



APPENDICES



Table 1.1 Alpine Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO
POC	1	1
Primary monitor	Yes	Yes
Parameter code	44201	42603, 42602, 42601
Basic monitoring objective	NAAQS	NAAQS
Site type	High Concentration	Population Exposure
Monitor type/designation	PAMS, SLAMS	PAMS, SLAMS
Instrument manufacturer & model	Thermo 49	API 200E
Method code	047	099
Sampling method	UV absorption	Chemiluminescence
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	n/a	n/a
Reporting agency	SD APCD	SD APCD
Spatial scale	Urban Scale	Urban Scale
Monitoring start date	8/18/2010	8/18/2010
Current sampling frequency	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous
Sampling season	Year round	Year round
Probe height	6.2 m	6.2 m
Distance from supporting structure	n/a	n/a
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	N 11 m	N 11 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	Glass	Glass
Residence time for reactive gases	1.4 s	1.4 s
Will there be changes within the next 18 months?	Yes	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	10/19/11	10/20/11
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 1.2 Alpine Particulate Pollutants (PM_{2.5})

Pollutant	PM _{2.5} (non-FEM)
POC	1
Primary monitor	Yes
Parameter code	88501
Basic monitoring objective	Provide data, Research
Site type/Monitor objective	Population Exposure
Monitor Type/Designation	Special Purpose
Instrument manufacturer & model	Met One BAM 1020
Method code	731
Sampling method	Low volume, continuous, size selective inlet
FRM/FEM/ARM/Other	Other- Non-FEM
Collecting agency	SD APCD
Analytical laboratory	n/a
Reporting agency	SD APCD
Spatial scale	Urban Scale
Monitoring start date	8/18/2010
Current sampling frequency	Continuous
Calculated sampling frequency	Continuous
Sampling season	Year round
Probe height	6.2 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	N 11 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	No
Frequency of flow rate verification for sequential PM samplers	n/a
Frequency of flow rate verification for continuous PM samplers	1/2 weeks
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	3/11, 6/21, 8/31, 12/7



Table 1.3 Alpine Other Pollutants

Pollutant	PAMS-VOCs
POC	1 for 3-hr samples, 2 for 24-hr samples
Primary monitor	n/a
Parameter code	See PAMS Section, Table 12.2b
Basic monitoring objective	Research
Site type	Population Exposure
Monitor Type/designation	PAMS Type II
Instrument manufacturer & model	Xontech 910 & 912
Method code	126
Sampling method	Evacuated Canisters
FRM/FEM/ARM/Other	n/a
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Urban Scale
Monitoring start date	8/18/2010
Current sampling frequency	1:6
Calculated sampling frequency	1:6
Sampling season	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)
Probe height	6.2 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	N 11 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	n/a
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	n/a



Table 1.4 Alpine Meteorology Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp	Meteorological Rel. Humidity
Site type	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD	Capacitor sensor
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics	Rotronics
Parameter Code	61101	61104	62107	62101	62201
POC for monitor	1	1	1	1	1
Method Code	050	020	012	040	012
Start date	08/18/2010	08/18/2010	08/18/2010	08/18/2010	08/18/2010
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sensor height	7.2 m	7.2 m	n/a	5.7 m	5.7 m
Distance from supporting structure	n/a	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a	n/a
Distance from trees	n/a	n/a	n/a	n/a	n/a
Unrestricted airflow	360°	360°	n/a	360°	360°
Will there be changes within the next 18 months?	Yes	Yes	Yes	Yes	Yes

Figure 1.1 Alpine Site Pictures



Northwest



North



Northeast



West



Alpine



East



Southwest



South



Southeast

Figure 1.2 Alpine Additional Views/Pictures of the Station

Long View



Medium View

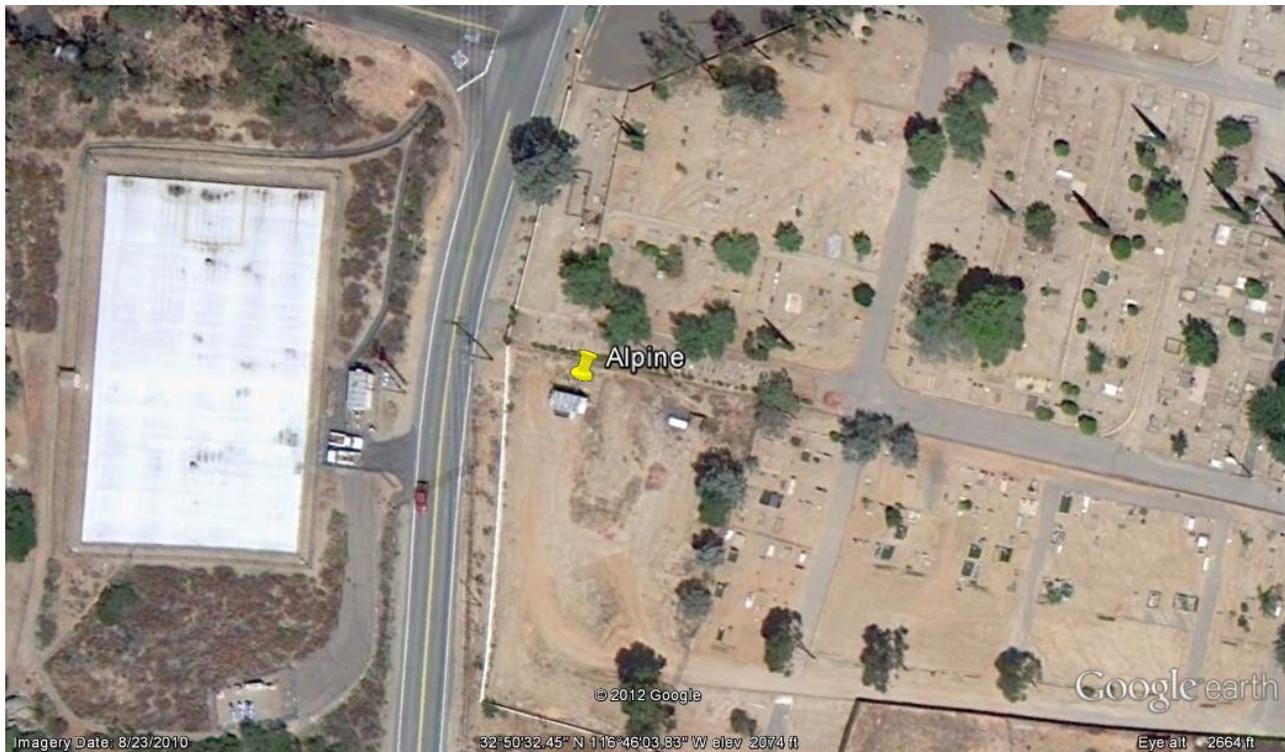




Table 2.1 Camp Pendleton Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO
POC	1	1
Primary monitor	Yes	Yes
Parameter code	44201	42603, 42602, 42601
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS
Site type	General/ Background	General/ Background
Monitor Type/Designation	PAMS, SLAMS	PAMS, SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42
Method code	047	099
Sampling method	UV absorption	Chemiluminescence
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	n/a	n/a
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1997	1997
Current sampling frequency	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous
Sampling season	Year round	Year round
Probe height	6 m	6 m
Distance from supporting structure	n/a	n/a
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	W 5.8 m	W 5.8 m
Distance from trees	SW 43.9 m	SW 43.9 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	Teflon	Teflon
Residence time for reactive gases	8.2 s	8.2 s
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	8/19/2011	9/28/2011
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 2.2 Camp Pendleton Particulate Pollutants (PM_{2.5})

Pollutant	PM _{2.5} (FEM)
POC	1
Primary monitor	Yes
Parameter code	88101
Basic monitoring objective	Provide Data, NAAQS
Site type	General/ Background
Monitor type/designation	SLAMS
Instrument manufacturer & model	Met One FEM BAM 1020
Method code	170
Sampling method	Low volume, continuous, size selective inlet
FRM/FEM/ARM/Other	*FEM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	6/20/2008
Current sampling frequency	Continuous
Calculated sampling frequency	Continuous
Sampling season	Year round
Probe height	5.7 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	W 5.5 m
Distance from trees	SW 43.9 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	Yes
Frequency of flow rate verification for sequential PM samplers	n/a
Frequency of flow rate verification for continuous PM samplers	1/2 weeks
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	3/15, 6/30, 9/13, 12/15

*Converted from non-FEM to FEM BAM on 11/9/2011



Table 2.3 Camp Pendleton Other Pollutants

Pollutant	PAMS-VOCs	PAMS-VOCs (collocated)
POC	1 for 3-hr samples, 2 for 24-hr samples	1 for 3-hr samples, 2 for 24-hr samples
Primary monitor	n/a	n/a
Parameter code	See PAMS Section, Table 12.2b	See PAMS Section, Table 12.2b
Basic monitoring objective	Research	Research
Site type	General/ Background	General/ Background
Monitor type/designation	PAMS Type I	PAMS Type I, QA Collocated
Instrument manufacturer & model	Xontech 910 & 912	Xontech 910 & 912
Method code	126	126
Sampling method	Evacuated Cannisters	Evacuated Cannisters
FRM/FEM/ARM/Other	n/a	n/a
Collecting agency	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1997	7/2011
Current sampling frequency	1:6	1:6
Calculated sampling frequency	1:6	1:6
Sampling season	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)
Probe height	5.5 m	5.5 m
Distance from supporting structure	n/a	n/a
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	5.8 m	5.8 m
Distance from trees	43.9 m	43.9 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	0.76 m	0.76 m
Unrestricted airflow	360°	360°
Probe material for reactive gases	n/a	n/a
Residence time for reactive gases	n/a	n/a
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 2.4 Camp Pendleton Meteorology Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp
Site type	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics
Parameter Code	61101	61104	62107	62101
POC for monitor	1	1	1	1
Method Code	050	020	012	040
Start date	1997	1997	1997	1997
Operation schedule	Continuous	Continuous	Continuous	Continuous
Sensor height	10 m	10 m	n/a	5 m
Distance from supporting structure	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a
Distance from trees	n/a	n/a	n/a	n/a
Unrestricted airflow	n/a	n/a	n/a	n/a
Will there be changes within the next 18 months?	360°	360°	n/a	360°

Figure 2.1 Camp Pendleton Site Pictures



Northwest



North



Northeast



West



Camp Pendleton



East



Southwest



South



Southeast

Figure 2.2 Camp Pendleton Additional Views/Pictures of the Station
Long View



Medium View





Section 3.0.0 Chula Vista Station Overview

Site Name:	CHULA VISTA	Representative Area:	San Diego MSA
Site Abbreviation:	CVA	Year established:	01/20/1972
AQS ID:	06 073 0001	Ground cover:	Paved asphalt
Location:	Far west corner of CVA Elementary School District offices parking lot	Distance to road:	NW 30 m- E. J St.
Elevation above sea level:	55 m	Traffic Count:	2,000 veh/day
Latitude:	32° 37' 52" N	Address:	80 East J St.
Longitude:	117° 03' 33" W	County:	San Diego

O ₃ Ambient	7/24	X
NO ₂ Ambient	7/24	X
CO Ambient		
SO ₂ Ambient	7/24	T
CO Trace Level		
NOy Total Oxides of Nitrogen		
SO ₂ Trace Level		
TSP Lead		
TSP Lead Collocated		
PM ₁₀ Lo-Vol		
PM ₁₀ Hi-Vol	1:6	X
PM ₁₀ Hi-Vol Collocated		
PM _{2.5} non-FEM		
PM _{2.5} FEM		
PM _{2.5} FEM Collocated		
PM _{2.5} FRM	1:3	X
PM _{2.5} FRM Collocated		
PMcoarse FRM		
PAMS VOC		
PAMS VOC Collocated		
PAMS Carbonyls		
TOXICS VOC	1:12	X
TOXICS Total Metals	1:12	X
TOXICS CR (VI)	1:12	X
TOXICS Aldehydes	1:12	X
STN		
CSN		
CSM Carbon		
Meteorology External Temperature	7/24	X
Meteorology % Relative Humidity		
Meteorology Wind Speed	7/24	X
Meteorology Wind Direction	7/24	X
Meteorology Internal Temperature	7/24	X
Meteorology Barometric Pressure		
Meteorology Solar Radiation		

X= Existing
 A= Plan to Add or Recently Added
 T= Plan to Terminate or Recently Terminated
 D= In Development

7/24= Continuous Sampling
 1:1= Samples Every Day
 1:3= Samples Every Three Days
 1:6= Samples Every Six Days
 1:12= Samples Every Twelve Days

Site Description: This station is a trailer located on the western corner of the Chula Vista Elementary School District Administration property, immediately south of Chula Vista Fire Station No. 2.

Monitoring Objectives: The Chula Vista monitoring station was originally established to measure potential impacts from the South Bay power plant to the west-southwest. This power plant is no longer in operation and pollutant spikes are no longer observed.

Planned changes for 2012/2013: The SO₂ monitor was decommissioned on June 30, 2011.



Table 3.1 Chula Vista Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO	*SO ₂
POC	1	1	1
Primary monitor	Yes	Yes	Yes
Parameter code	44201	42603, 42602, 42601	42101
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	SLAMS	SLAMS	SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42	Thermo 43
Method code	047	099	054
Sampling method	UV absorption	Chemiluminescence	Fluorescence
FRM/FEM/ARM/Other	FRM	FRM	FRM
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	n/a	n/a	n/a
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1974	1974	1974
Current sampling frequency	Continuous	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous	Continuous
Sampling season	Year round	Year round	Year round
Probe height	4 m	4 m	4 m
Distance from supporting structure	n/a	n/a	n/a
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 9.35 m	N 9.35 m	N 9.35 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	Glass	Glass	Glass
Residence time for reactive gases	1.6 s	1.6 s	1.6 s
Will there be changes within the next 18 months?	No	No	Decommissioned on June 30, 2011
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	5/25/2011	6/21/2011	4/11/2011
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a



Table 3.2a Chula Vista Particulate Pollutants (PM_{2.5})

Pollutant	PM _{2.5} (FRM)
POC	1
Primary monitor	Yes
Parameter code	88101
Basic monitoring objective	Provide Data, NAAQS
Site type	Population Exposure
Monitor type/designation	SLAMS
Instrument manufacturer & model	Thermo 2025
Method code	105
Sampling method	Low volume, continuous, size selective inlet
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	1999
Current sampling frequency	1:3
Calculated sampling frequency	1:6
Sampling season	Year round
Probe height	6 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	6 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	Yes
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	3/15, 6/28, 9/13, 12/9



Table 3.2b Chula Vista Particulate Pollutants (non-PM_{2.5})

Pollutant	PM ₁₀
POC	2
Primary monitor	Yes
Parameter code	85101 Local 81102 Std
Basic monitoring objective	NAAQS
Site type	Population Exposure
Monitor type/designation	SLAMS
Instrument manufacturer & model	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head
Method code	063
Sampling method	High volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	1986
Current sampling frequency	1:6
Calculated sampling frequency	1:6
Sampling season	Year round
Probe height	5.4 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	4 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	1/14, 8/10



Table 3.3 Chula Vista Other Pollutants

Pollutant	TOXICS- VOCs	TOXICS- Metals Cr(VI)	PAMS- Aldehydes
POC	See ARB	See ARB	See ARB
Primary monitor	n/a	n/a	n/a
Parameter code	See ARB	See ARB	See ARB
Basic monitoring objective	Research	Research	Research
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	CA Toxis-Supplemental speciation	CA Toxis-Supplemental speciation	CA Toxis-Supplemental speciation
Instrument manufacturer & model	Xontech 910	Xontech 924	Xontech 924
Method code	See ARB	See ARB	See ARB
Sampling method	Evacuated Canister	Filter	DNPB cartridge
FRM/FEM/ARM/Other	n/a	n/a	n/a
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	ARB	ARB	arb
Reporting agency	ARB	ARB	ARB
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1988	1988	1988
Current sampling frequency	1:12	1:12	1:12
Calculated sampling frequency	n/a	n/a	n/a
Sampling season	Year round	Year round	Year round
Probe height	8.6 m	6 m	6 m
Distance from supporting structure	2 m	2 m	2 m
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	NW 10 m	NW 7 m	NW 7 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	n/a	n/a	n/a
Residence time for reactive gases	n/a	n/a	n/a
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a



Table 3.4 Chula Vista Meteorology Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp
Site type	SLAMS	SLAMS	SLAMS	SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics
Parameter code	61103	61104	62107	62101
POC for monitor	1	1	1	1
Method Code	020	020	012	040
Start date	1972	1972	1972	1998
Operation schedule	Continuous	Continuous	Continuous	Continuous
Probe height	10 m	10 m	n/a	5.4 m
Distance from supporting structure	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a
Distance from trees	n/a	n/a	n/a	n/a
Unrestricted airflow	360°	360°	n/a	360°
Will there be changes within the next 18 months?	No	No	No	No

