

From: Steckel.Andrew@epamail.epa.gov [mailto:Steckel.Andrew@epamail.epa.gov]
Sent: Monday, December 07, 2009 2:59 PM
To: KEVIN J. WILLIAMS; mguzzett@arb.ca.gov
Cc: Perez.Idalia@epamail.epa.gov
Subject: EPA Comments on Sacramento Rule 414



United States Environmental Protection Agency
Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

December 07, 2009

Transmittal of EPA Rule Review Comments

To: Kevin Williams, Sacramento Metropolitan Air Quality Management District
kjwilliams@airquality.org

Mike Guzzetta, California Air Resources Board
mguzzett@arb.ca.gov

From: Andrew Steckel, Rulemaking Office Chief
steckel.andrew@epa.gov

Re: Rule 414, Water Heaters (Draft provided to EPA 10/25/09)

We are providing comments based on our preliminary review of the draft rule identified above. Please direct any questions in this regard to me at (415) 947-4115 or to Idalia Perez at (415) 972-3248.

1. We recommend that the exemption for Pool/Spa Heaters with a heat input less than 75,000 Btu/hr found in Section 111 be eliminated. For example, SJV Rule 4902 eliminates this exemption effective 1/1/2010.
2. The District should consider changing the compliance deadline of 1/1/2013 to an earlier date similar to SJV Proposed Rule 4308 (November 5, 2009) which has a compliance deadline of 1/1/2011. The extended compliance deadline for Sacramento seems unnecessary since compliant equipment should be available sooner nearby to adhere with SJV 4308.

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January 14, 2010

Mr. Andrew Steckel
Rulemaking Office Chief
EPA Region IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Dear Mr. Steckel:

The Sacramento Metropolitan Air Quality Management District (SMAQMD) would like to thank EPA Region IX for providing comments and recommendations in our rulemaking process for SMAQMD Rule 414. Below are our responses to the comments you made in your letter dated December 7, 2009 (attached).

Comment #1: We recommend that the exemption for pool/spa heaters with a heat input less than 75,000 Btu/hr found in Section 111 be eliminated. For example, SJV Rule 4902 eliminates this exemption effective 1/1/2010.

Response: Three districts – Bay Area, Yolo-Solano, and San Joaquin – have recently amended their rules pertaining to water heaters rated less than 75,000 Btu/hr to be essentially consistent with the standards first adopted by the South Coast AQMD. However, there has been no consensus on whether pool/spa heaters with a heat input less than 75,000 Btu/hr should be exempt from the standards. In the South Coast district, and now in the San Joaquin district, these units are not exempt. In the Yolo-Solano and Bay Area districts, these units are exempt. We reviewed the web sites of 5 major manufacturers of pool/spa heaters (Hayward, Laars, Pentair, Raypak, and Jandy) and one large retailer of pool and spa supplies (Best Buy Pool Supply) to determine the number of models/sizes of pool/spa heaters being manufactured or offered for sale. Of the 92 models and sizes identified, only 4 had an input rating of 75,000 Btu/hr or less. In addition, 4 of the web sites had heater sizing charts for various sizes of pools and spas, with none recommending heaters smaller than 100,000 Btu/hr for even the smallest pools and spas.

After consideration of this information, while we have proposed to subject all pool/spa heaters rated 75,000 Btu/hr or greater to NO_x emission limits, we are proposing to exempt pool/spa heaters rated less than 75,000 Btu/hr. This exemption will have a minimal effect on the emission reductions that will be achieved by the rule amendments.

Comment #2: The District should consider changing the compliance deadline of 1/1/2013 to an earlier date similar to SJV Proposed Rule 4308 (November 5, 2009) which has a compliance deadline of 1/1/2011. The extended compliance deadline for Sacramento seems unnecessary since compliant equipment should be available sooner nearby to adhere with SJV 4308.

