Santa Barbara County
Air Pollution Control District

Our Vision Clean Air

Agenda Date: January 17, 2008
Agenda Placement: Regular
Estimated Time: 20 Minutes
Continued Item: No

Board Agenda Item

TO: Air Pollution Control District Board

FROM: Terry E. Dressler, Air Pollution Control Officer

CONTACT: Rebecca Armstrong, 961-8888

SUBJECT: Proposed New Rule 361, Small Boilers, Steam Generators, and Process Heaters
Amended Rule 202, Exemptions to Rule 201, Permits Required

RECOMMENDATION:

That the Board:

A. Hold a public hearing to receive testimony on proposed new Rule 361 and proposed amended Rule 202.

B. Approve the Resolution attached to this Board Letter. Approval of the resolution will result in the following actions:

1. CEQA Findings: Adopt the CEQA findings (Attachment 1) pursuant to the California Environmental Quality Act (CEQA) and the CEQA guidelines.

2. Rule Findings: Adopt the associated rule findings (Attachment 2) in support of the proposed new Rule 361 and proposed amended Rule 202 pursuant to Health and Safety Code Section 40727 regarding necessity, authority, clarity, consistency, nonduplication, and reference. The rule findings also acknowledge public comments received on the proposed rules (see Attachment 3) and adopt the Response to Comments (see Attachment 4) as findings of the Board.

3. New Rule Adoption: Adopt proposed new Rule 361 (Attachment 5).

4. Amended Rule Adoption: Adopt proposed amended Rule 202 (Attachment 6).

EXECUTIVE SUMMARY:

The 2007 Clean Air Plan includes a commitment for the Santa Barbara County Air Pollution Control District (APCD) to adopt a control measure to control NOx emissions from small boilers, process heaters, and steam generators. Proposed new APCD Rule 361 will fulfill this 2007 Clean Air Plan commitment. This rule will apply 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 (Btu/hr) rated heat input capacity.

The major provisions of Rule 361 are:

1. Any affected new or modified unit must meet an oxides of nitrogen (NO_x) 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_x 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.

This rule does <u>not</u> 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 Air Quality Management District (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 heat output limits since the mid 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

Rule 361 will regulate small 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. The adoption of this rule will fulfill the APCD's "all feasible measure" requirement of the 2007 Clean Air Plan. The adoption of Rule 361 will ultimately reduce NOx emissions by 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 twelve years.

Amending Rule 202 to require units subject to Rule 361 to obtain permits will allow the APCD to assure compliance with Rule 361.

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 oxides of nitrogen (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 NOx from small boilers, steam generators, and process heaters (greater than 2 MM Btu/hr to less than 5 MM Btu/hr). The APCD currently has 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.

The proposed Rule 361 is similar to the South Coast AQMD Rule 1146.1 (Emissions of Oxides of Nitrogen From Small Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters) and Ventura County's Rule 74.15.1.

Rule 361 includes a sunset provision that expires in the year 2020. 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 including existing 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 about the need for Rule 361 to be a retrofit rule or a point of sale rule. Specifically, the CAC proposed that instead of a retrofit rule like South Coast AQMD's Rule 1146.1, Rule 361 should become applicable to all affected new and modified units upon adoption *and* to include a sunset clause, at which time all affected units needed to comply with the rule. As a result of the CAC's recommendation, APCD staff added a footnote including this sunset clause in Table 4-3 of the 2007 Clean Air Plan. It should be noted, however, that the California Air Resources Board (CARB) and the United States Environmental Protection Agency (US EPA) upon their review of Draft Rule 361, have expressed their concern with this sunset date being too far out into the future. CARB has suggested that this sunset date possibly be shortened. Staff recommends that Rule 361 retain the sunset clause to be consistent with the CAC's recommendation.

This Board item also includes a revision to Rule 202 to require permits for units to be subject to Rule 361.

Rule 361 Requirements

Rule 361 establishes NOx 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 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 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. 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.

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.

Please see Attachment 7 regarding the compliance schedule and flowchart for Rule 361.

Rule 361 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 Rule 361 for low use exemption and exempt units. Reporting includes submission of required records by March 1st 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. Detailed APCD Tune-Up Procedures are included in this rule.

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.

Implications to Sources

<u>Affected Sources</u>

A significant effort was expended toward public outreach in order to spread the word regarding new Rule 361 and amended Rule 202. 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. Additionally two publically noticed workshops, one in Santa Barbara and one in Santa Maria, were held in August. 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.

There are no boiler, steam generator, or process heater manufacturers in Santa Barbara County. In order to comply with the South Coast AQMD and Ventura County APCD requirements, most manufacturers are producing these compliant units that already meet the NOx and CO emission limits.

Stationary sources in Santa Barbara County that need to replace boilers, steam generators or process heaters with new units will purchase compliant appliances from vendors that carry such appliances. These subject units are expected to have a life of 10 to 15 years and the majority of the units (other than those existing units that are eligible for a low-use exemption) will need to be replaced before the January 1, 2020 deadline in the sunset clause.

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.

There is also a low-use exemption for this rule. This exemption is available to any existing units that use 1.8 billion Btu (approximately 18,000 therms) per year or less. To be qualified for a low-use exemption, the facility operator/owner must install a fuel meter(s) on the subject unit(s) on or before December 31, 2016 and submit a Compliance Plan to the APCD on or before March 15, 2016. Facilities with units that qualify for the low-use exemption will be allowed to tune their units every 6 to 12 months (i.e., two times per year) instead of performing a more costly source test once every two years.

Implications to APCD Budget

Removing the exemption for units subject to Rule 361 will require the owner/operator of existing units to apply for a Permit to Operate (PTO) and to pay a PTO filing fee and a permit evaluation fee based on the heat input rating of the unit. These fees already exist and are specified in APCD Rule 210. They are currently $325 and the $427.25 per million Btu per hour (heat input rating) for the filing and evaluation fees respectively (these fees are adjusted annually based on the Consumer Price Index). Additionally, every permit is re-evaluated every three years. The current reevaluation costs a permit reevaluation fee of $427.24 per million Btu heat input rating.

The permit and reevaluation revenue are difficult to estimate as the number of units is unknown. Additionally, a facility with multiple affected units will pay only one filing fee but an evaluation fee based on the heat input rating of all affected units.

