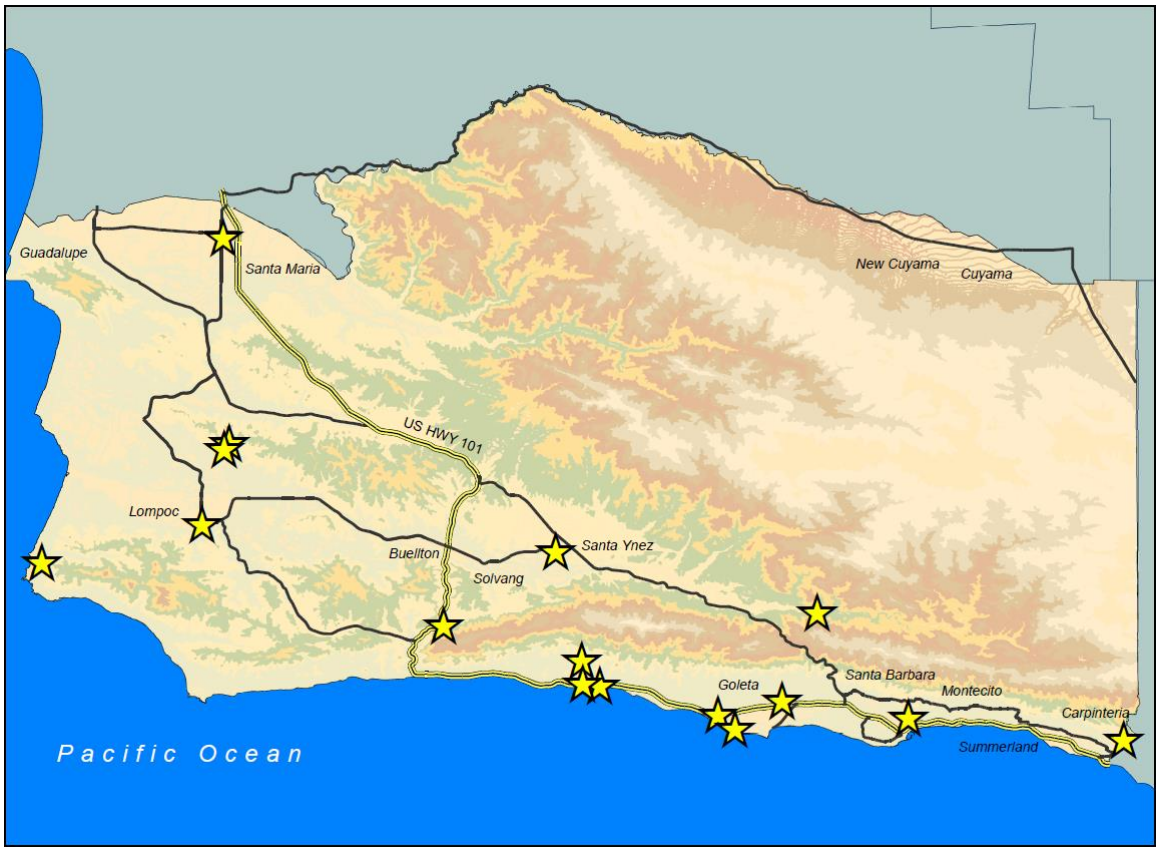
Santa Barbara County
Air Pollution Control District

Annual Air Monitoring Network Plan
Santa Barbara County



July 5, 2017

Prepared by the
Santa Barbara County
Air Pollution Control District

Annual Air Monitoring Network Plan
For Santa Barbara County

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1.0 Introduction

This report describes the network of ambient air quality monitors in Santa Barbara County. This report was prepared to meet the requirements for an annual network plan as listed in Title 40, Part 58, Section 10 of the Code of Federal Regulations (40 CFR 58.10). The language of 40 CFR 58.10 is included in Appendix A of this report. The regulations require that this annual monitoring network plan be submitted to the U.S. Environmental Protection Agency (EPA) by July 1 of each year. The plan must be made available for public inspections for at least 30 days prior to submission to EPA. This draft plan was available for public review and comment from June 4 through July 3, 2017. No comments were received.

This review is used to determine if the State and Local Air Monitoring Station (SLAMS) network in Santa Barbara County meets the U.S. Environmental Protection Agency (EPA) criteria for station siting based on the EPA monitoring objectives. This network review ensures that the data collected by the SLAMS air monitoring network in Santa Barbara County is representative and will satisfy the data needs of EPA, California Air Resources Board (CARB), and the Santa Barbara County Air Pollution Control District (SBCAPCD).

This network plan includes SLAMS monitors which are federal reference methods (FRM), federal equivalent methods (FEM), or approved regional methods (ARM). Industrial and “other” monitors are also included in this plan. The industrial and “other” monitors in Santa Barbara County consist of a number sites operated by the SBCAPCD or private contractors. There are a number of major oil and gas developments in Santa Barbara County with permits for the production, processing and transportation of oil and gas. The industrial sites are designed to measure regional air quality in addition to criteria pollutants from these oil and gas facilities, the “other” sites are designed to measure odorous compounds from these facilities. Operating permits for the oil and gas facilities require the industrial and “other” monitors to be operated for the life of the permitted facility.

1.1 Network Design

The air monitoring network in Santa Barbara County consists of SLAMS and Industrial monitors operated by the SBCAPCD, California Air Resources Board (CARB) and private contractors. The monitoring network is designed to cover the diverse range of topography, meteorology, emissions and air quality in Santa Barbara County, while adequately representing the population in the county.

Santa Barbara County has agreed to coordinate the air monitoring network design with CARB through the joint PQAO Roles and Responsibilities agreement between the two agencies. Item 5 of this agreement stipulates that both agencies will coordinate any site changes in the network, assuring that

requirements of the network design are met. Complete details of the Roles and Responsibilities can be obtained from the following link: http://arb.ca.gov/aaqm/qa/pqao/repository/santa_barbara_rolesandresponsibilities.pdf

This network review is used to determine if the monitoring system meets the monitoring objectives defined in 40 CFR 58 Appendix D. The three basic monitoring objectives as described in Appendix D are:

1) Provide air pollution data to the general public in a timely manner.
2) Support compliance with ambient air quality standards and emissions strategy development.
3) Support for air pollution research studies.

1.2 Stations

In order to support the air quality management work indicated in the three basic air monitoring objectives, the network is designed with a variety of monitoring site types. There are six general site types:

1) Highest concentrations expected to occur in the area.

2) Typical concentrations in areas of high population density.

3) Impact of significant sources on air quality.

4) General background concentration levels.

5) Regional pollutant transport among populated areas.

6) Air pollution impact on visibility, vegetation damage or other welfare-based impacts.

There are 16 ambient air monitoring stations located in Santa Barbara County. The map in Figure 1.1 shows the location of each site. These sites are operated for different objectives. There are six SLAMS stations which are sited to measure the typical concentrations in areas of high population density or to monitor the impacts of regional pollution. Two of these sites (Santa Barbara and Santa Maria) are operated by CARB. The other four SLAMS sites (Goleta, El Capitan, Lompoc H Street, and Santa Ynez) are operated by SBCAPCD.

There are ten sites which were installed to comply with permit conditions for major sources to measure the impacts of these stationary sources and to measure regional air quality. These sites are classified as industrial and “other”. Carpinteria, Exxon LFC 1, Lompoc HS & P, Nojoqui, Paradise Road, and VAFB STS were installed with ozone monitors to measure regional air quality in Santa Barbara County. Of these sites, Paradise Road, Carpenteria and Exxon LFC 1 have measured the highest Ozone concentrations in the county. The Nojoqui monitoring station was located in a pass between the northern and southern portions of Santa Barbara County to measure transport between the two portions

of the county. Exxon LFC 1, West Campus, Lompoc HS & P, and VAFB STS contain monitors to measure the impacts of nearby sources. Lompoc Odor, LFC Odor and Ellwood Odor are located near oil and gas processing facilities to monitor odorous compounds: hydrogen sulfide and total reduced sulfur. The Ellwood Odor site was temporarily shut down on October 22, 2015 due to the loss of lease and the inability to find an acceptable alternative location. The permit holder was granted a variance, allowing the temporary shut down until a site location suitable to the District was found. An extension to the variance was recently approved, allowing the site to stay shut down until an appropriate site is identified. A copy of the variance extension is attached in Appendix C.

Table 1.1 lists the sites in Santa Barbara County and identifies the site's EPA AQS identification code, type of site, and operator. The sites in the table are numbered to match the site numbers of the map shown in Figure 1.1.