Response: The standard in question is the 14 ng/J NO_x limit for units rated greater than or equal to 75,000 Btu/hr and less than 400,000 Btu/hr. This standard was originally developed by the South Coast AQMD, and they have set a compliance date of January 1, 2012. We have

Mr. Andrew Steckel
January 14, 2010
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proposed a compliance date of January 1, 2013 so that we can evaluate whether there are any early problems with manufacture, certification, or availability of units meeting this standard in the South Coast district. Our proposed compliance date is the same as that established by the Bay Area district, and one year earlier than the date established by the Yolo-Solano district.

Manufacturers typically certify their units in the South Coast district. In our past experience with Rule 414, manufacturers have certified their units in our district by submitting the appropriate South Coast AQMD certifications, as opposed to submitting test results directly to us. Other districts, including Bay Area and Yolo-Solano, also accept the South Coast certifications. Setting a compliance date earlier than the date required by the South Coast district would put an additional burden on manufacturers to first undergo the certification process in our district. For these reasons, we continue to propose a compliance date of January 1, 2013.

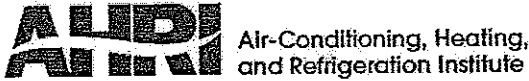
Sincerely,

Kevin J. Williams, Ph.D.
Program Coordinator

c: Brigette Tollstrup, SMAQMD

Attachment

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December 15, 2009

Mr. Joe Carle
Sacramento Metropolitan AQMD
777 12th St., 3rd Floor
Sacramento, CA 95814

Dear Mr. Carle:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) is a national trade association representing manufacturers of space heating, water heating, air conditioning and refrigeration equipment and components. AHRI's 300 member companies include nearly all the manufacturers of gas water heaters, boilers and other equipment proposed to be covered by the amendments to Rule 414 (Water Heaters, Boilers and Process Heaters Rated Less Than 1,000,000 Btu per Hour). We have reviewed the proposed amendments to Rule 414 along with the accompanying staff report and have the following comments.

Section 102

We are concerned that the expansion of this rule to include equipment fired by nongaseous fuels has not been adequately analyzed or justified. The staff report expresses the belief that there are currently no units fired by wood, coal or fuel oil operating in the district. If that is correct then what is the need to regulate products not being used in the district. There are no emission reductions to be achieved by such a regulation. Conversely, if the staff report is in error and, for example, there are some oil-fired water heaters or boilers operating in the district then applying a rule developed for gas-fired products without further analysis of the differences between oil-fired and gas-fired products is inappropriate.

Section 301

The proposed 6 month delay in the effective date of the revised NO_x emission limits is too short for the expanded scope of this amended rule. While it is more likely that residential gas storage water heaters can clear through the distribution chain and clear inventory in six months, the other types of water heaters and boilers proposed to be added to this rule are not sold and installed at anywhere near the frequency as that of residential storage water heaters. The staff report estimates that less than 2% of the units affected by this rule will be those with inputs in the range of 75,000 to 1,000,000 Btu/h. Distributors and wholesalers will still have to stock some of these units but with significantly less demand some of these units will sit in inventory for more than 6 months. If this rule continues to be implemented at "point of sale,"

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we recommend a 12 month sell through period. The better solution would be to apply the rule to the date of manufacture and then make the revised rule effective six months after it is adopted. This is the implementation process that has been successfully used in the SCAQMD.

We appreciate this opportunity to provide comments on the proposed amended Rule 414. If you have any questions or need additional information regarding any of these comments please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink that reads "Frank A. Stanonik". The signature is written in a cursive style with a large initial "F".

Frank A. Stanonik
Chief Technical Advisor

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**STATE OF CALIFORNIA
ENVIRONMENTAL PROTECTION AGENCY
AIR RESOURCES BOARD**



P. O. Box 2815
Sacramento, California 95812

December 15, 2009

ARB Staff Rule Review Results

To: Mr. Kevin Williams, Associate Air Quality Engineer
Sacramento Metropolitan Air Quality Management District
Telephone Number: (916) 874-4851
e-mail: kjwilliams@airquality.org

From: Alex Krichevsky, (916) 324-6222
e-mail: akrichev@arb.ca.gov

The following rule, which is scheduled for workshop to be held by your District staff on December 16, 2009, was received by us on November 20, 2009, for our review:

Rule 414 Natural Gas-Fired Water Heaters

The Air Resources Board staff has reviewed the rule and, based on the information available to us at this time, we have no comments.