Assuming there are 125 boiler, steam generator, and process heaters affected by removing the Rule 202 exemption, an "average" heat input rating of 3 million Btu per unit and that each unit requires a PTO (i.e., no facility with multiple units), the maximum additional revenue based on the current Rule 210 fees are:

Upon removal of the exemption:
125 units x ($325/unit + 3 million Btu x $427.25/million Btu) = $200,843

Every three years thereafter:
125 units x (3 million Btu x $427.25/million Btu) = $160,218

The fees rates are consistent with the rates as specified in Rule 210, Schedule A for existing external combustion units already permitted by the APCD.

Comparison to Existing Federal, State and Local Requirements

Pursuant to the H&SC §40727.2, the APCD is required to identify all existing federal, state, and local air pollution control requirements that apply to the same equipment or source category as the rule proposed for adoption or modification by the APCD. The APCD is unaware of any federal, state, or local air pollution control requirements that apply to small boilers, steam generators, and process heaters. Therefore, there is no comparison to be made with other local, state, or federal air pollution control requirements.

Emission Reductions

To reduce the formation of oxides of nitrogen, manufacturers lower the unit's peak flame temperature or reduce the amount of air flowing to the burner. Manufacturers add fans to the units to provide better mixing of the air and fuel and to better control the amount of air. Reducing excess air and other low-NOx strategies also improve fuel efficiency. By reducing the amount of combustion air, less air is heated and, therefore, less fuel is required.

Staff estimates that through the normal rate of replacement of old boilers, steam generators, and process heaters with units that comply with proposed Rule 361, NOx 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 2007 Clean Air Plan.

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. Staff took draft rules to the Community Advisory Committee (CAC) on October 10, 2007. The CAC recommended that the Board adopt Rule 361 and Rule 202 as presented by the APCD staff with the clarification of "modified unit" in either the rule or staff report. The motion passed with a vote of 11:3:0.

Public Comments Submitted to Date

Attachments 3 and 4 contain a list of verbal public comments received at the Public Workshops held in August 2007 and a list of written comments received to date for these two rules, respectively. The majority of the questions and comments that APCD staff received were based on permitting, compliance schedule, and rule requirements.

Specifically, the following question was asked to be clarified as a part of the Community Advisory Council's approval and recommendation of adoption to the Board of these rules. Staff agreed to include this question and response in this staff report for New Rule 361 and Revised Rule 202:

Question:
If a permitted unit is moved within a stationary source, would it still be considered an existing unit?

SBCAPCD Staff Response:
The question at hand is not a permitting issue as Rule 202.D.13 already addresses that. Rule 202.D.13 allows such movement under specific conditions (e.g., existing location not assumed as part of an AQIA or HRA). The issue at hand is compliance with the requirement of Rule 361 itself and the intent behind the development of the rule. In Rule 361, existing units are defined as being "installed" prior to the date of rule adoption. The replacement of an existing unit under Rule 361 triggers the requirements for new/modified units (i.e., must meet the NO_x and CO emission standards). This requirement for replacement units does not distinguish where the replacement unit comes from. As such, moving an existing permitted unit to replace another permitted existing unit clearly is a "replacement" unit as envisioned in the context of Rule 361 and therefore the replacement unit is subject to the emission standards of the rule.

Further, taking a unit that is installed at an existing location and installing it at a new location that is part of a project that expands an existing process or is part of a new process (e.g., building a tank battery to recovery additional oil reserves or starting up an enhanced oil recovery project) would be considered a new installation for the purposes of Rule 361. The rationale is that such activities would otherwise require a new unit to perform these functions. The basic tenet of the Rule 361 rule development process was that new/modified units would have to meet the emission standards of Rule 361. As such, moving an existing uncontrolled unit (most likely a unit that not operated in years) to perform the function of what a new unit should be doing is counter to the intention of the rule and is not allowed without complying with the emission standards.

There are cases where moving a unit within the stationary source can be done without being subject to or treated as a new/modified under Rule 361. These include moving the unit to a different location within a building due to remodeling or seismic upgrade activities and the unit continues to perform its original work after the building upgrades (albeit at a different location within the building). Another example includes relocating the unit within a tank battery to accommodate the installation of a new tank or piping. In both cases, the unit returns to performing its original work for the given process.

In summary, there are cases when moving an existing unit would be treated as new/modified under Rule 361 (i.e., replacements) and other cases when the unit remains within the realm of the same process but has moved for reasons unrelated to replacement and/or a new process. Based on the inventory of units in question, we see this question only arising at oilfields that have older permitted out-of-service units on hand for which replacement (dirty unit for dirty unit) is being sought. Such a request is fundamentally at odds with the approach taken with developing Rule 361.

This information was included at the request of the Community Advisory Council (CAC) and is also included in the public comments (see attached). Public comments are being accepted up until the Board Hearing of January 17, 2008.

Cost-Effectiveness

Based on information provided by vendors and manufacturers of NO_x control devices, and the fact that the limit in Rule 361 is already being achieved by similar units, the control technology that would likely be used is a low NO_x burner system either with or without Flue Gas Recovery (FGR). There are natural draft type units at schools, oilfields, and refineries that may not be able to be retrofit. These existing units will require replacement on or before January 1, 2020 and we expect that most of them will have reached the end of their useful life at that point.

The replacement cost for a new compliant burner is approximately $3,000.00 to $5,000.00. The life expectancy of these new units is twelve to fifteen years. Instead of replacing an old non-functional unit with a new unit, one may choose to retrofit the unit by changing out a replacement part such as a burner.

The cost-effectiveness of air pollution control rules is generally specified in terms of cost of compliance per ton of emissions reduced. The Ventura County APCD estimated the cost effectiveness for the same control measures for small boilers, steam generators, and process heaters of this size. Over a range of sizes, the cost-effectiveness for gas-fired equipment varies from $5,333 to $13,393 per ton of NOx reduced, with many results just under $10,000 per ton reduced. With both a Ventura County APCD and South Coast AQMD rule in place, most manufacturers of these appliances already make units that comply with the Rule 361 NOx and CO limits.

California Environmental Quality Act (CEQA)

Pursuant to Section 15168 (e) of the California Environmental Quality Act (CEQA) the APCD finds that this rulemaking activity for Rules 361 and 202 is within the scope of the

program EIR for the 1991 Air Quality Attainment Plan and the 2004 Clean Air Plan Supplemental EIR adopted earlier and these documents adequately describe the activity for the purposes of CEQA. Any subsequent changes in the project description during the public review period will undergo additional environmental review under the CEQA.

PUBLIC REVIEW:

Two publicly noticed workshops were held in Santa Barbara and Santa Maria on August 28 and 29, 2007, respectively. The public comments received (as well as staff responses) at these workshops are provided in Attachments 3 and 4.

