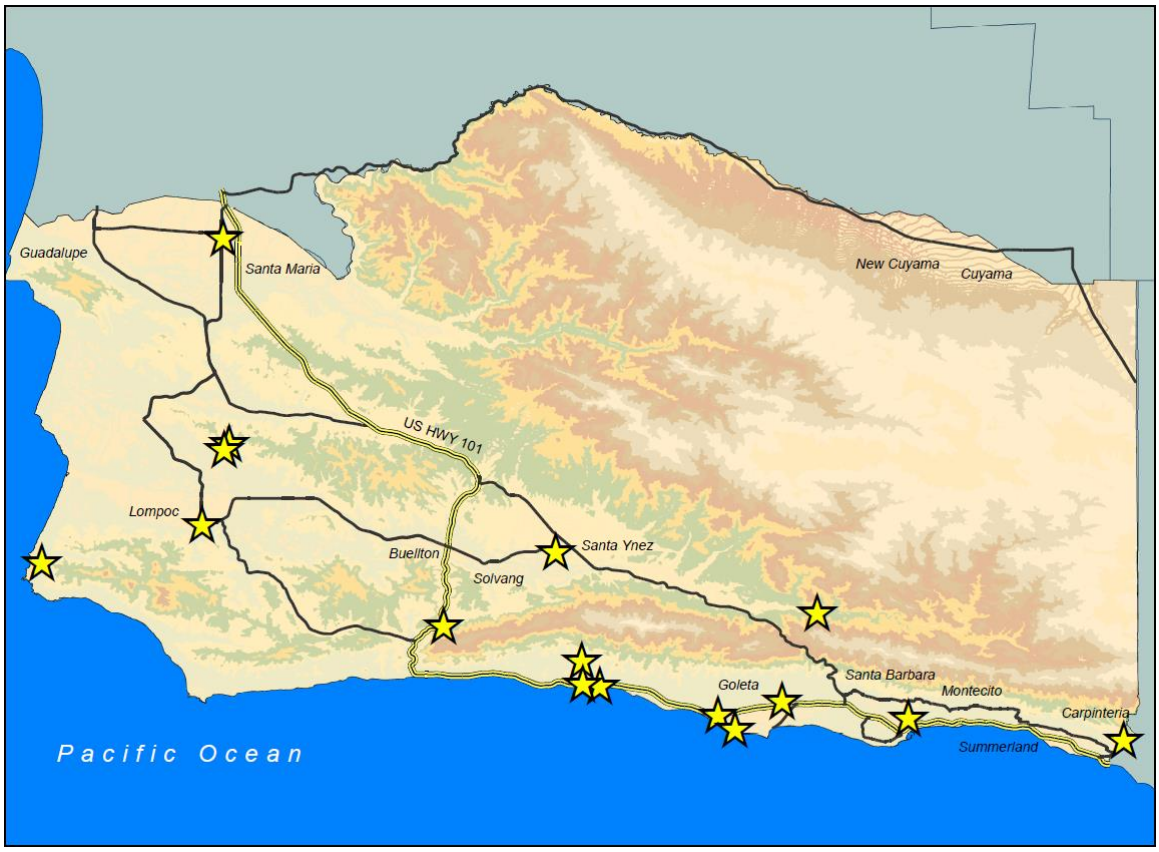
Santa Barbara County
Air Pollution Control District

Annual Air Monitoring Network Plan
Santa Barbara County
Public Draft



June 1, 2018

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 is available for public review and comment from June 1 through June 30, 2018.

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 15 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 nine 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, Lompoc HS & P, and VAFB STS contain monitors to measure the impacts of nearby sources. Lompoc Odor, LFC Odor and West

Campus are located near oil and gas processing facilities to monitor odorous compounds. SBCAPCD considers these “odor sites” to be sites to meet only Santa Barbara County regulatory requirements, and for state and federal regulations considered non-regulatory. Information on these “odor sites” are being provided in this report for only informational purposes. The Ellwood Odor site was shut down on October 22, 2015 due to the loss of lease and the inability to find an acceptable alternative location. Due to the inability to find an nearby site location for the Ellwood Odor site, the odor monitoring requirements were transferred to the existing West Campus site. The Lompoc Odor site was destroyed by a wildfire on September 29, 2017, so no data was collected from this point through the end of 2017. The Lompoc Odor site was re-started and began collecting data for record on February 1, 2018.

