

## **CHAPTER 10**

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# **STATE AND FEDERAL CLEAN AIR ACT REQUIREMENTS**

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## **10. STATE AND FEDERAL CLEAN AIR ACT REQUIREMENTS**

### **10.1 INTRODUCTION**

This 2001 Clean Air Plan (2001 Plan) is being prepared by the Santa Barbara County Air Pollution Control District (APCD) to satisfy various mandates of the 1990 federal Clean Air Act Amendments (Federal Act) and the California Clean Air Act of 1988 (State Act). This chapter presents an overview of all state and federal clean air act requirements and discusses how the work completed in conjunction with this 2001 Plan complies with all applicable requirements.

### **10.2 FEDERAL CLEAN AIR ACT MANDATES**

This section outlines the submittals that are required from the APCD to satisfy the provisions of the Federal Act that apply to maintenance areas and our current classification as a “serious” ozone nonattainment area.

**Section 107(d)(3) Redesignation** – In order to be redesignated as an attainment area, this 2001 Plan must meet the following five criteria under Section 107(d)(3)(E): 1) The United States Protection Agency (USEPA) must determine that the federal 1-hour ozone standard has been met; 2) USEPA must fully approve the applicable implementation plan under Section 110(k); 3) USEPA must determine that the improvement in air quality is due to permanent and enforceable reductions in emissions; 4) Santa Barbara County must have met all applicable requirements (local and state) under Section 110 and Part D; and 5) USEPA must fully approve a Maintenance Plan, including contingency measures, for our area under Section 175A.

As documented in Chapter 7 – Redesignation Request and Maintenance Plan, Santa Barbara County complies with all the requirements under Section 107(d)(3)(E) and 175A of the Federal Act and all relevant policies and procedures of the USEPA pertaining to these requirements.

**Section 110(2)(A) Implementation Plans** – Each implementation plan submitted to USEPA must be adopted by the State after reasonable notice and public hearing. Each plan shall include contains

enforceable emission limitations adequate to produce attainment, requires monitoring, compiling, and analyzing ambient air quality data. It must provide for adequate funding, staff, and associated resources necessary to implement SIP requirements, have provisions for Prevention of Significant Deterioration (PSD) and New Source Review (NSR), and require stationary source emissions monitoring and reporting.

As documented in Chapter 7 – Redesignation Request and Maintenance Plan, Santa Barbara County has complied and received USEPA approval on the 1994 Clean Air Plan and the 1998 Clean Air Plan. These plans comply with the requirements outlined in Section 110(2)(A).

**Section 175A Maintenance Plans** – Section 175A of the Federal Act outlines the general framework of a Maintenance Plan.

(a) Plan Revision. Each state which submits a request under Section 107(d) for redesignation of a nonattainment area for any air pollutant as an area which has attained the national primary ambient air quality standard for that air pollutant shall also submit a revision to the applicable State Implementation Plan to provide for the maintenance of the national primary ambient air quality standard for such air pollutant in the area concerned for at least 10 years after the redesignation. The plan shall contain such additional measures, if any, as may be necessary to ensure such maintenance.

(b) Subsequent Plan revisions. Eight years after redesignation of any area as an attainment area under Section 107(d), the State shall submit to the administrator an additional revision of the applicable SIP for maintaining the national primary ambient air quality standard for 10 years after expiration of the 10-year period referred to in subsection (a).

(c) Nonattainment Requirements Applicable Pending Plan Approval. Until such plan revision is approved and an area is redesignated as attainment for any area designated as a nonattainment area, the requirements of this part shall continue in force and effect with respect to such area.

(d) Contingency Provisions. Each plan revision submitted under this section shall contain such contingency provisions as the administrator deems necessary to assure that the State will promptly

correct any violation of the standard which occurs after the redesignation of the area as an attainment area. Such provisions shall include a requirements that the State will implement all measures with respect to the control of the air pollutant concerned which were contained in the State implementation plan for the area before redesignation of the area as an attainment area. The failure of any area redesignated as an attainment area to maintain the national ambient air quality standard concerned shall not result in a requirement that the State revise its State implementation plan unless the administrator, in the administrator's discretion, requires that State to submit a revised State implementation plan.