Staff presented the proposed rules to the APCD Community Advisory Council (CAC) on October 10, 2007. The CAC motion was made to recommend to the Board that Rule 361 and Rule 202 be adopted as presented by the APCD staff with the clarification of "modified unit" in either the rule or staff report. The motion passed with a vote of 11:3:0.

FISCAL IMPACT:

The cost of implementing Rule 361 is expected to be primarily for compliance and permitting staff activities. The standard APCD application and reevaluation fees in Rule 210 will pay for these activities.

SPECIAL INSTRUCTIONS:

Please send a certified minute order and signed resolution to Rebecca Armstrong, APCD, for transmittal to the Air Resources Board.

CONCURRENCES:

County Counsel.

ATTACHMENTS:

Resolution	
Attachment 1:	CEQA Findings
Attachment 2:	Rule Findings
Attachment 3:	Public Comments
Attachment 4:	Response to Public Comments
Attachment 5:	Proposed New Rule 361
Attachment 6:	Proposed Revised Rule 202
Attachment 7:	Compliance Schedule and Flowchart

BOARD RESOLUTION

PROPOSED RULE 361
SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

PROPOSED AMENDED RULE 202
EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

January 17, 2008

Santa Barbara County Air Pollution Control District

260 North San Antonio Road, Suite A
Santa Barbara, California 93110

(805) 961-8800

RESOLUTION OF THE AIR POLLUTION

CONTROL DISTRICT BOARD OF THE COUNTY OF

SANTA BARBARA, STATE OF CALIFORNIA

In the Matter of	**)**	**APCD Resolution No.**
	)	
Adopting Rule 361 and Amended Rule 202	**)**	
_____	**)**	

RECITALS

1. The Air Pollution Control District Board of the County of Santa Barbara ("Board") is authorized to adopt, amend, or repeal rules and regulations pursuant to Health and Safety Code Section 40725 *et seq*.

2. Pursuant to Health and Safety Code 40001, the Board is required to adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards.

3. The Board has determined that a need exists to adopt Rule 361, Emissions of Oxides of Nitrogen From Small Boilers, Steam Generators, and Process Heaters, and to amend Rule 202, Exemptions to Rule 201 (Permits Required) for the purpose of implementing the 2007 Clean Air Plan control measure N-XC-4 for controlling oxides of nitrogen emissions.

NOW, THEREFORE, IT IS HEREBY RESOLVED THAT:

1) This Board has held a hearing and accepted public comments in accordance with the requirements of Health and Safety Code section 40725 *et seq.*

2) The California Environmental Quality Act ("CEQA") findings set forth in Attachment 1 of the Board Package dated January 17, 2008 (herein after "Board Package") are hereby adopted as findings of this Board Package pursuant to the CEQA and the CEQA guidelines.

3) The general rule findings set forth in Attachment 2 of the Board Package are hereby adopted as findings of this Board pursuant to Health and Safety Code section 40727.

4) The Responses to Comments set forth in Attachment 4 of the Board Package are hereby adopted as findings of this Board.

5) Rule 361 set forth in Attachment 5 and Rule 202 set forth in Attachment 6 of the Board Package are hereby adopted as rules of the Santa Barbara County Air Pollution Control District pursuant to Health and Safety Code Section 40725 *et seq.*

6) The Board authorizes the Control Officer to transmit Rule 361 and rule 202 to the State Air Resources Board in compliance with applicable state and federal law. Additionally, the Board authorizes the Control Officer to do any other acts necessary and proper to obtain necessary approvals of the new rule by the California Air Resources Board and the United States Environmental Protection Agency.

PASSED AND ADOPTED by the Air Pollution Control District Board of the County of Santa Barbara, State of California, this January 17, 2008, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:
TERRENCE E. DRESSLER
CLERK OF THE BOARD,

By_____
Deputy

_____
Chair, Air Pollution Control
District Board of the County of
Santa Barbara

APPROVED AS TO FORM:

didn't he retire?
SANTA BARBARA COUNTY COUNSEL

By_____
Deputy
Attorneys for the Santa Barbara
Air Pollution Control District

ATTACHMENT 1

CEQA FINDINGS

PROPOSED RULE 361
SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

AND

PROPOSED AMENDED RULE 202
EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

January 17, 2008

Santa Barbara County Air Pollution Control District

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ATTACHMENT 1

CEQA FINDINGS

The Air Pollution Control District found that the potential environmental impacts of Rule 361, including the revision of Rule 202, were adequately described and analyzed in:

- The program Environmental Impact Report (EIR) for the 1991 Air Quality Attainment Plan (AQAP)

- The Final Supplemental Environmental Impact Report for 2004 Clean Air Plan

The adoption and implementation of Rule 361 will not have significant adverse impacts on the environment.

The Board finds that:

- Pursuant to Section 15168 (e) of the California Environmental Quality Act (CEQA) this rulemaking activity is within the scope of the 2004 Clean Air Plan Supplemental EIR and the SEIR adequately describes the activity for the purposes of CEQA.

- The 1991 AQAP EIR and the Final SEIR for 2004 Clean Air Plan were previously determined by this Board to have been completed in compliance with CEQA and were reviewed and considered by the Board prior to approval

- Any subsequent changes to the project description during the public review period will undergo additional environmental review under the CEQA.

ATTACHMENT 2

RULE FINDINGS

PROPOSED RULE 361
SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

AND

PROPOSED AMENDED RULE 202
EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

January 17, 2008

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ATTACHMENT 2

RULE FINDINGS FOR PROPOSED RULE 361 and PROPOSED AMENDED RULE 202

Pursuant to California Health and Safety Code Section 40727, the Board makes the following findings for the adoption of Proposed New Rule 361, Small Boilers, Steam Generators, and Process Heaters, and the amendment of Rule 202, Exemptions to Rule 201 (Permits Required).

Necessity

The Board determines that it is necessary to adopt Rule 361 and to amend Rule 202 to fulfill the commitment in the 2007 Clean Air Plan to implement control measures N-XC-4 for controlling oxides of nitrogen emissions from large water heaters and small boilers.

Authority

The Board is authorized under state law to adopt, amend, or repeal rules and regulations pursuant to Health and Safety Code Section 40000, and 40725 through 40728 which assigns to local and regional authorities the primary responsibility for the control of air pollution from all sources other than exhaust emissions from motor vehicles. Additionally, pursuant to Health and Safety Code Section 40702, the District Board is required to adopt rules and regulations and to do such acts as are necessary and proper to execute the powers and duties granted to it and imposed upon it by State law.

Clarity

The Board finds that proposed Rule 361 and amended Rule 202 are sufficiently clear. The rules were publicly noticed, and reviewed by the Community Advisory Council. The rules are written or displayed so that persons directly affected by them can easily understand their meaning.