Figure 1.1
Map of Monitoring Network in Santa Barbara County

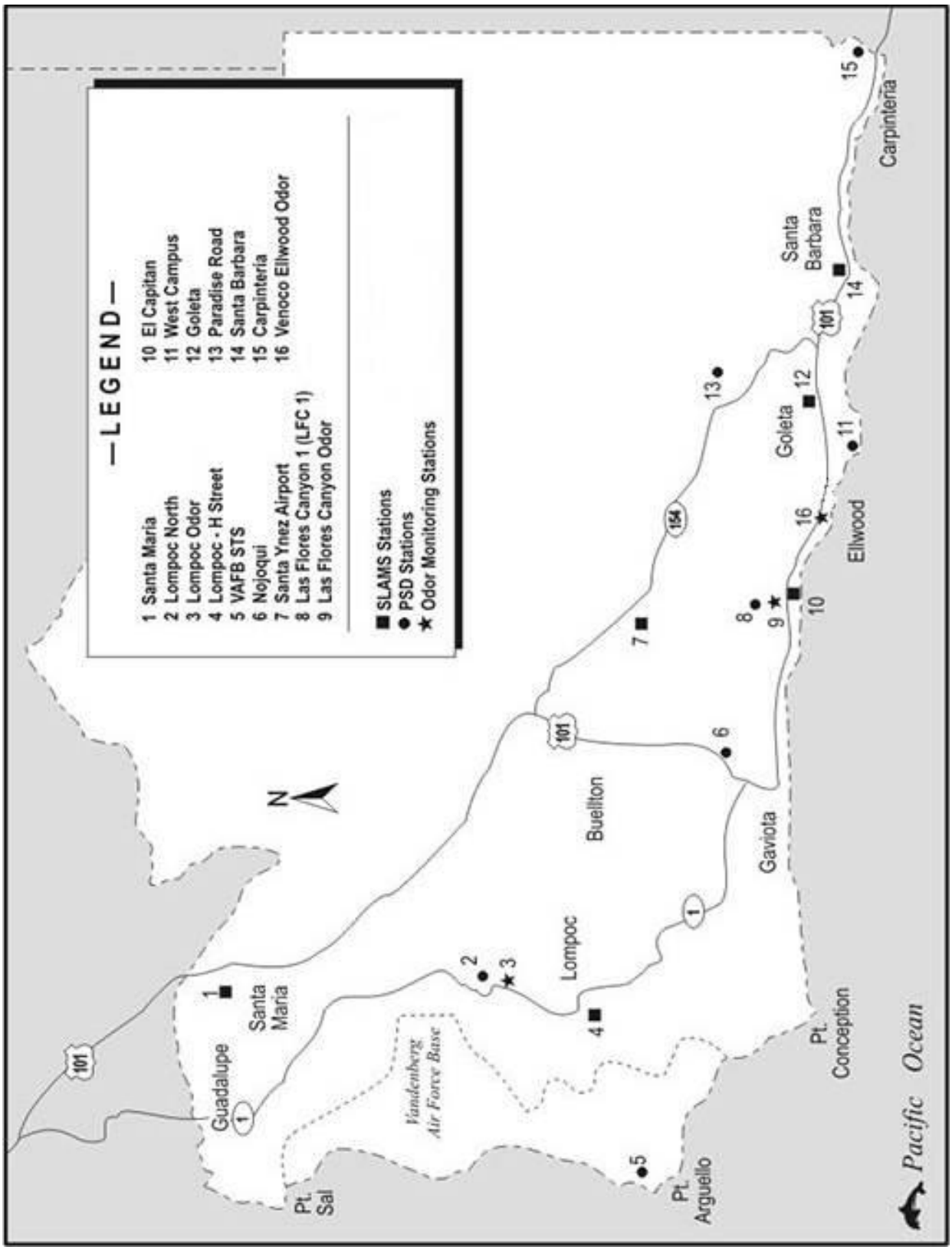

Table 1.1
Monitoring Network in Santa Barbara County

No.	Site Name	Site Code	Type	Operator
1	Santa Maria	060831008	SLAMS	CARB
2	Lompoc HS & P	060831013	INDUSTRIAL	Contractor
3	Lompoc Odor	060831022	INDUSTRIAL	Contractor
4	Lompoc H Street	060832004	SLAMS	SBCAPCD
5	VAFB STS	060834003	INDUSTRIAL	SBCAPCD
6	Nojoqui	060831018	INDUSTRIAL	SBCAPCD
7	Santa Ynez	060833001	SLAMS	SBCAPCD
8	Exxon LFC 1	060831025	INDUSTRIAL	SBCAPCD
9	LFC Odor	060831037	INDUSTRIAL	SBCAPCD
10	El Capitan	060830008	SLAMS	SBCAPCD
11	West Campus	060831020	INDUSTRIAL	Contractor
12	Goleta	060832011	SLAMS	SBCAPCD
13	Paradise Road	060831014	INDUSTRIAL	Contractor
14	Santa Barbara – Canon Perdido	060830011	SLAMS	CARB
15	Carpinteria	060831021	INDUSTRIAL	Contractor
16	Ellwood Odor	060831032	INDUSTRIAL	Contractor

Note: Ellwood Odor temporarily shut down on October 22, 2015, see above in Section 1.2 and Appendix C for further information.

1.3 Monitors

Many of the sites in the monitoring network serve multi-purposes. They may be ideal for background concentration for one pollutant while also measuring the impact of transport for another pollutant. To clarify the nature of the link between the general monitoring objectives, site types, and physical location of a particular monitor, the concept of spatial scale of representativeness is defined. The goal of locating monitors is to correctly match the spatial scale represented by the sample of monitored air with the spatial scale most appropriate for the monitoring site type, air pollutant to be measured, and the monitoring objective. The scales of representativeness of most interest for the monitoring site types are described as follows:

1) Micro scale – Defines the concentrations in air volumes associated with area dimensions ranging from several meters up to about 100 meters.

2) Middle scale – Defines the concentration typical of areas up to several city blocks in size with dimensions ranging from about 100 meters to 0.5 kilometer.

3) Neighborhood scale – Defines concentrations within some extended area of the city that has relatively uniform land use with dimensions in the 0.5 to 4.0 kilometers range.

4) Urban scale – Defines concentrations within an area of city like dimensions, on the order of 4 to 50 kilometers.

5) Regional scale – Defines usually a rural area of reasonably homogeneous geography without large sources, and extends from tens to hundreds of kilometers.

Classification of the monitor by its type and spatial scale of representativeness aids in the interpretation of the monitoring data for a particular monitoring objective. Table 1.2 illustrates the relationship between the various site types that can be used to support the three basic monitoring objectives and the scales of representativeness that are generally most appropriate for that type of site.

Table 1.2
Relationship between Site Types and Scales of Representativeness

Site Type	**Appropriate Siting Scales**
Highest concentration	Micro, middle, neighborhood (sometimes urban or regional for secondarily formed pollutants)
Population oriented	Neighborhood, urban
Source Impact	Micro, middle, neighborhood
General/background and regional transport	Urban, regional
Welfare-related impacts	Urban, regional

The sites and the monitors located at each site in Santa Barbara County are listed in Table 1.3. The table includes the spatial scale and monitoring objective for each monitored pollutant.

Table 1.3
Measured Parameters with Spatial Scale and Monitoring Objective

Parameter	O3	NO2	SO2	CO	PM-2.5	PM-10	THC	H2S	TRS
AIRS Pollutant Code	44201	42602	42401	42101	88101	81102	43101	42402	43911
Carpinteria	RS/HC	RS/BL							
El Capitan	RS/BL	RS/BL	RS/BL			NS/BL			
Ellwood Odor								NS/IM	NS/IM
Goleta	US/PO	US/PO		NS/PO	NS/PO	NS/PO			
Las Flores Cyn 1	RS/HC	NS/IM	NS/IM	NS/IM		NS/IM	NS/IM		
LFC Odor								NS/IM	
Lompoc H St.	NS/PO	NS/PO	NS/PO	NS/PO	NS/PO	NS/PO			
Lompoc HSP	RS/BL	NS/IM	NS/IM				NS/IM		
Lompoc Odor								NS/IM	NS/IM
Nojoqui	RS/BL	RS/BL							
Paradise Road	RS/HC	RS/BL							
Santa Barbara	US/PO	NS/HC		MS/HC	NS/HC	NS/HC			
Santa Maria	US/PO	US/PO		MS/HC	NS/PO	NS/PO			
Santa Ynez	US/PO								
VAFB STS	RS/BL	NS/IM	NS/IM	NS/IM		NS/IM	NS/IM		
West Campus			NS/IM				NS/IM	NS/IM	NS/IM

Spatial Scale:
- MI - Microscale
- MS - Middle Scale
- NS - Neighborhood Scale
- US - Urban Scale
- RS - Regional Scale
- NG - National and Global scale

Monitoring Objective:
- HC - Highest concentration
- PO - Population Oriented
- IM - Source Impact
- BL - Background Levels
- WR - Welfare-related impacts

Note: Las Flores Canyon#1 PM10 monitor is classified as Neighborhood Scale due to the dominant source being the large nearby oil and gas facility. VAFB STS PM10 spatial scale is classified as Neighborhood Scale due to the dominate source being the nearby power plant. Ellwood Odor was temporarily shut down on October 22, 2015, see section 1.2 and Appendix C for details. Santa Barbara (operated by CARB) temporarily discontinued PM10 and PM2.5 measurements in August 2015 due to safety issues and has not yet resumed sampling (See Appendix B)

2.0 Monitoring Requirements

EPA regulations specify the minimum number of sites at which state and local air agencies must deploy monitors. Santa Barbara County meets or exceeds EPA's minimum requirements. In practice, the state and local agencies find they need to deploy more monitors than required by the law. The additional monitors are needed to fulfill state and local purposes for monitoring that are in addition to the federal purposes. A number of monitors are required by permits issued to operate stationary emission sources. California State air quality standards are more stringent than national standards and require more monitors to show compliance with the state standards. Monitors are also used to keep the public informed of the actual air quality conditions where they live and work. Also, due to the complex topography in Santa Barbara County, more monitors than the minimum required by EPA are needed to properly characterize the air quality in the county.

The requirements for numbers of monitors appear in Appendix D of Part 58 of the CFR. For ozone, PM2.5, and PM10, the required minimum number is based on the population of an area and the severity of the air quality for the pollutant in the area. For other pollutants, no monitoring is required unless an area exceeds or is close to exceeding a national ambient air quality standard. For purposes of the minimum requirements, the areas are defined by the metropolitan statistical areas (MSAs) developed by the U.S. Census Bureau. Santa Barbara County is part of the Santa Barbara – Santa Maria MSA. It covers the major cities in our county and has a population count of 446,170 based on the 2016 U.S. Census estimate.

All criteria pollutant monitors in Santa Barbara County are sited and operated to meet the requirements outlined in 40 CFR 58 Appendix A, B, C, and D where applicable.

2.1 Ozone (O3)

The minimum monitoring requirements for ozone are listed in Table 2.1. Santa Barbara County has 12 ozone monitors, although only six of these sites are SLAMS sites, which meet the requirements of EPA. Santa Barbara County has a design value of .067 ppm based on 2014 – 2016 data which meets the new federal 8-hour ozone standard of 0.070 ppm. Santa Barbara County is non-attainment for the state ozone standard based on the 2015 area designations. There were no sites in Santa Barbara County that recorded concentrations of ozone in excess of the new federal and state 8-hour ozone standard in 2016. Data from ozone monitors in Santa Barbara County are utilized to inform the public on air quality through AQI reporting and air quality mapping. Additionally, the data from these sites are compared to the NAAQS and state standards to assess attainment/non-attainment.

Table 2.1
Minimum Monitoring Requirements for Ozone

MSA	County	Pop. (year)	8-hour Design Value (years)[2]	Design Value Site (name, AQS ID)	Min. # Sites Required	# Sites Active[1]	Sites Needed
Santa Barbara – Santa Maria, CA	Santa Barbara County	446,170 (2016)	.067 ppm 2014 - 2016	Las Flores Cyn #1, 060831025	2	6	0

[1]Only SLAMS monitors are eligible to be counted towards meeting minimum monitoring requirements. In addition, ozone monitors that do not meet traffic count/distance requirements to be neighborhood or urban scale (40 CFR 58 Appendix E, Table E-1) cannot be counted towards minimum monitoring requirements.
[2] DV Years = the three years over which the design value (DV) was calculated (e.g., 2008-2010)

Monitors required for SIP or Maintenance Plan: Santa Barbara County has a maintenance plan for ozone that requires any modification to the existing ozone network to be approved by EPA.

2.2 Carbon Monoxide (CO)

There are no EPA minimum requirements for the number of CO monitoring sites for CBSA's with a population less than one million. For CBSA's with a population of one million or greater, near roadway CO monitors are required. Continued operation of existing SLAMS CO sites is required until discontinuation is approved by the EPA. There are four SLAMS CO monitors located at Goleta, Lompoc H Street, Santa Barbara and Santa Maria which are used to measure the impacts of high population exposure and are not near roadway monitors. There are also CO monitors located at Exxon LFC1 and VAFB STS which are required by operating permit conditions issued to nearby sources.