Figure 3.1 Chula Vista Site Pictures



Northwest



North



Northeast



West



Chula Vista



East



Southwest



South



Southeast

Figure 3.2 Chula Vista Additional Views/Pictures of the Station

Long View



Medium View

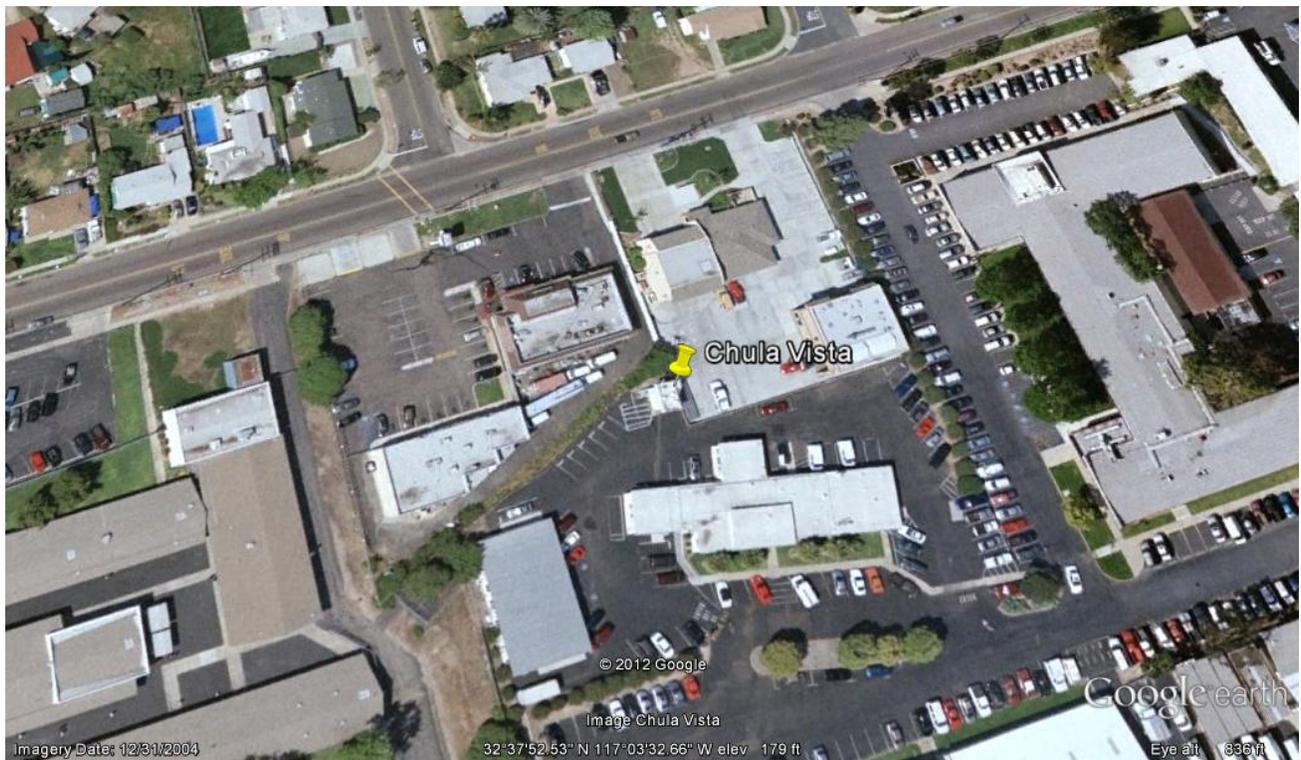




Table 4.1 Del Mar Gaseous Pollutants (Ambient Level)

Pollutant	O ₃
POC	1
Primary monitor	Yes
Parameter code	44201
Basic monitoring objective	Provide Data, NAAQS
Site type	General/Background
Monitor type/designation	SLAMS
Instrument manufacturer & model	Thermo 49
Method code	047
Sampling method	UV absorption
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	n/a
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	10/1983
Current sampling frequency	Continuous
Calculated sampling frequency	Continuous
Sampling season	Year round
Probe height	3.8 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	SW 7.6 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	Teflon
Residence time for reactive gases	3.25 s
Will there be changes within the next 18 months?	Possibly
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	n/a
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks
Last annual performance evaluation for gas	6/14/2011
Last two semi-annual flow rate audits for PM samplers	n/a



Table 4.2 Del Mar Meteorology Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp
Site type	SLAMS	SLAMS	SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD
Equipment	Qualimetrics	Qualimetrics	Qualimetrics
Parameter Code	61101	61104	62107
POC for monitor	1	1	1
Method Code	020	020	012
Start date	1983	1983	1983
Operation schedule	Continuous	Continuous	Continuous
Sensor height	10 m	10 m	n/a
Distance from supporting structure	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a
Distance from trees	n/a	n/a	n/a
Unrestricted airflow	360°	360°	n/a
Will there be changes within the next 18 months?	Yes	Yes	Yes

Figures 4.1 Del Mar Site Pictures



Northwest



North



Northeast



West



Del Mar



East



Southwest

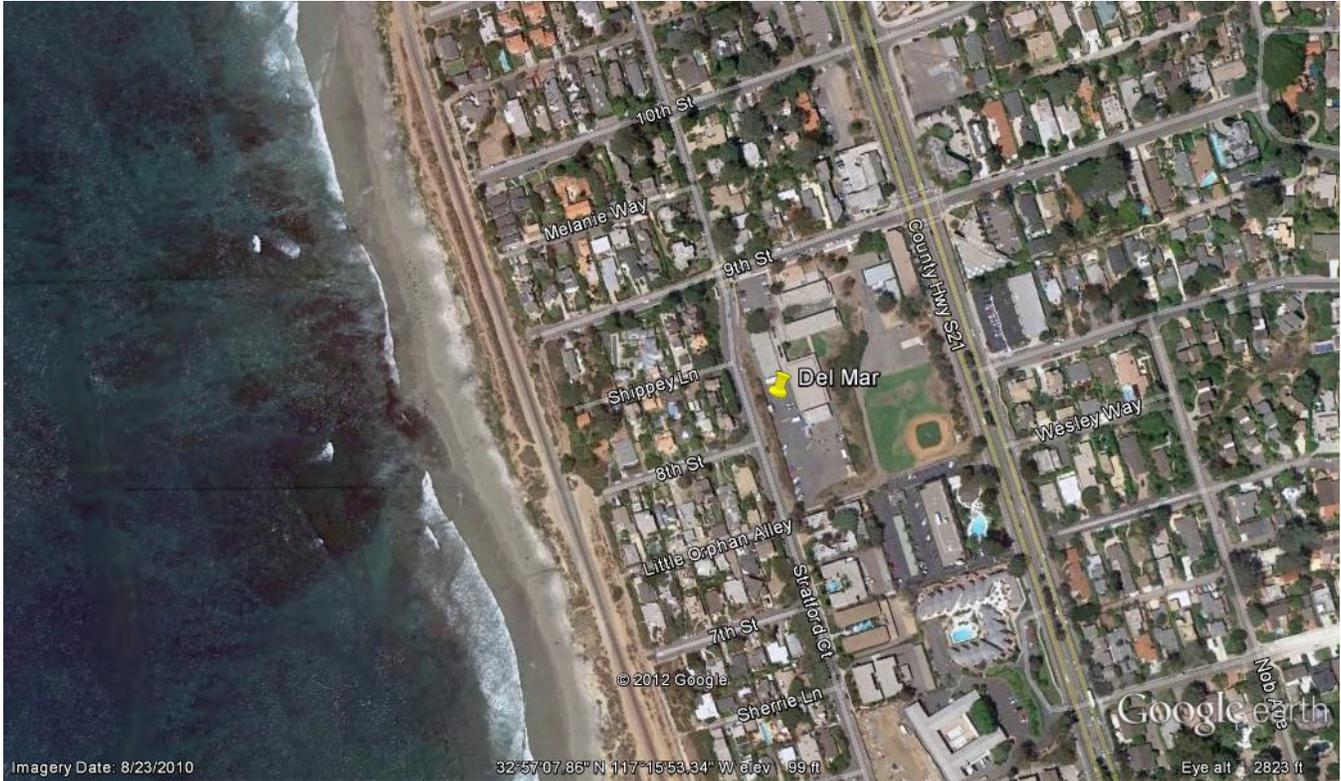


South



Southeast

Figure 4.2 Del Mar Additional Views/Pictures of the Station
Long View



Medium View





Table 5.1 Donovan Particulate Pollutants (non-PM_{2.5})

Pollutant	PM ₁₀
POC	1
Primary monitor	Yes
Parameter code	81102 Std
Basic monitoring objective	NAAQS
Site type	Population Exposure
Monitor type/designation	SLAMS
Instrument manufacturer & model	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head
Method code	063
Sampling method	High volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	1/2005
Current sampling frequency	1:6
Calculated sampling frequency	1:6
Sampling season	Year round
Probe height	1.5 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	SE 26 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	5/5, 12/30

Figures 5.1 Donovan Site Pictures



Northwest



North



Northeast



West



Donovan



East



Southwest



South



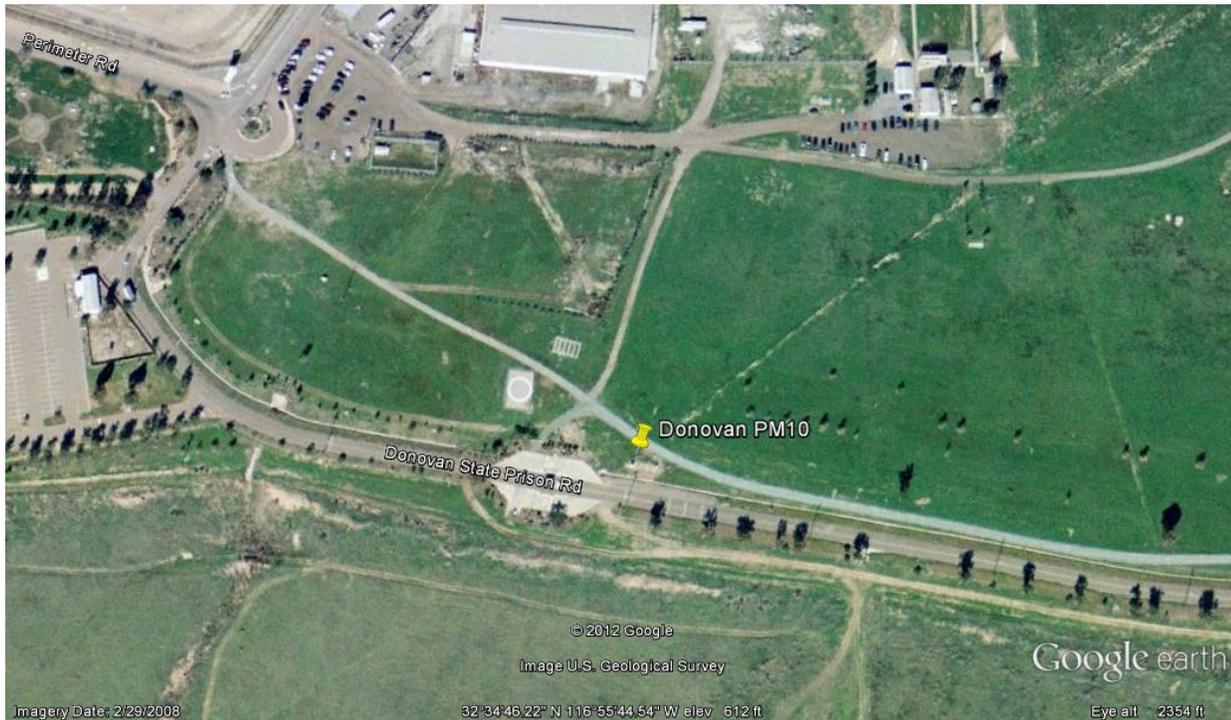
Southeast

Figure 5.2 Donovan Additional Views of the Station

Long View



Medium View





Section 6.0.0 San Diego / Beardsley St. - Downtown Station Overview

Site Name:	SAN DIEGO/BEARDSLEY	Representative Area:	San Diego MSA
Site Abbreviation:	DTN	Year established:	7/14/2005
AQS ID:	06 073 1010	Ground cover:	Asphalt
Location:	Trailer in Perkins Elementary School parking lot at corner of Sigsbee and Main St.	Distance to road:	NW 10.7 m (Sigsbee); SW 21.3 m (Main)
Elevation above sea level:	8 m	Traffic Count:	5,000 veh/dy-Main St.
Latitude:	32° 42' 05" N	Address:	1110a Beardsley St.
Longitude:	117° 08' 59" W	County:	San Diego

O ₃ Ambient	7/24	X
NO ₂ Ambient	7/24	X
CO Ambient	7/24	X
SO ₂ Ambient	7/24	T
CO Trace Level		
NO _y Total Oxides of Nitrogen		
SO ₂ Trace Level		
TSP Lead		
TSP Lead Collocated		
PM ₁₀ Lo-Vol		
PM ₁₀ Hi-Vol	1:6	X
PM ₁₀ Hi-Vol Collocated		
PM _{2.5} non-FEM		
PM _{2.5} FEM	7/24	X
PM _{2.5} FEM Collocated		
PM _{2.5} FRM	1:1	X
PM _{2.5} FRM Collocated		
PM _{coarse} FRM		
PAMS VOC		
PAMS VOC Collocated		
PAMS Carbonyls		
TOXICS VOC	1:6	X
TOXICS Total Metals	1:12	X
TOXICS CR (VI)	1:12	D
TOXICS Aldehydes	1:6	A
STN		
CSN		
CSM Carbon	1:6	X
Meteorology External Temperature	7/24	X
Meteorology % Relative Humidity		
Meteorology Wind Speed	7/24	X
Meteorology Wind Direction	7/24	X
Meteorology Internal Temperature	7/24	X
Meteorology Barometric Pressure		
Meteorology Solar Radiation		

X= Existing
 A= Plan to Add or Recently Added
 T= Plan to Terminate or Recently Terminated
 D= In Development

7/24= Continuous Sampling

1:1= Samples Every Day
 1:3= Samples Every Three Days
 1:6= Samples Every Six Days
 1:12= Samples Every Twelve Days

Site Description: This station is a trailer located on western corner of the Main Street parking lot for Perkins Elementary School. This site is centered in the heart of the Downtown/South Bay industrial zone, being exposed to emissions (depending upon wind direction) from Interstates 5 and 805, State Highways 15 and 94, Petco Park, downtown San Diego, Lindbergh Field, North Island Naval Air Station, 10th Ave. and 32nd St. marine terminals, NASSCO shipyards, Continental Maritime shipyard, Southwest Marine, train yards, and harbor ship traffic.

Monitoring Objectives: This site is in an Environmental Justice area. Forecasting of PM_{2.5} levels for several monitoring sites (from Chula Vista to Kearny Mesa) is partially based upon the values collected at this site. This location is useful for capturing high NO₂ concentrations, and has frequently been of value when assessing ozone transport from the south (Baja, Mexico). It provides pollutant concentrations representative of surrounding population centers.

Planned Changes: The SO₂ monitor was decommissioned on June 30, 2011. Sampling for carbonyls will be added in mid-2012. Testing for Metals is planned for mid-2013.



Table 6.1 Downtown Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO	CO	SO ₂
POC	1	1	1	1
Primary monitor	Yes	Yes	Yes	Yes
Parameter code	44201	42603, 42602, 42601	42101	42401
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	SLAMS	SLAMS	SLAMS	SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42	Thermo 48i	Thermo 43A
Method code	047	074	054	060
Sampling method	UV absorption	Chemiluminescence	Nondispersive Infrared	Fluorescence
FRM/FEM/ARM/Other	FRM	FRM	FRM	FRM
Collecting agency	SD APCD	SD APCD	SD APCD	SD APCD
Analytical laboratory	n/a	n/a	n/a	n/a
Reporting agency	SD APCD	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	7/2005	7/2005	7/2005	7/2005
Current sampling frequency	Continuous	Continuous	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous	Continuous	Continuous
Sampling season	Year round	Year round	Year round	Year round
Probe height	6.3 m	6.3 m	6.3 m	6.3 m
Distance from supporting structure	n/a	n/a	n/a	n/a
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	S 10 m	S 10 m	S 10 m	S 10 m
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	360°	360°	360°	360°
Probe material for reactive gases	Glass	Glass	Glass	Glass
Residence time for reactive gases	1.03 s	1.03 s	1.03 s	1.03 s
Will there be changes within the next 18 months?	No	No	No	Decommissioned on June 30, 2011
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 sequential PM samplers	n/a	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	2/16/2011*	3/2/2011	2/17/2011	2/4/2011
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a	n/a



Table 6.2a Downtown Particulate Pollutants (PM_{2.5})

Pollutant	PM _{2.5} (FRM)	PM _{2.5} (FEM)	PM _{2.5} (Carbon speciated)
POC	1	1	1
Primary monitor	Yes	No	n/a
Parameter code	88101	88101	See PM _{2.5} section, Table 9.3b
Basic monitoring objective	NAAQS	Provide Data, NAAQS	Research
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	SLAMS	SLAMS	Supplemental Speciation
Instrument manufacturer & model	Thermo 2025	Met One FEM BAM 1020	Met One SASS
Method code	105	170	See PM _{2.5} section, Table 9.3b
Sampling method	Low volume, sequential, size selective inlet	Low volume, continuous, size selective inlet	Low volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM	FEM	Other
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	7/2005	7/2005	8/10/2008
Current sampling frequency	1:1	Continuous	1:6
Calculated sampling frequency	1:3	n/a	n/a
Sampling season	Year round	Year round	Year round
Probe height	5 m	5 m	5 m
Distance from supporting structure	1.5 m	1.5 m	1.5 m
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	S 18.3 m	S 18.3 m	S 18.3 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	n/a	n/a	n/a
Residence time for reactive gases	n/a	n/a	n/a
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	Yes	Yes	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks	n/a	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a	1/2 weeks	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	3/9, 5/20, 8/29, 12/6	3/18, 5/20, 8/29, 12/16	3/8, 5/20, 8/29, 12/16



