

# Community Advisory Council Meeting

October 10, 2007

New Rule 361- “*Small Boilers, Steam Generators, and Process Heaters*”  
Proposed Amended Rule 202 – “*Exemptions to Rule 201*”, *Permits Required*

## **EXECUTIVE SUMMARY:**

As part of our responsibility to protect and improve the air quality of the County, the Santa Barbara County Air Pollution Control District (APCD) adopts and enforces air quality regulations and rules. Generally, before a rule is considered for adoption, the Board establishes the need for its adoption in the Clean Air Plan. The 2007 Clean Air Plan includes a commitment for the APCD to adopt control measure N-XC-4 to control NO<sub>x</sub> emissions from large water heaters and small boilers. The proposed APCD Rule 361 will fulfill this 2007 Clean Air Plan commitment. The APCD currently has rules for smaller and larger units of this type. Rule 360 includes 75,000 to 2 million Btu per hour units and Rule 342 includes greater than 5 million Btu per hour units.

This rule applies to boilers, steam generators, and process heaters that are greater than two (2) million British thermal units per hour to less than five (5) million British thermal unit per hour rated heat input capacity used within Santa Barbara County.

The major provisions of Rule 361 are:

1. Any affected new or modified unit must meet an oxides of nitrogen (NO<sub>x</sub>) emission limit of 30 parts per million by volume (ppmv) at 3 percent oxygen and a carbon monoxide (CO) emission limit of 400 ppmv at 3 percent oxygen.
2. Any existing unit must meet the above NO<sub>x</sub> and CO emission limits by January 1, 2020.
3. A low use exemption is included for existing units with an annual heat input (from all fuel) of 1.8 billion British thermal units or less per calendar year. For facilities with existing units that apply for this low use exemption, fuel meters must be installed no later than December 31, 2016.

The proposed Rule 361 requirements are similar to requirements adopted by the South Coast Air Quality Management District (AQMD). This rule does not require that existing units be immediately replaced or retrofitted with controls upon adoption. Rather this rule includes a sunset clause. Facilities with existing units have until January 1, 2020 to comply with this rule.

The South Coast AQMD adopted a small boilers, steam generators, and process heaters rule similar to Rule 361 in 1994. The Ventura County APCD adopted a small boiler, steam generator, and process heater rule similar to Rule 361 in 2000. As a consequence

of the South Coast AQMD and Ventura County APCD rules, most manufacturers who provide units for sale in Southern California have complied with the emission limits since the early 1990's.

Additionally, existing Rule 202, *Exemptions to Rule 201*, will be modified to require permits for small boilers, steam generators, and process heaters subject to Rule 361.

## **DISCUSSION:**

### **Objectives**

Staff proposes that the Board adopt Rule 361 to fulfill the 2007 Clean Air Plan commitment for a rule regulating small boilers, steam generators, and process heaters. The adoption of this rule will fulfill the APCD's "all feasible measure" requirements of the 2001, 2004, and 2007 Clean Air Plans. We estimate that the adoption of Rule 361 will reduce NOx emissions by 0.0467 tons per day or approximately 17 tons per year. The effect of Rule 361 will increase over time as owners install replacement units. As a result, this reduction will occur gradually over the next thirteen years.

### **Background**

The 1991 Air Quality Attainment Plan and the 2007 Clean Air Plan both call for the adoption of control measure N-XC-4 for controlling NOx emissions from small boilers, steam generators, and process heaters. In order to claim these emission reductions in the State Implementation Plan, the Air Resources Board and the U.S. Environmental Protection Agency require the APCD to adopt the control measures in a rule.

The primary objective of the rule is to reduce Oxides of Nitrogen from small boilers, steam generators, and process heaters (greater than 2 MM Btu/hr to less than 5 MM Btu/hr). We currently have rules for smaller (Rule 360 – 75,000 to 2,000,000 Btu/hr units) and larger (Rule 352 – 5,000,000 Btu/hr and greater units) units of this type.

Rule 361 includes a retrofit sunset provision that expires in the year 2020. Rule 361 is similar the South Coast AQMD Rule 1146.1. For boilers, steam generators, and process heaters between 2,000,000 and 5,000,000 Btu/hr, Rule 361 will require the owners who replace or modify existing units before January 1, 2020 to install units which meet the rule's emission limits. However, by January 1, 2020 all affected units will have to meet the rule's emission limits.

The APCD's Community Advisory Council (CAC) met to discuss the 2007 Draft Clean Air Plan on July 12, 2006. This meeting included a discussion with APCD staff regarding Rule 361. Specifically, instead of a retrofit rule like South Coast AQMD's Rule 1146.1, staff and CAC members agreed to have Rule 361 becoming applicable upon adoption to all affected new and modified units *and* to include a sunset clause, at which time all affected units needed to comply with the rule. As a result of this CAC meeting, APCD staff added a footnote including this sunset clause in Table 4-3 of the 2007 Clean Air Plan. However, the APCD has received notice from the California Air Resources

Board (CARB) and the United States Environmental Protection Agency (US EPA) upon their review of Draft Rule 361, regarding their concern with this sunset date being too far out into the future. CARB has expressed concern and a suggestion that this sunset date possibly be shortened.

Included as part of the project (the Rule 361 project) is a revision to Rule 202 to require permits for units to be subject to Rule 361.

### **Affected Sources**

A tremendous effort was expended toward public outreach in order to inform the public regarding this new rule. To date, approximately 1200 postcards have been mailed to currently permitted and non-permitted facilities that may have units of this type and size located within Santa Barbara County. Some examples of the types of facilities that could potentially have affected units include the electronic industry, oil and gas industry, schools, hotels, conference and event facilities, restaurants, golf courses, airports, and military bases, just to name a few.