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

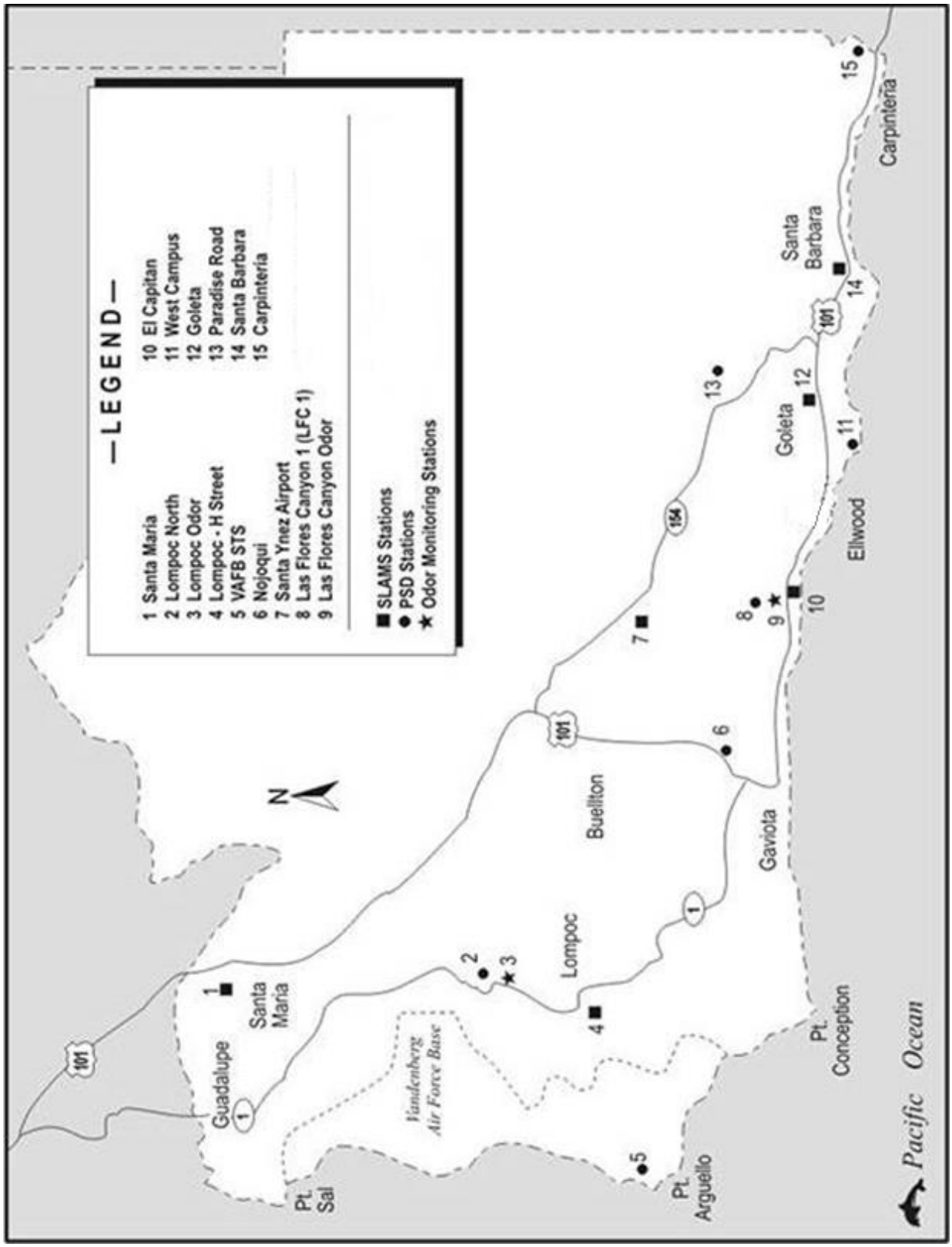

Table 1.1
Monitoring Network in Santa Barbara County

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

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			
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	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. Santa Barbara (operated by CARB) shut down NO2 and CO measurements in July 2017 and temporarily discontinued PM10 and PM2.5 measurements in August 2015 due to safety issues and resumed sampling in August 2017. (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 448,150 based on the 2017 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, D, and E 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 .065 ppm based on 2015 – 2017 data which meets the new federal 8-hour ozone standard of 0.070 ppm. Santa Barbara County is classified non-attainment transitional for the state ozone standard based on the 2016 area designations. There were three sites in Santa Barbara County that recorded concentrations of ozone in excess of the new federal and state 8-hour ozone standard in 2017. Lompoc HSP and Exxon LFC1 exceeded the federal and state 8 hour ozone standard on 9/2/17 with 8 hour concentrations of 79 and 72 ppb respectively. Vandenberg STS exceeded the federal and state 8 hour ozone standard on 10/16/17 with a concentration of 72 ppb. 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	448,150 (2017)	.065 ppm 2015 - 2017	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 three SLAMS CO monitors located at Goleta, Lompoc H Street, 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	448,150 (2017)	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 four SLAMS NO2 monitors. Goleta, Lompoc H Street, 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	448,150 (2017)	N/A (below pop. Threshold)	0	0	0	0	4	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	448,150 (2017)	383.1	171.7	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 and 2017 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. Per EPA region 9 guidance, when determining the number of sites required for PM10 monitoring, excluding data from exceptional events will not reduce the number of sites required. Note that the Santa Barbara site PM10 monitor (operated by CARB) was not operational in 2017 from January through July due to site safety issues (See Appendix B).

Table 2.5
Minimum Monitoring Requirements for PM10

MSA	County	Pop. (year)	Max 24 Hour Concentration (ug/m3)	2017 Max Concentration Site (name, AQS ID)	# Required Sites	# Active Sites[1]	# Additional SitesNeeded
Santa Barbara – Santa Maria, CA	Santa Barbara County	448,150 (2017)	399 (01/08/17) Including Exceptional Event Data[3]	Vandenberg STS 060834003	3-4	5[2]	0
			337 (12/7/17) Excluding Exceptional Event Data	Santa Barbara 060830011	3-4		

[1]Only SLAMS sites can be counted for minimum monitoring requirement
[2]Santa Barbara monitor not operational for January-July of 2017.
Monitors required for SIP or Maintenance Plan: None
[3]Includes data influenced by local wildfires in 2017.

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 2017 from January through July due to site safety issues (See Appendix B).

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, all of 2016, and from January through July 2017 due to site safety issues (See Appendix B). The Lompoc H Street PM2.5 monitor experienced excessive downtime due to equipment problems in the first quarter of 2017. Because there is insufficient PM2.5 data for the period 2015-2017 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	448,150 (2017)	8.2 ug/m3 2015 – 2017	Goleta 06-083-2011	24 ug/m3 2015 - 2017	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 January through July 2017.

Table 2.6b
Minimum Monitoring Requirements for Continuous 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 Cont. Monitors	# Active Cont. Monitors[3,4]	# Additional Cont. Monitors[2] Needed
Santa Barbara – Santa Maria, Ca	Santa Barbara County	448,150 (2017)	8.2 ug/m3 2015 – 2017	Goleta 06-083-2011	24 ug/m3 2015 - 2017	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 January through July 2017.
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 (2014 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	448,150 (2017)	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 448,150 (2017 census estimate), so no NO2, CO, or PM2.5 near roadway monitors are required.

Table 2.8
Near Roadway Monitor Requirements

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	448,150 (2017)	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. declared bankruptcy, forfeited bond funds to the California State Lands Commission, and turned 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 is required to continue during the decommissioning of the offshore facilities, but at this time, it is unknown when monitoring would be discontinued at the West

Campus odor site. All pollutants at these sites are non-criteria except SO2 at West Campus. EPA will be notified when the SO2 monitor will be shut down and consulted should it appear the SO2 monitor will be shut down. The Ellwood Odor site was shut down on October 22, 2015 due to the loss of lease and the inability to find an acceptable alternative location. Due to the inability to find a nearby site location for the Ellwood Odor site, the odor monitoring requirements were transferred to the existing West Campus site. There were only non-criteria monitors at the Ellwood Odor site (H2S/TRS). EPA approval was not required.

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. PM10 or PM2.5 measurements at this site resumed in August 2017. (see Appendix B).

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 2018. As this change is for a non-criteria pollutant (H2S), 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 and these monitors were shut down on June 19, 2017. See Appendix C for details.

In 2017 EPA, CARB and SBCAPCD discussed various options for changing the SBCAPCD monitoring network to free up SBCAPCD/CARB/EPA resources which could be used elsewhere, while still providing appropriate monitoring to the community. CARB and SBCAPCD provided initial proposals for modification of the network, which are attached to this document as Appendix E and F. SBCAPCD staff reviewed the proposals with the goal of identifying sites/monitors that could be discontinued due to either a historical data set showing extremely low concentrations and/or nearby monitors that provide representative data as well as identifying any areas where additional monitoring might be appropriate. Additionally, staff considered industrial monitors that were in place only to serve District data needs and regulations, that could be designated as Non-NAAQS compliant (often referred as “Non-Regulatory”).

