

FINAL

**VENTURA COUNTY
TRIENNIAL ASSESSMENT
AND PLAN UPDATE**

2006 - 2008



**Adopted by the
Ventura County Air Pollution Control Board**

June 14, 2011

VENTURA COUNTY AIR POLLUTION CONTROL DISTRICT
669 COUNTY SQUARE DRIVE, 2ND FLOOR
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1. BACKGROUND AND SUMMARY

In 1988, the California Legislature enacted the California Clean Air Act (CCAA) to attain and maintain the state clean air standards by the earliest practicable date. The CCAA required local air districts in violation of the state ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide standards, to adopt attainment plans for those standards by July 1991. On October 8, 1991, the Ventura County Air Pollution Control Board (APCB or Board) adopted the 1991 Ventura County Air Quality Management Plan (AQMP) for the California one-hour ozone standard. Ventura County was and remains in attainment of the state carbon monoxide, sulfur dioxide, and nitrogen dioxide standards.

The Triennial Assessment shows that Ventura County is still making significant progress towards meeting the state ozone standards. Furthermore, the Triennial Assessment has not identified any deficiencies with respect to meeting progress goals towards the state one-hour ozone standard. However, the “every feasible measure” analysis conducted for the Triennial Assessment identified several existing District rules with potential for enhancement. It also identified three possible new control measures that would help Ventura County continue its progress towards attaining the state ozone standards.

2. TRIENNIAL ASSESSMENT AND PLAN UPDATE REQUIREMENTS

The CCAA requires that once every three years beginning in 1994, the state’s air districts are to assess their progress towards attaining the state clean air standards, the amount of emission reductions achieved over the three-year period, correct any deficiencies in meeting progress goals, and incorporate new data and projections into their state clean air plans. The most recent assessment period is 2006 through 2008.

The California Health and Safety Code Sections [40924](#) and [40925](#) require that the Triennial Assessment Plan Update include the following:

- Improvement in air quality based upon air quality indicators identified by the ARB (Section 40924);
- Population-related, industry-related, and vehicle-related emissions growth (Section 40925);
- Control measures adopted by the District (Sections 40924 and 40925); and,
- Review of “every feasible measure” (Section 40925).

Table 1 provides a more complete list of triennial plan requirements and where those requirements are addressed in the Triennial Assessment.

Table 1
CCAA Triennial Assessment Requirements

Requirement	Submittal
Air Quality Analysis	Sections 3 & 4
Population Trends	Section 4
Population Exposure	Not available – no longer provided by ARB
Emission Inventory	Section 5 2007 AQMP (Chapter 2)
Control Measures	Section 7 & Appendix A 2007 AQMP (Chapter 3)
Control Strategy Cost-Effectiveness	Section 7.1
Transportation Control Measures	2007 AQMP – Chapter 3 (Section 3.2)
Vehicle Trips & Vehicle Miles Traveled Trends	2007 AQMP– Chapter 3 (Section 3.2.4) & Chapter 4 (Sections 4.1 & 4.1.2)
Contingency Measures	2007 AQMP (Chapter 7)
Every Feasible Measure	Section 8
Expeditious Adoption	Section 8
Ozone Transport	Section 10
Public Information	Section 11

3. AIR QUALITY INDICATORS

For prior triennial assessments, the California Air Resources Board (ARB) has recommended that local districts use three air quality indicators to assess progress in meeting the state ambient one-hour ozone standard: population-weighted exposure, area-weighted exposure, and expected peak day concentration (EPDC). However, due to budget and staff constraints, for this triennial update, ARB has only provided the EPDC and not the exposure indicators.

The EPDC represents the concentration expected to be exceeded at a particular air monitoring site once per year, on average. It is based on a statistical calculation of daily maximum one-hour and eight-hour ozone data collected at each air quality monitoring site in the county over a three-year period. For example, the 2008 EPDC values use 2006 – 2008 monitoring data. The EPDC is useful for tracking air quality progress at individual air quality monitoring locations. Because it uses a robust statistical calculation, it is relatively stable, thereby providing a trend indicator that is not highly influenced by year-to-year variations in meteorology.

Figures 1 and 2 present the one-hour and eight-hour EPDC trend values for each of the air quality monitoring stations for 1988 through 2008. Peak day ozone concentrations have significantly declined over the period and, with the exception of Simi Valley, are either below or near the respective state ozone standard. Tables 2 and 3 present the percent reduction in the one-hour and eight-hour EPDC values. These reductions are graphically presented in Figures 3 and 4.

The one-hour percent reductions range from a low of 28.9 percent in Piru to 44.7 percent in El Rio. The average one-hour reduction was over 36.1 percent. The corresponding eight-hour percent reductions range from a low of 24.8 percent in Piru to 42.8 percent in El Rio, with the average slightly over 33.1 percent.

Figure 1
Expected Peak Day Concentration Trends for Ozone (1-hour)

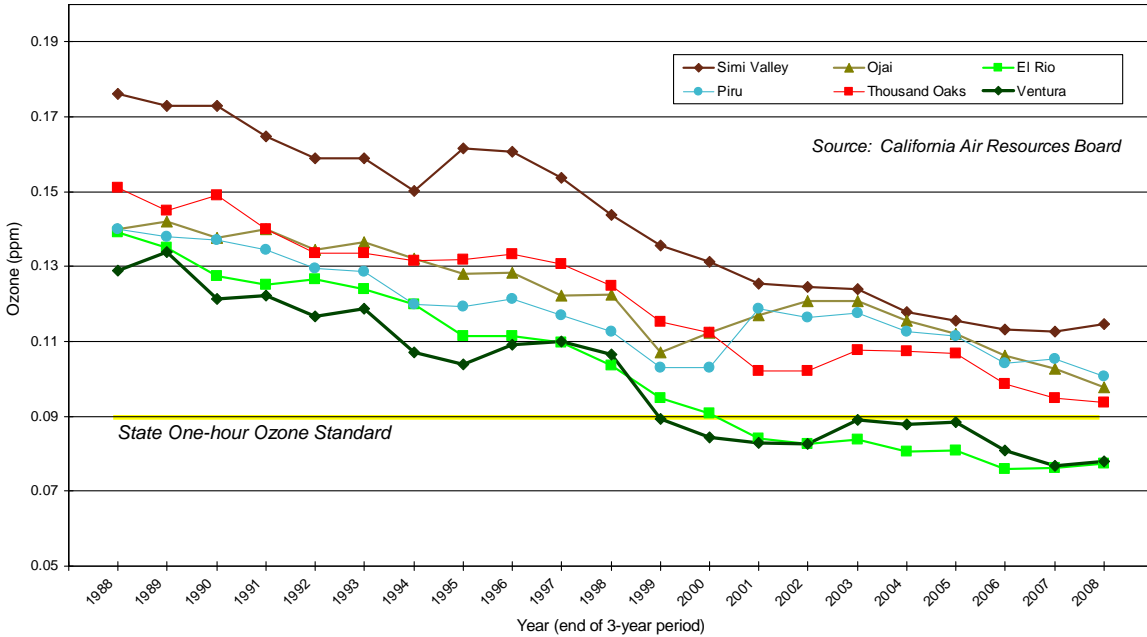


Figure 2
Expected Peak Day Concentration Trends for Ozone (8-hour)