Table 6.2b Downtown Particulate Pollutants (non-PM_{2.5})

Pollutant	PM ₁₀
POC	1
Primary monitor	Yes
Parameter code	81102 Std 85101 Local
Basic monitoring objective	Provide Data, NAAQS
Site type	Population Exposure
Monitor type/designation	SLAMS
Instrument manufacturer & model	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head
Method code	063
Sampling method	High volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	7/2005
Current sampling frequency	1:6
Calculated sampling frequency	1:6
Sampling season	Year round
Probe height	5 m
Distance from supporting structure	1.5 m
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	S 18.3 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	3/11, 8/10



Table 6.3 Downtown Other Pollutants

Pollutant	TOXICS- VOCs	TOXICS- Metals
POC	1	Collected, not analyzed
Primary monitor	n/a	n/a
Parameter code	210	Collected, not analyzed
Basic monitoring objective	Research	Research
Site type	Population Exposure	Population Exposure
Monitor type/designation	Supplemental Speciation	Supplemental Speciation
Instrument manufacturer & model	Xontech 910A (Fused silica lined)	Xontech 924
Method code	210	Collected, not analyzed
Sampling method	Evacuated canisters	Filters
FRM/FEM/ARM/Other	n/a	n/a
Collecting agency	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1/2007	7/2005
Current sampling frequency	1:6	1:12
Calculated sampling frequency	n/a	n/a
Sampling season	Year round	Year round
Probe height	5.6 m	5.6 m
Distance from supporting structure	2 m	2 m
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	N 18.3 m	N 17 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	n/a	n/a
Residence time for reactive gases	n/a	n/a
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 6.4 Downtown Meteorological Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp
Site type	SLAMS	SLAMS	SLAMS	SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics
Parameter Code	61101	61104	62107	62101
POC for monitor	1	1	1	1
Method Code	050	020	012	040
Start date	7/2005	7/2005	7/2005	7/2005
Operation schedule	Continuous	Continuous	Continuous	Continuous
Sensor height	10 m	10 m	n/a	5.5 m
Distance from supporting structure	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a
Distance from trees	n/a	n/a	n/a	n/a
Unrestricted airflow	360°	360°	n/a	360°
Will there be changes within the next 18 months?	No	No	No	No

Figure 6.1 Downtown Site Pictures



Northwest



North



Northeast



West



Beardsley



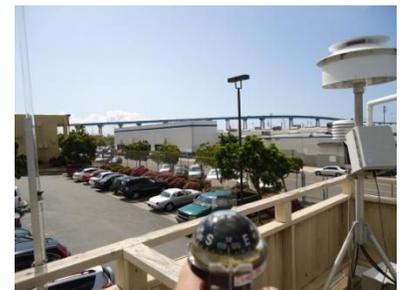
East



Southwest



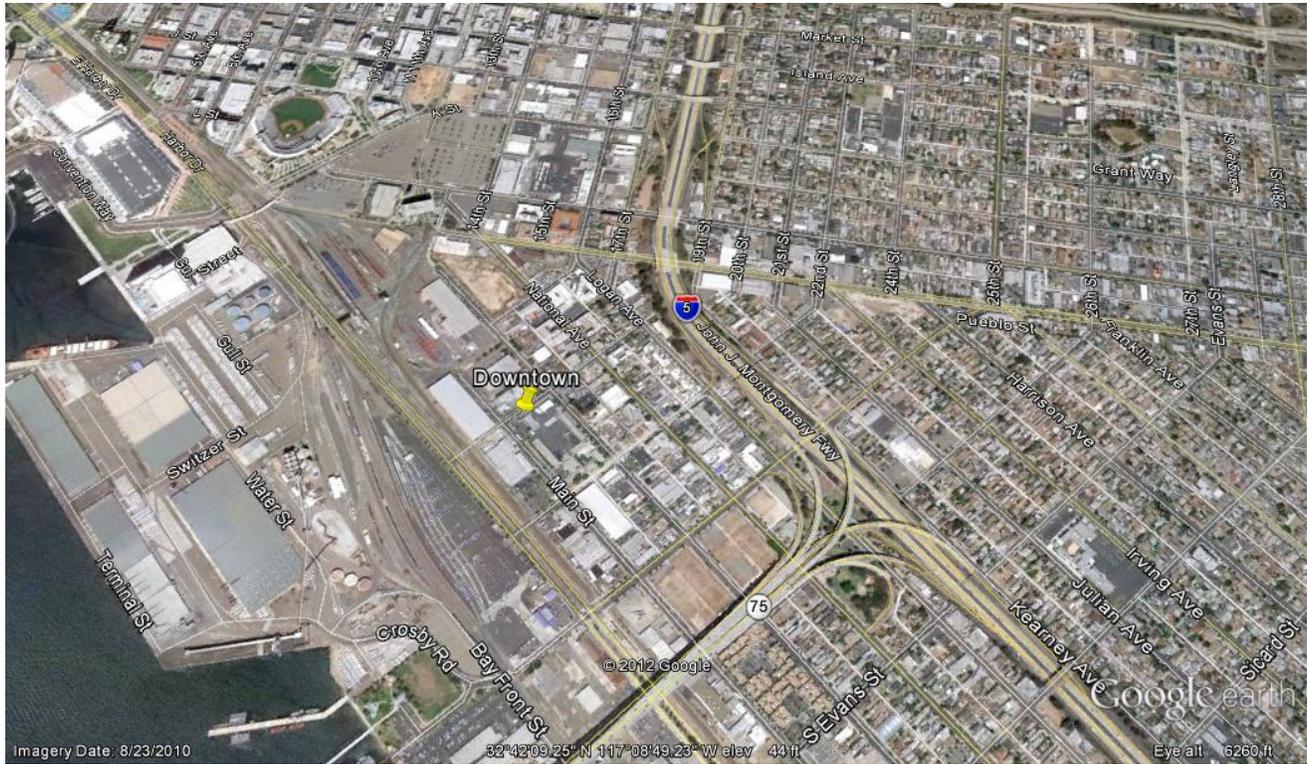
South



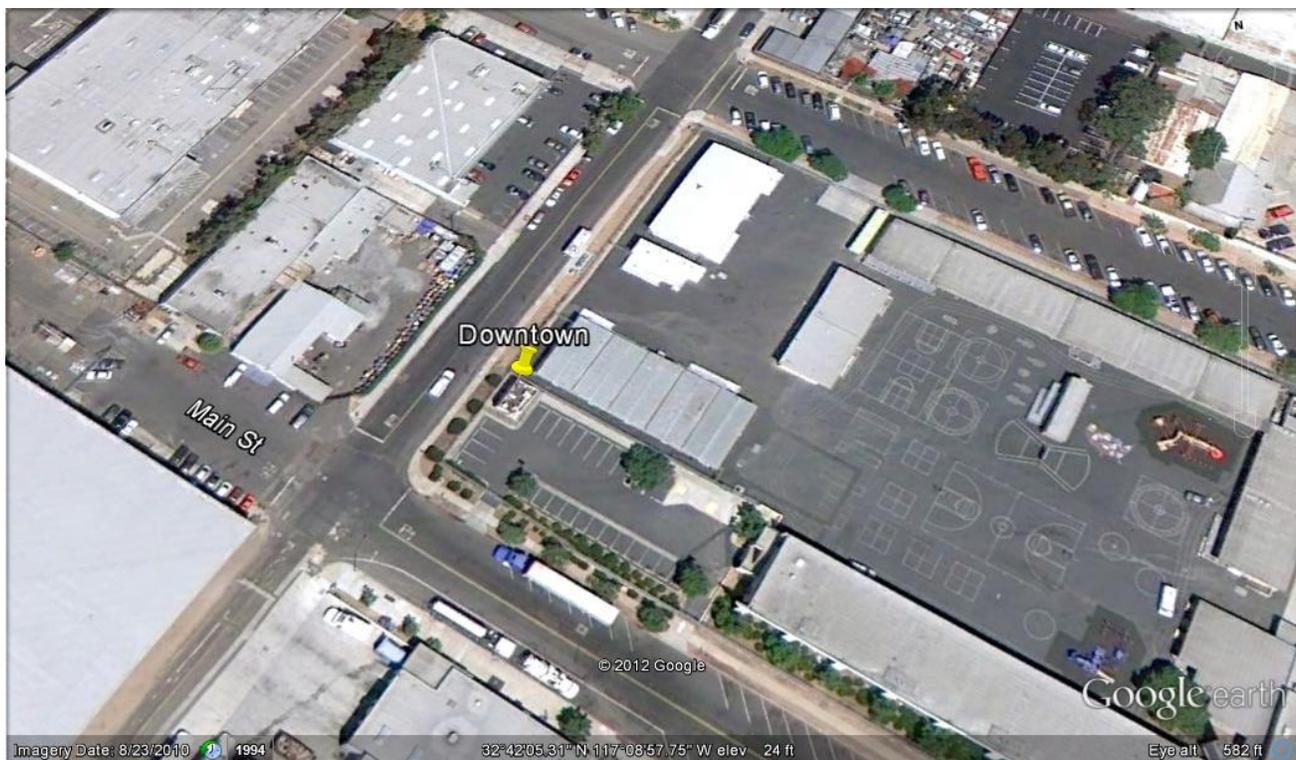
Southeast

Figure 6.2 Downtown Additional Views/Pictures of the Station

Long View



Medium View





Section 7.0.0 El Cajon Station Overview

Site Name:	EL CAJON	Representative Area:	San Diego MSA
Site Abbreviation:	ECA	Year established:	9/3/81
AQS ID:	06 073 0003	Distance to road:	N 7.8 m (Redwood); E 60 m (Ballard)
Location:	off Redwood St on Lexington Elementary School grounds in a trailer	Ground Cover:	Dirt, gravel
Elevation above sea level:	144 m	Traffic Count:	2,000 veh/day-Redwood
Latitude:	32° 47' 28" N	Address:	1155 Redwood Ave
Longitude:	116° 56' 32" W	County:	San Diego

O ₃ Ambient	7/24	X
NO ₂ Ambient	7/24	X
CO Ambient		
SO ₂ Ambient		
CO Trace Level	7/24	X
NO _y Total Oxides of Nitrogen	7/24	X
SO ₂ Trace Level	7/24	X
TSP Lead	1:6	A
TSP Lead Collocated		
PM ₁₀ Lo-Vol	1:3	A
PM ₁₀ Hi-Vol	1:6	T
PM ₁₀ Hi-Vol Collocated		
PM _{2.5} non-FEM		
PM _{2.5} FEM	7/24	X
PM _{2.5} FEM Collocated		
PM _{2.5} FRM	1:3	X
PM _{2.5} FRM Collocated		
PM _{coarse} FRM	1:3	X
PAMS VOC	1:6	X
PAMS VOC Collocated		
PAMS Carbonyls	1:6	X
TOXICS VOC	1:12	X
TOXICS Total Metals	1:12	X
TOXICS CR (VI)	1:12	X
TOXICS Aldehydes	1:12	X
STN	1:3	X
CSN	1:3	X
CSM Carbon	1:6	X
Meteorology External Temperature	7/24	X
Meteorology % Relative Humidity	7/24	X
Meteorology Wind Speed	7/24	X
Meteorology Wind Direction	7/24	X
Meteorology Internal Temperature	7/24	X
Meteorology Barometric Pressure		A
Meteorology Solar Radiation		A

X= Existing
 A= Plan to Add or Recently Added
 T= Plan to Terminate or Recently Terminated
 D= In Development

7/24= Continuous Sampling
 1:1= Samples Every Day
 1:3= Samples Every Three Days
 1:6= Samples Every Six Days
 1:12= Samples Every Twelve Days

Site Description: This station is a trailer immediately off of Redwood Avenue, within the northeastern portion of the Lexington Elementary School schoolyard.

Monitoring Objectives: The El Cajon site represents a major population center located in an inland valley, downwind of the heavily populated coastal zone. It is impacted from the transportation corridor of Interstate 8 and its major arteries. It is classified as a PAMS Type II site, being a maximum ozone precursor emissions impact site.

Planned Changes: The PM₁₀ (Hi-Vol) sampler was decommissioned on 7/1/2011. A PM₁₀ (Lo-Vol) sampler replaced it, so it could be used with a PM_{2.5} (Lo-Vol) sampler to calculate PM_{coarse}. A Pb-TSP (Hi-Vol) sampler was installed in late 2011 for the NCore program. This station may be forced to relocate in late 2013 due to a remodeling of the school grounds on which the station is located. A Barometric and SORAD sensor will be installed when the station is relocated. The monitor designation for NO_x and NO_y have change to RC/NS in 2011.



Table 7.1a El Cajon Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO
POC	1	1
Primary monitor	Yes	Yes
Parameter code	44201	42603, 42602, 42601
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure
Monitor type/designation	PAMS, SLAMS	PAMS, SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42i
Method code	047	074
Sampling method	UV absorption	Chemiluminescence
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	n/a	n/a
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	9/1981	9/1981
Current sampling frequency	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous
Sampling season	Year round	Year round
Probe height	6.6 m	6.6 m
Distance from supporting structure	n/a	n/a
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	W 12.2 m, N 16.6 m	W 12.2 m, N 16.6 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	Glass	Glass
Residence time for reactive gases	1.2 s	1.2 s
Will there be changes within the next 18 months?	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	8/12, 12/28	8/30, 12/28
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 7.1b El Cajon Gaseous Pollutants (Trace Level)

Pollutant	CO	SO ₂	NO _y , NO _y -NO, NO
POC	3	3	1
Primary monitor	Yes	Yes	No
Parameter code	42101	42401	42600, 42612, 42601
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS	Provide Data, Research
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	NCore	NCore	NCore
Instrument manufacturer & model	Thermo 48i-TLE	Thermo 43i-TLE	Thermo 42i-NOy
Method code	554	560	574
Sampling method	Nondispersive Infrared	Fluorescence	Chemiluminescence
FRM/FEM/ARM/Other	FRM	FRM	Other
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	n/a	n/a	n/a
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	12/2010	12/2010	12/2010
Current sampling frequency	Continuous	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous	Continuous
Sampling season	Year round	Year round	Year round
Probe height	6.6 m	6.6 m	6.6 m
Distance from supporting structure	1.8 m	1.8 m	1.8 m
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	W 12.2 m, N 16.6 m	W 12.2 m, N 16.6 m	W 12.2 m, N 16.6 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	Glass	Glass	Teflon
Residence time for reactive gases	1.2 s	1.2 s	1.2 s
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	Every 4 days	Every 4 days	Every 4 days
Last annual performance evaluation for gas	3/9, 6/9, 9/2, 10/14	3/3, 6/7, 8/26, 9/30, 10/7	3/10, 6/10, 9/13, 12/29
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a



Table 7.2a El Cajon Particulate Pollutants (PM_{2.5})

Pollutant	PM _{2.5} (FRM)	PM _{2.5} (FEM)	PM _{2.5} Carbon speciated Channel 4	PM _{2.5} Speciated Channels 1-3	PM _{2.5} Carbon speciated
POC	1	1	1	1	1
Primary monitor	Yes	Yes	No	No	No
Parameter code	1	1	1	See RTI	See RTI
Basic monitoring objective	NAAQS	Provide Data, NAAQS	Research	Research	Research
Site type	Population Exposure	Population Exposure	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	SLAMS, NCore	SLAMS, NCore	Supplemental Speciation	SLAMS, NCore	SLAMS, NCore
Instrument manufacturer & model	Thermo 2025	Met One FEM BAM 1020	Met One SuperSASS	Met One SuperSASS	URG 3000N
Method code	105	731	See PM _{2.5} section Table 9.3b	See RTI	See RTI
Sampling method	Low volume, sequential, Size selective inlet	Low volume, continuous, Size selective inlet	Low volume, sequential, Size selective inlet	Low volume, sequential, Size selective inlet	Low volume, sequential, Size selective inlet
FRM/FEM/ARM/Other	FRM	FEM	n/a	n/a	n/a
Collecting agency	SD APCD				
Analytical laboratory	SD APCD	SD APCD	SD APCD	RTI	RTI
Reporting agency	SD APCD	SD APCD	SD APCD	RTI	RTI
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1/1/1999	7/24/2007	2/24/2008	5/2002	5/3/2007
Current sampling frequency	1:3	Continuous	1:6	1:3	1:3
Calculated sampling frequency	1:6	n/a	n/a	n/a	n/a
Sampling season	Year round				
Probe height	5.7 m	6.0 m	5.5 m	5.5 m	5.7 m
Distance from supporting structure	2.1 m	2.4 m	1.8 m	1.8 m	2.1 m
Distance from obstructions on roof	n/a	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	n/a	n/a	n/a	n/a	n/a
Distance from trees	W 12 m	W 14 m	N 16 m	N 16 m	W 15 m
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°	360°	360°
Probe material for reactive gases	n/a	n/a	n/a	n/a	n/a
Residence time for reactive gases	n/a	n/a	n/a	n/a	n/a
Will there be changes within the next 18 months?	No	No	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	Yes	Yes	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks	n/a	1/4 weeks	1/4 weeks	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a	1/2 weeks	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a	n/a	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a	n/a	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	3/11, 6/9, 8/23, 12/9				