Consistency

The Board determines that proposed Rule 361 and amended Rule 202 are consistent with, and not in conflict with or contradictory to, existing federal or state statutes, court decisions, or regulations with regard to the control of NOx from small boilers, steam generators, and process heaters.

The neighboring air pollution control districts such as Ventura County Air Pollution Control District and South Coast Air Quality Management District have adopted similar rules. Based on this evidence, the Board finds that the rules are consistent with neighboring air pollution control districts.

Nonduplication

The Board finds that proposed Rule 361 (Emissions of Oxides of Nitrogen From Small Boilers, Steam Generators, and Process Heaters) does not impose the same restrictions as any existing state or federal regulation, and the proposed rule is necessary and proper to execute the powers and duties granted to, and imposed upon, the APCD.

Reference

The Board finds that we have authority under state law to adopt Rule 361 to pursuant to Health and Safety Code Section 39002 which assigns to local and regional authorities the primary responsibility for the control of air pollution from all sources other than exhaust emissions from motor vehicles. Additionally, pursuant to Health and Safety Code Section 40702, the Board is required to adopt rules and regulations and to do such acts as are necessary and proper to execute the powers and duties granted to it and imposed upon it by State law.

Public Comment

Response to Comments

The Board has reviewed the response to comments included in Attachment 4 and hereby approves those responses to comments as findings.

ATTACHMENT 3

PUBLIC COMMENTS ON PROPOSED RULE 361, SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

AND

PROPOSED AMENDED RULE 202 EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

January 17, 2008

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PUBLIC COMMENTS
PROPOSED RULE 361, SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS
AND
PROPOSED AMENDED RULE 202, EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

As of December 19, 2007, the District has received the attached public comments on these proposed rules.

ATTACHMENT 4

APCD RESPONSE TO PUBLIC COMMENTS ON PROPOSED RULE 361, SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

AND

PROPOSED AMENDED RULE 202 EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

January 17, 2008

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APCD RESPONSE TO PUBLIC COMMENTS
PROPOSED RULE 361, SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS
AND
PROPOSED AMENDED RULE 202, EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

As of December 19, 2007, the District has received and responded to the attached public comments on these proposed rules.

ATTACHMENT 5

PROPOSED RULE 361
SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS

January 17, 2008

Santa Barbara County Air Pollution Control District

260 San Antonio Road, Suite A
Santa Barbara, California 93110

(805) 961-8800

RULE 361. SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS. (Adopted [*date of adoption*])

A. Applicability

This rule shall apply to any boiler, steam generator, and process heater with a rated heat input capacity of greater than 2 million British thermal unit per hour and less than 5 million British thermal unit per hour.

B. Exemptions

1. The provisions of this rule shall not apply to:

   a. process heaters, kilns, furnaces, and dryers, where the products of combustion come into direct contact with the material to be heated.

   b. equipment that does not require a permit under the provisions of Rule 202.G.

   c. existing units until March 15, 2016.

2. Section D requirements shall not apply to any dual fuel unit while forced to burn nongaseous fuel during times of public utility imposed natural gas curtailment. This exemption shall not exceed 168 cumulative hours of operation per calendar year excluding equipment testing time not exceeding 24 hours per calendar year.

C. Definitions

See Rule 102 for definitions not limited to this rule. For the purposes of this rule, the following definitions shall apply:

"Annual Heat Input" means the total heat input of fuels burned by a unit in a calendar year, as determined from the higher heating value and cumulative annual usage of each fuel.

"Boiler or Steam Generator" means any combustion equipment permitted to be fired with liquid and/or gaseous and/or solid fossil fuel, used to produce steam or to heat water. Boiler or Steam Generator does not include any unfired waste heat recovery boiler that is used to recover sensible heat from the exhaust of any combustion equipment.

"Existing Unit" means any unit installed prior to [*date of adoption*] which is not a modified unit as defined herein.

"Higher Heating Value (HHV)" means the total heat liberated per mass of fuel burned (British thermal unit per pound), when fuel and dry air at standard conditions undergo complete combustion and all resulting products are brought to their standard states at standard conditions.

"Modified Unit" means any unit that has a burner or burners replaced or where the unit is replaced in its entirety on or after [*date of adoption*]. Modified units are considered new units.

"New Unit" means any unit that is not an existing unit. A modified unit is considered a new unit.

"Process Heater" means any external combustion equipment permitted to be fired with liquid and/or gaseous fuel and/or solid fuel which transfers heat from combustion gases to water or process streams. Process Heater does not include any kiln or oven used for drying, baking, curing, cooking, calcinating or vitrifying or any unfired waste heat recovery heater that is used to recover sensible heat from the exhaust of any combustion equipment.

"Rated Heat Input Capacity" (million British thermal units per hour) means the heat input capacity specified on the manufacturer's nameplate of the combustion unit. If the combustion unit has been physically modified such that its maximum heat input is different than the heat input capacity specified on the nameplate, the modified maximum heat input shall be considered as the rated heat input. The new maximum heat input must be certified, in writing, by the manufacturer or installer and engineering calculations supporting the new maximum heat input rating must be submitted to and approved by the District. The District may require the modified maximum heat input capacity to be demonstrated by a fuel meter while operating the unit at maximum capacity.

"Unit" means any boiler, steam generator, or process heater.

"Utility Natural Gas" means natural gas supplied by a public gas utility company that meets Public Utility Commission quality pipeline standards as specified in *General Order 58-A.*

D. Requirements – Emission Standards

1. No owner or operator shall operate any new or modified unit or, after January 1, 2020, any existing unit, in excess of the following limits, subject to Section D.2 below:

    a. Oxides of Nitrogen emissions shall not exceed 30 parts per million by volume at 3 percent oxygen.

    b. Carbon Monoxide emissions shall not exceed 400 parts per million by volume at 3 percent oxygen.

2. The provisions of Section D.1 shall not apply to any existing unit that meets the following:

    a. The existing unit operates with an annual heat input, from all fuels, at or below 1.8 billion British thermal units per calendar year as verified by a District approved non-resettable temperature and pressure corrected totalizing fuel meter that is installed no later than December 31, 2016; and

    b. The owner or operator implements the District approved *Rule 361 Compliance Plan* required under Section K.3 for the life of the unit; and

    c. The owner or operator demonstrates to the Control Officer compliance with the requirements specified in Sections F, G, H and I.