As documented in Chapter 7 – Redesignation Request and Maintenance Plan, Santa Barbara County complies with all the requirements under Section 107(d)(3)(E) and 175A of the Federal Act and all relevant policies and procedures of the USEPA pertaining to these requirements.

**Section 176(c) Conformity** – The USEPA was required to develop criteria and procedures by November 15, 1991 for determining the conformity of transportation and non-transportation (general) projects requiring federal agency approval with applicable nonattainment plans. These criteria and procedures were intended to ensure that such projects do not: cause or contribute to a new air quality standard violation; increase the frequency or severity of an existing violation; or delay timely attainment of a standard or any required interim emission reduction milestone. The USEPA promulgated the transportation conformity regulation on November 24, 1993, and the general conformity regulation on November 30, 1993. The transportation conformity regulation was amended in August 1995, November 1995, and August 1997.

Under the provisions of the Federal Act and the promulgated November 1993 regulations, Santa Barbara County was required to adopt its own transportation conformity rule by November 24, 1994, and a general conformity regulation by November 30, 1994. The APCD Board of Directors adopted Rule 701, Transportation Conformity, and Rule 702, General Conformity, on October 20, 1994. Rule 701 was revised in August 1998 in response to requirements in the August 1997 set of federal transportation conformity amendments. The APCD has submitted a revision to Rule 701, Transportation Conformity, to allow for the easier substitution of transportation control measures that are in this 2001 Plan.

**Section 182(a)(1) Emission Inventory** - The APCD was required to prepare a comprehensive 1990 base year emission inventory and submit this inventory to the USEPA by November 15, 1992. Section 172(c)(3) also requires that any nonattainment plan must include a comprehensive emission inventory.

ARB submitted the 1990 inventory to the USEPA on behalf of the APCD by November 15, 1992. However, the USEPA found the submittal incomplete due to the lack of a public hearing. A 1990 baseline inventory of the sources of pollution in Santa Barbara County was prepared as part of the 1994 Clean Air Plan and submitted to the USEPA by November 15, 1994. On January 8, 1997, the EPA approved this submittal, which satisfied the mandates of Section 182(a)(1).

The 1998 Clean Air Plan developed a 1996 emissions inventory to update the 1990 inventory and to forecast 1999 and 2005 emissions. These inventories were formally approved by the USEPA on August 14, 2000.

This 2001 Clean Air Plan uses a recently developed 1999 emissions inventory to demonstrate maintenance out through 2015 including future growth and controls. These inventories have been through the public review process and represent the most accurate information currently available.

**Section 182(a)(3) Emission Inventory Updates** - The APCD was required to adopt a rule by November 15, 1992, requiring sources emitting 25 or more tons of volatile organic compounds (VOC) or NO<sub>x</sub> per year to submit annual emission statements. The first emission statements were required by November 15, 1993.

On October 20, 1992, the APCD Board adopted Rule 212, Emission Statements, which required all stationary sources with permitted emissions, in the aggregate, of 10 tons or more of reactive organic compounds and nitrogen oxides to submit a written statement documenting the actual emissions of these pollutants. The first statements were required by Rule 212 to be submitted to the APCD by July 1, 1993. These statements were submitted to the EPA by the November 15, 1993 deadline.

**Section 182(b)(1) 1990-1996 Rate-of-Progress** – This section required a plan that provided for a minimum 15 percent reduction in VOC emissions between 1990 and 1996. These plans were due to the USEPA by November 15, 1993. Section 172(c)(2) required that the Plan demonstrate "reasonable further progress," defined under Section 171(1) to be annual incremental reductions as required to ensure attainment of national air quality standards by the applicable attainment date.

The APCD submitted a 1993 Rate-of-Progress Plan to the USEPA by November 15, 1993. This plan was found to be incomplete by USEPA and was amended as part of the 1994 Clean Air Plan, which was approved by the USEPA on January 8, 1997.

**Section 182(b)(2) and 182(f) Reasonably Available Control Technology** - The APCD had to adopt rules by November 15, 1992 requiring Reasonably Available Control Technology (RACT) on sources of VOC emissions. On April 7, 1994, the USEPA notified the APCD of the last remaining VOC RACT deficiency – Graphic Arts. A graphic arts VOC RACT rule (Rule 354) was adopted by the APCD and submitted to the USEPA on July 13, 1994.