Table 7.2b El Cajon Particulate Pollutants (non-PM_{2.5})

Pollutant	PM _{coarse}	PM ₁₀	Pb-TSP
POC	1	1 Local 2 Std	1
Primary monitor	Yes	Yes	Yes
Parameter code	86101	85101 81102	14129
Basic monitoring objective	Research	NAAQS	NAAQS
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	NCore	NCore	NCore
Instrument manufacturer & model	Paired Thermo 2025	Thermo 2025	Tisch TE-5170BLVFC+
Method code	105	105	192
Sampling method	By subtraction from paired samplers	Low volume, Sequential, Size selective inlet	High volume, Sequential
FRM/FEM/ARM/Other	Other	FRM	FRM
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	6/2010	6/2010	12/2011
Current sampling frequency	1:3	1:3	1:6
Calculated sampling frequency	n/a	n/a	n/a
Sampling season	Year round	Year round	Year round
Probe height	n/a	5.7 m	5.5 m
Distance from supporting structure	n/a	n/a	n/a
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	W 12 m	W 12 m	W 12 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	n/a	n/a	n/a
Residence time for reactive gases	n/a	n/a	n/a
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks	1/4 weeks	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	See paired samplers schedule	3/11, 6/9, 8/23, 12/9	Start-up date in December- no need to audit



Table 7.3 El Cajon Other Pollutants

Pollutant	PAMS-VOCs	PAMS-Carbonyls	TOXICS-VOCs	TOXICS-Metals	TOXICS-Aldehydes
POC	1 for 3-hr samples, 2 for 24-hr samples	1 for 3-hr samples, 2 for 24-hr samples	See ARB	See ARB	See ARB
Primary monitor	n/a	n/a	n/a	n/a	n/a
Parameter code	See PAMS Section, Table 12.2b	See PAMS Section, Table 12.2c	See ARB	See ARB	See ARB
Basic monitoring objective	Research	Research	Research	Research	Research
Site type	Population Exposure	Population Exposure	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	PAMS Type II	PAMS Type II	CA Toxis- Supplemental speciation	CA Toxis- Supplemental speciation	CA Toxis- Supplemental speciation
Instrument manufacturer & model	Xontech 910 & 912	Xontech 925	Xontech 910	Xontech 924	Xontech 924
Method code	126	202	See ARB	See ARB	See ARB
Sampling method	Evacuated Canister	DNPH cartridge	Evacuated Canister	Filter	DNPH cartridge
FRM/FEM/ARM/Other	n/a	n/a	n/a	n/a	n/a
Collecting agency	SD APCD	SD APCD	SD APCD	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD	ARB	ARB	ARB
Reporting agency	SD APCD	SD APCD	ARB	ARB	ARB
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1994	1/1/83	1988	1989	1989
Current sampling frequency	1:6	1:6	1:12	1:12	1:12
Calculated sampling frequency	n/a	n/a	n/a	n/a	n/a
Sampling season	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)	Year round	Year round	Year round
Probe height	5.5 m	5.5 m	5.5 m	5.6 m	5.6 m
Distance from supporting structure	n/a	n/a	n/a	n/a	n/a
Distance from obstructions on roof	n/a	n/a	n/a	n/a	n/a
Distance from obstructions not on roof	n/a	n/a	n/a	n/a	n/a
Distance from trees	E 18.0 m	E 18.0 m	E 18.0 m	E 18.5 m	E 18.5 m
Distance to furnace or incinerator flue	n/a	n/a	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°	360°	360°
Probe material for reactive gases	n/a	n/a	n/a	n/a	n/a
Residence time for reactive gases	n/a	n/a	n/a	n/a	n/a
Will there be changes within the next 18 months?	No	No	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a	n/a	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a	n/a	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a	n/a	n/a



Table 7.4 El Cajon Meteorological Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp	Meteorological Rel. Humidity
Site type	PAMS, SLAMS, NCore	PAMS, SLAMS, NCore	PAMS, SLAMS, NCore	PAMS, SLAMS, NCore	PAMS, SLAMS, NCore
Analysis method	Cup anemometer	Potentiometer	RTD	RTD	Capacitor sensor
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics	Rotronics
Parameter Code	61101	61104	62107	62101	62201
POC for monitor	1	1	1	1	1
Method Code	050	020	012	040	012
Start date	8/20/1981	8/20/1981	8/27/1981	8/27/1981	
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sensor height	10 m	10 m	n/a	5.3 m	5.3 m
Distance from supporting structure	n/a	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a	n/a
Distance from trees	W 12.2 m; N 16.6 m	W 12.2 m; N 16.6 m	W 12.2 m; N 16.6 m	W 12.2 m; N 16.6 m	W 12.2 m; N 16.6 m
Unrestricted airflow	360°	360°	n/a	360°	360°
Will there be changes within the next 18 months?	No	No	No	No	No

Figure 7.1 El Cajon Site Pictures



Northwest



North



Northeast



West



El Cajon



East



Southwest



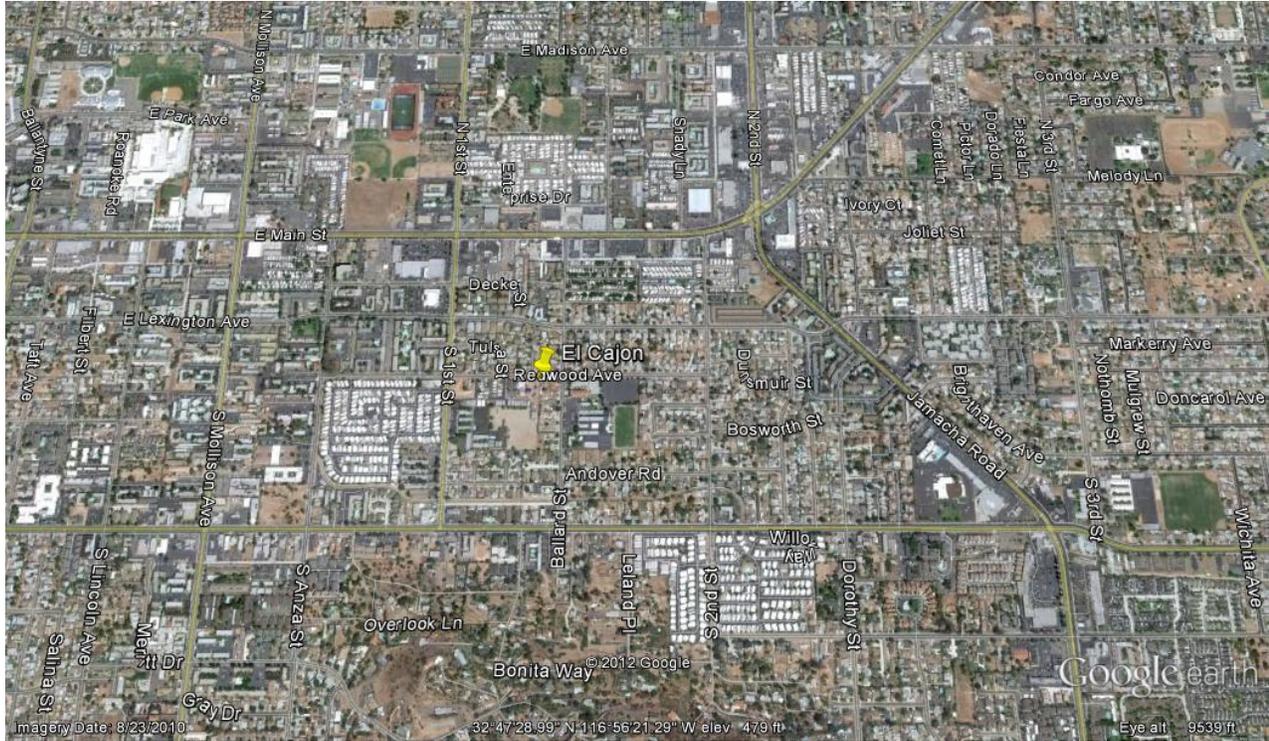
South



Southeast

Figure 7.2 El Cajon Additional Views/Pictures of the Station

Long View



Medium View





Section 8.0.0 Escondido Station Overview

Site Name:	ESCONDIDO	Representative Area:	San Diego MSA
Site Abbreviation:	ESC	Year established:	5/1972
AQS ID:	06 073 1002	Ground Cover:	Dirt, gravel
Location:	SE back parking lot of County Health Complex	Distance to road:	NE 89.3 m (Fig St.); SW 96 m (Valley Pkwy)
Elevation above sea level:	200 m	Traffic Count:	15,000 veh/day-E. Valley Pkwy
Latitude:	32° 07' 40" N	Address:	600 E Valley Pkwy
Longitude:	117° 04' 31" W	County:	San Diego

	O ₃ Ambient	7/24
X	NO ₂ Ambient	7/24
X	CO Ambient	7/24
	SO ₂ Ambient	
	CO Trace Level	
	NO _y Total Oxides of Nitrogen	
	SO ₂ Trace Level	
	TSP Lead	
	TSP Lead Collocated	
	PM ₁₀ Lo-Vol	
X	PM ₁₀ Hi-Vol	1:6
	PM ₁₀ Hi-Vol Collocated	
	PM _{2.5} non-FEM	
X	PM _{2.5} FEM	7/24
X	PM _{2.5} FEM Collocated	7/24
X	PM _{2.5} FRM	1:3
	PM _{2.5} FRM Collocated	
	PM _{coarse} FRM	
	PAMS VOC	
	PAMS VOC Collocated	
D	PAMS Carbonyls	
X	TOXICS VOC	1:6
	TOXICS Total Metals	
	TOXICS CR (VI)	
	TOXICS Aldehydes	
X	STN	1:6
X	CSN	1:6
X	CSM Carbon	1:6
X	Meteorology External Temperature	7/24
	Meteorology % Relative Humidity	
X	Meteorology Wind Speed	7/24
X	Meteorology Wind Direction	7/24
X	Meteorology Internal Temperature	7/24
	Meteorology Barometric Pressure	
	Meteorology Solar Radiation	

X= Existing
 A= Plan to Add or Recently Added
 T= Plan to Terminate or Recently Terminated
 D= In Development

7/24= Continuous Sampling
 1:1= Samples Every Day
 1:3= Samples Every Three Days
 1:6= Samples Every Six Days
 1:12= Samples Every Twelve Days

Site Description: This station is a trailer in the SE section of the back parking lot of the County Public Health Complex in the City of Escondido.

Monitoring Objectives: The Escondido site represents a major population center located in the inland North County along the Interstate 15/Highway 78 section of the County. It is impacted from the transportation corridor from the communities along these two highways. This location is like the El Cajon site and can be classified as a PAMS II location; it provides valuable data concerning the fate of coastal emissions, which react in sunlight to form ozone as they are carried eastward with the prevailing winds. This site is extremely important for burn/no-burn decisions.

Planned Changes: Carbonyl sampling will be investigated at this location. If it is viable, the District will designate Escondido as a PAMS II location and begin carbonyl sampling.



Table 8.1 Escondido Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO	CO
POC	1	1	1
Primary monitor	Yes	Yes	Yes
Parameter code	44201	42603, 42602, 42601	42101
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	SLAMS	SLAMS	SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42	Thermo 48i
Method code	047	074	054
Sampling method	UV absorption	Chemiluminescence	Nondispersive Infrared
FRM/FEM/ARM/Other	FRM	FRM	FRM
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	n/a	n/a	n/a
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	11/21/1973	6/1/1974	10/29/1979
Current sampling frequency	Continuous	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous	Continuous
Sampling season	Year round	Year round	Year round
Probe height	7 m	7 m	7 m
Distance from supporting structure	3 m	3 m	3 m
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	E 21.3 m	E 21.3 m	E 21.3 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	Glass	Glass	Glass
Residence time for reactive gases	3 s	3 s	3 s
Will there be changes within the next 18 months?	No	No	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	12/8/2011	12/9/2011	12/20/2011
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a



Table 8.2b Escondido Particulate Pollutants (non-PM_{2.5})

Pollutant	PM ₁₀
POC	1
Primary monitor	Yes
Parameter code	81102 Std 85101 Local
Basic monitoring objective	NAAQS
Site type	Population Exposure
Monitor type/designation	SLAMS
Instrument manufacturer & model	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head
Method code	063
Sampling method	High volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	9/4/1991
Current sampling frequency	1:6
Calculated sampling frequency	1:6
Sampling season	Year round
Probe height	5.3 m
Distance from supporting structure	1.5 m
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	SW 24.4 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	4/6, 12/8



Table 8.3 Escondido Other Pollutants

Pollutant	TOXICS- VOCs
POC	See Toxics section Table 13.2b
Primary monitor	n/a
Parameter code	1
Basic monitoring objective	Research
Site type	Population Exposure
Monitor type/designation	Supplemental Speciation
Instrument manufacturer & model	Xontech 910A Fused Silica Lined
Method code	210
Sampling method	Evacuated Canister
FRM/FEM/ARM/Other	n/a
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	1/2007
Current sampling frequency	1:6
Calculated sampling frequency	n/a
Sampling season	Year round
Probe height	5.8 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	E 25.0 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	n/a
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	n/a



Table 8.4 Escondido Meteorological Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp
Site type	SLAMS	SLAMS	SLAMS	SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics
Parameter Code	61101	61104	62107	62101
POC for monitor	1	1	1	1
Method Code	050	020	012	040
Start date	6/1/1974	6/1/1974		2/20/1975
Operation schedule	Continuous	Continuous	Continuous	Continuous
Probe height	10 m	10 m	n/a	5.0 m
Distance from supporting structure	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a
Distance from trees	24.4 m	24.4 m	24.4 m	24.4 m
Unrestricted airflow	360°	360°	n/a	360°
Will there be changes within the next 18 months?	No	No	No	No