E. Requirement - Loss of Low Use Exemption

Any owner or operator of any existing unit claiming the Section D.2 low use exemption where the unit's annual heat input in any calendar year exceeds 1.8 billion British thermal units shall comply with the following:

1. Within 120 days after the end of the calendar year during which the unit exceeded 1.8 billion British thermal units of annual heat input, submit an Authority to Construct permit application for installation of control equipment or a replacement unit; and

2. Within 365 days after the end of the calendar year during which the unit exceeded 1.8 billion British thermal units of annual heat input, demonstrate to the Control Officer and maintain compliance with Section D.1 for the life of the unit; and

3. Maintain compliance with requirements of Section D.2 until compliance with Section D.1 is achieved.

F. Requirements – Compliance Determination

1. Any owner or operator of any unit fired exclusively on utility natural gas and any unit subject to Section D.2 shall be tuned-up pursuant to the requirements of Section I. The District may, at its discretion, require any owner or operator of any unit subject to this rule to perform a source test per the test methods listed in Section J. An owner or operator may choose to comply with this section by performing District-approved source testing in lieu of tune-ups.

2. Except for units subject to Section D.2, any owner or operator of any unit not fired exclusively on utility natural gas shall perform District-approved source testing not less than once every 24 months using the source test methods listed in Section J. After the third required compliance source test, the District may, at its discretion, allow the owner or operator of the unit to perform tune-ups in lieu of source testing per the requirements of Section I.

3. All emission determinations shall be made in the as-found operating condition, except no compliance determination shall be established during unit start up, shutdown, or under breakdown conditions. Start up or shutdown intervals shall not last longer than is necessary to reach stable temperatures and conditions.

4. Any owner or operator of any unit found not to be in compliance with Section D.1 requirements as a result of the tune-up procedure shall notify the District in writing within 7 days. The notification shall include a copy of the *Rule 361 Tune-Up Report*, the actions taken to get the unit into compliance, and the next steps to achieve compliance. Failure to bring the unit into compliance with the requirements of Section D.1 within 15 days of the initial tune-up attempt shall constitute a violation of this rule.

G. Requirements – Recordkeeping

All owners or operators of units subject to this Rule shall keep all records listed below onsite for a period of five years and be made available to District upon request.

1. Maintain *Rule 361 Tune-Up Reports* and test-firing records.

2. Source test reports.

3. For existing units subject to Section D.2:

    a. Monthly and annual fuel use logs for each fuel type.

b. Meter calibration records.

4. Records of emergency non-gaseous fuel use per Section B.2. These records shall include the dates, operating hours, and volumes of non-gaseous fuel used and documentation of fuel sulfur content.

H. Requirements – Reporting

1. The records required pursuant to Section G shall be submitted to the District by March 1st for the prior calendar year.

2. Source test reports shall be submitted to the District within 45 days of test completion.

I. Requirements – Unit Tuning

The owner or operator of any unit subject to the tune-up requirements of this rule shall comply with the following requirements:

1. Perform tuning at least twice per year, (at intervals from 4 to 8 months apart) in accordance with the procedures described in the attached District Rule 361 Tune-Up Procedures. Units subject to Section D.1 emission standards shall follow the procedure requirements to measure oxides of nitrogen and carbon monoxide levels using a District-approved calibrated portable analyzer.

2. If the unit does not operate throughout a continuous six-month period within a calendar year, then only one tune-up is required for that calendar year.

3. No tune-up is required during a calendar year for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use but once test firing is completed it shall be shutdown. If test firing exceeds 24 hours per year, then tune-ups shall follow the requirements of Section I.1.

J. Requirements - Source Testing

1. The owner or operator of any unit subject to this Rule shall perform an initial source test on each unit at the time of installation and modification to verify compliance with the oxides of nitrogen and the carbon monoxide emission limits of Section D.1.a and D.1.b. After the initial source test, source tests shall be performed biennially to demonstrate compliance with Section D.1.a and Section D.1.b. For facilities with more than 10 units subject to Section D.1.a and Section D.1.b requirements, the Control Officer may, on a case-by-case basis, approve an alternate source test schedule for up to one half of the units every other year. Such a request shall be submitted with the Plan required in Section J.2.

2. The owner or operator of any unit subject to this Rule shall submit a Source Test Plan to the District and obtain District written approval prior to the start of any source test. The approved Plan shall be filed with the District at least 30 days before the start of each source test. The District shall be notified of the date of source testing a unit at least 14 days prior to testing to arrange a mutually agreeable test date.

3. Source testing shall be performed by a source test contractor certified by the Air Resources Board. District required source testing shall not be performed by an owner or operator unless approved by the Control Officer.

4. The owner or operator of any unit subject to source test requirements of this rule shall use the test methods and procedures below:

   a. Oxides of Nitrogen: Environmental Protection Agency Method 10 or Air Resources Board Method 100.

   b. Carbon monoxide: Environmental Protection Agency Method 7E or Air Resources Board Method 100.

   c. Fuel rate: District-approved metering system, calibrated within 60 calendar days of the test date. Public Utility Company regulated fuel meters relied on by operators for testing may be allowed an alternative calibration schedule upon approval by the Control Officer. Results must be corrected for pressure and temperature to standard conditions.

   d. Determination of the stack gas smoke-spot number using one of the following methods:

      1. American Society of Testing and Materials ASTM D 2156, "Standard Test Method for Smoke Density in Flue Gases from Burning Distillate Fuels", American Society of Testing and Materials International.

      2. Bacharach True Spot® Smoke Test Kit.

      3. Alternative methods for determining the stack gas smoke-spot number approved by the Control Officer in writing.

   e. Any alternative source test method approved in writing by the Control Officer that is found to be comparable in accuracy to the procedure in this Section and approved by the Air Resources Board and the Environmental Protection Agency.

   f. At a minimum, three 30 minute test runs shall be performed for compliance with Sections J.4.a and J.4.b. The average concentration from the three test runs shall be used for determining compliance.

K. Compliance Schedule

The owner or operator of any unit subject to this rule shall meet the following compliance schedule:

1. Existing units shall apply for a Permit to Operate by **[*90 days from date of adoption*]** in accordance with Rule 202.