As a “serious” nonattainment area, the APCD must apply NO<sub>x</sub> RACT to all sources that emit, or have the potential to emit 25 tons per year on NO<sub>x</sub>. All review of our permitted sources indicates that all sources that emit, or have the potential to emit 25 tons per year of NO<sub>x</sub> have been subject to RACT under our existing rules.

**Section 182(b)(3) Gasoline Vapor Recovery** - This section mandated that the APCD adopt a rule by November 15, 1992 requiring gasoline vapor recovery systems.

This requirement was satisfied by adoption of APCD Rule 316, Storage and Transfer of Gasoline, (adopted 10/71 and most recently revised 4/97).

**Section 182(c)(1) Enhanced Ozone Monitoring** – The USEPA was required to promulgate regulations for enhanced monitoring of ozone, VOC and NO<sub>x</sub>, by May 15, 1992. The USEPA adopted the required regulations on February 12, 1993.

Since Santa Barbara County was classified as a “serious” ozone nonattainment area on December 10, 1997, the APCD subsequently develop an enhanced monitoring program known as the Photochemical Assessment Monitoring System (PAMS). Documentation of this monitoring was provided in the 1998 Clean Air Plan and approved by the USEPA on August 14, 2000

**Section 182(c)(2)(A) Attainment Demonstration** - This section required that the 1998 Clean Air Plan demonstrate attainment of the federal 1-hour ozone standard by November 15, 1999, based on photochemical grid modeling. Section 172(c)(1) also requires attainment of the standard, but does not specify that a model to be used for the demonstration.

Chapter 7 and Appendix D of the 1998 Clean Air Plan documented the photochemical modeling conducted by the ARB. Based on information presented in Chapter 7 of the 1998 Clean Air Plan, the APCD demonstrated that the federal 1-hour ozone standard would be attained by November 15, 1999. This attainment demonstration was approved by USEPA on August 14, 2000. Further, this demonstration was verified with local monitoring data collected and quality assured in accordance with 40 CFR Part 58.

**Section 182(c)(2)(B) Post-1996 Rate-of-Progress** – This section required the APCD to submit a plan to the USEPA, that provides for at least a 9 percent reduction in ROC emissions from 1996 through 1999. This is in addition to the 15 percent reduction required by 1996 under Section 182(b)(1) for a total reduction of 24 percent by November 15, 1999.

The 1998 Clean Air Plan contained the Rate-of-Progress calculations required under this section and was approved by USEPA on August 14, 2000.

**Section 182(c)(3) Enhanced Vehicle Inspection and Maintenance** – This provision required the state of California to submit an enhanced inspection and maintenance program to reduce ROC and NOx emissions from on-road motor vehicles by November 15, 1992.

ARB submitted a State Implementation Plan (SIP) revision to EPA committing to adopt an enhanced inspection and maintenance program by November 15, 1993. In March 1994, the



Governor signed into law a three-bill legislative package that met USEPA requirements. Santa Barbara County does not meet the population requirements specified in the Federal Act and is not mandated to implement this program. However, the APCD continues to monitor the implementation of the enhancements to Smog Check II and has currently identified this as a contingency measure in this 2001 Plan.

**Sections 182(c)(4) and 246 Clean Fuel Vehicle Fleet Programs** – The ARB was to submit a program to require the use of clean fuel vehicles in centrally-fueled fleets comprising 10 or more vehicles located in serious and above ozone nonattainment areas by May 15, 1994.

On November 13, 1992, the ARB submitted an "opt-out" request to the USEPA per Section 182(c)(4)(B), in light of California's ongoing low emission vehicle control program. The USEPA conditionally approved this request on November 29, 1993, and indicated that the ARB needed to submit a complete SIP revision and additional information to receive full approval. On May 11, 1994, the ARB submitted the required revision and supplemental information. USEPA approved the California "opt-out" on August 27, 1999.

**Section 182(c)(5) Transportation Control Measures** - The APCD was required to demonstrate by November 15, 1999, and each third year thereafter whether current vehicle use, emissions and congestion levels are consistent with levels assumed in the attainment demonstration. All forecast on-road vehicle activity estimates used as inputs to the attainment demonstration are described in Appendix C of the 1998 Clean Air Plan. Also included in Appendix C was a discussion on how these vehicle activity estimates will be monitored and tracked. If the actual levels exceed the projected levels, then the APCD is required to submit, within 18 months, a plan revision to implement additional transportation control measures to augment those described in Chapter 5.