This review identified the following proposed changes to the SBCAPCD monitoring network:

1. Eliminate all monitors at the El Capitan Monitoring Station. This includes O3, NO2, SO2, and PM10.

2. Eliminate all monitors at the Nojoqui Monitoring Station. This includes O3 and NO2.
3. Eliminate all monitors at the Vandenberg STS Monitoring Station. This includes O3, NO2, SO2, CO, and PM10.
4. Eliminate the CO and NO2 monitor at the Goleta Monitoring Station.
5. Add a continuous PM10 monitor at the Santa Ynez Monitoring Station.
6. Designate the following industrial monitors as Non-NAAQS compliant:

Site	Pollutants
Carpinteria	NO2
Las Flores Canyon 1	NO2, SO2, CO, PM10
Lompoc HSP	O3, NO2, SO2
Paradise Road	NO2
West Campus	SO2

Specific details on the justification for these proposed changes are included in Appendix D.

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 three 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, 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	4.3 m	4.3 m			
Distance from supporting structure	1.5 m	1.5 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	13.6 s	13.9 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)	12/27/17	12/27/17			

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	3.6 m	3.6 m	3.6 m	4.6 m	
Distance from supporting structure	1.1 m	1.1 m	1.1 m	2.1 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)	8/31/17	8/31/17	8/31/17	N/A	
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	3/7/17 8/31/17	

Table 5.3
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	4.1 m	4.1 m	4.1 m	4.5 m	4.5 m
Distance from supporting structure	1.6 m	1.6 m	1.6 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	13.8 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)	5/2/2017	5/2/2017	5/2/2017	N/A	N/a
Last two semi-annual flow rate audits for PM monitors				5/2/17 10/26/17	5/2/17 10/26/17
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	Yes

Table 5.4
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	4.6 m
Distance from supporting structure	1.2 m	1.2 m	1.2 m	1.2 m	2.1 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	7.3 s	9.5 s	9.4 s	7.4 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)	4/19/2017	4/19/2017	4/19/2017	4/19/2017	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	4/19/17 10/26/17

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 5.5
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	12.3 s				
Will there be changes in next 18 months?	No				
Frequency of one-point QC check (gaseous)	Weekly				
Last annual performance evaluation (gaseous)	4/19/17				

Table 5.6
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	4.9	4.9	4.9	4.9	
Distance from supporting structure	1.7	1.7	1.7	1.7	
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	11.7 s	12.5 s	14.3 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)	12/14/17	12/12/17	12/12/17	12/12/17	

Table 5.7
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	4.4 m	4.4 m	4.4 m	4.4 m	5.3 m	5.3 m
Distance from supporting structure	1.0 m	1.0 m	1.0 m	1.0 m	1.9 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	8.6 s	10.1 s	10.3 s	14.1 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)	4/18/2017	4/18/2017	4/18/2017	4/18/2017	N/A	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	4/18/2017 10/27/2017	4/18/2017 10/27/2017
Is it suitable for comparison against the annual PM2.5?	N/A	N/A	N/A	N/A	N/A	Yes

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 5.8
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	4.8	4.8			
Distance from supporting structure	2.0	2.0			
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	18.7 s	18.7 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)	9/21/17	9/21/17			

Note: The Lompoc Odor site was destroyed by a wildfire on 9/29/17 and was not operational until it was re-started in February 2018.

Table 5.9
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	4.0 m	4.0 m			
Distance from supporting structure	1.4 m	1.4 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)	8/29/2017	8/29/2017			

Table 5.10
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	5.2 m	5.2 m			
Distance from supporting structure	2.2 m	2.2 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	13.1 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)	12/3/2017	12/3/2017			

Table 5.11
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 – 100 est.		
Groundcover	Asphalt		
Representative area	MSA (Santa Barbara – Santa Maria, CA)		
Pollutant, POC	**O3,1**	**PM2.5,3**	**PM10,3**
Monitor Type	SLAMS	SLAMS	SLAMS
Network Affiliation	NA	NA	NA
Parameter Code	44201	88101	81102
Monitoring Objective	NAAQS, public	NAAQS, public	NAAQS, public
Site type(s)	population	Highest concentration	population
MFG/ Model	TAPI 400	BAM 1020	BAM 1020
Method Code	087	170	122
FRM/FEM or other	FEM	FEM	FEM
Collecting Agency	CARB	CARB	CARB
Reporting Agency	CARB	CARB	CARB
Spatial Scale	Urban	Neighborhood	Neighborhood
Start date	5/1/02	7/1/10	5/1/02
Operation schedule	Continuous	Continuous	Continuous
Sampling season	All Year	All Year	All Year
Probe height	4.8 m	4.5 m	4.5 m
Distance from supporting structure	2.1 m	1.8 m	1.8 m
Distance from obstructions on roof	None	None	None
Distance from obstructions not on roof	10m/3m-tree	10m/3m-tree	10m/3m-tree
Distance from trees	10m	10m	10m
Distance to furnace or incinerator	None	None	None
Unrestricted airflow	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	No	No
Probe material	Glass & Teflon	N/A	N/A
Residence time	7.8 s	N/A	N/A

Will there be changes in next 18 months?	No	No	No
Frequency of one-point QC check (gaseous)	Weekly		
Frequency of flow rate verification for automated PM analyzers		Bi-Weekly	Bi-Weekly
Last annual performance evaluation (gaseous)	5/10/2017		
Last two semi-annual flow rate audits for PM monitors		10/26/17 *	10/26/17 *
Is it suitable for comparison against the annual PM2.5?	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). As noted in the 2017 ANP, Carbon Monoxide and Nitrogen Dioxide received EPA approval for shut down in 2017, Carbon Monoxide and Nitrogen Dioxide were shut down on 6/19/2017.

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

Table 5.12
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	Parking lot paving				
Representative area	MSA (Santa Barbara – Santa Maria, CA)				
Pollutant, POC	**O3,1**	**NO2,1**	**CO, 3**	**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	8.4 m	8.2 m	8.2 m	8.0 m	8.0 m
Distance from supporting structure	2.2 m	2.2 m	2.2 m	1.8 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	7.8 s	9.6 s	4.8 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)	12/5/2017	12/5/2017	11/30/2017		
Last two semi-annual flow rate audits for PM monitors				6/7/2017 12/5/2017	6/7/2017 12/5/2017
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 5.13
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)	5/8/2017				

Table 5.14
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	1.0	1.0	1.0	1.0	
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	16.1 s	15.3 s	15.3 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)	12/14/2017	12/14/2017	12/14/2017	12/14/2017	

Table 5.15
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	099	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	3.5 m	3.5 m	3.5 m	3.5 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	12.7 s	9.9 s	10.1 s	12.2 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)	4/20/2017	4/20/2017	4/20/2017	4/20/2017	N/A
Last two semi-annual flow rate audits for PM monitors	N/A	N/A	N/A	N/A	4/20/2017 10/23/2017

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
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
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

APPENDIX D

JUSTIFICATION FOR SHUTDOWN OF MONITORS

Guidelines on appropriateness of monitor shutdown is provided in 40 CFR 58.14. Various justifications for shutdown are listed below:

(c) State, or where appropriate, local agency requests for SLAMS monitor station discontinuation, subject to the review of the Regional Administrator, will be approved if any of the following criteria are met and if the requirements of appendix D to this part, if any, continue to be met. Other requests for discontinuation may also be approved on a case-by-case basis if discontinuance does not compromise data collection needed for implementation of a NAAQS and if the requirements of appendix D to this part, if any, continue to be met.