2. Obtain an Authority to Construct permit prior to installation or modification of any new or modified unit.

3. The owner or operator of any unit requesting the low use exemption in Section D.2 shall comply with the requirement to submit a *Rule 361 Compliance Plan* for District review and approval prior to March 15, 2016. The District approved fuel meters shall be installed by no later than December 31, 2016. The *Rule 361 Compliance Plan* shall include:

    a. The company name, District Facility ID number, facility address, current operating permit number, facility contact information.

    b. A list of all subject units with their rated heat input capacity, District Device ID number, anticipated annual heat input.

    c. For gaseous fuels, the proposed non-resettable temperature and pressure corrected totalizing fuel meter(s) specifications. For liquid fuels, the proposed non-resettable totalizing fuel meter(s) specifications. For solid fossil fuels, provide the methods of fuel throughput monitoring to be used that will achieve the same level of fuel monitoring accuracy as the meters required for the measurement of gaseous and liquid fuels described above. Include the fuel meter manufacturer, model number, technical brochure, and manufacturer recommended calibration schedule.

    d. For each unit, identify which Rule 361 Tuning Procedure will be used (see Attachment).

4. On or before January 30, 2019, the owner or operator of any existing unit shall:

    a. For units subject to Section D.1 emission standards, apply for an Authority to Construct permit.

    b. For units subject to the Section D.2 low use provision, provide the annual fuel heat input data for years 2017 and 2018.

5. On or before January 1, 2020, the owner or operator of any unit shall demonstrate final compliance with this Rule.

L. Rule Effective Date

This rule is effective [*date of adoption*]

ATTACHMENT

SBCAPCD Rule 361 Tune-Up Procedures[1]

PROCEDURE A
Equipment Tuning Procedure for Forced Draft-fired Equipment[2]

Nothing in this Equipment Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division), the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

As used in this procedure, the requirement to measure Oxides of Nitrogen (NO_x) readings is only required if the unit being tuned is subject to the requirements of Section D.1 (i.e., 30 ppmvd at 3 % oxygen [O_2]). Only District-approved portable NO_x and CO analyzers may be used. The analyzer shall be calibrated per ATSM Test Method D-6522-00 (reapproved 2005) prior to each use. Calibration records shall be submitted as part of the *Rule 361 Tune-Up Report*. Analyzer readings shall be taken pursuant to ATSM Test Method D-6522-00 (reapproved 2005). Steps in the Tune-Up Procedure below not applicable to specific units may be omitted.

1. Operate the unit at the firing rate most typical of normal operation. If the unit experiences significant load variations during normal operation, operate it at its average firing rate.

2. At this firing rate, record stack gas temperature, oxygen concentration, and carbon monoxide concentration and NO_x concentration (also record the smoke-spot number[3] for liquid fuels only) and the observed flame condition after unit operation stabilizes at the firing rate selected. Note these readings in the *Rule 361 Tune-Up Report* as the *"Initial As-Found Conditions"*. If the excess oxygen in the stack gas is at the lower end of the range of typical minimum values[4], and if the carbon monoxide emissions are low and there is not smoke, the unit is probably operating at near optimum efficiency - at this particular firing rate. However, complete the remaining portion of this procedure to determine whether still lower oxygen levels are practical. For units subject to Section D.1, note whether the NO_x and carbon monoxide values comply with the applicable limits.

---

1. These Rule 361 tune-up procedures differ from SCAQMD Rule 1146.1 and Ventura Rule 74.15.1 (e.g., NO_x (as NO_2) readings are required to be taken in addition to the CO reading if the unit is subject to Section D.1).

2. This tuning procedure is based on a tune-up procedure developed by KVB, Inc. for the EPA.

3. The smoke-spot number can be determined with American Society of Testing and Materials ASTM Test Method D-2156, "Standard Test Method for Smoke Density Flue Gases from Burning Distillate Fuels," American Society of Testing and Materials International or with the Bacharach method.

4. Typical minimum oxygen levels for boilers at high firing rates are:
   a. For natural gas: 0.5% - 3%
   b. For liquid fuels: 2% - 4%

3. Increase combustion air flow to the furnace until stack gas oxygen levels increase by one to two percent over the level measured in Step 2. As in Step 2, record the stack gas temperature, oxygen

concentration, carbon monoxide concentration, NO_x concentration (also record the smoke-spot number[5] for liquid fuels only), and the observed flame condition for these higher oxygen levels after boiler operation stabilizes.

4. Decrease combustion air flow until the stack gas oxygen concentration is at the level measured in Step 2. From this level gradually reduce the combustion air flow, in small increments. After each increment, record the stack gas temperature, oxygen concentration, carbon monoxide concentration, NO_x concentration, smoke-spot number (for liquid fuels) and the observed the flame condition.

5. Continue to reduce combustion air flow stepwise, until one of these limits in reached:

   a. Unacceptable flame conditions - such as flame impingement on furnace walls or burner parts, excessive flame carryover, or flame instability.

   b. Stack gas carbon monoxide concentrations greater than 400 ppmvd or NO_x concentrations greater than 30 ppmvd (as corrected to 3% O_2).

   c. Smoking at the stack.

   d. Equipment-related limitations - such as low windbox/furnace pressure differential, built in air-flow limits, etc.

6. Develop an oxygen/carbon monoxide curve (for gaseous fuels) or oxygen/smoke curve (for liquid fuels) similar to those shown in Figures 1 and 2 using the excess oxygen, carbon monoxide or smoke-spot number data obtained at each combustion air flow setting.

7. From the curves prepared in Step 6, find the stack gas oxygen levels where the carbon monoxide emissions or smoke-spot number equal the following values:

Fuel	Measurement	Value
Gaseous	carbon monoxide Emissions	400 parts per million
#1 & #2 oils	smoke-spot number	number 1
#4	oil smoke-spot number	number 2
#5	oil smoke-spot number	number 3
Other oils	smoke-spot number	number 4

The above conditions are referred to as carbon monoxide or smoke threshold, or as the minimum excess oxygen level.

5. The smoke-spot number can be determined with American Society of Testing and Materials ASTM Test Method D02156, "Standard Test Method for Smoke Density Flue Gases from Burning Distillate Fuels," American Society of Testing and Materials International or with the Bacharach method.

Compare this minimum value of excess oxygen to the expected value provided by the combustion unit manufacturer. If the minimum level found is substantially higher than the value provided by the combustion unit manufacturer, burner adjustments can probably be made to improve fuel and air mixing, thereby allowing operation with less air.

8. Add 0.5 to 2.0 percent to the minimum excess oxygen level found in Step 7 and reset burner controls to operate automatically at this higher stack gas oxygen level. This margin above the minimum oxygen level accounts for fuel variations, variations in atmospheric conditions, load changes, and nonrepeatability or play in automatic controls.

9. If the load of the combustion unit varies significantly during normal operation, repeat Steps 1-8 for firing rates that represent the upper and lower limits of the range of the load. Because control adjustments at one firing rate may affect conditions at other firing rates, it may not be possible to establish the optimum excess oxygen level at all firing rates. If this is the case, choose the burner control settings that give best performance over the range of firing rates. If one firing rate predominates, settings should optimize conditions at that rate.