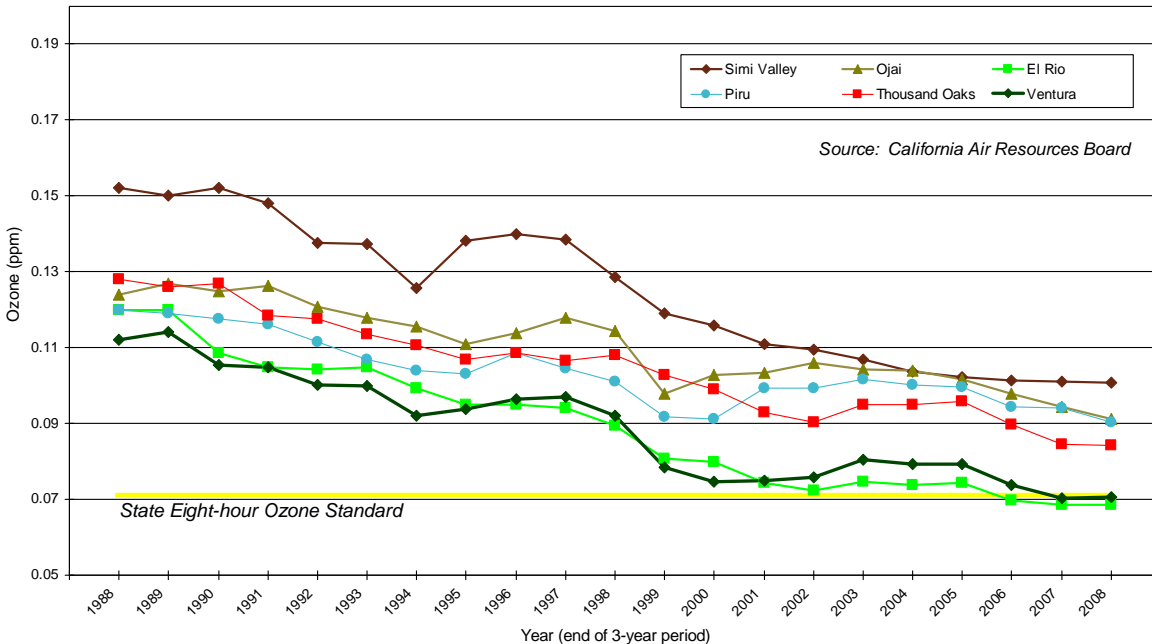


Table 2
Expected Peak Day 1-hour Ozone Reductions

Monitoring Site	1986 - 1988	2006 - 2008	Percent Reduction from 1988 - 2008
Simi Valley	17.6*	11.5	34.7
Ojai	14.2	9.8	31.0
El Rio	14.1	7.8	44.7
Piru	14.2	10.1	28.9
Thousand Oaks	15.2	9.4	38.2
Ventura	12.9	7.8	39.5

* Expected peak day concentration for ozone, in parts per hundred million (pphm).
Source: Air Resources Board (January 2010)

Figure 3
Percent Reduction in Expected Peak Day 1-hour Ozone Concentrations: 1988 – 2008

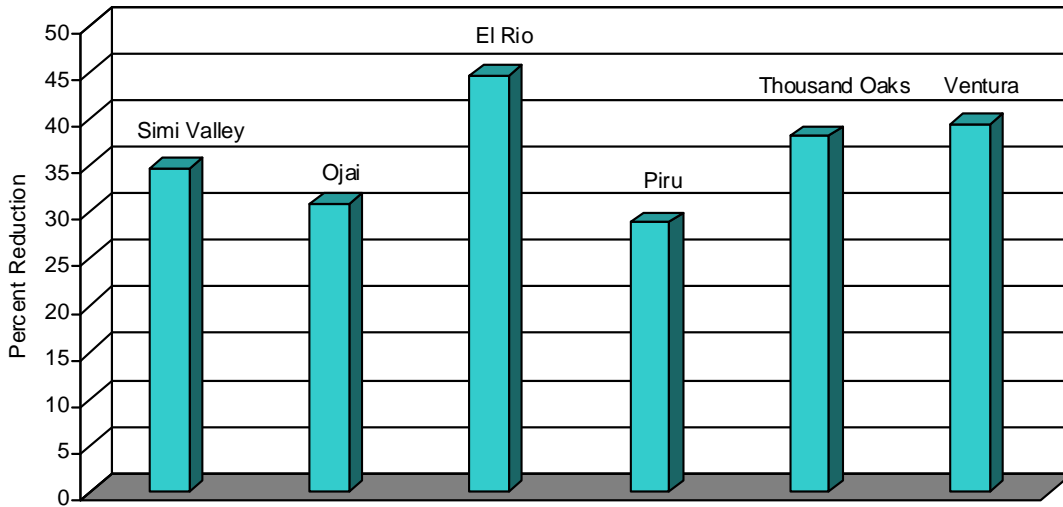
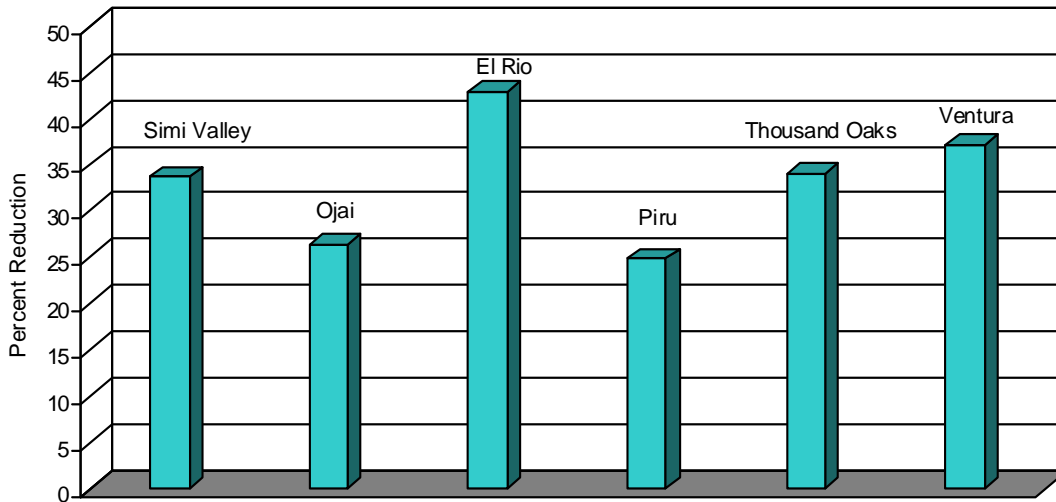