The rule was examined by the following ARB divisions: Stationary Source and Monitoring and Laboratory.

If you have any questions, please contact me by e-mail or at the telephone number above.

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Plumbing-Heating-Cooling Contractors of the Greater Sacramento Area
Plumbers Unilateral Apprenticeship Committee
Plumbing-Heating-Cooling Contractors of California
Apprenticeship Committee (Federal Purposes)
5816 Roseville Road, Suite 1
Sacramento, CA 95842
916-640-0910 Ofc
916-640-0905 Fax

December 22, 2009

DEC 24 2009

Air Quality Management District
777 12th Street, 3rd Floor
Sacramento, Ca 95814-1908

Attn: Mr. Joe Carle

Re: Rule 414 changes

Dear Mr. Carle,

Thank you for the workshop you conducted on December 16th, 2009 regarding Rule 414 changes. Involving all stakeholders concerned, prior to the changes, greatly increase our chances of success.

On behalf of the Plumbing-Heating-Cooling Contractors of California (PHCC) we are concerned about several items. Our concerns are as follows:

1. Power Vent, Power Direct Vent and Direct Vent water heaters should be excluded. No manufacturers currently produce these models.
2. Timing is everything. Please allow 6 months after the effective date of Rule 414 and the date on the plate to allow for inventories to be depleted. This is not a much time, but it reduces some concerns with a model or two that does not move. Typically, it takes 10 or 11 months to flush out complete inventories.
3. Remember that major manufacturers such as Bradford White, State, AO Smith, Rheem need time to implement production, as California is the only one state that requires this, to my knowledge. I would suggest at least 10 months.
4. If you need names and/or addresses of any manufacturers of water heaters, please let us know. We will be happy to provide these for you.

I look forward to attending your board meeting in February 2010, and very much appreciate your consideration in this matter.

Sincerely,

Harry Moos
Executive Vice President/CEO

HM:tt

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JOSEPH CARLE

From: Robert Glass [rglass@Raypak.com]
Sent: Thursday, February 18, 2010 4:08 PM
To: JOSEPH CARLE
Cc: Stanonik, Frank; Joe Boros; Karen Meyers
Subject: Comments on Proposed Amendments to Rule 414

Joe,

My name is Robert Glass and I am the Director of Engineering & Quality at Raypak, Inc. (located in Oxnard, CA). We are a major manufacturer of boilers, water heaters and pool heaters.

I have several comments on the proposed amendments as presented in the Notice of Public Hearing and Postponement to New Date - Sacramento Metropolitan Air Quality Management District concerning proposed amendments to Rule 414 - Natural Gas-Fired Water Heaters. I will be traveling and unavailable to participate in person at the Public Hearing on March 25, 2010.

We applaud the decision to allow product manufactured before the effective dates to be distributed, offered for sale or sold for 6 months after the effective date of the new standards in order to allow distributor inventory to be sold.

(1) We understand the desire of the Sacramento Metropolitan AQMD to address currently "unregulated" water heaters, boilers and process heaters rated between 75,000 Btu/hr and 1,000,000 Btu/hr. We also applaud the decision to exclude units fueled by liquid petroleum gas (ie. propane). However, we question why the proposal extends to units fueled by gaseous and nongaseous fuels other than natural gas. The SCAQMD and the other 3 districts referenced only have requirements for product fueled by natural gas. When local, state and federal agencies are offering incentives for use of bio-fuels and other alternative fuel sources, we wonder what test protocol can be used to qualify the proposed NOx levels for these fuels (other than natural gas)?

(2) If the Sacramento Metropolitan AQMD continues with the proposed revisions to include gaseous and nongaseous fuels other than natural gas in these changes, the proposed implementation date of 1/1/2011 is not appropriate. Manufacturers of products which would fall into this coverage would need much more time to make the necessary modifications to meet these very stringent requirements. Since they are NOT forced to meet these requirements in any other AQMD in California, this implementation period is totally insufficient.