Table 2.2
Near Roadway Monitoring Requirements

CBSA/MSA	Pop. (year)	# Required Near Roadway Monitors	# Active Near Roadway Monitors	# Additional Monitors Needed
Santa Barbara Santa Maria, CA	446,170 (2016)	0	0	0

Monitors required for SIP or Maintenance Plan: None
EPA Regional Administrator-required monitors per 40 CFR 58, App.D 4.2.2:

2.3 Nitrogen Dioxide (NO2)

On January 22, 2010, EPA strengthened the health-based NAAQS for NO2. The rule also established new ambient air monitoring and reporting requirements. One "near road" monitor will be required in urban areas with a population greater than or equal to 500,000 people. A second monitor is required near another major road in areas with either a population greater than or equal to 2.5 million people or a road segment with an annual average daily traffic count greater than or equal to 250,000 vehicles. One community wide monitor is required in urban areas with a population of greater than or equal to 1 million people. Santa Barbara does not meet any of these criteria so no additional monitors will be required. Continued operation of existing SLAMS NO2 sites is required until

discontinuation is approved by the EPA. There are five SLAMS NO2 monitors. Goleta, Lompoc H Street, Santa Barbara, and Santa Maria are used to measure the impacts of high population exposure and El Capitan monitors the pollutant on a regional scale There are six other sites which measure NO2: Carpinteria, Exxon LFC 1, Nojoqui, Paradise Road, Lompoc HS & P, and VAFB STS. These monitors are required by operating permit conditions of nearby sources and are used to measure the impact of sources on regional ozone formation. Table 2.3 lists the minimum monitoring requirements for Nitrogen Dioxide.

Table 2.3
Minimum Monitoring Requirements for Nitrogen Dioxide

CBSA/ MSA	Pop. (year)	Max AADT	# Required Near Roadway	# Active Near Roadway	# Additional Near Roadway needed	# Required Area-wide	# Active Area-wide[1]	# Additional Area-wide needed
Santa Barbara Santa Maria, CA	446,170 (2016)	N/A (below pop. Threshold)	0	0	0	0	5	0

[1]Only SLAMS sites can be counted for minimum monitoring requirements
Monitors required for SIP or Maintenance Plan: None
Monitors required for PAMS: None
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.3.4:

2.4 Sulfur Dioxide (SO2)

EPA strengthened the primary NAAQS for SO2 on June 2, 2010. The rule established a new 1 hour standard and revised the monitoring requirements. Monitors will be required based on Core Based Statistical Areas (CBSAs) based on a population weighted emissions index for the area. Three monitors will be required in CBSAs with index values of 1,000,000 or more. Two monitors will be required in CBSAs with index values less than 1,000,000 but greater than 100,000; and 1 monitor will be required in CBSAs with index values greater than 5,000. Continued operation of existing SLAMS SO2 sites is required until discontinuation is approved by the EPA. There are two SLAMS SO2 monitors at El Capitan and Lompoc H Street which are used to measure the impacts of high population exposure. There are four other sites which measure SO2: Exxon LFC 1, UCSB West Campus, Lompoc HS&P, and VAFB STS. These monitors are required by operating permit conditions of nearby sources and are used to measure the impact of sources on the surrounding air quality. New SO2 monitors must be operational by January 1, 2013. Table 2.4 lists the minimum monitoring requirements for SO2. No additional monitors will be required in Santa Barbara County.

Table 2.4
Minimum Monitoring Requirements for Sulfur Dioxide

CBSA/MSA	County	Pop. (year)	Total SO_2[1](Ton/yr)	Population Weighted Emissions Index[2]	Data Requirements Rule Source(s) using Monitoring	# Required Monitors	# Active Monitors[3]	# Additional Monitors Required
Santa Barbara Santa Maria, CA	Santa Barbara	446,170 (2016)	383.1	170.9	N/A below emissions threshold	0	2	0

[1]Using NEI data (2014)
[2]Calculated by multiplying CBSA population and total SO_2 and dividing product by one million
[3]Only SLAMS sites can be counted for minimum monitoring requirement
Monitors required for SIP or Maintenance Plan: None
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.4.3:

2.5 Particulate Matter (PM10)

The minimum monitoring requirements for PM10 are listed in Table 2.5. There are five SLAMS PM10 monitors located at Santa Barbara, El Capitan, Goleta, Lompoc H Street, and Santa Maria. There are two industrial sites which measure PM10: Exxon LFC 1 and VAFB STS. These monitors are required by operating permit conditions of nearby sources and are used to measure the impact of nearby sources on the surrounding air quality. In 2016 there were elevated PM10 concentrations due to wildfires. Data influenced by the wildfires has been flagged in AQS as an exceptional event. The District will be submitting an intent to classify as an exceptional event letter to EPA. Table 2.5 presents PM10 data including data flagged as an exceptional event as well as excluding data flagged as an exceptional event. Note that the Santa Barbara site PM10 monitor (operated by CARB) was not operational in 2016 due to site safety issues (See Appendix B), but is expected to resume monitoring soon.

Table 2.5
Minimum Monitoring Requirements for PM10

MSA	County	Pop. (year)	Max 24 Hour Concentration (ug/m3)	Max Concentration Site (name, AQS ID)	# Required Sites	# Active Sites[1]	# Additional SitesNeeded
Santa Barbara – Santa Maria, CA	Santa Barbara County	446,170 (2016)	436 (06/16/16) Including Exceptional Event Data	Las Flores Canyon #1 060831025	3-4	5[2]	0
			146 (8/30/16) Excluding Exceptional Event Data[3]	Las Flores Canyon #1 060831025	1-2		

[1]Only SLAMS sites can be counted for minimum monitoring requirement
[2]Santa Barbara monitor not operational in 2016.
Monitors required for SIP or Maintenance Plan:None
[3]Includes data influenced by local wildfires in 2016.

2.6 Particulate Matter (PM2.5)

The minimum monitoring requirements for PM2.5 are listed in Tables 2.6a and b. Note that the Santa Barbara site PM2.5 monitor (operated by CARB) was not operational in 2016 due to site safety issues (See Appendix B), but is expected to resume monitoring soon.

There are four PM2.5 monitors located at Santa Barbara, Santa Maria, Goleta, and Lompoc H Street. Santa Barbara and Santa Maria had FRM samplers but were removed in June 2010 and were replaced with FEM real time samplers. Lompoc H Street and Goleta had Non-FEM real time samplers that were switched to FEM real time samplers (Goleta was switched on January 1, 2014 and Lompoc H Street was switched on January 1, 2015). Santa Barbara County received approval of this change in status from EPA on May 22, 2015. The Santa Barbara PM2.5 monitor was not operational in part of 2015 and all of 2016 due to site safety issues (See Appendix B). Because there is insufficient PM2.5 data for the period 2014-2016 the monitors at Santa Barbara and Lompoc H Street are not included in the design value calculations listed in Tables 2.6a and Tables 2.6b. Note that Goleta did not meet data completeness requirements for Q3 of 2016, but a valid annual and 24 hour design data was calculated using the data substitution conventions outlined in 40 CFR 50 Appendix N Sections 4.1 and 4.2.

PM2.5 colocation requirements are based on the primary quality assurance organization (PQAO) network. Santa Barbara County is part of the CARB PQAO. See the CARB annual network plan for details on meeting the PM2.5 colocation requirements.

Table 2.6a
Minimum Monitoring Requirements for PM2.5 Monitors

MSA	County	Pop. (year)	Annual Design Value (years[1])	Annual Design Value Site (name, AQS ID)	Daily Design Value (years)	Daily Design Value Site (name, AQS ID)	# Required SLAMS Sites	# Active SLAMS Sites[2,3]	# Additional SLAMS Sites Needed
Santa Barbara – Santa Maria, Ca	Santa Barbara County	446,170 (2016)	7.7 ug/m3 2014 – 2016	Goleta 06-083-2011	16 ug/m3 2014 - 2016	Goleta 06-083-2011	0	4[4]	0

[1]DV Years = the three years over which the design value (DV) was calculated (e.g., 2008-2010)
[2]As of January 1, 2015
[3]Only SLAMS sites can be counted for minimum monitoring requirement
[4]Santa Barbara monitor was not operational for 2016.

Table 2.6b
Minimum Monitoring Requirements for Continuous PM2.5 Monitors

MSA	County	Pop. (year)	Annual Design Value	Annual Design Value Site	Daily Design Value (years)	Daily Design Value Site	# Required Cont. Monitors	# Active Cont. Monitors[3,4]	# Additional Cont. Monitor

			(years[1])	(name, AQS ID)		(name, AQS ID)			s[2] Needed
Santa Barbara – Santa Maria, Ca	Santa Barbara County	446,170 (2016)	7.7 ug/m3 2014 – 2016	Goleta 06-083-2011	16 ug/m3 2014 - 2016	Goleta 06-083-2011	0	4[5]	0

[1]DV Years = the three years over which the design value (DV) was calculated (e.g., 2008-2010)
[2] Only count one continuous monitor per site.
[3]As of January 1, 2015
[4]Only SLAMS sites can be counted for minimum monitoring requirement
[5] Santa Barbara monitor was not operational for 2016.

Monitors required for SIP or Maintenance Plan: None

2.7 Lead (Pb)

EPA substantially strengthened the NAAQS for lead on October 15, 2008. The level of the primary standard was revised from 1.5 ug/m3 down to 0.15 ug/m3 measured as total suspended particles (TSP). The secondary standard was revised to be identical to the primary standard. Source oriented Monitors are required in areas with airport sources that emit one ton or more per year of lead or non-airport sources that emit one half ton per year of lead. Additionally, non-source lead monitoring is required at NCORE sites in a CBSA with a population greater than 500,000. The population of Santa Barbara County is below the 500,000 threshold and there are no NCORE sites required in Santa Barbara County; therefore non-source lead monitors are not required. The highest emission inventory of lead in Santa Barbara County is the Santa Barbara Municipal airport with 0.35 tons per year (2013 NEI). Since this is below the threshold, no source oriented lead monitors are required.

Table 2.7a
Minimum Monitoring Requirements for Pb at NCORE sites

CBSA/MSA	Pop. (year)	# Required Near Road Monitors	# Active Near Road Monitors	# Additional Monitors Needed
Santa Barbara – Santa Maria, Ca	446,170 (2016)	0	0	0

Table 2.7b
Minimum Monitoring Requirements for Source Oriented Pb Monitoring

Source Name	Address	Pb Emissions	Emissions Source (year)	Max Design Value	Desing Value Date	# Required Monitors	# Active Monitors	# Additional Monitors Needed
Santa Barbara Municipal Airport	601 Firestone Rd. Santa Barbara, CA	0.35 ton/yr	National Emissions Inventory	N/A	N/A	0	0	0

Monitors required for SIP or Maintenance Plan: None
EPA Regional Administrator-required monitors per 40 CFR 58, App. D 4.5(c):

2.8 Near Roadway NO2, CO, and PM2.5 Monitors

40 CFR 58 Appendix D requires near roadway NO2, CO, and PM2.5 monitors for CBSA's with populations greater than 1,000,000. The Santa Barbara-Goleta-Santa Maria MSA/CBSA has a population of 446,170 (2016 census estimate), so no NO2, CO, or PM2.5 near roadway monitors are required.

CBSA	Population & Census year	Max AADT counts (year)	# Required NO_2 Mon.	# Active NO_2 Mon.	# Required $PM_{2.5}$ Mon.	# Active $PM_{2.5}$ Mon.	# Required CO Mon.	# Active CO Mon.	# Additional Monitors Needed
Santa Barbara -Goleta-Santa Maria	446,170 (2016)	N/A Below Pop. Threshold	0	0	0	0	0	0	0

2.9 Recent or Proposed Modifications to the Network

Permits held by Venoco, Inc. require the operation of Ellwood Odor and West Campus industrial sites. Venoco, Inc. has notified SBCAPCD that Venoco is declaring bankruptcy and will be forfeiting bond funds to the California State Lands Commission and turning over the offshore lease associated with the permit to California State Lands Commission. The offshore facility will be decommissioned by the State Lands Commission. Monitoring would be required to continue during the decommissioning of the offshore facilities, but at this time, it is unclear if and when monitoring would be discontinued at the Ellwood Odor and West Campus odor sites. All pollutants at these sites are non-criteria except SO2 at West Campus. EPA will be notified when the SO2 monitor will be shut downconsulted should it appear the SO2 monitor will be shut down.