Table 3
Expected Peak Day 8-hour Ozone Reductions

Monitoring Site	1986 - 1988	2006 - 2008	Percent Reduction from 1988 - 2008
Simi Valley	15.2*	10.08	33.7
Ojai	12.4	9.13	26.4
El Rio	12	6.87	42.8
Piru	12	9.03	24.8
Thousand Oaks	12.8	8.43	34.1
Ventura	11.2	7.05	37.1

* Expected peak day concentration for ozone, in parts per hundred million (pphm).
Source: Air Resources Board (January 2010)

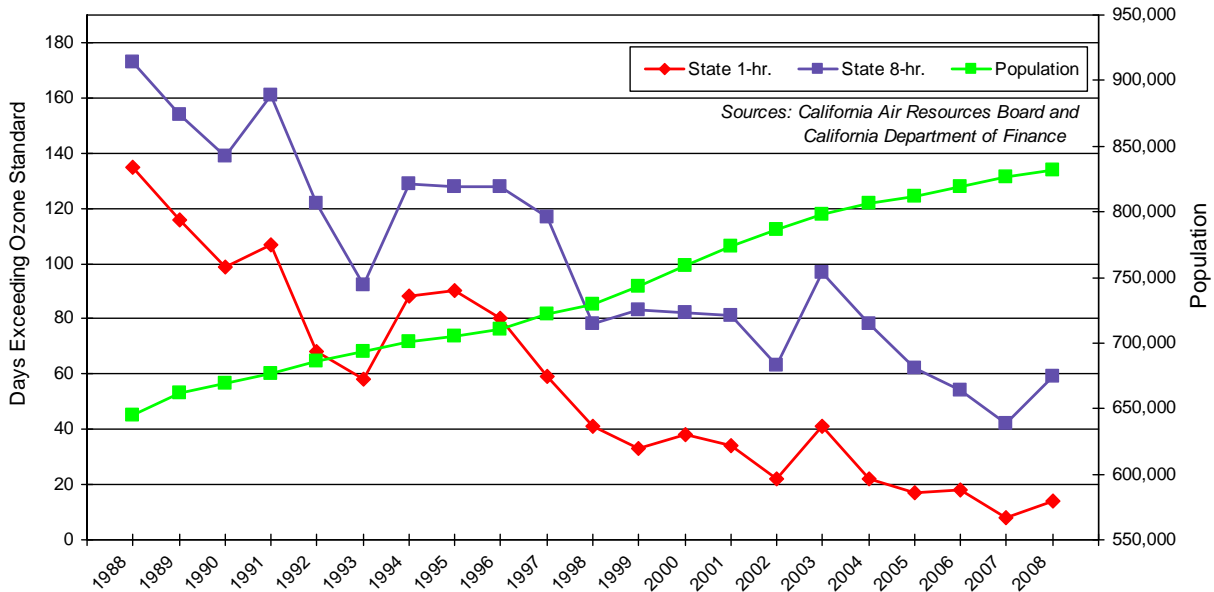
Figure 4
Percent Reduction in Expected Peak Day 8-hour Ozone Concentrations: 1988 – 2008



4. OZONE AND POPULATION TRENDS

As shown in Figure 5, since 1988, ambient ozone concentrations in Ventura County have improved dramatically with respect to the state ozone standards. In 1988, Ventura County had 135 days and 173 days over the state one-hour and eight-hour ozone standard, respectively. However, in 2008 there were only 14 days over the state one-hour standard and 59 days over the state eight-hour standard, up from 8 and 42 days, respectively, in 2007. These improvements have occurred despite a 29 percent increase in Ventura County’s population.

Figure 5
1-hour and 8-hour Ozone and Population Trends: 1988 – 2008



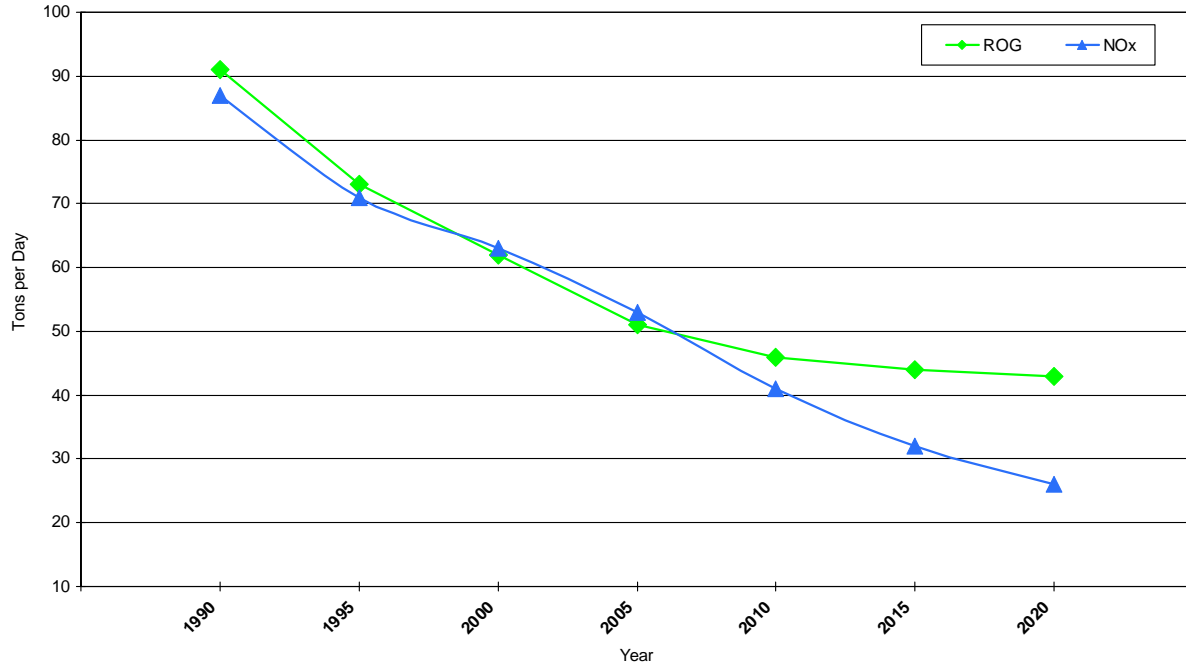
5. EMISSION INVENTORY TRENDS

This section presents reactive organic gases (ROG) and nitrogen oxide (NOx) emission inventory trends for Ventura County (onshore Ventura County and within three miles of the coastline) for years 1990 through 2020. Emission forecasts reflect the anticipated effects of socioeconomic changes and implementation of local, state, and federal control measures during the forecast years.