10. Verify that the new settings can accommodate the sudden changes that may occur in daily operation without adverse effects. Do this by increasing and decreasing load rapidly while observing the flame and stack. If any of the conditions in Step 4 result, reset the combustion controls to provide a slightly higher level of excess oxygen at the affect firing rates. Next, verify these new settings in a similar fashion. Then make sure that the final control settings are recorded at steady-state operating conditions for future reference.

11. Take a final combustion analysis for NO_x concentration, carbon monoxide concentration and oxygen concentration. Note these readings, as well as the stack temperature and flame condition, in the *Rule 361 Tune-Up Report* as the *"Final As-Tuned Conditions"*. Confirm that the final settings result in compliance with the regulatory limits. **If compliance with Section D.1 is not achievable, takes actions and provide notification to the District pursuant to the requirements of Section F.4**.

12. When the above checks and adjustments have been made prepare a *Rule 361 Tune-Up Report.* The report shall include all recorded data and combustion analysis data for the unit; the manufacturer, model number and serial number of the portable NOx/CO analyzer; the name, title, signature, company name, and contact information of person performing the tune-up; and date the tune-up was performed. The *Rule 361 Tune-Up Report* shall clearly indicate the *"Initial As-Found Conditions"* and the *"Final As-Tuned Conditions"* and shall (if applicable) state whether Section D.1 emission standards for NO_x and carbon monoxide were met. Calibration records shall be submitted as part of the *Rule 361 Tune-Up Report.*

NOTE

The owner/operator may propose an alternative tuning procedure that meets the same basic requirements of the procedure outlined above for District review and approval. The District may assess fees to reimburse its costs associated with the review of the alternative procedure using either Section I.C.d or Section III.C of Rule 210. District approval of the alternative tuning procedure must be obtained prior to its use.

Figure 1

Oxygen/Carbon Monoxide Characteristic Curve

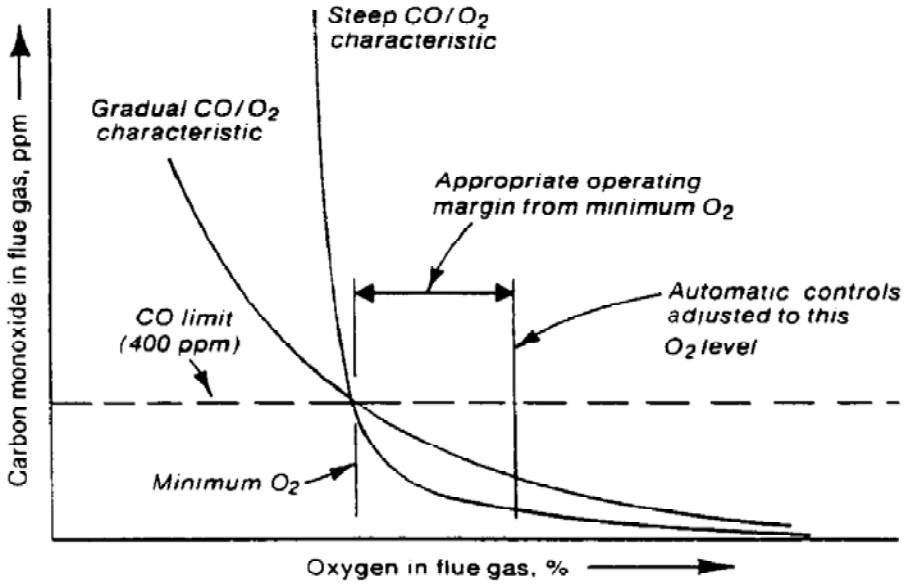
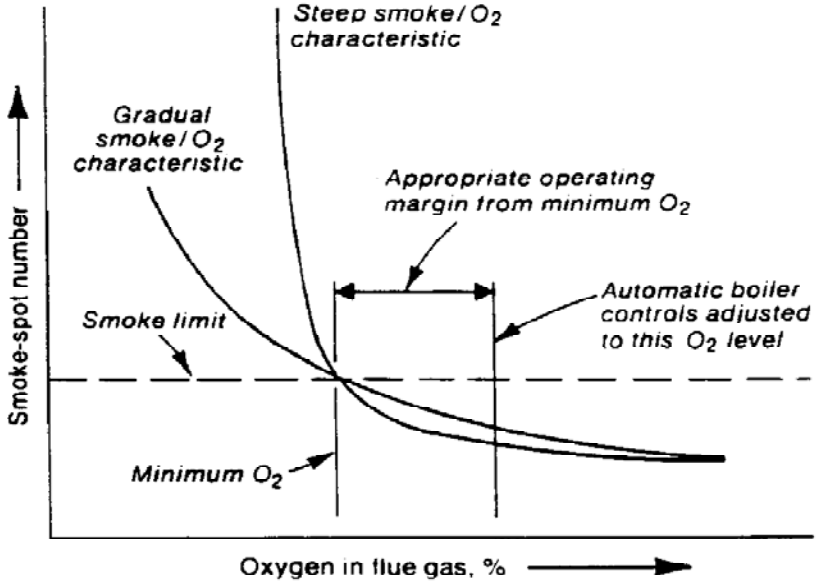


Figure 2

Oxygen/Smoke Characteristic Curve



PROCEDURE B

Equipment Tuning Procedure for Natural Draft-Fired Equipment

Nothing in this Equipment Tuning Procedure shall be construed to require any act or omission that would result in unsafe conditions or would be in violation of any regulation or requirement established by Factory Mutual, Industrial Risk Insurers, National Fire Prevention Association, the California Department of Industrial Relations (Occupational Safety and Health Division) the Federal Occupational Safety and Health Administration, or other relevant regulations and requirements.

As used in this procedure, the requirement to measure Oxides of Nitrogen (NO_x) readings is only required if the unit being tuned is subject to the requirements of Section D.1 (i.e., 30 ppmvd at 3% oxygen [O_2]). Only District-approved portable NO_x and CO analyzers may be used. The analyzer shall be calibrated per ATSM Test Method D-6522-00 (reapproved 2005) prior to each use. Calibration records shall be submitted as part of the *Rule 361 Tune-Up Report*. Analyzer readings shall be taken pursuant to ATSM Test Method D-6522-00 (reapproved 2005). Steps in the Tune-Up Procedure below not applicable to specific units may be omitted.