The West Campus station may be shut down within the next 18 months. The source triggering the requirement for the West Campus site may be retired which would eliminate the permit condition requiring the West Campus site. All pollutants at this site are non-criteria except for SO2. EPA will be notified when the SO2 monitor will be shut down.

Ellwood Odor remains shutdown. The permit holder was granted a variance, allowing the temporary shut down until a site location suitable to the District was found. An extension to the variance was approved on October 5, 2016, allowing the site to stay shut down until October 21, 2017 or when a suitable location is found. There are only non-criteria monitors at this site. EPA approval was not required. A copy of the variance extension is attached in Appendix C.

ARB temporarily suspended operation of PM10 and PM2.5 samplers at the Santa Barbara-National Guard Armory site for safety concerns on August 28, 2015. No estimated time of resuming operation has been given, and at this time there has been no PM10 or PM2.5 measurements at this site. (see Appendix B).

The lease for the Santa Barbara site was expected to be terminated in 2016, but CARB has been able to successfully sign a new lease, so no re-location of this site is anticipated.

The permit holders responsible for the operation of the LFC Odor site have negotiated approval from the District to temporary shutdown the site while production at the associated processing plants is shut down. It was anticipated that the site will be temporary shutdown in July 2016 and re-started when production at the associated processing plant resume. This did not occur as originally planned, but it now is expected that LFC Odor will be temporarily shut down in July 2017. As this change is for a non-criteria pollutant, approval from EPA is not required.

CARB requested approval from EPA on March 10, 2017 to discontinue the nitrogen dioxide (NO2) and carbon monoxide (CO) monitors at the Santa Barbara- National Guard station. On May 11, 2017 EPA gave approval for the discontinuation. See Appendix D for details.

There are no further plans to modify the network over the next 18 months.

2.10 Additional Monitors

Santa Barbara County operates some monitors which are not required by 40 CFR 58.10. These sites and monitors are included in the network review for reference only and not to show compliance with any requirements even though they are operated under the same quality assurance/control guidelines as the FRM monitors.

There are four stations which are set up near oil and gas processing facilities to monitor for two odorous compounds: Hydrogen sulfide (H2S) and total reduced sulfur (TRS). These monitors are located at the following stations: Lompoc Odor, LFC Odor, Ellwood Odor, and UCSB West Campus.

Total Hydrocarbon monitors (THC) are also located at some of the industrial monitoring stations located near oil and gas processing facilities. These sites are: Exxon LFC 1, Lompoc HS&P, West Campus, and VAFBSTS.

All of the monitoring stations listed in this report also measure wind speed, wind directions and ambient temperature. These data are used for modeling and tracking.

3.0 Additional information on PM2.5 monitors

This section includes information for a couple of elements required to be in the annual network plan that relate specifically to PM2.5. One required element relates to whether data for a PM2.5 monitor can be used to determine compliance with the national annual PM2.5 air quality standard. This is termed as the suitability for comparison to the annual standard. The other element requires information regarding the review process followed by air agencies when changes are made to the location of a PM2.5 monitor that is violating a PM2.5 NAAQS.

3.1 Comparison to annual PM2.5 NAAQS

Only data from a PM2.5 FRM or FEM can be used in regulatory determinations of compliance with the annual PM2.5 NAAQS and that the monitor be located at a neighborhood scale. For a PM2.5 monitor to be representative at a neighborhood scale, the concentration values measured by the monitor should be representative of concentrations expected over an area with dimensions of a few kilometers. Therefore the monitor should not be located too close to a hot spot of PM2.5 concentrations that extends over distances less than a few hundred meters. All of the PM2.5 FRM and FEM monitors in Santa Barbara County are sited to be representative of a neighborhood scale and meet this suitability requirement.

3.2 Review of changes to PM2.5 network

As required by regulation, prior to any changes to the PM2.5 network are made, a formal request is drafted outlining the reason for the change, when the change will occur, and any other relevant information about the proposed changes. The proposal (either as part of an annual network review or between reviews) will be posted on the District website for a 30 day public comment period. Following the comment period, the District will forward the request with comments and District responses to EPA for consideration. Only after EPA has granted approval of the proposed change, will the District make the changes to the PM2.5 monitoring network.

4.0 Quality Assurance and Data Submittal

All data collected from the monitors in the Santa Barbara County network are reviewed for quality assurance by the SBCAPCD with the exception of the Santa Barbara and Santa Maria monitoring stations which are reviewed and processed by CARB. All SLAMS and industrial monitors meet the requirements of 40 CFR 58.

4.1 Annual performance evaluation

Annual performance evaluations challenge the monitors with known concentrations of audit gases to evaluate the accuracy of the monitors. The SLAMS sites as well as the industrial and odor operated by SBCAPCD in Santa Barbara County are audited on an annual basis by the CARB. The industrial and "other" odor stations operated by contractors are evaluated by an independent contractor who audits the monitors on a quarterly basis.

4.2 Data submittal

Digital records of the data including precision and accuracy data are submitted to EPA by uploading the records to their air quality system data base (AQS). These records are submitted within 90 days following the end of each quarterly reporting period.

4.3 Annual certification

The data are certified for their accuracy and completeness on an annual basis and a certification letter is submitted to the regional EPA administrator by May 1 of each year.

5.0 Detailed Site Information

The tables in this section give detailed information relating to the sites and monitors. They are presented to show compliance with the monitoring requirements found in 40 CFR 58.10. Please note the following in relation to the detailed site information tables:

1. All glass used for inlet/manifold is borosilicate or equivalent.
2. There are no collocated monitors located in the SLAMS or industrial sites in Santa Barbara County, therefore information in detailed site information tables do not include fields relating to collocated monitors.
3. All collocation requirements are being met by CARB, see the CARB Annual Network Plan for details.
4. All sample probes, including low-vol PM samplers are separated horizontally from other station probes by at least one meter.
5. Distance to Trees entries represent the distance from the probe to the tree dripline.

Table 5.1
Carpinteria Monitoring Station Details

Site Name	**Carpinteria**				
AQS ID	060831021				
GIS coordinates	34.403047-119.45795				
Location	Located in a rural setting NE of the City of Carpinteria				
Address	Gobernador Road, Carpinteria, CA 93013				
County	Santa Barbara County				
Dist. To road	Gobernador Canyon Road, 115 meters				
Traffic count (AADT, year)	Gobernador Canyon Road - 50 est.				
Groundcover	Grass				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**			
Monitor Type	INDUSTRIAL	INDUSTRIAL			
Network Affiliation	NA	NA			
Parameter Code	44201	42602			
Monitoring Objective	NAAQS	NAAQS			
Site type(s)	Highest conc.	Gen. background			
Mfg/Model	TAPI 400e	TEI 42C			
Method Code	087	074			
FRM/FEM or other	FEM	FRM			
Collecting Agency	Consultant	Consultant			
Reporting Agency	Santa Barbara County	Santa Barbara County			
Spatial Scale	Regional	Regional			
Start date	1/1/86	1/1/86			
Operation schedule	Continuous	Continuous			
Sampling season	All Year	All Year			
Probe height	4.1 m	4.1 m			
Distance from supporting structure	1.3 m	1.3 m			
Distance from obstructions on roof	None	None			
Distance from obstructions not on roof	13m/3m-tree	13m/3m-tree			
Distance from trees	13m	13m			
Distance to furnace or incinerator	None	None			
Unrestricted airflow	360^{o}	360^{o}			
Probe material	Glass & Teflon	Glass & Teflon			
Residence time	16.3 s	16.7 s			
Will there be changes in next 18 months?	No	No			
Frequency of one-point QC check (gaseous)	Bi-weekly	Bi-weekly			
Last annual performance evaluation (gaseous)	11/18/2016	11/18/2016			

Table 5.2
El Capitan Monitoring Station Details

Site Name	**El Capitan**				
AQS ID	060830008				
GIS coordinates	34.462444-120.0255				
Location	Behind maintenance yard of campground				
Address	US Hwy 101, El Capitan State Beach, CA 93117				
County	Santa Barbara County				
Dist. to road	HWY 101,100 meters				
Traffic count (AADT, year)	Hwy 101 - 30,200 (2013)				
Groundcover	Grass and dirt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**SO2,1**	**PM10,3**	
Monitor Type	SLAMS	SLAMS	SLAMS	SLAMS	
Network Affiliation	NA	NA	NA	NA	
Parameter Code	44201	42602	42401	81102	
Monitoring Objective	NAAQS, Public Info	NAAQS, Public Info	NAAQS, Public Info	NAAQS, Public Info	
Site type(s)	General Background	General Background	General Background	General Background	
Mfg/ Model	TAPI 400e	TEI 42i	TEI 43i	BAM 1020	
Method Code	087	074	060	122	
FRM/FEM or other	FEM	FRM	FEM	FEM	
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	
Spatial Scale	Regional	Regional	Regional	Neighborhood	
Start date	6/1/78	6/1/78	6/1/78	6/1/78	
Operation schedule	Continuous	Continuous	Continuous	Continuous	
Sampling season	All Year	All Year	All Year	All Year	
Probe height	3.8 m	3.8 m	3.8 m	4.1 m	
Distance from supporting structure	1.2 m	1.2 m	1.2 m	1.5 m	
Distance from obstructions on roof	None	None	None	None	
Distance from obstructions not on roof	None	None	None	None	
Distance from trees	None	None	None	None	
Distance to furnace or incinerator	None	None	None	None	
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance (meters) and instrument(s).	NA	NA	NA	No	

Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A	
Residence time	14.3 s	15.1 s	11.7 s	N/A	
Will there be changes in next 18 months?	No	No	No	No	
Frequency of flow rate verification for automated PM analyzers	N/A	N/A	N/A	Bi-Weekly	
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly	N/A	
Last annual performance evaluation (gaseous)	9/1/2016	9/1/2016	9/1/2016	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	2/29/2016 9/1/2016	

Note that THC was shut down on 1/1/15.