Overall, ROG and NOx emissions are still declining, as they have for many years, continuing Ventura County’s progress towards meeting the state and federal ozone standards. This decline in ozone precursor emissions is occurring despite growing population and motor vehicle usage. As shown in Figure 6, from 1990 though 2020, ROG emissions are expected to decline by 51.9 percent and NOx by 35.7 percent. The greatest ROG and NOx declines are coming from mobile sources, mostly a result of ARB’s mobile source control strategies.

Although still trending downward, the decline in ROG emissions are starting to level off but NOx emissions are expected to continue declining through at least 2020. The greatest ROG and NOx declines are coming from mobile sources, mostly a result of ARB’s mobile source control strategies.

Figure 6
ROG and NOx Emission Trends: 1990 – 2020



Source: http://www.arb.ca.gov/aqd/almanac/almanac09/excel/tableA_31.xls

6. OVERALL PROGRESS

The air quality indicators presented in Section 3, together with the ozone concentration declines presented in Section 4, and the emission trends in Section 5, indicate that Ventura County has made exceptional progress towards attaining the state one-hour ozone standard. Such improvement should continue as new local, state, and federal control strategies and programs presented in the 2007 AQMP are implemented.

7. AQMP CONTROL MEASURE AND RULEMAKING UPDATE

This section summarizes the District's rulemaking activity for AQMP control measures during the 2006 – 2008 triennial assessment period. This section does not include other rulemaking activities unrelated to AQMP control measures, such as rules for other air pollutants, administrative rule changes, rule language cleanups and fix-ups, and air permitting rules. Information regarding the District's current rulemaking activities is available on the District's [Rule Development](#) website.

7.1. Control Strategy Cost Effectiveness

The CCAA requires that an emissions control strategy for the state one-hour ozone standard be cost effective, when viewed in its entirety. Furthermore, the cost effectiveness of individual control measures must be determined and presented in rank order. The 1991 AQMP, prepared for the state one-hour ozone standard, included cost effectiveness estimates for each proposed control measure. Only those control measures judged cost effective and technologically feasible

for Ventura County were included in that plan. Such has been the case for every Ventura County AQMP before or since, including the 2007 AQMP, Ventura County’s most recent clean air plan. The proposed rule revisions included in this triennial assessment were based on multi-factor evaluations that included estimates of cost effectiveness. Likewise, District staff will not recommend any control measure for adoption unless shown to be cost effective and appropriate for Ventura County.

7.2. Control Measures Amended or Implemented 2006 – 2008 and Control Measures Still Reducing Emissions Beyond the 2002 Emission Inventory Base Year

Table 4 presents those control measures adopted/amended during the triennial period and their respective maximum emissions reductions beyond previous AQMP projections. Except for Control Measure R-311, which was fully implemented in 2010 and is further reducing ROG emissions by 0.23 tons per day, the emissions reductions from these measures are rather minimal. This reflects the maturity of the District’s clean air program.

**Table 4
Control Measures Adopted or Amended 2006 – 2008**

CM Number	Control Measure Name	District Rule	Year Adopted/ Amended	Year Fully Implemented	Maximum Emission Reduction (tons/summer day)
ROG Control Measures					
R-306	Wood Product Coatings	74.30	2006	2007	0.001
R-311	Motor Vehicle & Mobile Equipment Coating Operations	74.18	2008	2010	0.230
R-332	Surface Coating of Metal Parts & Products	74.12	2008	2009	0.020
R-606	Soil Decontamination Operations	74.29	2008	2009	0.020
Total ROG Emission Reductions					0.271

Data source: Ventura County APCD

7.3. Status of Control Measures Scheduled for Revision 2006 – 2008

Table 5 presents the status of the fifteen control measures scheduled for adoption or revision during the 2006 - 2008 triennial assessment period. The District implements each control measure in Table 5 through a District rule adopted by the Ventura County Air Pollution Control Board. This means that Board actions to adopt, revise, or repeal control measures are actually actions to adopt, revise, or repeal the associated District rules. The proposed rule revisions were included to meet the “every feasible measure” requirements of the CCAA and/or Reasonably Available Control Technology (RACT) requirements of the federal Clean Air Act.

Of the fifteen control measures in Table 5, the District's governing board adopted revisions to four: R-306 (Rule 74.30), *Wood Product Coatings*; R-311 (Rule 74.18), *Motor Vehicle & Mobile Equipment Coating Operations*; R-332 (74.12), *Surface Coating of Metal Parts & Products*; and, R-606 (Rule 74.29), *Soil Decontamination Operations*.

Revisions to R-306 reduced certain ROC content limits to coincide with those in South Coast AQMD Rule 1171, *Solvent Cleaning Operations*.

Revisions to R-311 included the new requirements established by ARB's Suggested Control Measure (SCM) for automotive coatings and cleaners. The most significant proposed change is the new low-ROC content requirement for color coats used commonly in basecoat/clear coat auto body shop repairs.

The revisions to R-332 were to reduce certain ROC content limits to bring District Rule 74.12 in line with South Coast AQMD Rules 1107, *Coating of Metal Parts and Products*, and 1171, *Solvent Cleaning Operations*.

Revisions to R-606 expanded Rule 74.29 to include requirements for the excavation, transportation, and handling of active and inactive contaminated soil. Many of the proposed revisions appear in the May 11, 2001, revision to South Coast AQMD Rule 1166, *Volatile Organic Compound Emissions from Decontamination of Soil*. Other revisions were taken from Bay Area Air Quality Management District Rule 8-40, *Aeration of Contaminated Soil and Removal of Underground Storage Tanks*.

Of the remaining control measures in Table 5, one, R-334, *Wood Product Coatings*, was found infeasible by the APCB on September 11, 2007, based on District staff's regulatory cost/air quality benefit analysis.

The District reaffirms its commitment to rulemaking for the other control measures in Table 5, but has not yet set rulemaking schedules for the measures because of other rule development efforts and staff commitments.