Figure 8.1 Escondido Site Pictures



Northwest



North



Northeast



West



Escondido



East



Southwest



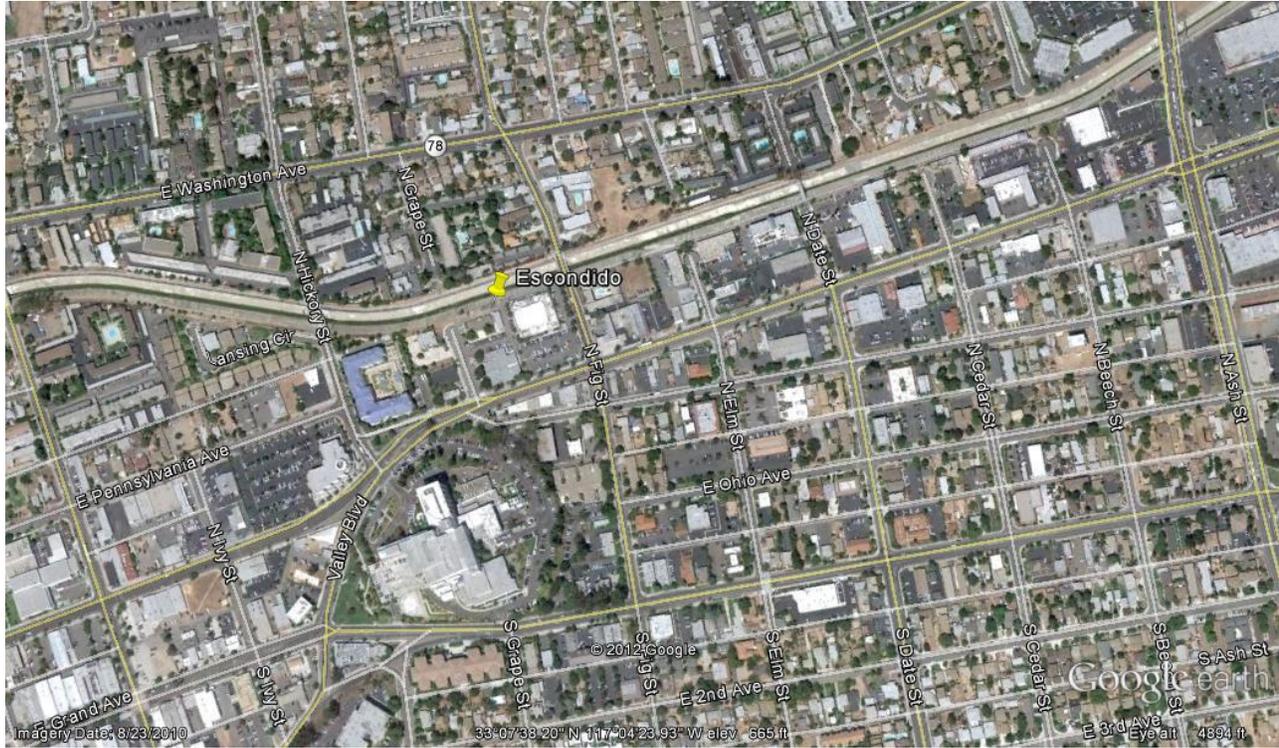
South



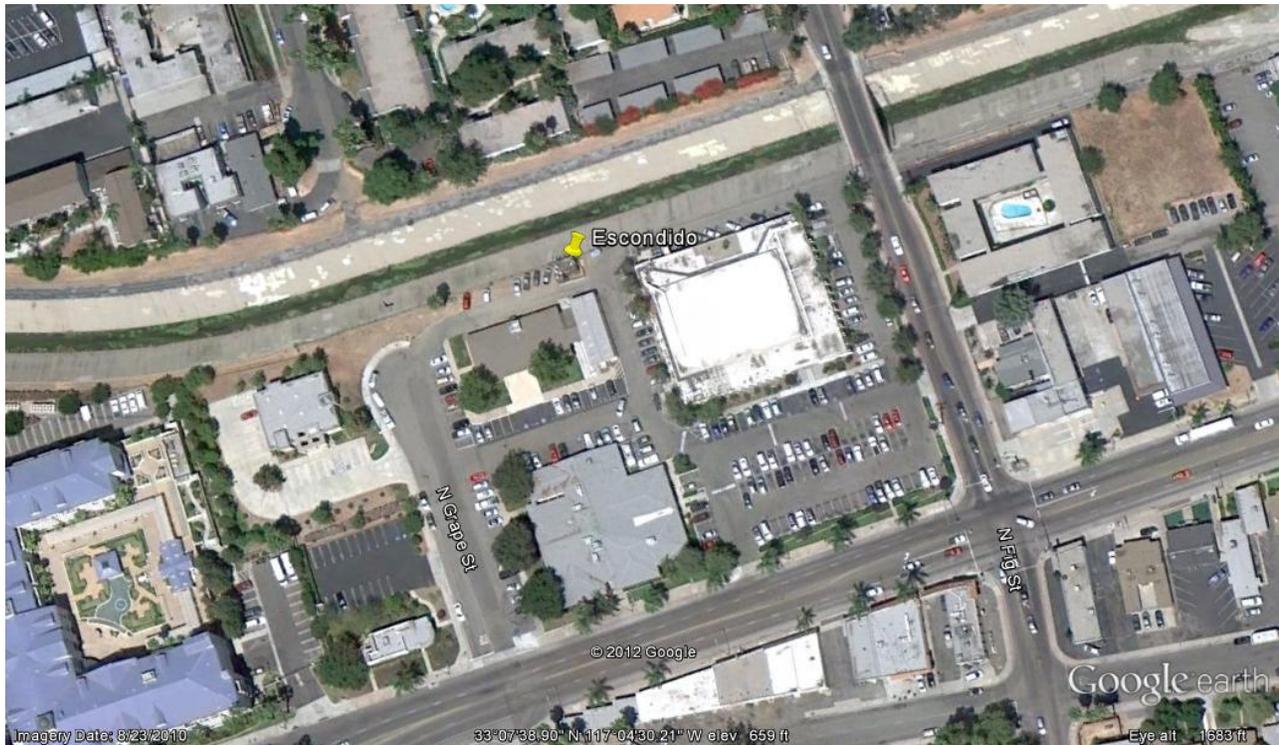
Southeast

Figure 8.2 Escondido Additional Views/Pictures of the Station

Long View



Medium View





Section 9.0.0 San Diego / Overland – Kearny Mesa Station Overview

Site Name:	SAN DIEGO /OVERLAND	Representative Area:	San Diego MSA
Site Abbreviation:	KMA	Year established:	4/1/1974
AQS ID:	06 073 0006	Ground Cover:	Asphalt
Location:	NE corner of the County Operations Center	Distance to road:	SE 85 m (Hazard Wy); N 174 m (Chesapeake Dr)
Elevation above sea level:	127 m	Traffic Count:	700 veh/day-Chesapeake
Latitude:	32° 50' 11" N	Address:	5555 Overland Ave.
Longitude:	117° 07' 43" W	County:	San Diego

O ₃ Ambient	7/24	T
NO ₂ Ambient	7/24	T
CO Ambient		
SO ₂ Ambient		
CO Trace Level		
NO _y Total Oxides of Nitrogen		
SO ₂ Trace Level		
TSP Lead		
TSP Lead Collocated		
PM ₁₀ Lo-Vol		
PM ₁₀ Hi-Vol	1:6	T
PM ₁₀ Hi-Vol Collocated	1:6	T
PM _{2.5} non-FEM		
PM _{2.5} FEM		
PM _{2.5} FEM Collocated		
PM _{2.5} FRM	1:3	T
PM _{2.5} FRM Collocated	1:12	T
PMcoarse FRM		
PAMS VOC	1:6	T
PAMS VOC Collocated	1:6	T
PAMS Carbonyls	1:6	T
TOXICS VOC		
TOXICS Total Metals		
TOXICS CR (VI)		
TOXICS Aldehydes		
STN		
CSN		
CSM Carbon		
Meteorology External Temperature	7/24	T
Meteorology % Relative Humidity	7/24	T
Meteorology Wind Speed	7/24	T
Meteorology Wind Direction	7/24	T
Meteorology Internal Temperature	7/24	T
Meteorology Barometric Pressure		T
Meteorology Solar Radiation		T

X= Existing
 A= Plan to Add or Recently Added
 T= Plan to Terminate or Recently Terminated
 D= In Development

7/24= Continuous Sampling

1:1= Samples Every Day
 1:3= Samples Every Three Days
 1:6= Samples Every Six Days
 1:12= Samples Every Twelve Days

Site Description: This station is a trailer in the NE corner of the County Operations Center in Kearny Mesa.

Monitoring Objectives: The Kearny Mesa site is a PAMS II location. It provides representative data for a large area and is the quality assurance location for the PM₁₀, PM_{2.5} and PAMS-VOC programs.

Planned Changes: Due to tenancy issues, this site relocated in the 1st Qtr of 2012. On 7/1/2011, the collection for PAMS-VOCs were discontinued here and the Camp Pendleton site became the quality assurance/collocation location for the PAMS-VOC program. In the 3rd Qtr of 2011, the Xontech 925 PAMS-Carbonyl sampler experienced catastrophic failure. Due to impending new PAMS guidance, a replacement carbonyl sampler(s) has not been pursued, per EPA Region IX's recommendation.



Table 9.1 Kearny Mesa Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO
POC	1	1
Primary monitor	Yes	Yes
Parameter code	44201	42603, 42602, 42601
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure
Monitor type/designation	PAMS, SLAMS	PAMS, SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42
Method code	047	074
Sampling method	UV absorption	Chemiluminescence
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	n/a	n/a
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	4/1/1974	4/1/1974
Current sampling frequency	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous
Sampling season	Year round	Year round
Probe height	6.6 m	6.6 m
Distance from supporting structure	2.6 m	2.6 m
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	S 22.0 m	S 22.0 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	Glass	Glass
Residence time for reactive gases	2.5 s	2.5 s
Will there be changes within the next 18 months?	Yes	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	5/26/2011	6/16/2011
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 9.2a Kearny Mesa Particulate Pollutants (PM_{2.5})

Pollutant	PM _{2.5} (FRM)	PM _{2.5} (FRM)
POC	1	2
Primary monitor	Yes	No
Parameter code	1	n/a
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure
Monitor type/designation	SLAMS	QA COLLOCATED
Instrument manufacturer & model	Thermo 2025	Thermo 2025
Method code	105	105
Sampling method	Low volume, sequential, size selective inlet	Low volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	9/3/1999	9/3/1999
Current sampling frequency	1:3	1:12
Calculated sampling frequency	1:3	n/a
Sampling season	Year round	Year round
Probe height	7.5 m	7.5 m
Distance from supporting structure	2.0 m	2.0 m
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	S 22.0 m	S 22.0 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	n/a	n/a
Residence time for reactive gases	n/a	n/a
Will there be changes within the next 18 months?	Yes	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	Yes	Yes
Frequency of flow rate verification for sequential PM samplers	1/2 weeks	1/2 weeks
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	2/10, 5/13, 8/29, 12/6	2/10, 5/13, 8/29, 12/6



Table 9.2b Kearny Mesa Particulate Pollutants (non-PM_{2.5})

Pollutant	PM ₁₀	PM ₁₀
POC	1	1
Primary monitor	Yes	No
Parameter code	1	n/a
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Population Exposure	Population Exposure
Monitor type/designation	SLAMS	QA COLLOCATED
Instrument manufacturer & model	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head
Method code	063	063
Sampling method	High volume, sequential, size selective inlet	High volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	9/4/1991	
Current sampling frequency	1:6	1:6
Calculated sampling frequency	1:6	n/a
Sampling season	Year round	Year round
Probe height	7.0 m	7.0 m
Distance from supporting structure	1.5 m	1.5 m
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	S 25.0 m	S 25.0 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	n/a	n/a
Residence time for reactive gases	n/a	n/a
Will there be changes within the next 18 months?	Yes	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	Yes	Yes
Frequency of flow rate verification for sequential PM samplers	1/4 weeks	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	1/9, 8/2	1/19, 8/4



Table 9.3 Kearny Mesa Other Pollutants

Pollutant	PAMS-Carbonyls	*PAMS-VOCs	*PAMS-VOCs
POC	1 for 3-hr samples, 2 for 24-hr samples	1 for 3-hr samples, 2 for 24-hr samples	1 for 3-hr samples, 2 for 24-hr samples
Primary monitor	n/a	n/a	n/a
Parameter code	See PAMS Section, Table 12.2c	See PAMS Section, Table 12.2b	See PAMS Section, Table 12.2b
Basic monitoring objective	Research	Research	Research
Site type	Population Exposure	Population Exposure	Population Exposure
Monitor type/designation	PAMS Type II	PAMS Type I	PAMS Type I, QA Collocated
Instrument manufacturer & model	Xontech 925	Xontech 910 & 912	Xontech 910 & 912
Method code	202	126	126
Sampling method	DNPH cartridge	Evacuated Cannisters	Evacuated Cannisters
FRM/FEM/ARM/Other	n/a	n/a	n/a
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	7/2/1995	1994	1994
Current sampling frequency	1:6	1:6	1:6
Calculated sampling frequency	1:6	1:6	1:6
Sampling season	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)	3-hr samples (Jul-Oct) 24-hr samples (Nov-Jun)
Probe height	8.1 m	8.1 m	8.1 m
Distance from supporting structure	2.6 m	2.6 m	2.6 m
Distance from obstructions on roof	n/a	n/a	n/a
Distance from obstructions not on roof	n/a	5.8 m	5.8 m
Distance from trees	N 26.0 m	N 26.0 m	N 26.0 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	0.3 m	0.3 m
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	n/a	n/a	n/a
Residence time for reactive gases	n/a	n/a	n/a
Will there be changes within the next 18 months?	Yes	Yes	YEs
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a

*Per EPA Region IX's guidance, PAMS-VOC sampling was decommissioned on 6/30/2011



Table 9.4a Kearny Mesa Meteorological Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp	Meteorological Rel. Humidity
Site type	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS	PAMS, SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD	Capacitor sensor
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics	Rotronics
Parameter Code	61101	61104	62107	62101	62201
POC for monitor	1	1	1	1	1
Method Code	050	020	012	040	012
Start date	4/1/1974	4/1/1974	4/1/1974	1/15/1975	1/15/1975
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sensor height	10 m	10 m	n/a	5.5 m	5.5 m
Distance from supporting structure	n/a	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a	n/a
Distance from trees	N 26 m	N 26 m	N 26 m	N 26 m	N 26 m
Unrestricted airflow	360°	360°	n/a	360°	360°
Will there be changes within the next 18 months?	Yes	Yes	Yes	Yes	Yes



Table 9.4b Kearny Mesa Meteorological Equipment (additional)

Parameter	Barometric Pressure	Solar Radiation
Site type	PAMS	PAMS,
Analysis method	Transducer	Differential Thermopile
Equipment	Rotronics	Eppley
Parameter Code	64101	663301
POC for monitor	1	1
Method Code	014	011
Start date		
Operation schedule	Continuous	Continuous
Sensor height	3 m	4.9 m
Distance from supporting structure	n/a	n/a
Distance from obstructions on the roof	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a
Distance from trees	n/a	N 26 m
Unrestricted airflow	n/a	n/a
Will there be changes within the next 18 months?	Yes	Yes

Figure 9.1 Kearny Mesa Site Pictures



Northwest



North



Northeast



West



Kearny Mesa



East



Southwest



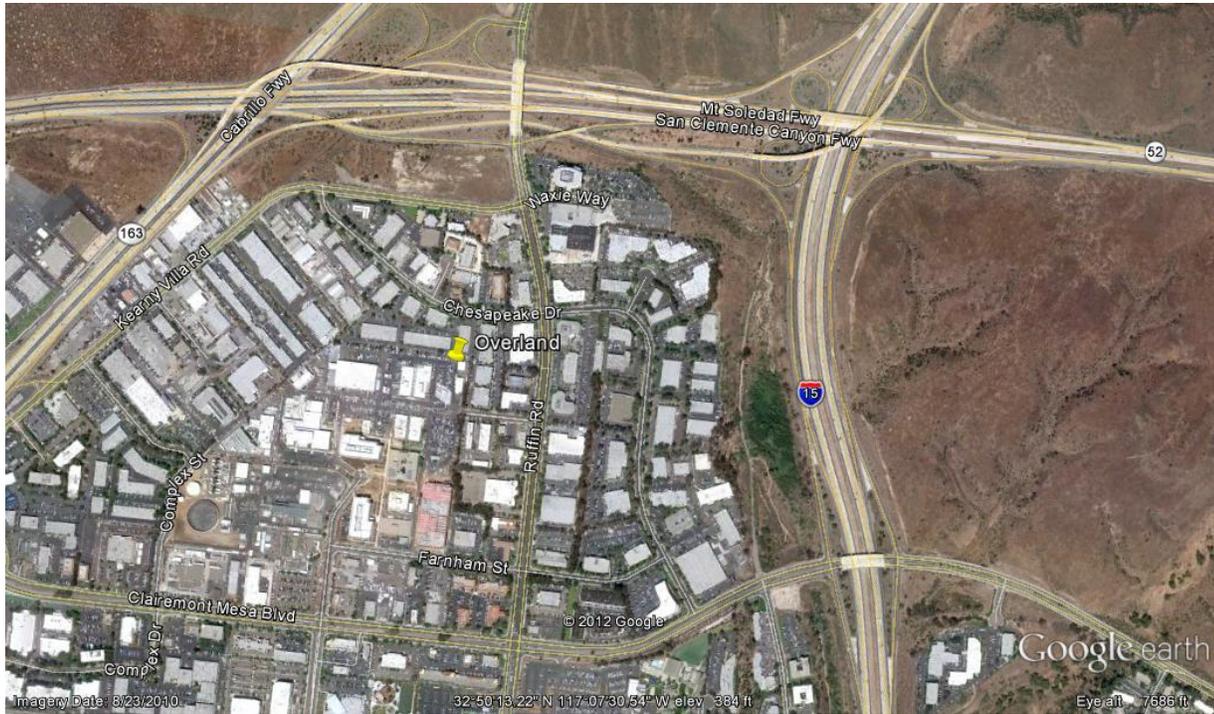
South



Southeast

Figure 9.2 Kearny Mesa Additional Views/Pictures of the Station

Long View



Medium View

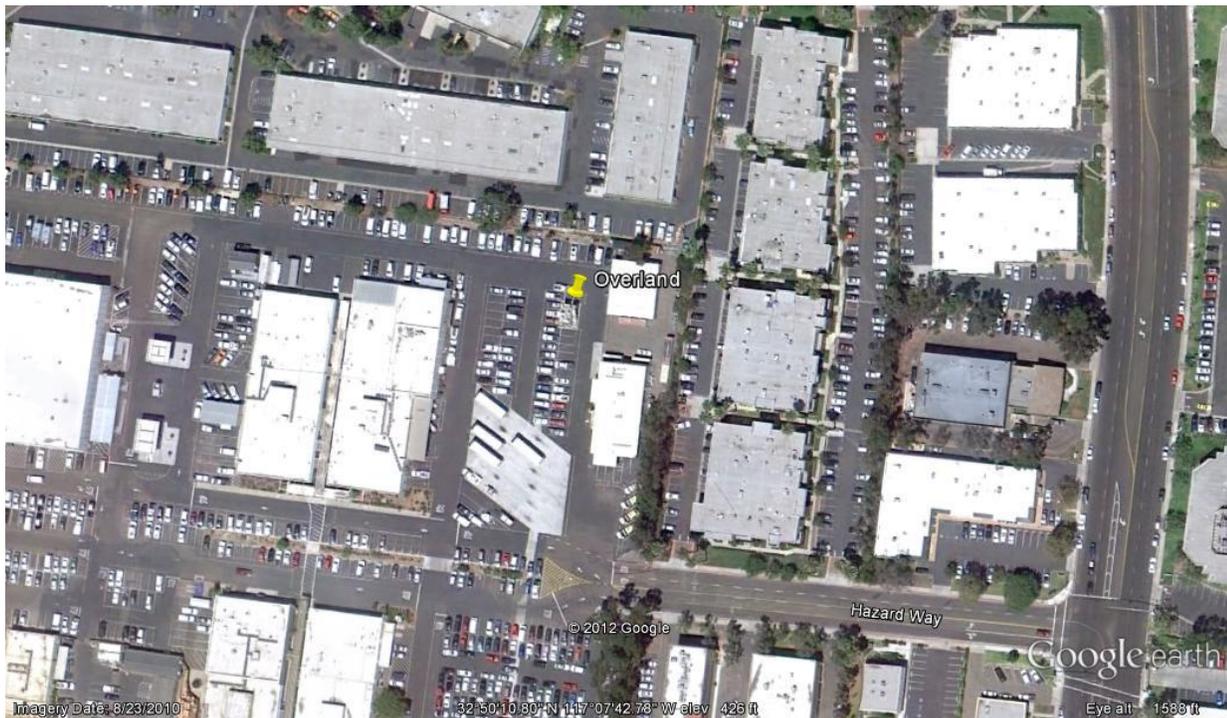




Table 10.1 Otay Mesa Gaseous Pollutants (Ambient Level)