This requirement was satisfied with the approval of the 1998 Clean Air Plan by the USEPA on August 14, 2000, and is not required in this 2001 Plan.

**Sections 182(c)(9) and 172(c)(9) Contingency Measures** - Nonattainment plans need to include contingency measures to ensure that anticipated progress toward attaining national air quality

standards occurs as anticipated. Section 172(c)(9) requires contingency measures to be undertaken if an area fails to make "reasonable further progress" or attain air quality standards by the required target date. Section 182(c)(9) requires contingency measures be implemented in serious and above ozone nonattainment areas if any emission reduction milestone is missed. Contingency measures must be structured so that they can be implemented without additional rulemaking activities.

The 1998 Clean Air Plan documented a comprehensive control strategy (including contingency measures) to attain the federal 1-hour ozone standard. These measures were approved by the USEPA on August 14, 2000. Since we attained the federal 1-hour ozone standard by the November 15, 1999 milestone date, the contingency measures were not required. This 2001 Clean Air Plan also identifies contingency measures to satisfy the requirements of Section 175A.

**Section 182(g)(2) and (3) Milestone Compliance Demonstration** – These sections require the APCD to submit a demonstration to the USEPA within 90 days of each emission reduction target milestone date (not including an attainment date on which a milestone occurs where the standard has been attained), indicating whether or not emissions have been reduced consistent with the targets outlined in the 1998 Clean Air Plan. Since we attained the federal 1-hour ozone standard by the November 15, 1999 milestone date, a milestone compliance demonstration was not required.

### **10.3 CALIFORNIA CLEAN AIR ACT MANDATES**

As indicated previously, an integral objective of this 2001 Plan is to satisfy the requirements of the California Clean Air Act (State Act). The APCD is required to submit a triennial progress report and a triennial update to the 1991 Air Quality Attainment Plan under the provisions of the State Act. Recognizing that many of the required submittals duplicate those mandated by the Federal Act, the APCD has developed this 2001 Plan to address all state and federal planning requirements.

#### **10.3.1 TRIENNIAL PROGRESS REPORT**

**Section 40924(b)** of the California Health and Safety Code (H&SC) requires the APCD to conduct an assessment of its air quality control program every three years, starting in 1994. This

assessment must address the expected and revised emission reductions scheduled for adoption during the previous three years. This triennial report must also include an assessment of progress based on monitored pollutant levels, modeling techniques and air quality indicators.

The emission control measures are presented in Chapters 4 and 5. In addition, Table 10-1 summarizes APCD rule activity from 1998 to 2000. A summary of ambient air quality data for Santa Barbara County is presented in Chapter 2 and the air quality indicators are presented in Chapter 11.

### 10.3.2 TRIENNIAL PLAN REVISION

**H&SC Section 40925(a)** requires the APCD to review and revise its attainment plan at least once every three years, beginning in 1994. The review and revisions are to correct for any deficiencies in meeting the interim measures of progress incorporated into the plan pursuant to **Section 40914** [emission reductions], and to incorporate new data or projections.

**Correct Deficiencies in Meeting Interim Measures of Progress:** The APCD has not identified any significant deficiencies in meeting the 1991 AQAP rule adoption schedule. Chapters 4 and 5 present a discussion of the stationary source and transportation control measures as well as an updated adoption schedule for each proposed control measure.

**Incorporate New Data and Projections:** This plan includes a reassessment of emission growth forecasts and control measure effectiveness estimates presented in Chapters 4, 5, and 6.

### 10.3.3 OVERALL PLAN REQUIREMENTS

**Sections 40912 through 40922 of the H&SC** specify overall requirements that apply to any plan submitted to the ARB to satisfy the State Act requirements. The requirements applicable to Santa Barbara County are discussed below.

**Transport Mitigation (H&SC Section 40912):** Santa Barbara County has been identified as a transport contributor (as part of the South Central Coast Air Basin) to the South Coast Air Basin. The APCD has satisfied the transport mitigation requirements through the application of Best Available Retrofit Control Technology (BARCT) requirements by January 1, 1994.