Table 5.3
Ellwood Odor Monitoring Station Details

Site Name	**Ellwood Odor**				
AQS ID	060831032				
GIS coordinates	34.430361 -119.89755				
Location	Located in a vehicle storage lot				
Address	Hollister Ave, Goleta, CA				
County	Santa Barbara County				
Dist. to road	Hollister Ave,75 meters; HWY101, 200 meters				
Traffic count (AADT, year)	Hollister Ave - 4937 (1999) Hwy 101 - 30,200 (2013)				
Groundcover	Asphalt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**H2S,1**	**TRS,1**			
Monitor Type	Other	Other			
Network Affiliation	NA	NA			
Parameter Code	42402	43911			
Monitoring Objective	Public Info	Public Info			
Site type(s)	Source	Source			
MFG/ Model	ML 8850	TEI 43i			
Method Code	020	020			
FRM/FEM or other	N/A	N/A			
Collecting Agency	Consultant	Consultant			
Reporting Agency	Santa Barbara County	Santa Barbara County			
Spatial Scale	Neighborhood	Neighborhood			
Start date	4/1/00	4/1/00			
Operation schedule	Continuous	Continuous			
Sampling season	All Year	All Year			
Probe height	3.5	3.5			
Distance from supporting structure	1.1	1.1			
Distance from obstructions on roof	None	None			
Distance from obstructions not on roof	None	None			
Distance from trees	None	None			
Distance to furnace or incinerator	None	None			
Unrestricted airflow	360º	360º			
Probe material	Glass & Teflon	Glass & Teflon			
Residence time	14.9 s	14.9 s			
Will there be changes in next 18 months?	No	No			
Frequency of one-point QC check (gaseous)	Bi-Weekly	Bi-Weekly			
Last annual performance evaluation (gaseous)	9/10/2015	9/10/2015			

Note: Site temporarily shut down 10/22/15, see Appendix C.

Table 5.4
Goleta Monitoring Station Details

Site Name	**Goleta**				
AQS ID	060832011				
GIS coordinates	34.4455 -119.828333				
Location	In field behind Lutheran Church				
Address	380 N. Fairview Ave., Goleta, CA				
County	Santa Barbara County				
Dist. to road	Berkley Road, 60 meters; Fairview Ave, 200 meters; Alli Way 100 meters				
Traffic count (AADT, year)	Fairview - 12546 (2003); Berkley Rd - 3480 (2003); Ali Way - 25 est.				
Groundcover	Grass				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**CO,1**	**PM10,1**	**PM2.5 ,1**
Monitor Type	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Network Affiliation	NA	NA	NA	NA	NA
Parameter Code	44201	42602	42101	81102	88101
Monitoring Objective	NAAQS, Public Info	NAAQS, Public Info	NAAQS, Public Info	NAAQS, Public Info	NAAQS, public Info
Site type(s)	Population	Population	Population	Population	Population
MFG/ Model	TAPI 400e	TAPI 200e	TAPI 300e	BAM 1020	BAM 1020
Method Code	087	099	093	122	170
FRM/FEM or other	FEM	FRM	FRM	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Urban	Urban	Neighborhood	Neighborhood	Neighborhood
Start date	1/1/1980	1/1/1992	5/1/1982	1/1/10	1/1/10
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year
Probe height	4.5 m	4.5 m	4.5 m	7.0 m	7.0 m
Distance from supporting structure	2.1 m	2.1 m	2.1 m	2.0 m	2.0 m
Distance from obstructions on roof	None	None	None	None	None
Distance from obstructions not on roof	None	None	None	None	None
Distance from trees	None	None	None	None	None
Distance to furnace or incinerator	None	None	None	None	None
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	360^{o}
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance (meters) and instrument(s).	NA	NA	NA	No	No
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A	N/A

Residence time	16.1 s	14.1 s	12.5 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No	No	No
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	N/A	N/A	Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	5/3/2016	5/3/2016	5/3/2016	N/A	N/a
Last two semi-annual flow rate audits for PM monitors				5/3/2016 11/17/16	5/3/2016 11/17/16
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	Yes

Table 5.5
Las Flores Canyon #1 Monitoring Station Details

Site Name	**Las Flores Canyon #1**				
AQS ID	060831025				
GIS coordinates	34.48975 -120.046917				
Location	North end of canyon behind an oil and gas facility				
Address	Calle Real US Hwy 101, El Capitan, CA				
County	Santa Barbara County				
Dist. to road	HWY 101, 2860 meters				
Traffic count (AADT, year)	Hwy 101 - 30,200 (2013)				
Groundcover	Grass and dirt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**SO2,1**	**CO,1**	**PM10,3**
Monitor Type	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL
Network Affiliation	NA	NA	NA	NA	NA
Parameter Code	44201	42602	42401	42101	81102
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public	NAAQS, public	NAAQS, public
Site type(s)	Max O3 conc.	Source	Source	Source	Source
MFG/ Model	TAPI 400e	TAPI 200e	TEI 43i	TEI 48i	BAM 1020
Method Code	087	099	060	054	122
FRM/FEM or other	FEM	FRM	FEM	FRM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Regional	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Start date	4/1/88	4/1/88	4/1/88	4/1/88	4/1/88
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year
Probe height	3.5 m	3.5 m	3.5 m	3.5 m	4.0 m
Distance from supporting structure	1.2 m	1.2 m	1.2 m	1.2 m	1.0 m
Distance from obstructions on roof	None	None	None	None	None
Distance from obstructions not on roof	None	None	None	None	None
Distance from trees	None	None	None	None	None
Distance to furnace or incinerator	None	None	None	None	None

Unrestricted airflow	360º	360º	360º	360º	360º
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance (meters) and instrument(s).	NA	NA	NA	NA	No
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A
Residence time	11.3 s	12.5 s	12.0 s	11.5 s	N/A
Will there be changes in next 18 months?	No	No	No	No	No
Frequency of flow rate verification for automated PM samplers	N/A	N/A	N/A	N/A	Bi-Weekly
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly	Weekly	N/A
Last annual performance evaluation (gaseous)	4/20/2016	4/20/2016	4/20/2016	4/20/2016	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	4/20/2016 11/17/2016

Note: Las Flores Canyon#1 PM10 monitor is classified as Neighborhood Scale due to the dominant source being the nearby oil and gas facility.

Table 5.6
Las Flores Canyon Odor Monitoring Station Details

Site Name	**Las Flores Canyon Odor**				
AQS ID	060831037				
GIS coordinates	34.464528 -120.044972				
Location	Located in a parking lot at the entrance to Las Flores Canyon				
Address	Calle Real US Hwy 101, El Capitan, CA				
County	Santa Barbara County				
Dist. to road	HWY 101,75 meters; Calle Real, 44 meters; Las Flores Canyon Rd???				
Traffic count (AADT, year)	Hwy 101 - 30,200 (2013)				
Groundcover	Gravel				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**H2S,1**				
Monitor Type	Other				
Network Affiliation	NA				
Parameter Code	42402				
Monitoring Objective	Public				
Site type(s)	Source				
MFG/ Model	API 101e				
Method Code	020				
FRM/FEM or other	N/A				
Collecting Agency	Santa Barbara County				
Reporting Agency	Santa Barbara County				
Spatial Scale	Neighborhood				
Start date	2/1/88				
Operation schedule	Continuous				
Sampling season	All Year				
Probe height	3.5				
Distance from supporting structure	1.1				
Distance from obstructions on roof	None				
Distance from obstructions not on roof	None				
Distance from trees	None				
Distance to furnace or incinerator	None				
Unrestricted airflow	360^{o}				
Probe material	Glass & Teflon				
Residence time	14.5 s				
Will there be changes in next 18 months?	No				
Frequency of one-point QC check (gaseous)	Weekly				
Last annual performance evaluation (gaseous)	4/20/2016				

Table 5.7
Lompoc HS&P Monitoring Station Details

Site Name	**Lompoc HS&P**				
AQS ID	060831013				
GIS coordinates	34.725331 -120.428689				
Location	Located North of Lompoc near an oil processing facility				
Address	2988 Harris Grade Rd, Lompoc, CA 93436				
County	Santa Barbara County				
Dist. to road	Harris Grade Road,700 meters				
Traffic count (AADT, year)	Harris Grade Road - 100 est.				
Groundcover	Dirt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**SO2,1**	**THC,1**	
Monitor Type	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	
Network Affiliation	NA	NA	NA	NA	
Parameter Code	44201	42602	42401	43101	
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public	Public	
Site type(s)	General Background	Source	Source	Source	
MFG/ Model	TEI 49i	TEI 42c	TEI 43i	TEI 51 Clt	
Method Code	047	074	060	011	
FRM/FEM or other	FEM	FRM	FEM	N/A	
Collecting Agency	Consultant	Consultant	Consultant	Consultant	
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	
Spatial Scale	Regional	Neighborhood	Neighborhood	Neighborhood	
Start date	1/1/86	1/1/86	1/1/86	1/1/86	
Operation schedule	Continuous	Continuous	Continuous	Continuous	
Sampling season	All Year	All Year	All Year	All Year	
Probe height	4.7	4.7	4.7	4.7	
Distance from supporting structure	1.6	1.6	1.6	1.6	
Distance from obstructions on roof	None	None	None	None	
Distance from obstructions not on roof	None	None	None	None	
Distance from trees	None	None	None	None	
Distance to furnace or incinerator	None	None	None	None	
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	Glass & Teflon	
Residence time	14.0 s	14.3 s	14.8 s	13.8 s	
Will there be changes in next 18 months?	No	No	No	No	
Frequency of one-point QC check (gaseous)	Bi-weekly	Bi-weekly	Bi-Weekly	Bi-Weekly	
Last annual performance evaluation (gaseous)	12/21/2016	12/21/2016	12/21/2016	12/21/2016	

Table 5.8
Lompoc H Street Monitoring Station Details

Site Name	**Lompoc H Street**					
AQS ID	060832004					
GIS coordinates	34.637833 -120.4575					
Location	Parking lot behind gas company					
Address	128 S. H Street, Lompoc CA 93436					
County	Santa Barbara County					
Dist. to road	H Street, 28 meters; E. Cyprus, 57 meters; Ocean Ave, 120 meters; Alley,13 meters					
Traffic count (AADT, year)	Ocean Ave (Hwy 246) - 11200 (2013); H Street 12900 (2010); Cyprus - 500 est.; Alley - 20 est.					
Groundcover	Asphalt					
Representative area	MSA (Santa Barbara – Santa Maria, CA)					
Pollutant, POC	**O3,1**	**NO2,1**	**SO2,1**	**CO,1**	**PM10,2**	**PM2.5,1**
Monitor Type	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Network Affiliation	NA	NA	NA	NA	NA	NA
Parameter Code	44201	42602	42401	42101	81102	88101
Monitoring Objective	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, public
Site type(s)	Population	Population	Population	Population	Population	Population
MFG/ Model	TAPI 400e	TEI 42i	TEI 43i	TEI 48i	BAM 1020	BAM 1020
Method Code	087	074	060	054	122	170
FRM/FEM or other	FEM	FRM	FEM	FRM	FEM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Start date	1/1/84	5/1/91	1/1/84	1/1/84	8/1/09	9/1/08
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year	All Year
Probe height	5.3 m	5.3 m	5.3 m	5.3 m	5.4 m	5.4 m
Distance from supporting structure	1.3 m	1.3 m	1.3 m	1.3 m	1.8 m	1.9 m
Distance from obstructions on roof	None	None	None	None	None	None
Distance from obstructions not on roof/Obs. Height above inlet	15m/1m-building 16m/2m-tree	15m/1m-building 16m/2m-tree	15m/1m-building 16m/2m-tree	15m/1m-building 16m/2m-tree	15m/1m-building 16m/2m-tree	15m/1m-building 16m/2m-tree
Distance from trees	16m	16m	16m	16m	16m	16m
Distance to furnace or incinerator	None	None	None	None	None	None
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	360^{o}	360^{o}
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance	NA	NA	NA	NA	No	No

(meters) and instrument(s).						
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A	N/A
Residence time	17.6 s	13.3 s	14.9 s	18.7 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No	No	No	No
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A	No
Frequency of flow rate verification for manual PM samplers	N/A	N/A	N/A	N/A	N/A	N/A
Frequency of flow rate verification for automated PM analyzers	N/A	N/A	N/A	N/A	Bi-Weekly	Bi-Weekly
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly	Weekly	N/A	N/A
Last annual performance evaluation (gaseous)	4/19/2016	4/19/2016	4/19/2016	4/19/2016	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	4/19/2016 11/17/2016	4/19/2016 11/17/2016
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A	No

Note: PM10 and PM2.5 spatial scale was incorrectly listed as micro in the 2015 ANP based on incorrect traffic counts/distances. Based on correct counts/distances these monitors are now correctly listed as neighborhood spatial scale.