### **Exempt Sources**

This rule will not apply to process heaters, kilns, furnaces, and dryers, where the products of combustion come into direct contact with the material to be heated. Additionally, emission standard requirements do not apply to any dual fuel unit while forced to burn nongaseous fuel during times of Public Utility imposed natural gas curtailment.

### **Rule Requirements**

Rule 361 establishes NO<sub>x</sub> and CO emission limits for new boilers, steam generators, and process heaters installed in Santa Barbara County. The rule does not require that existing units be immediately replaced or retrofitted with controls until January of 2020. APCD staff expects that most units will have been replaced during that time period due to natural wear and tear.

### **Rule 202 and Permitting Requirements**

The units subject to Rule 361 are currently exempt from permit by Rule 202, Section G.1. Permits are required for all subject sources in order to ensure compliance with the requirements of Rule 361. This revision of Rule 202 is necessary as a result of the adoption of new Rule 361. The subject units in this size category will no longer be exempt from permitting. Like Rule 361, this rule revision is a fulfillment of our 2001, 2004, and 2007 Clean Air Plan requirements because it is necessary to enforce Rule 361.

The permit compliance schedule for this rule varies as to whether or not a subject unit is new, modified, or existing. Facilities with existing units must apply for a Permit to Operate within 90 days of the adoption of Rule 361 and Revised Rule 202. After the date of adoption for these rules, an Authority to Construct permit must be obtained from the APCD prior to installation of a new or modified unit. Facilities that request a low use exemption for their existing units are required to submit a Compliance Plan to the APCD

for review and approval prior to March 15, 2016. For existing units, subject facilities must ultimately apply for an Authority to Construct permit on or before January 30, 2019 in order for APCD staff to have sufficient time to process the permit prior to the rule's sunset clause of 2020.

### **Source Testing, Record Keeping, and Reporting Requirements**

Recordkeeping includes tune-up reports, test-firing records, and source test reports. Additional required records are noted in Section G of this rule for low use exemption and exempt units. Reporting includes submission of required records by March 1<sup>st</sup> for the prior calendar year and submission of source test reports within 45 days of test completion.

Rule 361 requirements also include source testing to be performed not less than once every 24 months for subject units. In an effort to reduce costs for facilities with existing units that are eligible for the low-fuel use exemption and for facilities using public utility supplied grade natural gas, unit tuning (in lieu of source testing) will be required to be performed two times per year. There is an attachment to this rule including detailed APCD Tune-Up Procedures.

The APCD has included an approximately 12-year compliance period for existing units. This rule requires owners who replace or install units in this size range before the year 2020 to meet the rule's emission limits. By January 1, 2020, all subject units will have to be replaced to meet the rule's emission limits.

### **Emission Reductions**

We estimate that through the normal rate of replacement of old boilers, steam generators, and process heaters with units that comply with proposed Rule 361, NO<sub>x</sub> emissions will be reduced by approximately 0.0467 tons per day or approximately 17 tons per year overall. The emission reductions will increase over time as older units are replaced. The emission reductions projected to occur through implementation of proposed Rule 361 are consistent with the reductions assumed in the 2001, 2004, and 2007 Clean Air Plans.

### **Rulemaking Process and Schedule**

The rulemaking schedule for these two rules includes public workshops that were held August 28 and 29, 2007 in Santa Barbara and Santa Maria, respectively. The APCD staff will be taking these draft rules to our Community Advisory Committee on October 10<sup>th</sup>. The Board Hearing for these two rules is scheduled for December 20<sup>th</sup> of this year.

### **Compliance Schedule and Flowchart**

Please see the attached flowchart that includes the compliance schedule for units subject to Rule 361. Please note that there are different compliance “paths” for existing, new or modified, and low-use exemption units, as follows:

1. New or Modified Units:
  - a. Comply with the NO<sub>x</sub> and CO emission standards via the Authority to Construct (ATC) permit process prior to construction (i.e., replacement, installation, or modification).
  - b. If fired on utility supplied natural gas, tune the unit every 6-12 months.
  - c. If fired on other than utility supplied natural gas, source testing of unit is required every two (2) years.
  
2. Existing Units (Qualifies for Low Use exemption):
  - a. Apply for a Permit to Operate (PTO) within 90 days of Revised Rule 202 adoption.
  - b. Submit for APCD approval a Compliance Plan on or before March 15, 2016.
  - c. Installed fuel meters on or before December 31, 2016.
  - d. Provide actual fuel usage for 2017 or 2018 by no later than January 30, 2019.
  - e. Tune the unit every 6 to 12 months.
  
3. Existing Units (All other units):
  - a. Apply for a Permit to Operate (PTO) within 90 days of Revised Rule 202 adoption.
  - b. On or before January 1, 2019, apply for and obtain a permit to comply with the NO<sub>x</sub> and CO emission standards.
  - c. Must demonstrate final compliance with Rule 361 by January, 2020.
  - d. If fired on utility supplied natural gas, tune the unit every 6-12 months.
  - e. If fired on fuel other than utility supplied natural gas, source testing of unit is required every two (2) years.

### **Public Comments Submitted to Date**

Please see the attached documents for a list of verbal public comments received at the Public Workshops (that were held August of 2007) and a list of written comments received to date for these two rules. The majority of the questions and comments that APCD staff received were based on permitting, compliance schedule, and rule requirements.