Sampling season	All Year	All Year	All Year	All Year
Probe height	4.8	3.5	4.8	4.8
Distance from supporting structure	1.6	1.6	1.3	1.6
Distance from obstructions on roof	N/A	N/A	N/A	N/A
Distance from obstructions not on roof	N/A	N/A	N/A	N/A
Distance from trees	N/A	N/A	N/A	N/A
Distance to furnace or incinerator flue	N/A	N/A	N/A	N/A
Distance between collocated monitors	2.0	N/A	2.0	2.0
Unrestricted airflow	Yes	Yes	Yes	Yes
Probe material	N/A	N/A	N/A	N/A
Residence time	N/A	N/A	N/A	N/A
Will there be changes within the next 18 months?	Yes	Yes	Yes	Yes
Is it suitable for comparison against the annual PM2.5?	Yes	N/A	N/A	N/A

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Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A	Monthly	Monthly
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	N/A
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	N/A
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	06/18/08, 05/06/09	N/A	N/A	N/A

Pollutant	PM2.5	XONTECH 920	XONTECH 920	
Monitor obj	HIGHEST CONCENTRATION	REPRESENTATIVE CONCENTRATION	REPRESENTATIVE CONCENTRATION	
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	
Sampling method	MetOne SASS	XONTECH 920	XONTECH 920	
Serial #	A5525	148	149	
Property #		15478	15480	
Last Calibration Date	01/08/09	12/04/08	12/05/08	
Analysis method	EPA RTP STN	Weighed by SCAQMD lab	Weighed by SCAQMD lab	
Start date	10/13/04	11/29/07	04/12/04	
Operation schedule	1:6	1:6	1:every other month	
Sampling season	All Year	All Year		
Probe height	4.8	4.8	4.8	
Distance from supporting structure	1.6	1.6	1.6	
Distance from obstructions on roof	N/A	N/A	N/A	
Distance from obstructions not on roof	N/A	N/A	N/A	
Distance from trees	N/A	N/A	N/A	
Distance to furnace or incinerator flue	N/A	N/A	N/A	
Distance between collocated monitors	2.0	2.0	2.0	
Unrestricted airflow	Yes	Yes	Yes	
Probe material	N/A	N/A	N/A	
Residence time	N/A	N/A	N/A	
Will there be changes within the next 18 months?	Yes	No	No	

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Is it suitable for comparison against the annual PM _{2.5} ?	N/A	N/A	N/A	
Frequency of flow rate verification for manual PM samplers audit	Monthly	N/A	N/A	
Frequency of flow rate verification for automated PM analyzers audit	N/A	N/A	N/A	
Frequency of one-point QC check (gaseous)	N/A	N/A	N/A	
Last Annual Performance Evaluation (gaseous)	N/A	N/A	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	

**Riverside-Rubidoux
Site Photos**



Looking North from the probe.



Looking East from the probe.



Looking South from the probe.



Looking West from the probe.

**Riverside-Rubidoux
Site Photos (Cont.)**



Looking at the probe from the North.



Looking at the probe from the East.



Looking at the probe from the South.



Looking at the probe from the West.