**Cost Effective Strategy (H&SC Section 40913(b)):** A cost effectiveness analysis of the control measures is included in Chapter 4 and Appendix C of the 1991 AQAP and Appendix B of this 2001 Plan.

**Annual Emissions Reduction (H&SC Section 40914):** The APCD must demonstrate a reduction in APCD emissions of 5 percent or more per year for each nonattainment pollutant averaged over every consecutive three-year period. In the 1991 AQAP, the APCD identified every feasible control measure in lieu of the 5 percent annual emission reduction requirement. The 1998 Clean Air Plan was conditionally approved by the ARB (Resolution 99-2b) with the requirement that APCD provide a schedule to review the further study measures identified in the plan, complete this review, and make any appropriate rulemaking commitments based on this review. This 2001 Plan includes the results of this review and identifies every feasible measure in Chapters 4 and 5.

**Contingency Measures (H&SC Section 40915):** Contingency measures are to be implemented in the event the ARB finds that the APCD fails to meet interim goals or maintain adequate progress towards attainment. Proposed contingency measures are discussed in Chapters 4 and 5.

**Moderate Air Pollution Areas (H&SC Section 40918(a)):** The attainment plan must include the following:

- (1) A stationary source control program which achieves no net emission increases for sources which emit or have the potential to emit 25 tons per year of any nonattainment pollutant;
- (2) Stationary sources which emit more than 250 tons per year must be equipped with best available retrofit control technology;
- (3) Reasonable available transportation control measures;
- (4) Provisions to develop an area-wide source and indirect source programs;
- (5) An emissions inventory system; and
- (6) Public education programs.

APCD Regulations II (Permits) and III (Prohibitions) fulfill the first two requirements. Transportation control measures are described in Chapter 5 of this document fulfill the third requirement. The APCD has an inventory system in place that was utilized to prepare the emissions inventory presented in Chapter 3 to fulfill the fifth requirement. The fourth and sixth requirements are fulfilled with the APCD public education, area-wide and indirect source, and other programs, which are described in Chapter 8.

**Control Measure Cost-Effectiveness (H&SC Section 40922):** Analysis of control measure cost effectiveness was included in Chapter 4 of the 1991 AQAP and in Appendix B of this 2001 Plan.

## **10.4 CONCLUSIONS**

This 2001 Plan was prepared by the Santa Barbara County APCD to address all applicable state and federal mandates. Specifically, this 2001 Plan provides a maintenance demonstration for the federal 1-hour ozone standard and provides for expeditious attainment of the state 1-hour ozone standard. Moreover, this 2001 Plan complies with all applicable sections of the 1990 Federal Clean Air Act Amendments and the California Health and Safety Code.

**TABLE 10 -1**

<b>Santa Barbara County APCD Rule Activity from 1998-2000 Summary of Measures (Rules Adopted or Implemented)</b>					
<b>Rule #</b>	<b>CAP ID#</b>	<b>Description</b>	<b>Adoption Date</b>	<b>Implementation Date</b>	<b>Comments</b>
344	R-PP-1	Petroleum Sumps, Pits, and Well Cellars	November 1994	April 1998	Owners and operators of sumps and pits with surface areas less than 2000 square feet needed to comply with the rule by April 30, 1998.
330	R-SC-2	Surface Coating of Metal Parts and Products	June 1979 January 2000	January 2000	The January 2000 revisions to Rule 330 corrected USEPA-identified deficiencies. The changes had a neutral effect on emission reductions committed to in the SIP.
351	R-SC-5	Surface Coating of Wood Products	August 1993 August 1998	August 1998	The August 1998 revision delayed the 1999 limits to 2005, provided an exemption for coatings used on wood products used in automobiles, and revised recordkeeping to be monthly. The APCD is withholding the ROC limits that are to be implemented on July 2005 from the State Implementation Plan until they are actually implemented.
353	R-SL-9	Adhesives and Sealants	August 1999	August 1999	
352	N-XC-1 N-XC-3	Natural Gas-Fired Fan-Type Central Furnaces and Residential Water Heaters	September 1999	March 2000	CAP ID# N-XC-2 for commercial water heaters has become a 2001 CAP proposed control measure for "Large Water Heaters and Small Boilers, Steam Generators, and Process Heaters," Rule 360.