1. Preliminary Analysis

    a. Verify that the boiler, steam generator, or process heater (unit) is operating at the lowest pressure or temperature that will satisfy load demand. This pressure or temperature will be used as a basis for comparative combustion analysis before and after tune-up.

    b. Verify that the unit operates for the minimum number of hours and days necessary to perform the work required.

    c. Verify that the size of air supply openings is in compliance with applicable codes and regulations. Air supply openings must be fully open when the burner is firing and air flow must be unrestricted.

    d. Verify that the vent is in good condition, properly sized and free from obstruction.

    e. Perform an as-found (i.e., prior to any adjustments) combustion analysis for carbon monoxide concentration, NO_x concentration, oxygen concentration and measure the stack temperature and note the flame condition at both high and low fire, if possible. Note these readings in the *Rule 361 Tune-Up Report* as the *"Initial As-Found Conditions"*. Also record the following:

        (1) Inlet fuel pressure at burner at high and low firing rates.

        (2) Pressure above draft hood or barometric damper at high, medium, and low firing rates.

        (3) Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the unit.

        (4) Inlet fuel use rate if meter is available.

2. CHECKS AND CORRECTIONS

a. Clean all dirty burners or burner orifices. Verify that fuel filters and moisture traps are in place, clean, and operating properly. Confirm proper location and orientation of burner diffuser spuds, gas canes, etc. Replace or repair all damaged or missing burner parts.

b. Remove external and internal sediment and scale from heating surfaces.

c. Verify that the necessary water or process fluid treatment is being used. Confirm flushing and/or blowdown schedule.

d. Repair all leaks. In addition to the high-pressure lines, check the blow-off, drain, safety valve, bypass lines, and, if used, the feed pump.

3. SAFETY CHECKS

a. Test primary and secondary low water level controls.

b. Check operating and limit pressure and temperature controls.

c. Check pilot safety shut off operation.

d. Check safety valve pressure setting and verify that the setting is consistent with unit load requirements.

e. Check limit safety control and spill switch.

4. ADJUSTMENTS

Perform the following checks and adjustments on a warm unit at high fire:

a. Adjust unit to fire at the maximum inlet fuel use rate: record fuel manifold pressure.

b. Adjust draft and/or fuel pressure to obtain acceptable, clean combustion at high, medium, and low firing rates. The carbon monoxide value should not exceed 400 parts per million at 3% oxygen.

Verify that unit light-offs are smooth and safe. Perform a reduced fuel pressure test at both high and low firing rates in accordance with the manufacturer's instructions.

c. Check and adjust the modulation controller. Verify proper, efficient, and clean combustion through the range of firing rates.

When optimum performance has been achieved, record all data.

5. FINAL TEST

After adjustments, perform a final combustion analysis for carbon monoxide concentration, NO_x concentration, oxygen concentration, and measure the stack temperature and note the flame

condition on the warm unit at high, medium, and low firing rates, if possible. Note these readings in the *Rule 361 Tune-Up Report* as the "*Final As-Tuned Conditions*". Also record the following:

i. Inlet fuel pressure at burner at high and low firing rates.

ii. Pressure above draft hood or barometric damper at high, medium, and low firing rates.

iii. Steam pressure, water temperature, or process fluid pressure or temperature entering and leaving the unit.

iv. Inlet fuel use rate if meter is available.

If the unit is subject the Section D.1 limits for NO_x (30 ppmvd at 3% O_2) and carbon monoxide (400 ppmvd at 3% O_2), confirm that the final settings result in compliance with the regulatory limits. **If compliance is not achievable, takes actions and provide notification to the District pursuant to the requirements of Section F.4**.

6. RULE 361 TUNE-UP REPORT

When the above checks and adjustments have been made, prepare a *Rule 361 Tune-Up Report*. The report shall include all recorded data and combustion analysis data for the unit; the manufacturer, model number and serial number of the portable NO_x/CO analyzer; the name, title, signature, company name and contact information of person performing the tune-up; and date the tune-up was performed. The *Rule 361 Tune-Up Report* shall clearly indicate the "*Initial As-Found Conditions*" and the "*Final As-Tuned Conditions*" and shall (if applicable) state whether Section D.1 emission standards for NO_x and CO were met. Calibration records shall be submitted as part of the *Rule 361 Tune-Up Report*.

NOTE
The owner or operator may propose an alternative tuning procedure that meets the same basic requirements of the procedure outlined above for review and approval by the Control Officer. The District may assess fees to reimburse its costs associated with the review of the alternative procedure using either Section I.C.d or Section III.C of Rule 210. Control Officer approval of the alternative tuning procedure must be obtained in writing prior to its use.

APPROVED AS TO FORM:

STEPHEN SHANE STARK
SANTA BARBARA COUNTY COUNSEL

By_____
Deputy
Attorneys for the Santa Barbara
Air Pollution Control District

ATTACHMENT 6

PROPOSED AMENDED RULE 202
EXEMPTIONS TO RULE 201 (PERMITS REQUIRED)

January 17, 2008

Santa Barbara County Air Pollution Control District

260 San Antonio Road, Suite A
Santa Barbara, California 93110

(805) 961-8800

RULE 202. EXEMPTIONS TO RULE 201. (Adopted 10/18/1971, revised 5/1/1972 and 6/27/1977, readopted 10/23/1978, revised 12/7/1987, 1/11/1988, 1/17/1989, 7/10/1990, 7/30/1991, 11/05/1991, 3/10/1992, 5/10/1994, 6/28/1994, 4/17/1997, and [*date of revised rule adoption*]

A. Applicability

An Authority to Construct or Permit to Operate shall not be required for equipment, operations, and activities described herein.

[. . .]

G. Combustion Equipment (Other than Internal Combustion Engines)

Notwithstanding the listed exemptions, any collection of articles, machines, equipment or other contrivances within each listed equipment category at a stationary source that has aggregate emissions in excess of 25 tons per calendar year of any affected pollutant is not exempt.

1. Combustion equipment with a maximum heat input of less than or equal to two (2) million British thermal units per hour is exempt from permit requirements if fired exclusively with one of the following:

[…]

APPROVED AS TO FORM:

STEPHEN SHANE STARK
SANTA BARBARA COUNTY COUNSEL

By_____
Deputy

Attorneys for the Santa Barbara
Air Pollution Control District

ATTACHMENT 7

PROPOSED RULE 361 FLOWCHART (SMALL BOILERS, STEAM GENERATORS, AND PROCESS HEATERS)

January 17, 2008

Santa Barbara County Air Pollution Control District

260 San Antonio Road, Suite A
Santa Barbara, California 93110

(805) 961-8800

Compliance Schedule and Flowchart

The attached flowchart 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_x 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 an ATC permit to comply with the NO_x 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.