Table 5
Status of Control Measures Scheduled for Revision 2006 – 2008

CM Number	Control Measure Name	District Rule	Affected Source Type	Status/Comments
R-306	Wood Products Coating	74.30	Wood product finishers	<i>Rule revisions adopted 6/27/06.</i> ROC limits reduced for surface preparations and cleanup to comply with CCAA “every feasible measure” requirements.
R-308	Aerospace Component Manufacturing and Assembly	74.13	Aerospace Assembly and component manufacturing operations	<i>Rule revision not yet adopted – adoption date to be determined.</i> Rule revision included to meet CCAA “every feasible measure” and CAA RACT requirements.
R-311	Motor Vehicle & Mobile Equipment Coating Operations	74.18	Auto body shops	<i>Rule revision adopted 11/11/2008.</i> Rule revision adopted to meet CCAA “every feasible measure” and CAA RACT requirements.
R-312	Semiconductor Manufacturing	74.21	Semiconductor manufacturing operations	<i>Rule revision not yet adopted – adoption date to be determined.</i> Rule revision included to meet CCAA “every feasible measure” and CAA RACT requirements.
R-316	Graphic Arts	74.19	Graphic arts operations	<i>Rule revisions scheduled for adoption second quarter 2011.</i> Rule revisions included to meet CAA RACT requirements.
R-321	Marine Coatings	74.24	Marine coating operations	<i>Rule revision not yet adopted – adoption date to be determined.</i> Rule revisions included to meet CCAA “every feasible measure” and CAA RACT requirements.
R-328	Surface Cleaning & Degreasing	74.6	Facilities cleaning a wide variety of components	<i>Rule revisions not yet adopted – adoption date to be determined.</i> Rule revisions included to meet CCAA “every feasible measure” requirement.
R-329	Architectural Coatings	74.2	Suppliers of architectural coatings	<i>Rule revisions adopted 1/11/2010.</i> Rule revisions adopted to meet CCAA “every feasible measure.”
R-331	Batch Loaded Vapor Degreasing	74.6.1	Vapor degreasing operations (aerospace/electronics, etc.)	<i>Rule revisions not yet adopted – adoption date to be determined.</i> Rule revisions included to meet CCAA “every feasible measure.”
R-332	Surface Coating of Metal Parts & Products	74.12	Manufacturers and refinishers of metal parts and products	<i>Rule revisions adopted 4/8/2008.</i> Rule revisions adopted to meet CCAA “every feasible measure” and CAA RACT requirements.
R-334	Wood Product Coatings	74.30	Wood coating operations	<i>Rule revision found to be infeasible 9/11/07</i> Rule revisions included to meet CCAA “every feasible measure” and CAA RACT requirements.

Table 5 (cont'd)

CM Number	Control Measure Name	District Rule	Affected Source Type	Status/Comments
R-431	Storage & Transfer of Gasoline	70	Gasoline stations	<i>Rule re-evaluated and rule revisions found to be no longer needed.</i> Rule revisions included to meet CCAA “every feasible measure” requirements.
R-606	Soil Decontamination Operations	74.29	Fuel-contaminated soils	<i>Rule revisions adopted 4/8/2008.</i> Rule revisions included to meet CCAA “every feasible measure” requirement.
N-105	Boilers, Steam Generators & Process Heaters	74.15	Boilers (5MMBtu+)	<i>Rule revision not yet adopted – adoption date to be determined.</i> Rule revision included to meet CCAA “every feasible measure” requirement.
TBD*	Oil Well Degassing	TBD	Oil wells	<i>Rule revisions not yet adopted – adoption date to be determined.</i> Rule revisions included to meet CCAA “every feasible measure” requirements.

* To be determined

8. EVERY FEASIBLE MEASURE

Health and Safety Code [Section 40914](#) requires that clean air plans for attaining the California one-hour ozone standard reduce emissions of ROG and NOx by a minimum of five percent per year, averaged over each consecutive three-year period. The 1991 Ventura County AQMP did not meet that emission reduction target. However, it was able to satisfy the alternative requirement of including “every feasible measure (also known as “all feasible measures”) . . . and an expeditious adoption schedule,” as allowed by Section 40914(b)(2). On August 13, 1992, the ARB approved the 1991 AQMP based on this “every feasible measure” determination of progress.

District staff has conducted “every feasible measure” assessments for all of the District’s prior triennial assessments. For this Triennial Assessment, staff evaluated 20 District rules by comparing them to similar rules of other California air districts. District staff identified four District rules with potential for enhancement and three others that would be new for Ventura County (see Table 6). Appendix A presents a summary of the “every feasible measure” analyses conducted for this triennial assessment.

The District commits to rulemaking for the rules in Table 6, during which District staff will further evaluate the feasibility of each for Ventura County. Emission reductions will be estimated for those determined to be feasible prior to rule adoption. Staff believes that Ventura County APCD rules implement “every feasible measure” for all other emission source categories under its jurisdiction.

**Table 6
Measures Potentially Feasible for Ventura County**

CM Number	District Rule	Control Measure Description	Rulemaking Schedule
R-324	74.19.1, <i>Screen Printing Operations</i>	<ul style="list-style-type: none"> Limit screen printing cleaners to 100 g/l consistent with South Coast AQMD Rule 1171 	TBD*
N-102	74.11.1, <i>Large Water Heaters & Small Boilers</i>	<ul style="list-style-type: none"> Limit NOx emissions from large water heaters and small boilers to 14 ng/J, consistent with South Coast AQMD Rule 1146.2. 	2013**
N-105	74.15.1, <i>Boilers, Steam Generators & Process Heaters</i>	<ul style="list-style-type: none"> Limit NOx emissions from boilers, steam generators, and process heaters with capacities between 1,000,000 and 5,000,000 BTU/hr to as little as 9 ppm, consistent with South Coast AQMD Rule 1146.1. Implementation of the South Coast Rule 1146.1 limits began on January 1, 2011, and ends on January 1, 2015. VCAPCD will schedule a revision to Rule 74.15.1 after the final South Coast AQMD implementation date has been in effect for one year (January 1, 2016). 	2016**
N-110	74.22, <i>Natural Gas Fan-Type Central Furnaces</i>	<ul style="list-style-type: none"> Limit NOx from natural gas fan-type central furnaces to 14 ng/J consistent with South Coast AQMD Rule 1111. 	2019**
New (TBD)	TBD, <i>Metal Working Fluids & Direct Contact Lubricants</i>	<ul style="list-style-type: none"> Replace high-ROC oil-based lubricants with water-based or synthetic lubricants consistent with South Coast AQMD Rule 1144 	TBD
New (TBD)	TBD, <i>Low-ROC Spray Gun Cleaning</i>	<ul style="list-style-type: none"> Eliminate the current vapor pressure limit of 45 mm Hg for spray equipment in Rules 74.12, 74.14, Rule 74.18 & Rule 74.30 Establish a new ROC content limit for spray equipment in Rules 74.13, 74.20, 74.24, and 74.24.1. 	TBD
New (TBD)	TBD, <i>Flaring or Flare Minimization</i>	<ul style="list-style-type: none"> Adopt a new rule to control flaring at oil & gas facilities 	TBD

* To be determined

** Based on the implementation schedule for the corresponding South Coast AQMD rule

9. CONTROL MEASURES NOT RETAINED IN THE 2007 AQMP

Several control measures that were in the 1994 AQMP are not in the 2007 AQMP for either the federal eight-hour ozone standard or the state one-hour ozone standard. Section 3.1.8 of the 2007 AQMP presents these measures.

10. OZONE TRANSPORT

The CCAA directs ARB to assess the contribution of ozone and ozone precursors in upwind basins or regions on ozone concentrations that violate the State ozone standard in downwind basins or regions. The movement of ozone and ozone precursors between basins or regions is termed transport. The CCAA also directs ARB to establish mitigation requirements for upwind districts commensurate with their contributions to the air quality problems in downwind basins or regions.