(1) Any $PM_{2.5}$, O_3, CO, PM_{10}, SO_2, Pb, or NO_2 SLAMS monitor which has shown attainment during the previous five years, that has a probability of less than 10 percent of exceeding 80 percent of the applicable NAAQS during the next three years based on the levels, trends, and variability observed in the past, and which is not specifically required by an attainment plan or maintenance plan. In a nonattainment or maintenance area, if the most recent attainment or maintenance plan adopted by the State and approved by EPA contains a contingency measure to be triggered by an air quality concentration and the monitor to be discontinued is the only SLAMS monitor operating in the nonattainment or maintenance area, the monitor may not be discontinued.

(2) Any SLAMS monitor for CO, PM_{10}, SO_2, or NO_2 which has consistently measured lower concentrations than another monitor for the same pollutant in the same county (or portion of a county within a distinct attainment area, nonattainment area, or maintenance area, as applicable) during the previous five years, and which is not specifically required by an attainment plan or maintenance plan, if control measures scheduled to be implemented or discontinued during the next five years would apply to the areas around both monitors and have similar effects on measured concentrations, such that the retained monitor would remain the higher reading of the two monitors being compared.

(3) For any pollutant, any SLAMS monitor in a county (or portion of a county within a distinct attainment, nonattainment, or maintenance area, as applicable) provided the monitor has not measured violations of the applicable NAAQS in the previous five years, and the approved SIP provides for a specific, reproducible approach to representing the air quality of the affected county in the absence of actual monitoring data.

(4) A $PM_{2.5}$ SLAMS monitor which EPA has determined cannot be compared to the relevant NAAQS because of the siting of the monitor, in accordance with §58.30.

(5) A SLAMS monitor that is designed to measure concentrations upwind of an urban area for purposes of characterizing transport into the area and that has not recorded violations of the relevant NAAQS in the previous five years, if

discontinuation of the monitor is tied to start-up of another station also characterizing transport.
(6) A SLAMS monitor not eligible for removal under any of the criteria in paragraphs (c)(1) through (c)(5) of this section may be moved to a nearby location with the same scale of representation if logistical problems beyond the State's control make it impossible to continue operation at its current site.

PROPOSED MODIFICATIONS TO CARBON MONOXIDE MONITORING NETWORK

SBCAPCD is proposing the shutdown of the following Carbon Monoxide monitors:

Site Name	Monitor AQS Identifier	Type of Monitor
Goleta	06-083-2011-42101-1	SLAMS
Vandenberg STS	06-083-4003-42101-1	Industrial

If the proposed shutdown of CO monitors is approved, the minimum number of CO monitors will be achieved as there are no EPA minimum requirements for the number of CO monitoring sites for CBSA's with a population less than one million.

These monitors have a less than 10% probability of exceeding 80% of the NAAQS, and therefore qualify for shutdown by meeting condition #1 above.

Site	NAAQS Averaging Time	NAAQS ppm	Design Value 2017	Design Value 2016	Design Value 2015	Design Value 2014	Design Value 2013	Shown Attainment of NAAQS for 5 Years?	< 10% Prob of exceed 80% of NAAQS?
Goleta	1 hour	35	2.2	1.1	0.9	0.8	1	Y	Yes
Goleta	8 hour	9	1.6	0.6	0.5	0.4	0.7	Y	Yes
VSTS	1 hour	35	1.1	0.6	0.4	1.5	0.9	Y	Yes
VSTS	8 hour	9	0.9	0.4	0.4	0.4	0.4	Y	Yes

The calculation evaluating if there is less than 10% probability of exceeding 80% of the NAAQS uses the equation below:

$$\overline{X} + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

Where $\overline{X}$ is the average design value for the last 5 years, t is the student t value for n-1 degrees of freedom at the 90% confidence level (2.13), s is the standard deviation of the design values, n is the number of design values (5). Each years design value utilized is the second highest concentration (in ppm) for each year.

PROPOSED MODIFICATIONS TO THE SULFUR DIOXIDE MONITORING NETWORK:

SBCAPCD is proposing the shutdown of the following Sulfur Dioxide monitors:

Site Name	Monitor AQS Identifier	Type of Monitor
El Capitan	06-083-0008-42401-1	SLAMS
Vandenberg STS	06-083-4003-42401-1	Industrial

If the proposed shutdown of SO2 monitors is approved, the minimum number of SO2 monitors required will be achieved based on the table below that reflect the number of SO2 monitors if the proposed shutdown is approved:

CBSA/MSA	County	Pop. (year)	Total $SO2^1$(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	448,150 (2017)	383.1	171.7	N/A below emissions threshold	0	1	0

These monitors have a less than 10% probability of exceeding 80% of the NAAQS, and therefore qualify for shutdown by meeting condition #1 above.

Site	NAAQS Averaging Time	NAAQS ppb	Design Value 2017	Design Value 2016	Design Value 2015	Design Value 2014	Design Value 2013	Shown Attainment of NAAQS for 5 Years?	< 10% Prob of exceed 80% of NAAQS?
El Capitan	1 hour	75	2	3	4	4	3	Y	Yes
VSTS	1 hour	75	3	5	5	5	3	Y	Yes

The calculation evaluating if there is less than 10% probability of exceeding 80% of the NAAQS uses the equation below:

$$\overline{X} + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

Where $\overline{X}$ is the average design value for the last 5 years, t is the student t value for n-1 degrees of freedom at the 90% confidence level (2.13), s is the standard deviation of the design values, n is the number of design values (5). Each years design value utilized is the three year design value calculated from each year's 99th percentile (in ppb) for each year.

PROPOSED MODIFICATIONS TO THE NITROGEN DIOXIDE MONITORING NETWORK:

SBCAPCD is proposing the shutdown of the following Nitrogen Dioxide monitors:

Site Name	Monitor AQS Identifier	Type of Monitor
El Capitan	06-083-0008-42602-1	SLAMS
Nojoqui	06-083-1018-42602-1	Industrial
Goleta	06-083-2011-42602-1	SLAMS
Vandenberg STS	06-083-4003-42602-1	Industrial

If the proposed shutdown of NO2 monitors is approved, the minimum number of NO2 monitors required will be achieved based on the table below showing the number of monitors if the proposed shutdowns are approved:

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	448,150 (2017)	N/A (below pop. Threshold)	0	0	0	0	2	0

These monitors have a less than 10% probability of exceeding 80% of the NAAQS, and therefore qualify for shutdown by meeting condition #1 above.