Pollutant	O ₃	NO _x , NO ₂ , NO	*SO ₂
POC	1	1	1
Primary monitor	Yes	Yes	Yes
Parameter code	44201	42603, 42602, 42601	42101
Basic monitoring objective	Provide Data, NAAQS	Provide Data, NAAQS	Provide Data, NAAQS
Site type	Source Oriented	Source Oriented	Population Exposure
Monitor type/designation	SLAMS	SLAMS	SLAMS
Instrument manufacturer & model	Thermo 49	Thermo 42	Thermo 43
Method code	047	074	054
Sampling method	UV absorption	Chemiluminescence	Fluorescence
FRM/FEM/ARM/Other	FRM	FRM	FRM
Collecting agency	SD APCD	SD APCD	SD APCD
Analytical laboratory	n/a	n/a	n/a
Reporting agency	SD APCD	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1974	1974	1974
Current sampling frequency	Continuous	Continuous	Continuous
Calculated sampling frequency	Continuous	Continuous	Continuous
Sampling season	Year round	Year round	Year round
Probe height	4.7 m	4.7 m	4.7 m
Distance from supporting structure	2.7 m	2.7 m	2.7 m
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	E 17.4 m	E 17.4 m	E 17.4 m
Distance to furnace or incinerator flue	n/a	n/a	n/a
Distance between collocated monitors	n/a	n/a	n/a
Unrestricted airflow	360°	360°	360°
Probe material for reactive gases	Glass	Glass	Glass
Residence time for reactive gases	2.8 s	2.8 s	2.8 s
Will there be changes within the next 18 months?	Yes	Yes	Decommissioned on June 30, 2011
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks	1/2 weeks	1/2 weeks
Last annual performance evaluation for gas	10/21/2011	10/26/2011	Closed before audit
Last two semi-annual flow rate audits for PM samplers	n/a	n/a	n/a



Table 10.2 Otay Mesa Particulate Pollutants (non-PM_{2.5})

Pollutant	PM ₁₀	PM ₁₀
POC	1	n/a
Primary monitor	Yes	No
Parameter code	81102 Std 85101 Local	81102 Std 85101 Local
Basic monitoring objective	NAAQS	QA COLLOCATED
Site type	Source Oriented	Source Oriented
Monitor type/designation	SLAMS	SLAMS
Instrument manufacturer & model	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head	Graseby Metal Works 2000H w/ Sierra Anderson 1200 Head
Method code	063	063
Sampling method	High volume, sequential, size selective inlet	High volume, sequential, size selective inlet
FRM/FEM/ARM/Other	FRM	FRM
Collecting agency	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	7/16/1990	9/3/1991
Current sampling frequency	1:6	1:6
Calculated sampling frequency	1:6	1:6
Sampling season	Year round	Year round
Probe height	5.4 m	5.4 m
Distance from supporting structure	1.5 m	1.5 m
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	4 m	4 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	5.2 m	5.2 m
Unrestricted airflow	360°	360°
Probe material for reactive gases	n/a	n/a
Residence time for reactive gases	n/a	n/a
Will there be changes within the next 18 months?	Yes	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	5/5, 10/26	5/5, 10/26



Table 10.3 Otay Mesa Other Pollutants

Pollutant	TOXICS- VOCs	TOXICS- Metals
POC	1	Collected, not analyzed
Primary monitor	n/a	n/a
Parameter code	210	Collected, not analyzed
Basic monitoring objective	Research	Research
Site type	Population Exposure	Population Exposure
Monitor type/designation	Supplemental Speciation	Supplemental Speciation
Instrument manufacturer & model	Xontech 910A (Fused silica lined)	Xontech 924
Method code	210	Collected, not analyzed
Sampling method	Evacuated canisters	Filters
FRM/FEM/ARM/Other	n/a	n/a
Collecting agency	SD APCD	SD APCD
Analytical laboratory	SD APCD	SD APCD
Reporting agency	SD APCD	SD APCD
Spatial scale	Neighborhood Scale	Neighborhood Scale
Monitoring start date	1/2007	1994
Current sampling frequency	1:6	1:12
Calculated sampling frequency	n/a	n/a
Sampling season	Year round	Year round
Probe height	8.4 m	8.4 m
Distance from supporting structure	2.0 m	2.0 m
Distance from obstructions on roof	n/a	n/a
Distance from obstructions not on roof	n/a	n/a
Distance from trees	20.5 m	20.5 m
Distance to furnace or incinerator flue	n/a	n/a
Distance between collocated monitors	n/a	n/a
Unrestricted airflow	360°	360°
Probe material for reactive gases	n/a	n/a
Residence time for reactive gases	n/a	n/a
Will there be changes within the next 18 months?	Yes	Yes
Is it suitable for comparison against the annual PM _{2.5} ?	n/a	n/a
Frequency of flow rate verification for sequential PM samplers	n/a	n/a
Frequency of flow rate verification for continuous PM samplers	n/a	n/a
Frequency of one-point QC check for gaseous instruments	n/a	n/a
Last annual performance evaluation for gas	n/a	n/a
Last two semi-annual flow rate audits for PM samplers	n/a	n/a



Table 10.4 Otay Mesa Meteorological Equipment

Parameter	Meteorological Wind Speed	Meteorological Wind Direction	Meteorological Internal Temp	Meteorological External Temp
Site type	SLAMS	SLAMS	SLAMS	SLAMS
Analysis method	Cup anemometer	Potentiometer	RTD	RTD
Equipment	Qualimetrics	Qualimetrics	Qualimetrics	Rotronics
Parameter Code	61101	61104	62107	62101
POC for monitor	1	1	1	1
Method Code	050	020	012	040
Start date	12/13/1990	12/13/1990		1/4/1991
Operation schedule	Continuous	Continuous	Continuous	Continuous
Sensor height	10 m	10 m	1.7 m	5.5 m
Distance from supporting structure	n/a	n/a	n/a	n/a
Distance from obstructions on the roof	n/a	n/a	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a	n/a	n/a
Distance from trees	17.6 m	17.6 m	17.6 m	17.6 m
Unrestricted airflow	360°	360°	n/a	360°
Will there be changes within the next 18 months?	Yes	Yes	Yes	Yes

Figure 10.1 Otay Mesa Site Pictures



Northwest



North



Northeast



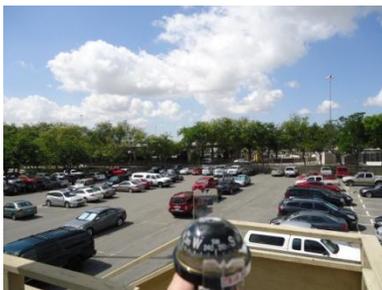
West



Otay Mesa



East



Southwest



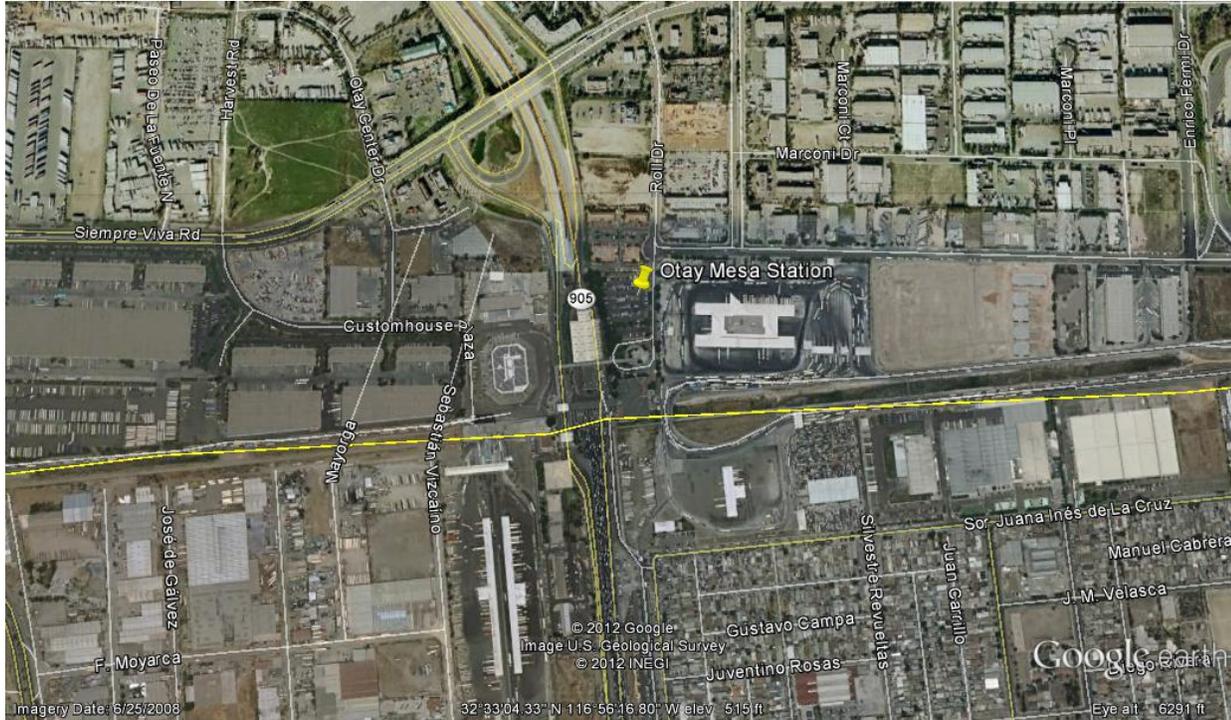
South



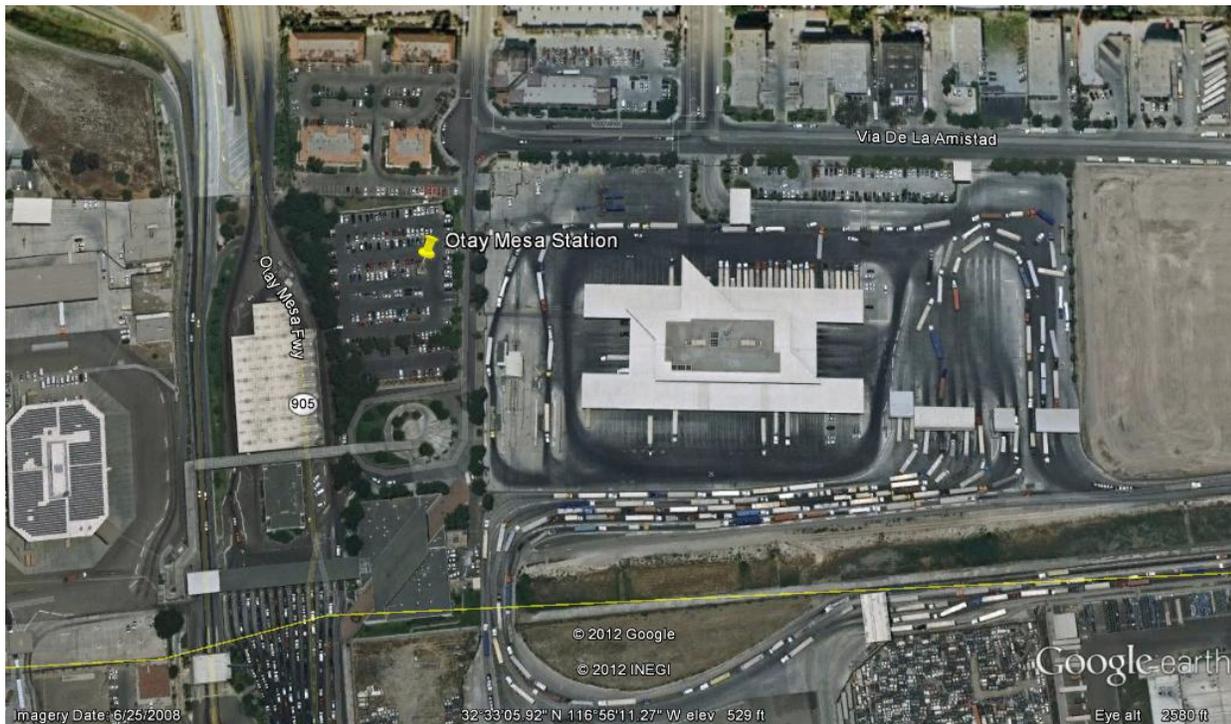
Southeast

Figure 6.2 Otay Mesa Additional Views/Pictures of the Station

Long View



Medium View





Section 11.0.0 Kearny Villa Road Overview

Site Name:	SAN DIEGO-KEARNY VILLA ROAD	Representative Area:	San Diego MSA
Site Abbreviation:	KVR	Year established:	11/05/2010
AQS ID:	06 073 1016	Ground Cover:	Dirt and gravel
Location:	SW corner of Camp Elliot on Marine Corp Miramar Air Station	Distance to road:	S 1.6 km Clairemont Mesa Blvd & Ruffin Rd; W 180 m Kearny Villa Rd
Elevation above sea level:	132 m	Traffic Count:	27, 300 veh/day Clairemont Mesa Blvd
Latitude:	32° 50' 44" N	Address:	Kearny Villa Road
Longitude:	117° 07' 26" W	County:	San Diego

O ₃ Ambient	7/24	X
NO ₂ Ambient	7/24	A
CO Ambient		
SO ₂ Ambient		
CO Trace Level		
NO _y Total Oxides of Nitrogen		
SO ₂ Trace Level		
TSP Lead		
TSP Lead Collocated		
PM ₁₀ Lo-Vol		
PM ₁₀ Hi-Vol	1:6	A
PM ₁₀ Hi-Vol Collocated	1:6	A
PM _{2.5} non-FEM		
PM _{2.5} FEM		
PM _{2.5} FEM Collocated		
PM _{2.5} FRM	1:3	A
PM _{2.5} FRM Collocated	1:12	A
PMcoarse FRM		
PAMS VOC		
PAMS VOC Collocated		
PAMS Carbonyls	1:6	A
TOXICS VOC		
TOXICS Total Metals		
TOXICS CR (VI)		
TOXICS Aldehydes		
STN		
CSN		
CSM Carbon		
Meteorology External Temperature	7/24	X
Meteorology % Relative Humidity	7/24	A
Meteorology Wind Speed	7/24	A
Meteorology Wind Direction	7/24	A
Meteorology Internal Temperature	7/24	A
Meteorology Barometric Pressure	7/24	A
Meteorology Solar Radiation	7/24	A

X= Existing
 A= Plan to Add or Recently Added
 T= Plan to Terminate or Recently Terminated
 D= In Development

7/24= Continuous Sampling

1:1= Samples Every Day
 1:3= Samples Every Three Days
 1:6= Samples Every Six Days
 1:12= Samples Every Twelve Days

Site Description: This station is a trailer in the SW corner of Camp Elliot next to the District's wind profiler.

Monitoring Objectives: This site is a PAMS II location. It provides representative data for a large area and it will be the quality assurance location for the PM₁₀ and PM_{2.5} program. Only O₃ is currently parallel sampled against the San Diego/Overland site.

Planned Changes: The station added all the instrumentation listed above and became fully operationally on 2/2012 and replaced the decommissioned San Diego-Overland / Kearny Mesa site.

Other Equipment: The site also has a radar wind profiler on the grounds. It is the only functioning wind profiler for the SDAB for the PAMS program. It must be replaced or refurbished soon.