Over the last decade, the ARB has published several transport reports that include technical assessments of transport relationships between air basins and regions in California. Along with these technical assessments, the reports have included mitigation requirements for ensuring that upwind areas do their part to limit the effects of transport on their downwind neighbors. These two important components are available on the following ARB websites: [Transport Assessments](#) and [Transport Mitigation](#). ARB completed its most recent transport assessment, [Ozone Transport Mitigation in California](#), in 2004.

ARB transport assessments indicate that Ventura County, as part of the South Central Coast Air Basin, impacts ozone levels in the South Coast Air Basin. This means that Ventura County must comply with ARB's transport mitigation requirements. The District complies with these requirements through its rules and permitting programs, including adoption of "every feasible measure," and application of Best Available Retrofit Control Technology to existing sources of ozone precursors. The county's greatly improved air quality over the last 20 or so years provides direct evidence that Ventura County has and is mitigating ozone transport into the South Coast Air Basin.

11. PUBLIC INFORMATION

The District conducts a public information program through its Public Information Division. It does this through a variety of both traditional and innovative public information techniques including: the [District website](#), publications and creative materials, educational programs, outreach events, advertising programs, media relations, and special projects. For more information about the District's public information program, visit the District's [Public Information Division](#) webpage.

In summary, during the period 2006 – 2008, the Public Information Division distributed approximately 153,000 pieces of public information material; 276,000 supplements in the *Ventura County Star* newspaper; spoke to over 9,000 individuals through educational programs, outreach events, and movie screenings; and printed or ordered over 141,000 materials. More detailed information about Public Information Division activities during the period 2006 – 2008 is presented below.

Publications and Creative Materials: Public Information created the *Skykeeper Activity Book*, *7 Days to Cleaner Air Commuter's Guide*, "Don't top off" postcards, "Give air pollution a place in your heart" cards, Frisbees for Energy Information Day, 40th anniversary stickers, APCD posters, sticky notes, airbags, and Clean Airhead pens. Public Information also reordered and reprinted many other promotional materials. It also produced the District's monthly report, [Skylines](#).

Educational Programs: Public Information actively informs Ventura County students about air pollution through outreach events and presentations. In 2008, work began on an educator's guide to the District's award-winning film *Air – the search for one clean breath*. Middle school and high school instructors will have a guide and accompanying classroom lessons that will enable students to understand more about air quality by expanding upon the material presented in

the film. The guide was coordinated by the [California Regional Environmental Education Community](#) (CREEC), and written and field-tested by California teachers.

District staff has been educating middle school students with the *Clean Air Quest* classroom presentation since 2000. This interactive presentation includes a Jeopardy-style game that involves students with the links between air quality and transportation. Public Information also makes available *Air Town*, an activity program for children ages 5 – 9 in summer camps, day care centers, and after-school programs. These programs continued through the middle of calendar year 2006.

Public Information also conducts educational events, including the *Interactive Science Career Expo*, in conjunction with the Ventura County Science Fair. It also gives three Science Fair awards to air quality projects. Additionally, Public Information has participated in Ventura County's clean air and transportation student calendar project for many years. Other air districts throughout the country have copied this concept.

Clean Air Month Supplement: Public Information published the *Clean Air Today* supplement in the *Ventura County Star* in 2006, 2007, and 2008. The supplement was distributed countywide to subscribers of the publication. In addition, copies were distributed to the public at several outreach events, classroom presentations, the District's speaker's bureau, and for Air Pollution Control Board use. The current edition of [Clean Air Today](#) is available on the District's website.

Summer Public Awareness Campaign: The Summer Public Awareness Campaign uses radio ads, public events, commercial businesses, promotional materials and print media to inform the public about a specific aspect of air pollution.

- The 2006 *Clean Air Today* featured articles on health risks of air pollution on the elderly, diabetics, and unborn children. It also had articles on meteorology and air pollution, the 1952 London Smog attack, coupons, *The Book of Air*, and a kid's activity page.
- The 2007 *Clean Air Today* featured topic was global climate change and the entire issue was devoted to that topic. A downloadable version was also put on the District website so the information could be printed online.
- The 2008 *Clean Air Today* supplement celebrated the District's 40th anniversary and chronicled the history of the District, and thanked companies, agencies, and individuals who have supported the District's mission over the years.

Outreach Events: Public outreach and speaker's bureau programs took place at many public events and functions in Ventura County, including service organizations, health fairs, home and garden shows, Earth Day activities, and street fairs. Additionally, staff presented *Clean Air Quest* and *Air Town* programs at schools and libraries in Ventura County. Public Information

does the marketing for the District Global Climate Change speaker's bureau presentation. This marketing includes revising the brochure, composing letters, and scheduling presentations.

Media Relations: Public Information handles media calls and news releases and provides local reporters with ideas for feature articles. Public Information coordinates all news conferences, radio and print interviews, and media sponsorships.

Special Projects: *Air – the search for one clean breath*, a high-definition film narrated by Joe Mantegna, is a biography of air created by the Ventura County Air Pollution Control District with grant support from the United States Environmental Protection Agency (U.S. EPA). Co-sponsors included Dubscape, Inc., Loma Linda University Medical Center, Media 360, and the Port of Long Beach. Some of the materials that were produced related to the movie include: standard DVDs, Blu-Ray DVDs, marketing cards, posters, DVD casing design, news releases, and website www.airthefilm.org for the film. The film was the most ambitious public information project done by a local air agency for a national audience. The film premiered nationally at the U.S. EPA Air Now conference in Portland, OR, and locally in Ojai, CA. It was shown at multiple screenings through 2008.

Activities in 2007 and 2006 related to the film included fundraising activities, scheduling, coordination, logistics, script creation/changes, contracts for animation and musical score, pre/post production for filming, and creation of the movie trailer.

On May 13, 2008, at a ceremony in Washington, DC, the District's Public Information Division was honored by receiving the prestigious 2008 U.S. EPA's *Clean Air Excellence Award*. The film, *Air – the search for one clean breath*, won in the Education/Outreach category. The film also received an international Mercury Communications Gold Award for best educational film.