Site	NAAQS Averaging Time	NAAQS ppb	Design Value 2017	Design Value 2016	Design Value 2015	Design Value 2014	Design Value 2013	Shown Attainment of NAAQS for 5 Years?	< 10% Prob of exceed 80% of NAAQS?
El Capitan	1 hour	100	20	21	21	22	22	Y	Yes
El Capitan	Annual Avg	53	3.1	2.79	3.3	3.01	2.75	Y	Yes
Nojoqui	1 hour	100	12	13	15	17	18	Y	Yes
Nojoqui	Annual Avg	53	2.21	2.43	2.6	3.21	3.19	Y	Yes
VSTS	1 hour	100	5	8	8	7	5	Y	Yes
VSTS	Annual Avg	53	0.36	0.3	0.32	0.37	0.32	Y	Yes
Goleta	1 hour	100	25	27	29	31	32	Y	Yes
Goleta	Annual Avg	53	2.09	2.38	3.76	5.32	5.98	Y	Yes

The calculation evaluating if there is less than 10% probability of exceeding 80% of the NAAQS uses the equation below:

$$\overline{X} + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

Where $\overline{X}$ is the average design value for the last 5 years, t is the student t value for n-1 degrees of freedom at the 90% confidence level (2.13), s is the standard deviation of the design values, n is the number of design values (5). Each years design value utilized for the 1 hour NAAQS is the three year average the 98th percentile (in ppb) for each year. Each years design value utilized for the annual NAAQS is that year's annual arithmetic average (in ppb) for each year.

PROPOSED MODIFICATIONS TO THE OZONE MONITORING NETWORK:

SBCAPCD is proposing the shutdown of the following Ozone monitors:

Site Name	Monitor AQS Identifier	Type of Monitor
El Capitan	06-083-0008-42602-1	SLAMS
Nojoqui	06-083-1018-42602-1	Industrial
Vandenberg STS	06-083-4003-42602-1	Industrial

If the proposed shutdown of Ozone monitors is approved, the minimum number of Ozone monitors required will be achieved based on the table below that reflects the number of monitors if the proposed shutdown is approved:

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	448,150 (2017)	.065 ppm 2015 - 2017	Las Flores Cyn #1, 060831025	2	5	0

The ozone monitors proposed for shutdown do not qualify for any of the specific criteria listed in 40 CFR 58.14. However, analysis of the data shows that the monitors proposed for shutdown have consistently measured lower ozone concentrations than other monitors in Santa Barbara County as shown by the table below. Note that the table highlights (in red) for each year, monitors that measured higher ozone concentrations than any of the monitors proposed for shutdown (in Bold). This clearly demonstrates that for the five year data set, LFC1 measured higher ozone concentrations than any of the monitors proposed for shutdown.

	Maximum 8 hour Ozone Concentration				
Site Name	2013	2014	2015	2016	2017
El Capitan	**61**	**78**	**65**	**72**	**64**
Santa Barbara	61	77	63	72	70
Santa Maria	60	68	55	56	63
Lompoc HSP	77	74	64	61	79
Paradise Rd	75	75	64	73	68
Nojoqui	**64**	**73**	**61**	**67**	**57**
Carpinteria	72	89	63	64	57
LFC1	74	86	71	75	75
Lompoc H	70	71	60	61	56
Goleta	64	80	62	71	68
Santa Ynez	70	68	67	67	69
VSTS	**71**	**71**	**61**	**66**	**72**

Therefore removal of the proposed monitors would not impact the attainment/non-attainment NAAQS status. SBCAPCD requests that EPA consider the proposed shutdown of these monitors based on how unlikely their removal would impact attainment decisions as well as the large number of ozone monitors in Santa Barbara County.

PROPOSED MODIFICATIONS TO THE PM10 MONITORING NETWORK:

SBCAPCD is proposing the shutdown of the following PM10 monitors:

Site Name	Monitor AQS Identifier	Type of Monitor
El Capitan	06-083-0008-81102-3	SLAMS
Vandenberg STS	06-083-4003-81102-3	Industrial

SBCAPCD is also proposing the addition of the following PM10 monitors:

Site Name	Monitor AQS Identifier	Type of Monitor
Santa Ynez	06-083-3001-81102-1	SLAMS

If the proposed modification of PM10 monitors is approved, the minimum number of PM10 monitors required will be achieved based on the table below:

MSA	County	Pop. (year)	Max 24 Hour Concentration (ug/m3)	2017 Max Concentration Site (name, AQS ID)	# Required Sites	# Active Sites[1]	# Additional SitesNeeded
Santa Barbara – Santa Maria, CA	Santa Barbara County	448,150 (2017)	399 (01/08/17) Including Exceptional Event Data[3]	Vandenberg STS 060834003	3-4	5[2]	0
			337 (12/7/17) Excluding Exceptional Event Data	Santa Barbara 060830011	3-4		

In 2016 and 2017 there were major wildfires that had significant impacts to PM10 monitors in Santa Barbara County. SBCAPCD flagged values clearly impacted by wildfires as Exceptional Events in AQS, and has requested EPA to concur with this finding. The El Capitan PM10 monitor proposed for shutdown qualify based on condition #1, even including exceptional event data values. However, the Vandenberg STS PM10 monitor qualifies for shutdown based on condition #1, only if the exceptional event data is excluded as shown below:

Site	NAAQS Averaging Time	NAAQS ug/m3	Design Value 2017	Design Value 2016	Design Value 2015	Design Value 2014	Design Value 2013	Shown Attainment of NAAQS for 5 Years?	< 10% Prob of exceed 80% of NAAQS?
El Capitan	24 hour	150	109	98	66	66	51	Y	Yes
VSTS	24 hour	150	208	177	58	55	55	N	No
With Exceptional Event Data Values Excluded									
VSTS	24 hour	150	103	103	58	55	55	Y	Yes

The calculation evaluating if there is less than 10% probability of exceeding 80% of the NAAQS uses the equation below:

$$\overline{X} + \frac{t * s}{\sqrt{n}} < 0.8 * NAAQS$$

Where $\overline{X}$ is the average design value for the last 5 years, t is the student t value for n-1 degrees of freedom at the 90% confidence level (2.13), s is the standard deviation of the design values, n is the number of design values (5). Each years design value utilized for the 24 hour NAAQS is the design concentration calculated following EPA guidance document, “PM10 SIP Development Guidelines” (EPA-450/2-86-001). The approach utilized is summarized in Section 6.3.1, and utilizes the look up table 6.1.