Table 11.1 Kearny Villa Road Gaseous Pollutants (Ambient Level)

Pollutant	O ₃
POC	1
Primary monitor	Yes
Parameter code	44201
Basic monitoring objective	Research
Site type	Population Exposure
Monitor type/designation	SLAMS
Instrument manufacturer & model	Thermo 49
Method code	047
Sampling method	UV absorption
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	n/a
Reporting agency	SD APCD
Spatial scale	Neighborhood Scale
Monitoring start date	11/5/2010
Current sampling frequency	Continuous
Calculated sampling frequency	Continuous
Sampling season	Year round
Probe height	4.6 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	E 108 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	Glass
Residence time for reactive gases	2.8 s
Will there be changes within the next 18 months?	No
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	n/a
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	1/2 weeks
Last annual performance evaluation for gas	Not operational long enough
Last two semi-annual flow rate audits for PM samplers	n/a



Table 11.2a Kearny Villa Road Meteorological Equipment

Parameter	Meteorological Internal Temp
Site type	SLAMS
Analysis method	RTD
Equipment	Rotronics
Parameter Code	62107
POC for monitor	1
Method Code	012
Start date	11/05/2010
Operation schedule	Continuous
Sensor height	n/a
Distance from supporting structure	n/a
Distance from obstructions on the roof	n/a
Distance from obstructions not on the roof	n/a
Distance from trees	E 108 m
Unrestricted airflow	360°
Will there be changes within the next 18 months?	No



Table 11.2b Kearny Villa Road Meteorological Equipment (Additional-Radar Wind Profiler)

Parameter	Upper-air wind & temperature
Site Type	PAMS
Analysis Method	Radio Acoustic Sounding System (RASS)
Equipment	Radian LAP 3000
Parameter Code	n/a
Start date	1999
Operation schedule	Continuous, Temp every hour
Sensor Height	3 m
Distance from supporting structure	n/a
Distance from obstructions on the roof	n/a
Distance from obstructions not on the roof	n/a
Distance from trees	E 108 m
Unrestricted airflow	360°
Will there be changes within the next 18 months?	No

Figure 11.1 Kearny Villa Road Site Pictures



Northwest



North



Northeast



West



Kearny Villa



East



Southwest



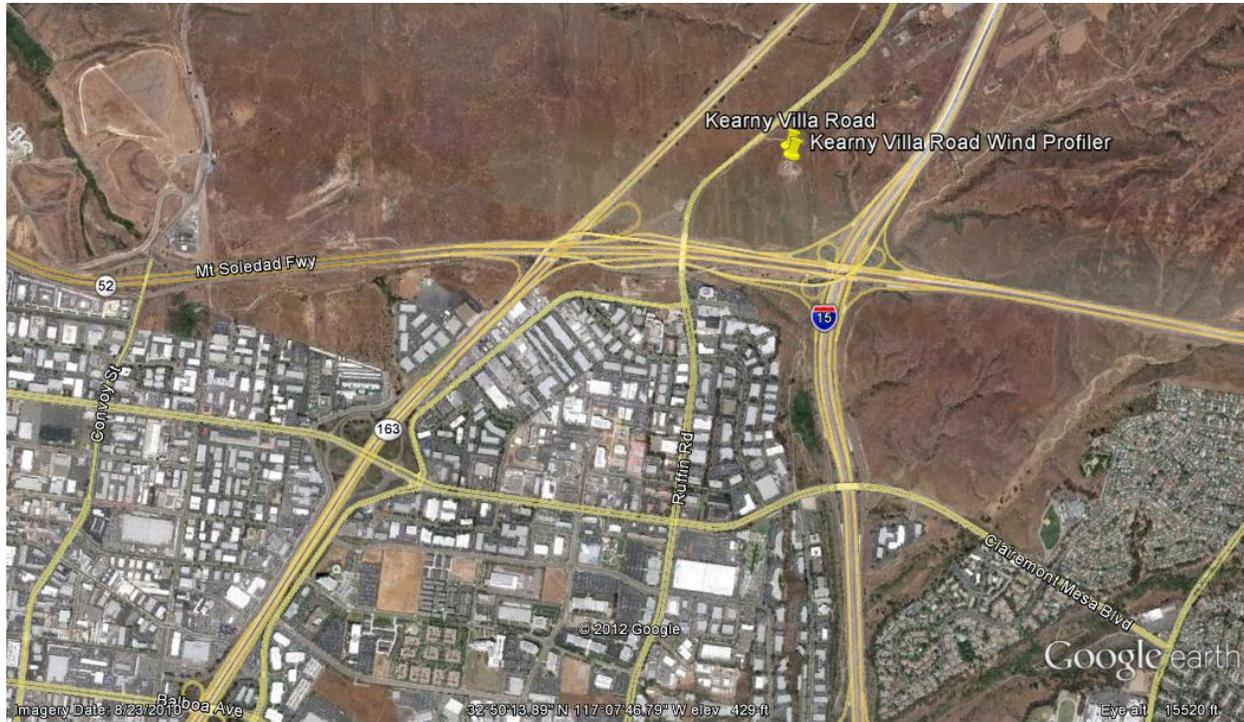
South



Southeast

Figure 11.2 Kearny Villa Road Additional Views/Pictures of the Station

Long View



Medium View

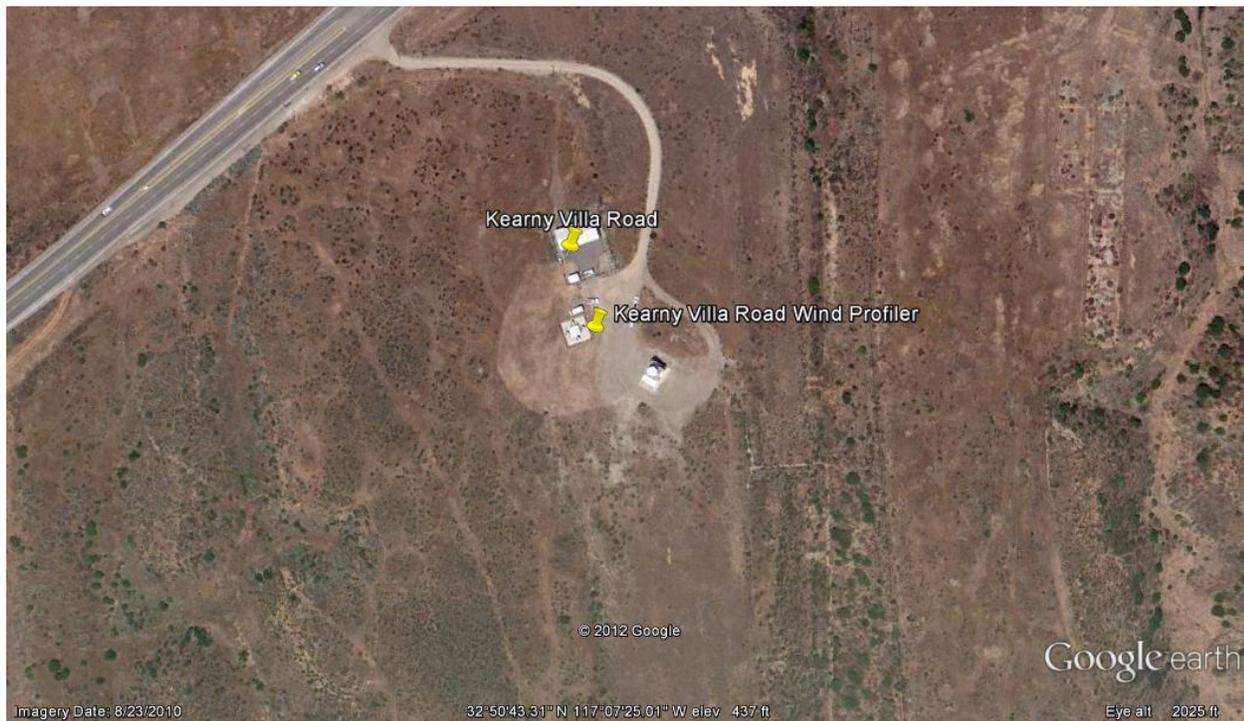


Figure 11.3 Kearny Villa Road Radar Wind Profiler Pictures



Miramar RWP/RASS



Section 12.0.0 San Marcos Peak Enhanced Meteorological Data Collection Overview

Site Name:	San Marcos Peak	Representative Area:	San Diego MSA
Abbreviation:	SMP	Year established:	1997
AQS ID:	06 073 1015	Ground Cover:	Gravel
Location:	Roof of American Tower Building	Distance to road:	n/a
Elevation above sea level:	475 m	Traffic Count:	n/a
Latitude:	33° 11' 06" N	Address:	Rancho Luiseno Rd.
Longitude:	117° 07' 46" W	County:	San Diego

Site Description: On the rooftop of the American Tower Building situated in the Merriam mountains northeast of San Marcos.

Monitoring Objectives: To provide meteorological data for winds speed and wind direction to help characterize ozone transport days.

Planned Changes: None

Table 12.1 San Marcos Peak Meteorological Equipment (enhanced)

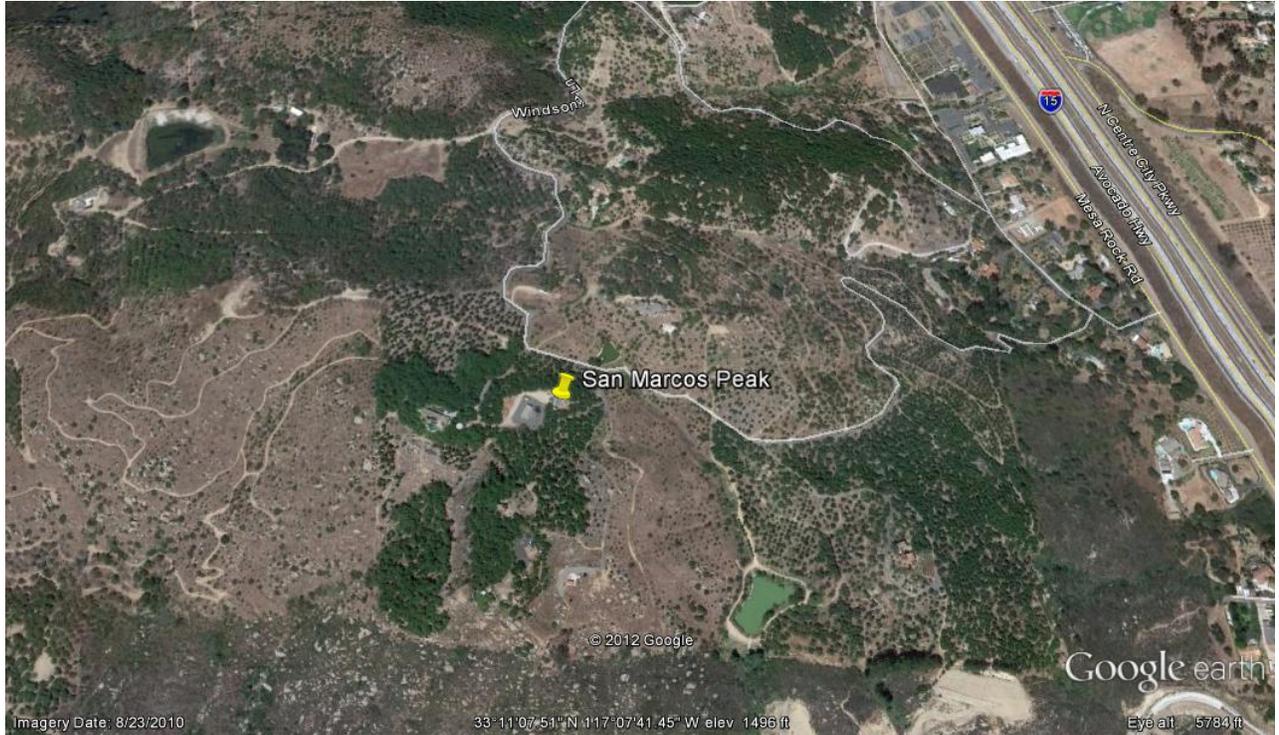
Parameter	Wind Speed	Wind Directions
Site Type	n/a	n/a
Equipment	Qualimetrics	Qualimetrics
Parameter Code	n/a	n/a
Start date	11/1/1997	11/1/1997
Operation schedule	Continuous,	Continuous
Sensor Height	10 m from ground	10 m from ground
Distance from supporting structure	n/a	n/a
Distance from obstructions on the roof	n/a	n/a
Distance from obstructions not on the roof	n/a	n/a
Distance from trees	25 m	25 m
Unrestricted airflow	360°	360°
Will there be changes within the next 18 months?	No	No

Figures 12.1 San Marcos Peak Site Pictures



Figure 12.2 San Marcos Peak Additional Views/Pictures of the Station

Long View



Medium View

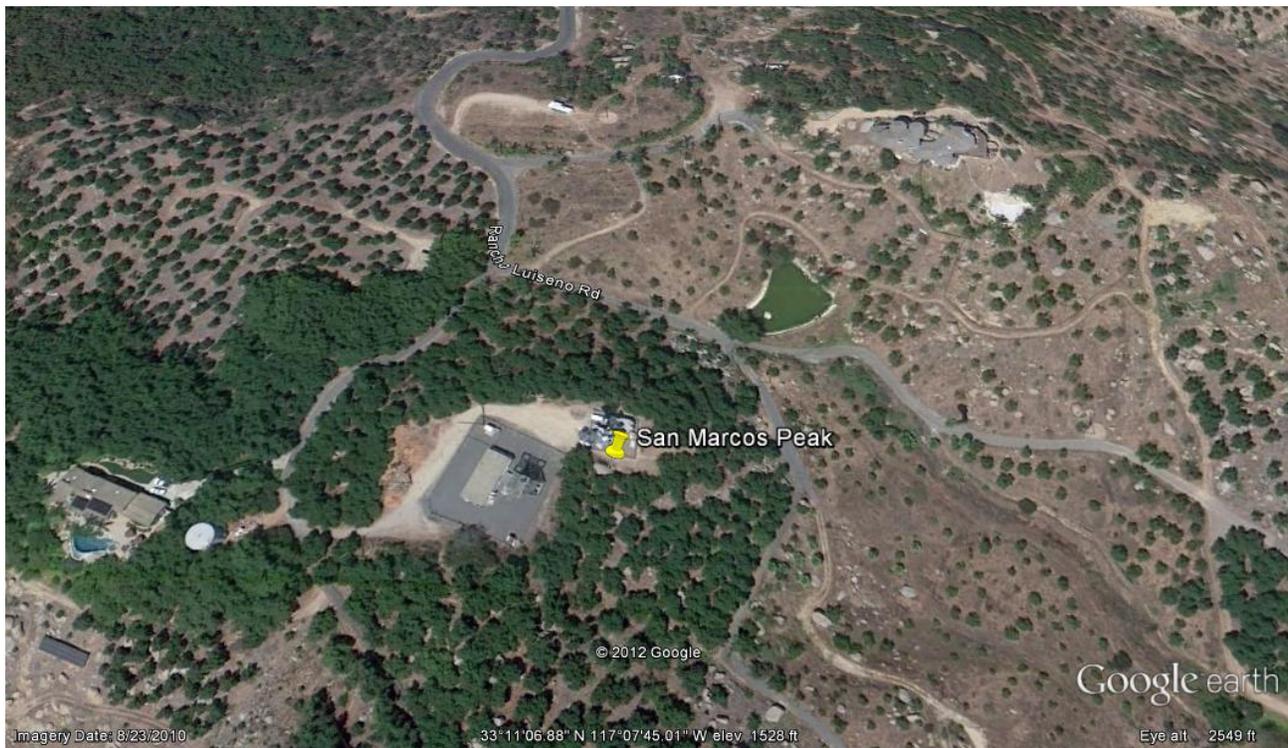




Table 13.1 Palomar Particulate Pollutants (non-PM_{2.5})

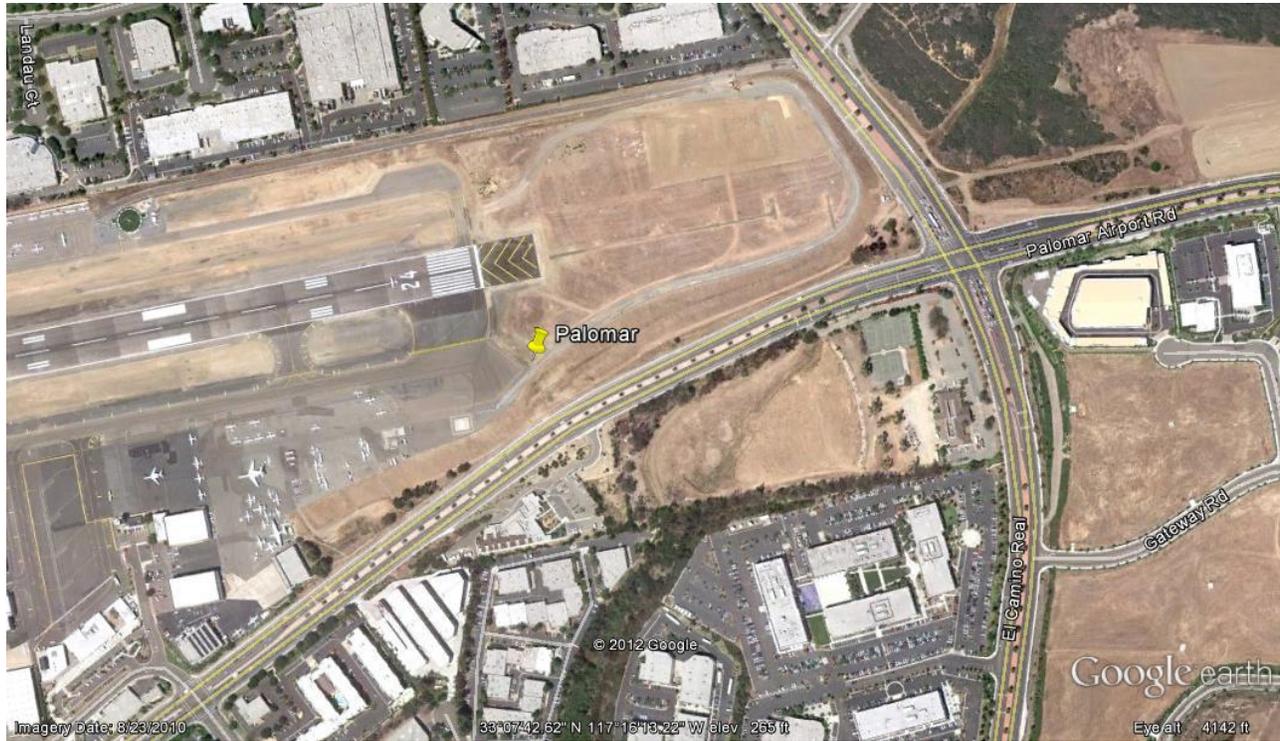
Pollutant	Pb-TSP
POC	1
Primary monitor	Yes
Parameter code	14129
Basic monitoring objective	NAAQS
Site type	Source Oriented
Monitor type/designation	SLAMS
Instrument manufacturer & model	Tisch TE-5170BLVFC+
Method code	192
Sampling method	High volume, Sequential
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Micro Scale
Monitoring start date	*
Current sampling frequency	1:6
Calculated sampling frequency	n/a
Sampling season	Year round
Probe height	1.5 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	SE 122.0 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	Possibly
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	*

*Sampler was in placed in the 4th quarter of 2011, but not sampling, due to power delivery issues.