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APPENDIX A
“EVERY FEASIBLE MEASURE” ANALYSES

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Control Measure, Rule (If Any), and Summary of Analysis	Include in AFM List?
<p>R-306; Rule 74.30, Wood Products Coating Rule 74.30 was last amended on June 27, 2006. The rule is now equal in stringency to the South Coast AQMD and Bay Area AQMD rules. No additional revisions are required.</p> <p>Note: On September 11, 2007, the Air Pollution Control Board found that the latest proposed revisions to Rule 74.30 were infeasible and should be removed from the District’s 2007 annual list of proposed rule revisions. The revision would have eliminated ROC limits for wood product refinishing operations. Staff determined that there would be no emission reduction benefit from the proposed deletion of Rule 74.30, Subsection B.2.</p>	<p>No</p>
<p>R-309; Rule 74.3, Paper, Fabric, & Film Coating Operations Rule 74.3 limits the emissions of reactive organic compounds from the coating of paper, fabric, or film substrates. A search of the current permitted sources in Ventura County shows that only one source, Imation, is subject to this rule. Imation is no longer operating in Ventura County.</p>	<p>No</p>
<p>R-332; Rule 74.12, Surface Coating of Metal Parts & Products Rule 74.12 was last amended on April 8, 2008. The changes included a limit for coating strippers of 200 grams/liter (g/l) and a limit for surface preparation and application solvents of 25 g/l. The rule is now equal in stringency to the South Coast AQMD and Bay Area AQMD rules. No further revisions to Rule 74.12 are required.</p>	<p>No</p>
<p>R-411; Rule 71.4, Petroleum Sumps, Pits, Ponds & Well Cellars Rule 71.4 limits the emissions of reactive organic compounds from petroleum sumps, pits, ponds and well cellars. This rule contains ROC control requirement that eliminates first stage sumps, and requires covers on other sumps and pits. Storage of crude oil in well cellars is limited to five calendar days. Sumps, pits, or ponds are exempt if the ROC content is less than 5 milligrams per liter.</p> <p>This rule is very similar to South Coast AQMD Rules 1148.1, <i>Oil and Gas Production Wells</i>, and Rule 1176, <i>Sumps and Wastewater Separators</i>. Rule 1148.1 requires the removal of organic liquid in the well cellar no later than two (2) days after any activity is completed; the period is five (5) calendar days when no activity occurs. The Rule 71.4 threshold is five days for all situations. Rule 1148.1 also requires, during a wellhead valve opening, a portable container to catch and contain organic liquid. Rule 71.4 does not require this.</p> <p>Rule 1176 requires closer floating cover tolerances and 97 percent coverage; Rule 71.4 requires 90 percent. There are no other significant differences between the rules. Revisions to Rule 71.4 are not recommended because oil production activity is down and the resulting incremental emission reductions would be insignificant.</p>	<p>No</p>

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<p>R-431; Rule 70, Storage and Transfer of Gasoline</p> <p>Rule 70 was last amended on March 10, 2009. With state-mandated Enhanced Phase II Vapor Recovery in place, maximum ROC emission reductions are occurring and no further enhancements are currently needed.</p>	No
<p>R-324; Rule 74.19.1, Screen Printing Operations</p> <p>Rule 74.19.1 limits the emissions of reactive organic compounds (ROC) from the use of inks, coatings, adhesives, and cleaners used at screen printing operations. This rule limits the ROC content of inks, coating, and adhesives, while cleaning solvents are limited by ROC content and ROC composite vapor pressure.</p> <p>On February 17, 2005, District staff held a public workshop, which included a proposal to reduce ROC emissions by reducing the ROC content of cleaning solvents, adhesives, metallic inks, and high-performance inks. In addition, the proposal included eliminating the existing exemption for electronic screen printers. The District received a letter, dated March 25, 2005, from Marcia Kinter, Vice President of the Specialty Graphic Imaging Associations, which represents the screen printing industry. Ms. Kinter was concerned mainly about the solvent cleaning requirements with a proposed ROC content at 200 g/l, which is double the 100 g/l limit adopted in South Coast AQMD Rule 1171, <i>Solvent Cleaning Operations</i>. The rest of the proposal for reducing emissions from adhesives, metallic inks, and high performance inks was not an issue for her. It was estimated that the District's 2005 proposal would reduce ROC emissions by 8.7 tons, with 90 percent of the reductions resulting from the new limits on solvent cleaners.</p> <p>In 2006, the South Coast AQMD Board delayed the effective date of the 100 g/l screen printing cleaners until January 1, 2008. Since these limits have been in effect for at least two years, they are no longer technology forcing. Screen printing cleaners complying with the South Coast AQMD Rule 1171 limit of 100 g/l are now available from vendors.</p>	Yes
<p>R-501; Rule 74.14, Polyester Resin Materials Operations</p> <p>Rule 74.14 was amended in 2005 and is equivalent in stringency with South Coast AQMD Rule 1162, <i>Polyester Resin Operations</i>, and Rule 1171, <i>Solvent Cleaning Operations</i>. It is also equivalent to the Bay Area AQMD rule. No further revisions to Rule 74.14 are required.</p>	No
<p>R-504; Rule 74.25, Restaurant Cooking Operations</p> <p>Currently, Rule 74.25 is similar to South Coast AQMD Rule 1138, <i>Control of Emissions from Restaurant Cooking Operations</i>. Although South Coast AQMD is planning to revise Rule 1138 to include a wider variety of charbroilers, the revision has not yet occurred. The District will monitor the proposed revisions and amend Rule 74.25 as the revisions are implemented.</p>	No

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<p>R-606; Rule 74.29, Soil Decontamination Rule 74.29 was last amended on April 8, 2008. The rule is now equal in stringency to the corresponding South Coast AQMD and Bay Area AQMD rules. No additional revisions are required.</p>	No
<p>N-105, Rule 74.15, Boilers, Steam Generators & Process Heaters This rule covers units 5,000,000 BTU/hr capacity and greater. After examining rules from South Coast AQMD and San Joaquin Valley APCD, four scenarios of revised NOx reduction limits were evaluated. These scenarios include the following:</p> <ul style="list-style-type: none"> ▪ Reduce from 40 ppmv to 30 ppmv for all units (at 3% oxygen) ▪ Reduce from 40 ppmv to 15 ppmv for units equal to or less than 20 MMBTU/hr ▪ Reduce from 40 ppmv to 12 ppmv for units equal to or less than 20 MMBTU/hr ▪ Reduce from 40 ppmv to 9 ppmv for units greater than 20 MMBTU/hr <p>The cost effectiveness of these scenarios varies between \$19,352 per ton of NOx removed to \$323,489 per ton. NOx emission reductions vary between 1.3 tons per year and 17.1 tons per year. Based on the District’s Best Available Control Technology threshold of \$18,000 per ton of NOx reduced, no scenario is cost effective. On this basis, all proposed revisions to Rule 74.15 are considered infeasible.</p>	No
<p>N-101; Rule 74.23, Stationary Gas Turbines Ten stationary gas turbines are in regular use in Ventura County. Of these, four are in compliance with the more stringent South Coast AQMD limits. Of the remaining six, three are on an offshore oil platform, where emission reductions will be either difficult or impossible. The same is true for an old General Electric (GE) LM-2500 turbine, which, due to location issues, cannot be retrofitted with selective catalytic reduction (SCR). A second GE LM-2500 currently uses both steam injection and Selective Catalytic Reduction and, due to its age, will be difficult to further control. The final gas turbine is also old and may be expensive to retrofit. Based on this analysis, revisions to Rule 74.23 are not currently feasible in Ventura County.</p>	No
<p>N-102; Rule 74.11.1, Large Water Heaters and Small Boilers This rule covers units from equal to or greater than 75,000 BTU/hr to less than or equal to 2,000,000 BTU/hr capacity. South Coast AQMD recently revised Rule 1146.2, reducing the NOx limit for all units from 40 ng/J to 14 ng/J. The new limits became effective on January 1, 2010, for units greater than 400,000 BTU/hr and January 1, 2012, for units over 400,000 BTU/hr. No other district has applied this new limit. The District will schedule a revision to Rule 74.11.1 after the final South Coast AQMD implementation date has been in effect for one year (January 1, 2013).</p>	Yes