PROPOSED NON-NAAQS INDUSTRIAL MONITORS

Site	Pollutants
Carpinteria	NOx
Las Flores Canyon 1	NOx, SO2, CO, PM10
Lompoc HSP	O3, NOx, SO2
Paradise Road	NOx
West Campus	SO2

Currently the above monitors are compared to the appropriate NAAQS. The District proposes changing the AQS designation for these monitors to Non-NAAQS comparable, while still allowing the District to continue operation of these monitors for District purposes. Additionally, the data from these monitors would be present in AQS and could be used by EPA as secondary data sources when considering any NAAQS designation changes.

APPENDIX E

INITIAL SBCAPCD NETWORK MODIFICATION PROPOSAL

Proposals for Santa Barbara County Industrial Monitors

June 14, 2017

SBCAPCD staff has considered many options to meet regulatory requirements as well as wishes of EPA and CARB with regards to the industrial monitors operated in Santa Barbara County. Below are concepts or goals that were used in considering various proposals, followed by three specific proposals that would be acceptable to SBCAPCD. The three specific proposals are open to adjustments and potentially combining the proposals to reach a consensus agreement between SBCAPCD, CARB, and EPA.

Goals Considered in Proposed Solutions:

1. **Provide CARB with flexibility on QA support for industrial monitors.** CARB has provided annual audit support for all industrial monitors since their inception. CARB included industrial monitors in a TSA performed in 2002, but decided not include any of the industrial monitors in the 2016 TSA. CARB has expressed concern that if funding becomes tight, it may have difficulty supporting the industrial sites in Santa Barbara. *Any solution should seek to minimize mandatory QA responsibility for CARB (and EPA) wherever possible.*
2. **Ensure industrial monitors funding/operation continues.** The industrial monitoring performed in Santa Barbara was a result of major oil and gas projects proposed in the 1980's. As these projects were being proposed, local government responded to citizen concerns over the unprecedented oil and gas development by requiring significant air quality surveillance over these projects to provide assurance that the oil development did not degrade local air quality. *Any solution should seek to keep all industrial monitors operational in order to fulfill the commitments local government made when allowing the influx of oil and gas facilities.*
3. **Ensure industrial ozone monitors that have been driving ozone NAAQS decisions continue operation, meeting Appendix A requirements.** Three of the county wide regional industrial ozone monitors historically have been driving ozone NAAQS decisions. *Any solution should seek to ensure that these three ozone monitors continue operation and meet all Appendix A requirements so they can continue to be utilized in NAAQS decisions.*
4. **Ensure all QA and other regulations are met moving forward.** While there may be some flexibility in other areas, *any solution must ensure that all industrial monitors utilized for NAAQS decisions meet all QA regulations*. Central to this issue is ensuring that the three industrial ozone monitors driving NAAQS decisions can meet the PQAO requirements of Appendix A.

Proposal #1:

1. **Eliminate all CARB support for non-criteria and meteorological monitoring**. CARB has historically provided audit support for H2S industrial "odor" sites. Additionally, CARB has performed meteorological audits at industrial sites. Under this proposal, CARB would no longer perform this QA support for non-criteria pollutants and meteorological systems. All criteria pollutant monitors in the industrial monitoring network would continue to be supported by CARB with audits. The reduction in CARB support under this proposal would be to eliminate the following performance audits:

Parameter	H2S	Meteorological System
Carpinteria		Eliminate
Las Flores Cyn 1		Eliminate
LFC Odor	Eliminate	Eliminate
Lompoc HSP		Eliminate
Lompoc Odor	Eliminate	Eliminate
Nojoqui		Eliminate
Paradise Road		Eliminate
VAFB STS		Eliminate
West Campus	Eliminate	Eliminate

   The elimination of three H2S audits and 9 meteorological audits would provide some relief to CARB QA responsibilities, while keeping the core industrial monitors under CARB PQAO. It is important to note that H2S audits are the most time consuming gas audit performed due to the long stabilization period for most H2S monitors. The SBCAPCD would continue to have a third party perform QA audits for these H2S monitors.

2. **Meeting all QA and other EPA regulations.** It is critical that any solution ensure all regulatory monitors meet all QA and other federal regulations. In addition to all other regulations, a central issue is ensuring that all monitors meet the 5 Appendix A PQAO requirements. Due to urging by EPA, CARB has developed a mechanism where District operated monitors can meet these 5 PQAO requirements, even though the operators of the District monitors are not part of CARB's organization or chain of command. Meeting these requirements are spelled out in a roles and responsibilities agreement between each District and CARB. A critical component to these agreements is a requirement that each District either follow all CARB QMP's, QAPP's, and SOP's (or receive CARB approval for differing QA documents) as well as participating in CARB sponsored common training programs. SBCAPCD has agreed to these requirements, and is nearing completion of drafting and receiving approval from CARB for SBCAPCD specific quality documents. This process ensures that any monitor operated by District staff (including any regulatory industrial funded monitor operated by District staff) will follow the approved quality documents and all District staff will participate in the CARB common training program.

   There are five industrial sites that are not operated by SBCAPCD staff, but are operated by a consultant hired by the permit holder. SBCAPCD proposes ensuring that these monitors meet the

common PQAO requirements by utilizing the exact same process that CARB is using to ensure all District operated monitors meet the PQAO requirements. Permit requirements for these industrial monitors state, “the operation of these monitors shall be operated in accordance of District Air Monitoring Protocol”. This provides clear authority for SBCAPCD to require the operators of these monitors to follow CARB approved District quality documents (QMP, QAPP, and SOP’s). This has also been a District goal that all industrial and SLAMS monitors in Santa Barbara County be operated following the exact same procedures.

Meeting the common training requirement would be met by requiring the operators of these five sites to participate in the CARB PQAO training program, just as a new District employee would be treated.

The contractor operating these sites also have been utilizing (and would continue to utilize) SBCAPCD’s ozone primary (Level 2) standard for certification of their ozone (Level 3) transfer standard. Additionally, the contractor utilizes the same compressed gas standard vendor as SBCAPCD. This ensures meeting the common laboratory/standards PQAO requirement.

Proposal #2:

- **Make all Non-NAAQS critical industrial monitors "non-regulatory".** EPA has indicated that one option to make CARB QA support "optional" is to designate a monitor that does not and would not likely influence NAAQS decisions "non-regulatory". This is an approach EPA has taken with Tribal monitors to avoid having to perform TSA's on every Tribe's monitoring program (each Tribe is considered its own PQAO). Any monitor that was designated "non-regulatory" would be "NAAQS excluded" in AQS, which excludes that monitor from any NAAQS calculation performed in AQS. These "non-regulatory" industrial monitors would no longer be required to be audited annually by CARB, and no longer be included in any TSA's performed by CARB or EPA. SBCAPCD would be free to continue to require all other QA tasks be performed by the operators of the monitor, and would still have audits performed by an independent party to ensure the monitoring data meets District QA objectives. SBCAPCD proposes making all monitors non-regulatory, except:
- Ozone at Paradise Road, Carpinteria, and Las Flores Canyon #1, as these three monitors drive NAAQS attainment decisions in Santa Barbara County.
- Sulfur Dioxide at Los Flores Canyon #1, as this monitor has exceeded the Federal Standard within the last four years.
- PM10 at VFB STS, as this monitor has exceeded the State annual PM10 standard in 2015.
- PM10 at Las Flores Canyon #1, as this monitor is close to exceeding the state annual PM10 standard.