Table 5.9
Lompoc Odor Monitoring Station Details

Site Name	**Lompoc Odor**				
AQS ID	060831022				
GIS coordinates	34.718992 -120.432761				
Location	Located near an oil processing facility				
Address	2988 Harris Grade Rd, Lompoc, CA 93436				
County	Santa Barbara County				
Dist. to road	Harris Grade Rd., 100 meters				
Traffic count (AADT, year)	Harris Grade Road - 100 est				
Groundcover	Dirt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**H2S,1**	**TRS,1**			
Monitor Type	Other	Other			
Network Affiliation	NA	NA			
Parameter Code	42402	43911			
Monitoring Objective	Public	Public			
Site type(s)	Source	Source			
MFG/ Model	TEI 45C	TEI 43i			
Method Code	020	020			
FRM/FEM or other	N/A	N/A			
Collecting Agency	Consultant	Consultant			
Reporting Agency	Santa Barbara County	Santa Barbara County			
Spatial Scale	Neighborhood	Neighborhood			
Start date	2/1/88	2/1/88			
Operation schedule	Continuous	Continuous			
Sampling season	All Year	All Year			
Probe height	3.5	3.5			
Distance from supporting structure	1.1	1.1			
Distance from obstructions on roof	None	None			
Distance from obstructions not on roof	None	None			
Distance from trees	None	None			
Distance to furnace or incinerator	None	None			
Unrestricted airflow	360^{o}	360^{o}			
Probe material	Glass & Teflon	Glass & Teflon			
Residence time	15.5 s	14.6 s			
Will there be changes in next 18 months?	No	No			
Frequency of one-point QC check (gaseous)	Bi-Weekly	Bi-Weekly			
Last annual performance evaluation (gaseous)	12/23/2016	12/23/2016			

Table 5.10
Nojoqui Monitoring Station Details

Site Name	**Nojoqui**				
AQS ID	060831018				
GIS coordinates	34.527472 -120.1965				
Location	Located at the top of Nojoqui pass just off of US Hwy 101				
Address	US Hwy 101 & Nojoqui Pass, Gaviota Ca 93117				
County	Santa Barbara County				
Dist. to road	HWY 101,60 meters				
Traffic count (AADT, year)	Hwy 101 - 23700 (2013)				
Groundcover	Grass				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**			
Monitor Type	INDUSTRIAL	INDUSTRIAL			
Network Affiliation	NA	NA			
Parameter Code	44201	42602			
Monitoring Objective	NAAQS, Public	NAAQS, Public			
Site type(s)	Transport, background	Transport, background			
MFG/ Model	TAPI 400e	TEI 42i			
Method Code	087	074			
FRM/FEM or other	FEM	FRM			
Collecting Agency	Santa Barbara County	Santa Barbara County			
Reporting Agency	Santa Barbara County	Santa Barbara County			
Spatial Scale	Regional	Regional			
Start date	7/1/87	7/1/87			
Operation schedule	Continuous	Continuous			
Sampling season	All Year	All Year			
Probe height	3.0 m	3.0 m			
Distance from supporting structure	1.0 m	1.0 m			
Distance from obstructions on roof	None	None			
Distance from obstructions not on roof	None	None			
Distance from trees	None	None			
Distance to furnace or incinerator	None	None			
Unrestricted airflow	360^{o}	360^{o}			
Probe material	Glass & Teflon	Glass & Teflon			
Residence time	16.1 s	18.3 s			
Will there be changes in next 18 months?	No	No			
Frequency of one-point QC check (gaseous)	Weekly	Weekly			
Last annual performance evaluation (gaseous)	8/30/2016	8/30/2016			

Table 5.11
Paradise Road Monitoring Station Details

Site Name	**Paradise Road**				
AQS ID	060831014				
GIS coordinates	34.54170 -119.79152				
Location	Located in Los Padres National Forest off of Paradise Rd				
Address	Paradise Road, Los Padres National Forrest CA 93105				
County	Santa Barbara County				
Dist. to road	Paradise Rd.,100 meters				
Traffic count (AADT, year)	Paradise Rd - 100 est.				
Groundcover	Trees and brush				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**			
Monitor Type	INDUSTRIAL	INDUSTRIAL			
Network Affiliation	NA	NA			
Parameter Code	44201	42602			
Monitoring Objective	NAAQS, Public	NAAQS, Public			
Site type(s)	Max O3 Conc.	Background			
MFG/ Model	TEI 49i	TEI 42i			
Method Code	047	074			
FRM/FEM or other	FEM	FRM			
Collecting Agency	Consultant	Consultant			
Reporting Agency	Santa Barbara County	Santa Barbara County			
Spatial Scale	Regional	Regional			
Start date	1/1/86	1/1/86			
Operation schedule	Continuous	Continuous			
Sampling season	All Year	All Year			
Probe height	5.0 m	5.0 m			
Distance from supporting structure	1.8 m	1.8 m			
Distance from obstructions on roof	None	None			
Distance from obstructions not on roof	20m/2m-tree	20m/2m-tree			
Distance from trees	20 m	20 m			
Distance to furnace or incinerator	None	None			
Unrestricted airflow	360^{o}	360^{o}			
Probe material	Glass & Teflon	Glass & Teflon			
Residence time	13.0 s	13.8 s			
Will there be changes in next 18 months?	No	No			
Frequency of one-point QC check (gaseous)	Bi-weekly	Bi-weekly			
Last annual performance evaluation (gaseous)	11/25/2016	11/25/2016			

Table 5.12
Santa Barbara Monitoring Station Details

Site Name	**Santa Barbara**				
AQS ID	060830011				
GIS coordinates	34.427711 -119.690844				
Location	In parking lot of the National Guard Armory				
Address	700 E. Canon Perdido, Santa Barbara CA 93103				
County	Santa Barbara County				
Dist. to road	De La Guerra, 10 meters; N Quarantina, 85 meters; N. Nopal, 60 meters; E. Canon Perdido, 140 meters; N. Milpas, 200 meters				
Traffic count (AADT, year)	De La Guerra - 4500 (1996); Canon Perdido - 7300 (1996); Quarantina - 100 est.; Milpas - 14600 (1996)N. Nopal -??????				
Groundcover	Asphalt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**CO,3**	**PM2.5,3 No data 2016**	**PM10,1 No data 2016**
Monitor Type	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Network Affiliation	NA	NA	NA	NA	NA
Parameter Code	44201	42602	42101	88101	81102
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public	NAAQS, public	NAAQS, public
Site type(s)	population	High concentration	High concentration	Highest concentration	population
MFG/ Model	TAPI 400	TAPI 200	TAPI 300eu	BAM 1020	BAM 1020
Method Code	087	099	593	170	122
FRM/FEM or other	FEM	FRM	FRM	FEM	FEM
Collecting Agency	CARB	CARB	CARB	CARB	CARB
Reporting Agency	CARB	CARB	CARB	CARB	CARB
Spatial Scale	Urban	Neighborhood	Middle Scale	Neighborhood	Neighborhood
Start date	5/1/02	5/1/02	5/1/02	7/1/10	5/1/02
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year
Probe height	6.0 m	6.0 m	6.0 m	7.0 m	7.0 m
Distance from supporting structure	2.5 m	2.5 m	2.5 m	2.0 m	2.0 m
Distance from obstructions on roof	None	None	None	None	None
Distance from obstructions not on roof	10m/3m-tree	10m/3m-tree	10m/3m-tree	10m/3m-tree	10m/3m-tree
Distance from trees	10m	10m	10m	10m	10m
Distance to furnace or incinerator	None	None	None	None	None
Unrestricted airflow	360º	360º	360º	360º	360º
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance (meters) and instrument(s).	NA	NA	NA	No	No

Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A	N/A
Residence time	7.8 s	8.8 s	6.5 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No	No	No
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly		
Frequency of flow rate verification for automated PM analyzers				Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	5/11/2016	5/11/2016	4/12/2016		
Last two semi-annual flow rate audits for PM monitors				*	*
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	Yes	N/A

Note: This site is owned and operated by CARB. Data in this table are provided for reference only. The 2016 ANP listed the distance to De La Guerra as 7 meters. The site operator measured the distance and confirmed that the distance is actually a bit over 10 meters. PM10 and PM2.5 were temporarily discontinued in August 2015 due to safety issues (see Appendix B).

* Both semi-annual flow rate audits for PM could not be completed due to the temporary suspension of PM monitoring at this site.

Table 5.13
Santa Maria Monitoring Station Details

Site Name	**Santa Maria**				
AQS ID	060831008				
GIS coordinates	34.942864 -120.435625				
Location	Located on second floor of small office building				
Address	906 S. Broadway, Santa Maria CA 93454				
County	Santa Barbara County				
Dist. to road	S. Broadway,25 meters; W. Morrison, 25 meters; El Camino Colegio, 120 meters; McClelland St., 100 meters				
Traffic count (AADT, year)	S. Broadway - 24000 (2010); Morrison - 4016 (2010); El Camino Colegio 769 (2010); McClelland - 500 (est.)				
Groundcover	Roof				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**CO, 1**	**PM10,2**	**PM2.5, 3**
Monitor Type	SLAMS	SLAMS	SLAMS	SLAMS	SLAMS
Network Affiliation	NA	NA	NA	NA	NA
Parameter Code	44201	42602	42101	81102	88101
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public	NAAQS, public	NAAQS, public
Site type(s)	Population	Population	Highest Conc.	Population	Population
MFG/ Model	TAPI 400	TAPI 200	TAPI T300eu	BAM 1020	BAM 1020
Method Code	087	099	593	122	170
FRM/FEM or other	FEM	FRM	FRM	FEM	FEM
Collecting Agency	CARB	CARB	CARB	CARB	CARB
Reporting Agency	CARB	CARB	CARB	CARB	CARB
Spatial Scale	Urban	Urban	Middle Scale	Neighborhood	Neighborhood
Start date	5/1/99	5/1/99	5/1/99	7/1/09	7/1/10
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year
Probe height	9.0 m	9.0 m	9.0 m	7.0 m	9.0 m
Distance from supporting structure	3.0 m	3.0 m	3.0 m	2.0 m	2.0 m
Distance from obstructions on roof	None	None	None	None	None
Distance from obstructions not on roof	16m/2m-tree	16m/2m-tree	16m/2m-tree	16m/2m-tree	16m/2m-tree
Distance from trees	16m	16m	16m	16m	16m
Distance to furnace or incinerator	None	None	None	None	None
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	360^{o}
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance (meters) and instrument(s).	NA	NA	NA	No	No

Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A	N/A
Residence time	7.7 s	9.2 s	6.7 s	N/A	N/A
Will there be changes in next 18 months?	No	No	No	No	No
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly		
Frequency of flow rate verification for automated PM analyzers				Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	12/6/2016	12/6/2016	4/12/2016		
Last two semi-annual flow rate audits for PM monitors				6/30/2016 12/6/2016	6/30/2016 12/6/2016
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	Yes

Note: This site is owned and operated by CARB. Data in this table are provided for reference only.