Control Measure, Rule (If Any), and Summary of Analysis	Include in AFM List?
<p>N-105; Rule 74.15.1, Boilers, Steam Generators & Process Heaters</p> <p>This rule covers units between 1,000,000 and 5,000,000 BTU/hr. South Coast AQMD Rule 1146.1, <i>Emissions of Oxides of Nitrogen from Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters</i>, was revised on September 5, 2008, lowering NOx limits for all applicable units (new or existing) to as little as 9 ppm. Implementation of the new limits began on January 1, 2011, and ends on January 1, 2015. The District will schedule a revision to Rule 74.15.1 after the final South Coast AQMD implementation date has been in effect for one year (January 1, 2016).</p>	<p>Yes</p>
<p>N- 106; Rule 59, Electrical Power Generating Equipment</p> <p>Rule 59 was first adopted in 1969, and has been revised seven times, the last being in 1992. The rule applies to electric power generating steam boilers with a rated heat input capacity of greater than three hundred (300) million BTUs per hour, and any auxiliary boiler used with an electric power generating steam boiler, not subject to the provisions of Rule 74.15. Rule 59 is the most stringent power plant air pollution rule in the state. No changes to the rule are required at this time.</p>	<p>No</p>
<p>N-108; Rule 74.9, Stationary Internal Combustion Engines</p> <p>Rule 74.9 was first adopted on July 21, 1981. This began an eight year phase-in of emission requirements for engines over 100 HP (now 50 HP). The initial rule required 10 percent of the engine inventory to reduce NOx emissions; a 90 percent reduction from rich-burn engines and 80 percent from lean-burn engines. The first revision to the rule, adopted on July 2, 1985, increased the compliance inventory and added equivalent emission limits in parts per million (ppm) and grams per horsepower-hour (gm/hp-hr).</p> <p>The second revision, adopted September 5, 1989, brought all remaining engines into the rule. In addition, emission limits for carbon monoxide (CO) and reactive organic compounds (ROC) were added. These limits were needed to eliminate excessive emissions of CO and ROC created in the process of controlling NOx. The third revision to Rule 74.9 occurred on December 21, 1993. Emission limits were reduced to their current levels; 25 ppm NOx for rich-burn engines and 45 ppm NOx for lean-burn engines, corrected to 15 percent oxygen. The revision also added a NOx limit for diesel engines of 80 ppmv (@ 15% O₂) or 90 percent reduction. CO and ROC limits remained the same as in 1989; the lean burn CO and ROC limits apply also to diesel engines. The fourth revision to the rule provided an exemption from the rule for engines on Anacapa and San Nicolas Island. After that revision, EPA Region IX suggested three improvements to the rule. The fifth, and latest, revision to the rule addressed those suggestions. In addition, staff issues with Rule 74.9 were addressed, including the efficiency correction procedure and obsolete language.</p> <p>Based on the foregoing, Rule 74.9 is the most stringent internal combustion engine rule in the state. No changes are currently required.</p>	<p>No</p>

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<p>N-110; Rule 74.22, Natural Gas Fan-Type Central Furnaces South Coast AQMD revised Rule 1111, <i>NOx Emissions from Natural-Gas-Fired, Fan-Type Central Furnaces</i>, on November 6, 2009, reducing the NOx limit from 40 ng/J to 14 ng/J. Implementation of the new limits begins on October 1, 2014, and ends on October 1, 2018. No other district has applied this limit. The District will schedule a revision to Rule 74.22 after the final South Coast AQMD implementation date has been in effect for one year (October 1, 2019).</p>	<p>Yes</p>
<p>No Control Measure; Rule 74.11, Natural-Gas Fired Water Heaters Rule 74.11 was amended on January 12, 2010, to include a residential and commercial water heater NOx limit of 10 ng/J as of July 1, 2010. The 10 ng/J limit for water heaters is the most stringent limit in the state. No further revisions are required.</p>	<p>No</p>
<p>New Control Measure; Rules 74.13, 74.20, 74.24, and 74.24.1: Low-ROC Spray Gun Cleaning Many of the existing coating rules contain a low-ROC requirement (less than 25 g/l) for the cleaners used for coating application or spray equipment. District rules already having this requirement include: Rule 74.12, <i>Surface Coating of Metal Parts</i>, Rule 74.14, <i>Polyester Resin Material Operations</i>, Rule 74.18, <i>Motor Vehicle and Mobile Equipment Coating Operations</i>, and Rule 74.30, <i>Wood Product Coatings</i>. This new control measure would implement this low-VOC application or spray equipment requirement by amending Rule 74.13, <i>Aerospace Assembly and Component Manufacturing Operations</i>, Rule 74.20, <i>Adhesives & Sealants</i>, Rule 74.24, <i>Marine Coating Operations</i>, and Rule 74.24.1, <i>Pleasure Craft Coating and Commercial Boatyard Operations</i>. This control measure would eliminate the current vapor pressure limit of 45 mm Hg for spray equipment cleaning in these rules and establish a new limit of 25 g/l ROC content. The estimated ROC emission reductions are about 10 tons per year. The feasibility of this measure is demonstrated by the ability of existing coating operations to meet this standard. In addition, these low-ROC cleaners are currently available from coating supply vendors.</p>	<p>Yes</p>

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Control Measure, Rule (If Any), and Summary of Analysis

New Control Measure: *Metalworking Fluids and Direct Contact Lubricants*

This new control measure is based on the South Coast AQMD Rule 1144, *Metalworking Fluids and Direct Contact Lubricants*. Metalworking operations are located at machine shops and foundries. The three largest metal forges in the county are Advance Metalform Technologies, Aluminum Precision Products, and Arcturus. This control measure would reduce ROC emissions from the fluids and lubricants used in these processes. The ROC emission reductions would result from the replacement of high-ROC oil based lubricants to water-based or synthetic lubricants. Based on normalizing the data from the South Coast AQMD Rule 1144 staff report, we could expect approximately 50 tons per year of ROC reductions from this control measure. Since most of the machine shops are exempt from District permit requirements, a sales prohibition would be needed to effectively reduce emissions from these sources.

Yes