  The reduction in CARB support under this proposal would be to eliminate the following performance audits:

Parameter	Ozone	NOx	SO2	CO	PM10	H2S	Met. System
Carpinteria		Eliminate	NA	NA	NA	NA	Eliminate
Las Flores Cyn 1		Eliminate		Eliminate		NA	Eliminate
LFC Odor	NA	NA	NA	NA	NA	Eliminate	Eliminate
Lompoc HSP	Eliminate	Eliminate	Eliminate	NA	NA	NA	Eliminate
Lompoc Odor	NA	NA	NA	NA	NA	Eliminate	Eliminate
Nojoqui	Eliminate	Eliminate	NA	NA	NA	NA	Eliminate
Paradise Road		Eliminate	NA	NA	NA	NA	Eliminate
VAFB STS	Eliminate	Eliminate	Eliminate	Eliminate		NA	Eliminate
West Campus	NA	NA	Eliminate	NA	NA	Eliminate	Eliminate
Total Reduction	3	6	3	2	0	3	9

Under this proposal in addition to the reduction of 14 gas audits and 9 meteorological audits, only the three critical ozone monitors, SO2 at LFC#1, and PM10 at LFC #1 and VAFB STS would be included (with the SLAMS monitors in SB County) in any CARB/EPA Technical Systems Audits.

- **Meeting all QA and other EPA regulations.** It is critical that any solution ensure all regulatory monitors meet all QA and other federal regulations. In addition to all other regulations, a central issue is ensuring that all monitors meet the 5 Appendix A PQAO requirements. Due to urging by EPA, CARB has developed a mechanism where District operated monitors can meet these 5 PQAO requirements, even though the operators of the District monitors are not part of CARB's organization or chain of command. Meeting these requirements are spelled out in a roles and responsibilities agreement between each District and CARB. A critical component to these agreements is a requirement that each District either follow all CARB QMP's, QAPP's, and SOP's (or receive CARB approval for differing QA documents) as well as participating in CARB sponsored common training programs. SBCAPCD has agreed to these requirements, and is nearing completion of drafting and receiving approval from CARB for SBCAPCD specific quality documents. This process ensures that any monitor operated by District staff (including the industry funded Las Flores Canyon #1 ozone monitor operated by District staff) will follow the approved quality documents and all District staff will participate in the CARB common training program.
  The remaining two industrial ozone regulatory monitors (Carpinteria and Paradise Road) would also be required to meet the critical 5 PQAO requirements as they are operated by a consultant hired by industry. SBCAPCD proposes ensuring that these two critical monitors meet the common PQAO requirements by utilizing the exact same process that CARB is using to ensure all District operated monitors meet the PQAO requirements. Permit requirements for these monitors state, "the operation of these monitors shall be operated in accordance of District Air Monitoring Protocol". This provides clear authority for SBCAPCD to require the operators of these monitors to follow approved District quality documents (QMP, QAPP, and SOP's). This also has also been a District goal that all industrial and SLAMS monitors in Santa Barbara County be operated following the exact same procedures.

  Meeting the common training requirement would be met by requiring the operators of these two ozone monitors to participate in the CARB PQAO training program, just as a new District employee would be treated.

  The contractor operating the two ozone monitors also has been utilizing (and would continue to utilize) SBCAPCD's ozone primary (Level 2) standard for certification of their ozone (Level 3) transfer standard. This ensures meeting the common laboratory/standards PQAO requirement.

Proposal #3:

1. **Create a new PQAO for the industrial monitors in SB County.** Under this proposal, a new PQAO would be created that includes all industrial criteria monitors. SB County SLAMS monitors would remain in the CARB PQAO. This would eliminate the requirement for CARB to perform any audits and have any responsibility for industrial monitors in SB County.

2. **Ensure that the new PQAO would comply with all requirements for a PQAO.** Creating a new PQAO requires extensive efforts to ensure compliance with federal regulations. SBCAPCD has an existing infrastructure and funding sources that would make creation of a SB County Industrial PQAO possible. Below is a listing of critical aspects of forming a new PQAO and how SBAPCD proposes meeting those requirements:

    a. **Quality Documents.** SBCAPCD is nearing completion on approval (by CARB following EPA review guidance) for all required quality documents (QMP, QAPP, and SOP's). SBCAPCD proposes using these freshly approved documents, with small adjustments to reflect the conditions of the industrial monitoring network as the common set of procedures to be used for the operation of all monitors in the SB Industrial PQAO. This set of quality documents would show compliance with all aspects of 40 CFR 58 Appendix A, C, and E and would be submitted to EPA for approval. As these documents have already received approval from CARB, using EPA review guidance, it is anticipated that there will only be small adjustments to the documents to meet EPA approval. SBCAPCD would update these documents every five years in conjunction with the updates to the quality documents required for the monitors in the CARB PQAO.

    b. **Independent QA Oversight.** Performance audits on all monitors in the SB Industrial PQAO would be performed by an independent consultant. The consultant would report directly to the SBC APCO, providing at least two management levels of separation from personnel involved in station operations. Periodic compilation and review of data quality indicators would be performed by an independent QA consultant. As with the auditing consultant, the QA consultant would report directly to the SBC APCO, providing at least two management levels of separation from personnel involved in station operations. Additionally, any strategic planning, budgeting, or other planning related to the PQAO quality system would be performed by the QA consultant in coordination with the SBC APCO. Much of this independent oversight is already in place. SBCAPCD utilizes a consultant for performance audits of industry operated sites and a QA consultant for review of site operations performed at industry operated sites. Existing funding from industry (specified in each sources permit to operate) is sufficient to maintain this independent QA oversight. A once every three year TSA would be required to be performed on the SB Industrial PQAO by EPA. SBCAPCD would be willing to provide the use of their QA consultant to assist EPA in this TSA.

APPENDIX F

INITIAL CARB NETWORK MODIFICATION PROPOSAL

Issue

The U.S. Environmental Protection Agency (EPA) recently requested that the Air Resources Board (ARB) and Santa Barbara County Air Pollution Control District (District) each propose recommendations on the redesignation of air monitors that are designated as Prevention of Significant Deterioration (PSD)/Industrial sites. EPA has stated that these monitor designations do not accurately reflect the appropriate data collection objectives.

ARB is concerned with the potential increased quality assurance (QA) oversight if all the sites/monitors are redesignated as regulatory monitors. The District is concerned about the continued operation of these sites/monitors and the funding that they provide.