Table 5.14
Santa Ynez Monitoring Station Details

Site Name	**Santa Ynez**				
AQS ID	060833001				
GIS coordinates	34.605819 -120.075069				
Location	South side of Santa Ynez airport runway				
Address	900 Airport Rd., Santa Ynez, CA				
County	Santa Barbara County				
Dist. to road	HWY 246, 550 meters				
Traffic count (AADT, year)	Hwy 246 - 8050 (2013)				
Groundcover	Grass/Dirt				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**				
Monitor Type	SLAMS				
Network Affiliation	NA				
Parameter Code	44201				
Monitoring Objective	NAQQS, public				
Site type(s)	Population				
MFG/ Model	TAPI T400				
Method Code	087				
FRM/FEM or other	FEM				
Collecting Agency	Santa Barbara County				
Reporting Agency	Santa Barbara County				
Spatial Scale	Urban				
Start date	7/1/2013				
Operation schedule	Continuous				
Sampling season	All Year				
Probe height	3.5 m				
Distance from supporting structure	1.0 m				
Distance from obstructions on roof	None				
Distance from obstructions not on roof	None				
Distance from trees	None				
Distance to furnace or incinerator	None				
Unrestricted airflow	360^{o}				
Probe material	Teflon				
Residence time	3.4 s				
Will there be changes in next 18 months?	No				
Frequency of one-point QC check (gaseous)	Weekly				
Last annual performance evaluation (gaseous)	5/16/2016				

Table 5.15
UCSB West Campus Monitoring Station Details

Site Name	**UCSB West Campus**				
AQS ID	060831020				
GIS coordinates	34.414942 -119.879511				
Location	Located West of Deverouix slough near UCSB				
Address	UCSB West Campus, Santa Barbara, CA				
County	Santa Barbara County				
Dist. to road	Slough Road, 425 meters				
Traffic count (AADT, year)	Slough Road - 50 est				
Groundcover	Grass				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**SO2,2**	**H2S,1**	**TRS,1**	**THC,1**	
Monitor Type	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	
Network Affiliation	NA	NA	NA	NA	
Parameter Code	42401	42402	43911	43101	
Monitoring Objective	NAAQS, Public	Public	Public	Public	
Site type(s)	Source	Source	Source	Source	
MFG/ Model	TEI 43i	TEI 43i	TEI 43i	51i-HT	
Method Code	060	020	020	011	
FRM/FEM or other	FEM	N/A	N/A	N/A	
Collecting Agency	Consultant	Consultant	Consultant	Consultant	
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	
Spatial Scale	Neighborhood	Neighborhood	Neighborhood	Neighborhood	
Start date	6/1/99	6/1/99	6/1/99	6/1/99	
Operation schedule	Continuous	Continuous	Continuous	Continuous	
Sampling season	All Year	All Year	All Year	All Year	
Probe height	3.5	3.5	3.5	3.5	
Distance from supporting structure	1.1	1.1	1.1	1.1	
Distance from obstructions on roof	None	None	None	None	
Distance from obstructions not on roof	None	None	None	None	
Distance from trees	None	None	None	None	
Distance to furnace or incinerator	None	None	None	None	
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	Glass & Teflon	
Residence time	12.7 s	13.0 s	12.0 s	9.7 s	
Will there be changes in next 18 months?	NO	No	No	No	
Frequency of one-point QC check (gaseous)	Bi-Weekly	Bi-Weekly	Bi-Weekly	Bi-Weekly	
Last annual performance evaluation (gaseous)	12/22/2016	12/22/2016	12/22/2016	12/22/2016	

Table 5.16
VAFB STS Monitoring Station Details

Site Name	**VAFB STS**				
AQS ID	060834003				
GIS coordinates	34.595861 -120.63135				
Location	Coastal hillside east of a gas turbine peaking power plant				
Address	South VAFB, Vandenberg AFB, CA				
County	Santa Barbara County				
Dist. to road	Honda Ridge Road, 580 meters				
Traffic count (AADT, year)	Honda Ridge Road - 250 est				
Groundcover	Grass				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**SO2,1**	**CO,1**	**PM10,3**
Monitor Type	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL	INDUSTRIAL
Network Affiliation	NA	NA	NA	NA	NA
Parameter Code	44201	42602	42401	42101	81102
Monitoring Objective	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, Public	NAAQS, Public
Site type(s)	General Background	Source	Source	Source	Source
MRG/Model	TAPI 400e	TAPI 200e	TEI 43i	TAPI 300	BAM 1020
Method Code	087	074	060	093	122
FRM/FEM or other	FEM	FRM	FEM	FRM	FEM
Collecting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Reporting Agency	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County	Santa Barbara County
Spatial Scale	Regional	Neighborhood	Neighborhood	Neighborhood	Neighborhood
Start date	6/1/88	6/1/88	6/1/88	6/1/88	6/1/88
Operation schedule	Continuous	Continuous	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year	All Year	All Year
Probe height	4.5 m	4.5 m	4.5 m	4.5 m	5.0 m
Distance from supporting structure	1.0 m	1.0 m	1.0 m	1.0 m	1.5 m
Distance from obstructions on roof	None	None	None	None	None
Distance from obstructions not on roof	None	None	None	None	None
Distance from trees	None	None	None	None	None
Distance to furnace or incinerator	None	None	None	None	None
Unrestricted airflow	360^{o}	360^{o}	360^{o}	360^{o}	360^{o}
For low volume PM instruments, is any PM instrument within 1 m of the lovol? If yes, please list distance	NA	NA	NA	NA	No

(meters) and instrument(s).					
Probe material	Glass & Teflon	Glass & Teflon	Glass & Teflon	Glass & Teflon	N/A
Residence time	14.3 s	11.4 s	12.0 s	13.9 s	N/A
Will there be changes in next 18 months?	No	No	No	No	No
Frequency of flow rate verification for automated PM samplers	N/A	N/A	N/A	N/A	Bi-Weekly
Frequency of one-point QC check (gaseous)	Weekly	Weekly	Weekly	Weekly	N/A
Last annual performance evaluation (gaseous)	8/30/2016	8/30/2016	8/30/2016	8/30/2016	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	5/18/2016 10/31/2016

Note: VAFB STS PM10 spatial scale is classified as Neighborhood due to the dominate source being the nearby power plant.

Glossary of Acronyms

AQS	Air quality system
ARB	Air Resources Board
ARM	Approved regional method
CARB	California Air Resources Board
CFR	Code of Federal Regulations
CO	Carbon monoxide
FEM	Federal equivalent method
FRM	Federal reference method
H2S	Hydrogen Sulfide
MSA	Metropolitan statistical area
NAAQS	National ambient air quality standard
NO2	Nitrogen dioxide
O3	Ozone
PM10	Particulate matter less than 10 microns in diameter
PM2.5	Particulate matter less than 2.5 microns in diameter
PSD	Prevention of significant deterioration
SBCAPCD	Santa Barbara County Air Pollution Control District
SLAMS	State and Local Air Monitoring Station
SO2	Sulfur dioxide
SPM	Special purpose monitor
THC	Total hydrocarbons
TRS	Total reduced sulfur
US EPA	United States Environmental Protection Agency

APPENDIX A

Regulatory language of 40 CFR 58.10

§ 58.10 Annual monitoring network plan and periodic network assessment.

(a)(1) Beginning July 1, 2007, the State, or where applicable local, agency shall adopt and submit to the Regional Administrator an annual monitoring network plan which shall provide for the establishment and maintenance of an air quality surveillance system that consists of a network of SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme ozone nonattainment areas, PAMS stations, and SPM monitoring stations. The plan shall include a statement of purposes for each monitor and evidence that siting and operation of each monitor meets the requirements of appendices A, C, D, and E of this part, where applicable. The annual monitoring network plan must be made available for public inspection for at least 30 days prior to submission to EPA.

(2) Any annual monitoring network plan that proposes SLAMS network modifications including new monitoring sites is subject to the approval of the EPA Regional Administrator, who shall provide opportunity for public comment and shall approve or disapprove the plan and schedule within 120 days. If the State or local agency has already provided a public comment opportunity on its plan and has made no changes subsequent to that comment opportunity, the Regional Administrator is not required to provide a separate opportunity for comment.

(3) The plan for establishing required NCore multi-pollutant stations shall be submitted to the Administrator not later than July 1, 2009. The plan shall provide for all required stations to be operational by January 1, 2011.

(b) The annual monitoring network plan must contain the following information for each existing and proposed site:

(1) The AQS site identification number.

(2) The location, including street address and geographical coordinates.

(3) The sampling and analysis method(s) for each measured parameter.

(4) The operating schedules for each monitor.

(5) Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal.

(6) The monitoring objective and spatial scale of representativeness for each monitor as defined in appendix D to this part.

(7) The identification of any sites that are suitable and sites that are not suitable for comparison against the annual $PM_{2.5}$NAAQS as described in §58.30.

(8) The MSA, CBSA, CSA or other area represented by the monitor.

(c) The annual monitoring network plan must document how States and local agencies provide for the review of changes to a $PM_{2.5}$ monitoring network that impact the location of a violating $PM_{2.5}$ monitor or the creation/change to a community monitoring zone, including a description of the proposed use of spatial averaging for purposes of making comparisons to the annual $PM_{2.5}$ NAAQS as set forth in appendix N to part 50 of this chapter. The affected State or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

(d) The State, or where applicable local, agency shall perform and submit to the EPA Regional Administrator an assessment of the air quality surveillance system every 5 years to determine, at a minimum, if the network meets the monitoring objectives defined in appendix D to this part, whether new sites are needed, whether existing sites are no longer needed and can be terminated, and whether new technologies are appropriate for incorporation into the ambient air monitoring network. The network assessment must consider the ability of existing and proposed sites to support air quality characterization for areas with relatively high populations of susceptible individuals (e.g., children with asthma), and, for any sites that are being proposed for discontinuance, the effect on data users other than the agency itself, such as nearby States and Tribes or health effects studies. For PM2.5, the assessment also must identify needed changes to population-oriented sites. The State, or where applicable local, agency must submit a copy of this 5-year assessment, along with a revised annual network plan, to the Regional Administrator. The first assessment is due July 1, 2010.

(e) All proposed additions and discontinuations of SLAMS monitors in annual monitoring network plans and periodic network assessments are subject to approval according to §58.14.