Figures 13.1 Palomar Site Pictures



Figure 13.2 Palomar Additional Views of the Station
Long View



Medium View





Table 14.1 Particulate Pollutants (non-PM_{2.5})

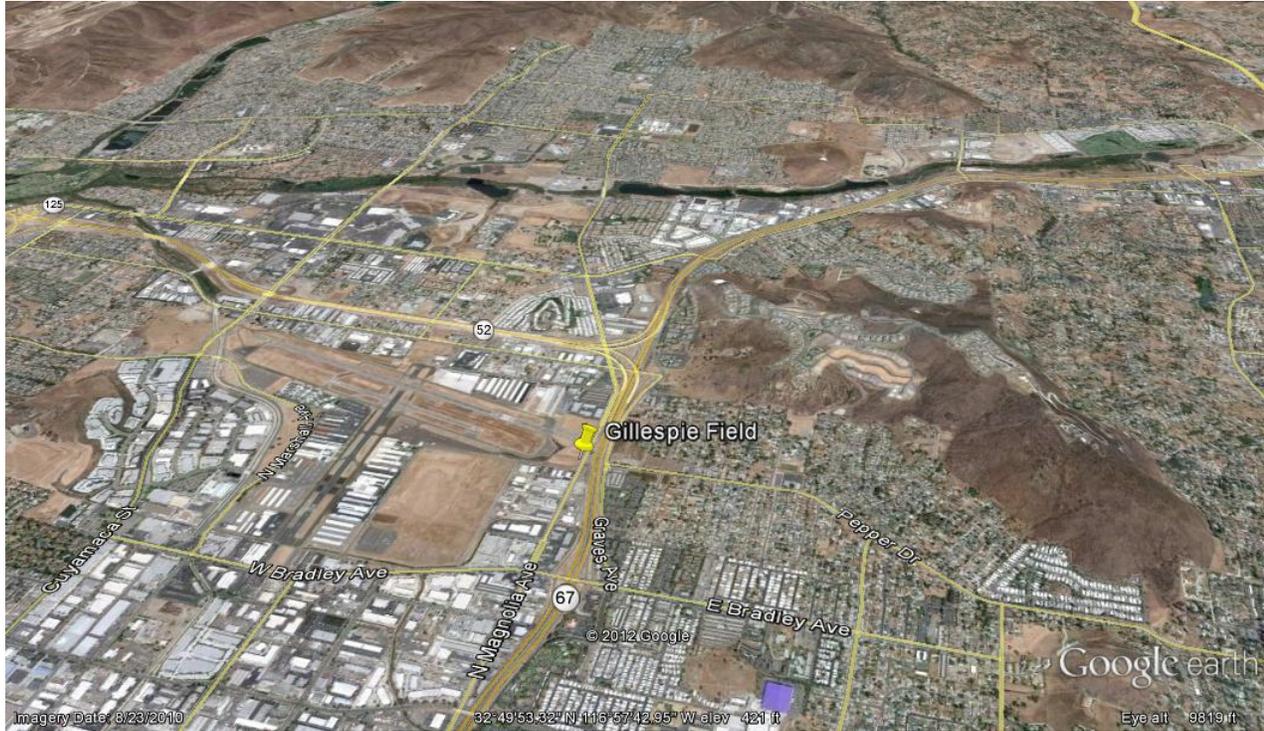
Pollutant	Pb-TSP
POC	1
Primary monitor	Yes
Parameter code	14129
Basic monitoring objective	NAAQS
Site type	Source Oriented
Monitor type/designation	SLAMS
Instrument manufacturer & model	Tisch TE-5170BLVFC+
Method code	192
Sampling method	High volume, Sequential
FRM/FEM/ARM/Other	FRM
Collecting agency	SD APCD
Analytical laboratory	SD APCD
Reporting agency	SD APCD
Spatial scale	Micro Scale
Monitoring start date	*
Current sampling frequency	1:6
Calculated sampling frequency	n/a
Sampling season	Year round
Probe height	1.5 m
Distance from supporting structure	n/a
Distance from obstructions on roof	n/a
Distance from obstructions not on roof	n/a
Distance from trees	S 104.0 m
Distance to furnace or incinerator flue	n/a
Distance between collocated monitors	n/a
Unrestricted airflow	360°
Probe material for reactive gases	n/a
Residence time for reactive gases	n/a
Will there be changes within the next 18 months?	Possibly
Is it suitable for comparison against the annual PM _{2.5} ?	n/a
Frequency of flow rate verification for sequential PM samplers	1/4 weeks
Frequency of flow rate verification for continuous PM samplers	n/a
Frequency of one-point QC check for gaseous instruments	n/a
Last annual performance evaluation for gas	n/a
Last two semi-annual flow rate audits for PM samplers	*

*Sampler was in placed in the 4th quarter of 2011, but not sampling, due to power delivery issues.

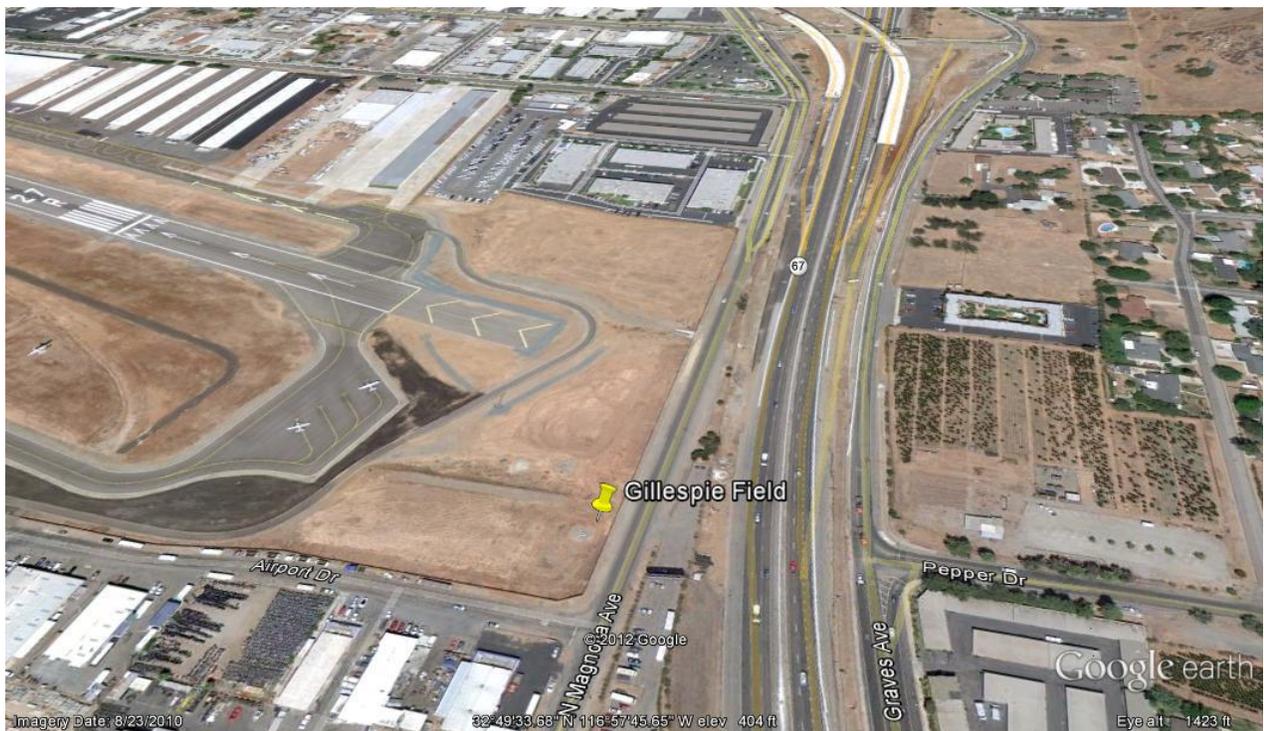
Figures 14.1 Site Pictures



Figure 14.2 Additional Views of the Station
Long View



Medium View





Section 15.0.0 Acronyms and Definitions

AQS: Air Quality System. Houses the national database and data management system, administered by the EPA, which houses the entirety of the ambient air pollution data collected by the nation's federal, state, local, and tribal air pollution control agencies from thousands of monitoring stations. AQS also contains meteorological data, descriptive information about each monitoring station (including its geographic location and its operator), and data quality assurance/quality control information.

ARB: (California) Air Resources Board, the state agency empowered to carry out the dictates of the Clean Air Act. Within California, the Air Resources Board oversees all geographic areas except those covered by the three Primary Quality Assurance Organizations (PQAO).

ARMs: Approved Regional Methods are monitoring methods that continuously measure fine particulate matter of 2.5 microns or less ($PM_{2.5}$), and produce data that meet specific criteria in comparison to the data from the FRM for $PM_{2.5}$ (which is not a continuous monitoring method).

Attainment: A geographic area that meets or does better than the primary standard is called an attainment area; areas that don't meet the primary standard are called nonattainment areas. **BAM:** Beta Attenuation Monitor. A type of $PM_{2.5}$ monitor in which the quantity of fine particulates collected on a sample filter or tape is determined by the degree to which the particulates attenuate (block) a stream of beta particles issued from a radioactive source.

BAR: Barometric pressure. This parameter is currently monitored only at the San Diego – Overland site, and ambient pressures are then assigned to all other sites after being corrected for altitude.

CFR: Code of Federal Regulations. A compilation of all current federal regulations.

Chromium (VI): Read as “chrome six”, or hexavalent chrome. Chromium is an essential trace element which exists in two different oxidative states. Chromium (III) is necessary for proper human nutrition, whereas chromium (VI) demonstrates mutagenic and carcinogenic effects at relatively low levels. It is primarily a fugitive emission from plating, flame/plasma spray, and painting operations.

CO: Carbon monoxide, a colorless, odorless, and poisonous gas produced by the incomplete combustion of fuels. A major pollutant produced in large quantities by gasoline-powered vehicles. Except for one occasion during the October, 2003 firestorm, the San Diego Air Basin has not violated the state or federal CO standards since 1990.

Collocated: A collocated sampler is of the same type as the primary sampler, and run on the same sampling days under identical conditions. It is sited within a specified distance from the primary sampler. Results are used to estimate precision of network particulate and PAMS data.

Continuous $PM_{2.5}$: Any of various automated $PM_{2.5}$ samplers that collect continuous real-time data and generally report that data as one-hour averages.

Criteria Pollutant: Under provisions of the Clean Air Act, which is intended to improve the quality of the air we breathe, EPA sets limits on how much of a pollutant can be in the air anywhere in the United States. This ensures that all Americans have the same basic health and environmental



protections. The law allows individual states to have stronger pollution controls, but states are not allowed to have weaker pollution controls than those set for the whole country. EPA calls these pollutants "[criteria air pollutants](#)" because the agency has regulated them by first developing health-based criteria (science-based guidelines) as the basis for setting permissible levels. One set of limits (primary standard) protects health; another set of limits (secondary standard) is intended to prevent environmental and property damage. The six criteria pollutants are O₃, NO₂, CO, SO₂, particulate matter (PM₁₀, PM_{2.5}), and lead.

FEM: Federal Equivalent Method. An instrument that employs a method other than the Federal Reference Method but meets the requirements for measuring a species specified in 40 CFR Part 53, subchapter B.

FRM: Federal Reference Method. An instrument that employs a method specified in 40 CFR Part 50.

HUM: Relative humidity. These measurements are used to help gauge the horizontal and vertical extent of the inversion layer, and how it varies throughout the day.

Inversion Layer: San Diego's temperature inversion is formed when warm, dry air overlies the cool, moist marine air. Hovering around 2,000 feet above sea level, this inversion prevents the free dispersal of pollutants into the air above the inversion layer, and causes ozone levels to increase below the inversion layer.

MSA: Metropolitan Statistical Area.

NAAQS: National Ambient Air Quality Standards. A maximum concentration above which adverse effects on human health may occur.

NIST: National Institute of Science and Technology. A non-regulatory federal agency within the U.S. Commerce Department's Technology Administration that provides primary reference materials for governmental, academic and industrial laboratories nationwide.

NO₂: Nitrogen Dioxide. A by-product of incomplete combustion that is intimately involved in photochemistry and ozone formation, as well as acid rain formation. The San Diego Air Basin has not exceeded the federal annual average NO₂ standard since 1978, nor the State one-hour standard since 1988.

NO_x: A measure of total Oxides of Nitrogen, consisting primarily of nitrogen dioxide (NO₂) and nitric oxide (NO).

O₃: Ozone. Historically the pollutant of primary concern within the San Diego Air Basin. This colorless gas results from complex chemical reactions between nitrogen dioxide and volatile organic compounds. It is the major component of smog.

PAMS: Photochemical Assessment Monitoring Stations. A generic, collective term for a group of 50 hydrocarbon compounds that are involved in photochemistry and ozone formation.

PQAO: Primary Quality Assurance Organization, formerly known as "reporting organization". Defined such that measurement uncertainty among all stations in the organization can be expected to be reasonably homogenous, as a result of common factors including operation by a common team



of field operators according to a common set of procedures, common calibration facilities and standards, use of common standard operating procedures, oversight by a common quality assurance organization, and support by common management and laboratory. The California PQAOs are San Diego County APCD, South Coast AQMD, Bay Area AQMD, and California Air Resources Board.

PM_{2.5}: Particulate matter with an aerodynamic diameter of less than 2.5 microns. This size particulate is thought to be primarily responsible for harmful health effects. Because of their small size (about one-thirtieth the width of a human hair), these fine particles can lodge deeply into the lungs. The first PM_{2.5} NAAQS was established in 1997. Sometimes referred to as “PM fine”.

PM_{2.5-carbon}: Measurements of the elemental and organic carbon contributions (OC/EC) to a PM_{2.5} sample. These values may be related to the quantity of hazardous diesel particulates present in ambient air. The District’s SASS and PM_{2.5-carbon} samplers are part of the national particulate Speciation Trends Network (STN).

PM₁₀: Particulate matter with an aerodynamic diameter of less than 10 microns. This was the first size cut-point established for particulate matter (1987) and was previously thought to be the size primarily responsible for adverse health effects.

PM_{10-2.5}: Also called PMcoarse and abbreviated as PMc. "Inhalable coarse particles", such as those found near roadways and dusty industries, have aerodynamic diameters larger than 2.5 microns and smaller than 10 microns. There is currently no standard for this size particulate.

RWP/RASS: Upper-air wind and temperature monitoring is critical to the determination of daily transport patterns and the capacity to disperse regional smog. Accurate and timely measurements of the vertical wind and temperature structure of the atmospheric boundary layer are essential to the meteorological and air quality modeling necessary for air quality management planning, as well as to meet ongoing air quality forecasting requirements. The radar wind profilers (RWP), with radio acoustic sounding systems (RASS) for vertical temperature profiles, collect hourly data in near real-time, at favorable accuracy and cost compared to alternative techniques such as balloon-borne soundings or towers. RWP/RASS units are part of the District’s PAMS program
San Diego Air Basin: The area defined by geographical and administrative boundaries used for air pollution control programs in San Diego County.

SASS: Speciation Samplers Air Sampling System. A type of PM_{2.5} sampler that collects low-volume 24-hr samples as part of the national STN (see PM_{2.5-carbon}).

SIP: States are required to develop state implementation plans (SIPs) that explain how they will clean up polluted areas. EPA must approve each SIP, and if a SIP isn't acceptable, EPA can take over enforcing the Clean Air Act in that state. The District submits a SIP to EPA through ARB.

SLAMS: State and Local Air Monitoring Station.

SO₂: Sulfur Dioxide. A by-product produced when sulfur-containing fossil fuels (coal, oil, etc.) are



burned. It is one of two criteria pollutants associated with acid rain, and also contributes to visibility impairment in large parts of the country. The San Diego Air Basin has never violated State or Federal SO₂ standards.

SRD: Solar Radiation. The total amount of incoming solar radiation reaching the surface. A portion (UV) of the solar spectrum is involved in photochemical formation of ozone.

STN: Speciation Trends Network. A network of sampling locations established by the EPA in 2001 to characterize PM_{2.5} composition in urban areas. Roughly 300 sites nationwide are part of this network, two are in the San Diego Air Basin (El Cajon and Escondido).

THC: Total Hydrocarbons. A measure of all non-speciated gaseous hydrocarbons found in an ambient air sample, including carbonyl compounds, VOCs, and ambient toxics compounds.

TMP: External Temperature.

TOX: Ambient Toxics. A collective term for the 48 compounds of interest which are either identified as human carcinogens, are classified as Hazardous Air Pollutants (HAPs) by EPA, or which pose other risks to human health.

Transport: The movement of air pollutants from one air basin to another.

VOC: Volatile Organic Compound. A term sometimes used interchangeably with PAMS, which refers to the reactive hydrocarbons involved with ozone formation.

WDR: Wind Direction Resultant. A vector average of wind direction.

WSR: Wind Speed Resultant. A vector average of wind speed.