Background

The District has an extensive ambient air monitoring program. The air monitoring network consists of 16 air monitoring stations: 6 regulatory (SLAMS) sites (2 are operated by ARB and 4 by the District) and 10 source oriented (PSD/Industrial) sites (operated by the District and contractors) - see Table 1. Ozone is the only pollutant in Santa Barbara County subject to federal minimum monitoring requirements. At a minimum, two ozone monitors are required under federal regulations and one of those monitors must capture the highest concentrations. The highest ozone concentration sites are measured at the Carpinteria and Los Flores Canyon sites, which are both designated as PSD/Industrial sites. Currently, there are 12 sites that monitor for ozone in Santa Barbara County.

For particulate matter (PM), there are 7 sites that measure PM10. Four of those seven sites also measure PM2.5. There are currently no federal minimum monitoring requirements for PM and the area is considered “attainment” for the federal PM2.5 standards. However, the area is currently designated nonattainment for the State PM10 standard. The highest PM2.5 design and PM10 designation values are typically based on measurements made at its existing SLAMS sites. The highest 2015 PM2.5 design values were based on data collected at the Santa Barbara, Santa Maria, and Goleta sites. Of the five current SLAMS sites collecting PM10 data, all are nonattainment of the State PM10 standard with the exception of Goleta.

The District has historically treated data from the PSD/Industrial sites in the same manner as SLAMS sites. Data from these sites are submitted and certified to be used for regulatory determinations. ARB uses the data for planning and area designation determinations. ARB provides QA oversight to the Santa Barbara network which includes Technical System Audits and annual performance audits. While the PSD/Industrial sites are not part of ARB’s PQAO, as stated by EPA, ARB does conduct one audit per year as resources permit.

Proposal

In developing potential options for the redesignation of monitors in the Santa Barbara air monitoring network, ARB performed a detailed technical assessment that was based on the monitoring requirements needed for the area, highest concentrations, local needs, and flexibility on ARB's monitoring and quality assurance requirements.

ARB has identified a network of 6 SLAMS sites and 10 non-regulatory sites that would provide for a robust air monitoring program in Santa Barbara that meets the needs of State planners and local residents (see Table 2). The proposal also provides the State with additional flexibility in providing critical resources to other areas in the State that have more challenging air quality issues. While there would be no change to the number of SLAMS sites, the highest three ozone concentration sites would change designation from PSD to SLAMS and three of the current SLAMS sites would change to non-regulatory. The current sites with the highest PM2.5 and PM10 design/designation values would retain their current SLAMS designations. The six SLAMS sites would be operated and maintained by the District (including the two current ARB sites- Santa Barbara and Santa Maria) and would be under the jurisdiction of the ARB PQAO. EPA has indicated that the remaining 10 sites could be redesignated as non-regulatory and continue to operate to meet the objectives of the District. ARB would provide QA oversight for the 6 SLAMS sites, which includes annual audits. Annual audits of the non-regulatory sites would become the responsibility of the District.

Table 1: Current Santa Barbara County Air Monitoring Network

	Site Name	Site Operator	2015 PM2.5 24-hr DV (ug/m3)	2015 PM2.5 Annual DV (ug/m3)	2015 PM10 24-hr[1] State Designation Value	2015 Ozone DV (ppm)	Parameter Monitored								
							O3	NO2	SO2	CO	PM2.5	PM10	THC	H2S	TRS
SLAMS	Goleta	SBCAPCD	18.5[2]	8.3[2]	45	0.063	✓	✓		✓	✓	✓			
	Santa Barbara	ARB	**18**	**9.2**	56	0.060	✓				✓	✓			
	Santa Maria	ARB	16	7.8	71	0.053	✓	✓		✓	✓	✓			
	Santa Ynez	SBCAPCD				0.060	✓								
	El Capitan	SBCAPCD			**98**	0.059	✓	✓	✓			✓	✓		
	Lompoc H St.	SBCAPCD	15.5[2]	7.1[2]	53	0.056	✓	✓	✓	✓	✓	✓			
PSD	Carpinteria	Contractor				**0.067**	✓	✓							
	Las Flores Canyon 1	SBCAPCD			51	0.065	✓	✓	✓	✓		✓	✓		
	Paradise Road – NF	Contractor				0.064	✓	✓							
	LFC Odor	SBCAPCD												✓	
	Lompoc HS & P	Contractor				0.063	✓	✓	✓				✓		
	Lompoc Odor	Contractor												✓	✓
	Nojoqui/Gaviota	SBCAPCD				0.060	✓	✓							
	VAFB STS	SBCAPCD			71	0.061	✓	✓	✓	✓		✓	✓		
	West Campus	Contractor							✓				✓	✓	✓
	Ellwood Odor	Closed												✓	✓

1) State PM10 24-hour Designation Values represent concentrations below the Expected Peak Day Concentration (EPDC) used to establish compliance with the State standard. 2) Based on 1 year of data.

Table 2: ARB Proposed Santa Barbara Monitor Redesignation

	Site Name	Site Operator	2015 PM2.5 24-hr DV (ug/m3)	2015 PM2.5 Annual DV (ug/m3)	2015 PM10 24-hr[1] State Designation Value	2015 Ozone DV (ppm)	Parameter Monitored								
							O3	NO2	SO2	CO	PM2.5	PM10	THC	H2S	TRS
SLAMS	Goleta	SBCAPCD	18.5 [2]	8.3 [2]	45	0.063	✓	✓		✓	✓	✓			
	Santa Barbara	SBCAPCD	**18**	**9.2**	56	0.060	✓				✓	✓			
	Santa Maria	SBCAPCD	16	7.8	71	0.053	✓	✓		✓	✓	✓			
	Carpinteria	Contractor				**0.067**	✓	✓							
	Las Flores Canyon 1	SBCAPCD			51	0.065	✓	✓	✓	✓		✓	✓		
	Paradise Road – NF	Contractor				0.064	✓	✓							
Non- Regulatory	Santa Ynez	SBCAPCD				0.060	✓								
	El Capitan	SBCAPCD			**98**	0.059	✓	✓	✓			✓	✓		
	Lompoc H St.	SBCAPCD	15.5 [2]	7.1 [2]	53	0.056	✓	✓	✓	✓	✓	✓			
	LFC Odor	SBCAPCD												✓	
	Lompoc HS & P	Contractor				0.063	✓	✓	✓				✓		
	Lompoc Odor	Contractor												✓	✓
	Nojoqui/Gaviota	SBCAPCD				0.060	✓	✓							
	VAFB STS	SBCAPCD			71	0.061	✓	✓	✓	✓		✓	✓		
	West Campus	Contractor							✓				✓	✓	✓
	Ellwood Odor	Closed												✓	✓

1) State PM10 24-hour Designation Values represent concentrations below the Expected Peak Day Concentration (EPDC) used to establish compliance with the State standard. 2) Based on 1 year of data.