APPENDIX B
EPA Approval of PM2.5 Network Modification

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, Ca. 94105-3901

MAY 21 2015

Mr. Joel Cordes
Air Monitoring Supervisor
Santa Barbara County Air Pollution Control District
260 North San Antonio Road, Suite A
Santa Barbara, California 93110-1315

Dear Mr. Cordes:

On March 19, 2015 we received Santa Barbara County Air Pollution Control District's (SBCAPCD) official request to change the monitor type for two Met One BAM 1020 $PM_{2.5}$ monitors from SPM to FEM SLAMs monitors; one monitor at the Lompoc H Street (AQS ID: 06-083-2004) site located at 128 S. H Street, Lompoc, CA and one monitor at the Goleta (06-083-2011) site located at 380 N. Fairview Ave., Goleta, CA. Upon our review of the documentation you have provided, pursuant to 40 CFR 58.10 and 58.14, we approve your conversions of the Goleta and Lompoc $PM_{2.5}$ SPM monitors to FEM SLAMS monitors beginning on January 1, 2014 and January 1, 2015, respectively.

We request that you submit data to AQS under the new parameter code 88101 and method code 170 as an FEM SLAMS $PM_{2.5}$ monitor for both sites. Please update the monitor information in the 2015 Annual Ambient Air Quality Monitoring Network Plan and 2015 Network Assessment and refer to and attach this approval letter to the 2015 Annual Ambient Air Quality Monitoring Network Plan.

Thank you for your cooperation throughout this process and please feel free to contact Dena Vallano (415) 972-3134 from my staff or myself (415) 947-4534 with any questions or concerns in regards to this matter.

Sincerely,

Meredith Kurpius, Manager
Air Quality Analysis Office

cc: Dave Van Mullem, Director, Santa Barbara County Air Pollution Control District
cc: (via email)
Gayle Sweigert, California Air Resources Board
Greg Gilani, California Air Resources Board
Pheng Lee, California Air Resource Board

APPENDIX B
Suspension of PM monitoring at Santa Barbara Armory Site

Joel S. Cordes

From:	Smith, Reginald@ARB <reginald.smith@arb.ca.gov>
Sent:	Friday, August 28, 2015 2:42 PM
To:	ARB (AQMIS); AirNowinfo@sonomatech.com; AMS-Notifications@valleyair.org; Joel S. Cordes; moritschm@sbcapcd.org; Contreas, Jaime@SLO; YOSHIMURA, GWEN (Yoshimura.Gwen@epa.gov)
Cc:	Benjamin, Michael@ARB; Stroud, Kenneth@ARB; Amador, Fernando@ARB
Subject:	Temporary suspension of cont. PM monitors at Oildale, San Luis Obispo-Higuera and Santa Barbara-Nat'l Guard

Data Clients:

The ARB is **temporarily suspending operation of the following continuous PM monitors** due to workplace safety concerns:

Oildale (060290232) - PM10
Santa Barbara-National Guard Armory (060830011) – PM10 and FEM PM2.5
San Luis Obispo-Higuera St (060792006) – PM10 and FEM PM2.5

Operation of the monitors above will resume once workplace safety concerns are addressed at each site. We apologize for this inconvenience and are expeditiously working to address these concerns.

Reggie Smith
Manager, Operations and Data Support Section
Air Quality Surveillance Branch
Monitoring and Laboratory Division
Air Resources Board
1927 13th Street Sacramento, CA 95811

Phone: (916) 327-1238
Fax: (916) 327-4718
Email: reginald.smith@arb.ca.gov

APPENDIX C
Variance allowing temporary shutdown of Ellwood Odor

Santa Barbara County
Air Pollution Control District

Case No / Date	2016-27-R	10/05/16
Petitioner	Venoco, LLC.	
Permit #	Part 70/PTO 7904	
Date Rec'd	09/07/16	
Time Rec'd	15:38	
FOR OFFICIAL USE ONLY		

BEFORE THE HEARING BOARD OF THE SANTA BARBARA COUNTY AIR POLLUTION CONTROL DISTRICT

In The Matter of the Application of Venoco LLC. for a Regular Variance from District Rule 206, Conditions 9.C.17, 9.C.18, and 9.C.19 of Part 70/Permit to Operate 7904.

H.B. Case No. 2016-27-R

VARIANCE FINDINGS

AND ORDER

On September 7, 2016, Venoco, LLC. filed a Petition for Regular Variance 2016-27-R, requesting a Modification of the Final Compliance Date for 2015-32-R. The Regular Variance was heard on October 5, 2016 in accordance with Health and Safety Code §40808, with Keith Wenal appearing for the Petitioner and Kaitlin McNally appearing for the Santa Barbara County Air Pollution Control District (District).

This matter having been fully presented and duly considered, the Hearing Board makes the following findings and gives the following reasons for its decision.

1. Notice of the Hearing was duly given in the manner and for the time required by law.

2. Sworn testimony and argument on behalf of the Petitioner and the Air Pollution Control Officer were made, received and considered.

3. The Petitioner operates the equipment described in the Petition at the Ellwood Onshore Facility (EOF) located approximately 14 miles west of the City of Santa Barbara, California.

4. Venoco, LLC. is the holder of Permit to Operate 7904-R10. This main facility permit authorizes the operation of equipment and processes located at EOF which receives oil, water, and gas from Platform Holly and the Seep Containment Devices located on State Coastal Lease 3242.

5. The Petitioner is required to operate an odor monitoring station (for hydrogen sulfide) as described in Table 9-7 of Part 70 Permit to Operate 7904-R10. This requirement was part of a Hearing Board Stipulated Order of Abatement 99-6(A) in 1999 that addressed nuisance odors from the source. The lease for the property where the station was located terminated on October 31, 2015 due to the property owner's recently approved development plans. The Petitioner has been aware of these development plans since 2008 and has stated they have been working to procure a new and acceptable location. The map and list attached to the Petitioner's request for variance show all parcels in the monitoring zone of interest that the Petitioner states have been vetted since 2009. The Petitioner states there is one remaining potential site at the corner of Hollister Avenue and Cathedral Oaks. This is the future location of a County Fire Station. The site design is pending City of Goleta and other agency approval, which will impact whether or not the monitoring station will have enough space to be incorporated.

   It appears that the Petitioner has exercised due diligence up to this point to try and remain in compliance with their monitoring requirements. In addition, as a result of the Plains All American Pipeline (AAPL) Line 901 failure on May 19, 2015, Venoco experienced facility impacts. The facility is not currently processing oil and gas and has completed the de-inventory process. Line 901 remains shutdown and Plains continues to work with local and federal agencies to reestablish pipeline operations. At this time, it is unclear when normal operations of the Petitioner's facility may occur.

   At this time, it is unclear when the Petitioner's facility will be able to return to compliance. Per Health and Safety Code §42357, the Petitioner is requesting a Modification of Final Compliance Date, extending variance coverage through October 21, 2017. There are no expected emissions related to the granting of the Petitioners request.

6. Without variance protection, the Petitioner would be in violation of District Rule 206, Conditions 9.C.17, 9.C.18, and 9.C.19 of Part 70 Permit to Operate 7904-R10.

7. Due to conditions beyond the reasonable control of the Petitioner, returning to compliance at this time is not possible due to the inability to find property to install and operate the monitoring station. This would result in an arbitrary or unreasonable taking of property as the Petitioner would need to close their entire facility in order to comply.

8. Closing or taking would be without a corresponding benefit in reducing air contaminants as there are no expected excess emissions as a result of the granting of this Variance.

9. The Petitioner has curtailed operations in that the Petitioner has vetted all potential monitoring zone sites with no success to date.

10. There are no expected excess emissions with the granting of this Variance.

6. Each day during any portion of which a violation occurs is a separate offense.

DATED: October 5, 2016

AYES: Ward, Lagattuta, Saperstein.

NOES: None.

ABSENT: Schmarje.

ABSTAIN: None.

Chair
Santa Barbara County Air Pollution Control District
Hearing Board

APPENDIX D
EPA Approval to Shut Down NOx/CO at Santa Barbara Site

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

MAY 11 2017

Mr. Ken Stroud, Chief
Air Quality Surveillance Branch
Monitoring and Laboratory Division
California Air Resources Board
1001 I Street, 6th Floor
Sacramento, California 95814

Dear Mr. Stroud:

This letter provides the U.S. Environmental Protection Agency's (EPA's) review and approval for California Air Resources Board's (CARB's) discontinuation of the NO_2 and CO State or Local Air Monitoring Station (SLAMS) monitors at the CARB-operated Santa Barbara-National Guard monitoring station (AQS ID: 06-083-0011). On March 10, 2017, CARB sent a letter to EPA with a description of this network change. Per 40 CFR 58.14, monitoring agencies are required to obtain EPA approval for the discontinuation of SLAMS monitors.

Discontinuation of the CO monitor was reviewed by EPA against criteria contained in 40 CFR 58.14(c)(1). According to data submitted to EPA's Air Quality System (AQS), the Santa Barbara-National Guard site was in attainment of the CO National Ambient Air Quality Standards (NAAQS) from 2012 through 2016. Based on these five design values, there is a less than 10 percent probability of exceeding 80 percent of the CO 1-hour and 8-hour NAAQS during the next three years at this site. These monitors are not specifically required by an attainment or maintenance plan, and they are not the last monitors in a nonattainment or maintenance area. Furthermore, discontinuance of these monitors will not prevent CARB from meeting 40 CFR 58 Appendix D requirements. Five additional CO monitors located in Santa Barbara County reported data to AQS in 2016. Based on this analysis, EPA approves discontinuation of the Santa Barbara-National Guard CO monitor.

Under 40 CFR 58.14(c), requests for closures may be approved on a case-by-case basis as long as the discontinuance does not compromise data collection for implementation of the NAAQS and the requirements of 40 CFR 58 Appendix D continue to be met. Discontinuation of the NO_2 monitor was reviewed according to these provisions.

In 2013, Santa Barbara-National Guard had only three complete quarters of 1-hour NO_2 data, resulting in incomplete 1-hour NO_2 design values for 2013, 2014, and 2015. All other years from 2011 through 2016 have four complete quarters of data. The valid 2011, 2012, and 2016 1-hr NO_2 design values were 42, 43, and 39 parts per billion (ppb), respectively. Over this six-year period, the maximum 1-hour value measured at the site was 52.1 ppb, well below the 100 ppb NAAQS. The annual NO_2 design values is also well below the 53 ppb annual NAAQS, with valid 2011 to 2015 design values between 8 to 10 ppb, passing the 40 CFR 58.14(c)(1) criteria for the annual NO_2 NAAQS. Ten additional NO_2 monitors located in Santa Barbara County reported data to AQS in 2016. Based on this analysis, EPA approves

discontinuation of the Santa Barbara-National Guard NO_2 monitor.

In summary, discontinuance of the CO and NO_2 monitors at Santa Barbara-National Guard would not compromise data collection needed for implementation of a NAAQS, and the requirements of Appendix D would continue to be met. EPA therefore approves discontinuation of the CO and NO_2 monitoring at Santa Barbara-National Guard.

If you have any questions, please contact me at (415) 972-3372 or Gwen Yoshimura of my staff at (415) 947-4134. Thank you for your continued attention to detail and thorough data analyses.

Sincerely,

Michael Flagg
Acting Manager, Air Quality Analysis Office

cc (via email): Gayle Sweigert, CARB
Joel Cordes, Santa Barbara County Air Pollution Control District