(3) Are the proposed changes for the water heaters rated less than 75,000 Btu per hour (excluding those used in mobile homes) limited to tank type water heaters? Raypak also makes water heaters in this input range that are not tank type heaters and this needs to be clarified.

(4) For units rated greater than or equal to 75,000 Btu/hr and less than 400,000 Btu/hr - why is the NOx level set at 40 ng/J (55 ppmv at 3% O2) until 1/1/2013? The previous SCAQMD levels (prior to 1/1/2010) were 20 ng/J (30 ppmv at 3% O2). Whereas the current SCAQMD levels for units in this rated capacity are 14 ng/J (20 ppmv at 3% O2) - effective 1/1/2010. We see that the proposal looks to make the new levels of 14ng/J (20 ppmv at 3% O2) effective 1/1/2013.

(5) Are pool/spa heaters rated greater than or equal to 400,000 Btu/hr and less than 1,000,000 Btu/hr excluded from revisions like the exclusion for pool/spa heaters less than 400,000 Btu/hr listed in the proposal?

(6) Since propane is excluded from NOx requirements under Rule 414 (both current and proposed amendments), would it be correct to state that a dual fuel product (fueled by natural gas or propane gas) would ONLY have to show compliance with the stated NOx levels on natural gas?

We thank you for the opportunity to provide comments on this rulemaking. Please feel free to visit our Raypak website (www.raypak.com) to review the products that we offer that will be affected by these proposed changes

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3/1/2010

or fro any clarification.

Also, please feel free to contact me if you have any questions. I would appreciate a response to these questions in order to properly reply, as necessary.

Regards,

Robert S. Glass
Director of Engineering & Quality
Raypak, Inc.
2151 Eastman Avenue
Oxnard, CA 93030
(805) 278-5398 - Phone
(805) 278-5494 - Fax
rglass@raypak.com

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3/1/2010

Robert Glass, Raypak, Inc. Written Comments (February 18, 2010)

Comment #1: We applaud the decision to allow product manufactured before the effective dates to be distributed, offered for sale or sold for 6 months after the effective date of the new standards in order to allow distributor inventory to be sold.

Response: Thank you.

Comment #2: We understand the desire of the Sacramento Metropolitan AQMD to address currently "unregulated" water heaters, boilers and process heaters rated between 75,000 Btu/hr and 1,000,000 Btu/hr. We also applaud the decision to exclude units fueled by liquid petroleum gas (ie. propane). However, we question why the proposal extends to units fueled by gaseous and nongaseous fuels other than natural gas. The SCAQMD and the other 3 districts referenced only have requirements for product fueled by natural gas. When local, state and federal agencies are offering incentives for use of bio-fuels and other alternative fuel sources, we wonder what test protocol can be used to qualify the proposed NOx levels for these fuels (other than natural gas)?

If the Sacramento Metropolitan AQMD continues with the proposed revisions to include gaseous and nongaseous fuels other than natural gas in these changes, the proposed implementation date of 1/1/2011 is not appropriate. Manufacturers of products which would fall into this coverage would need much more time to make the necessary modifications to meet these very stringent requirements. Since they are NOT forced to meet these requirements in any other AQMD in California, this implementation period is totally insufficient.

Response: The test procedure for certifying units fired by fuels other than natural gas is in Section 501.2 of the proposed rule amendments.

Units fired by nongaseous fuels like oil, wood and coal produce much higher levels of particulate matter than gaseous fuels as well as several toxic air contaminants. Our research indicates that there are very few, if any, currently used in Sacramento County. Converting from gaseous fuels to use of these more polluting fuels will exacerbate our air quality problems. Because other fuels are not widely used, many districts may have chosen not to establish emissions standards for these devices. In the absence of emissions standards, in parts of the eastern United States these devices have gained popularity in recent years. These devices caused significant neighborhood health complaints, and eventually resulted in some communities banning installation¹. Staff recommends these emissions standard provisions as a proactive

¹ See EPA website for some community listings
http://www.generalcode.com/samples/06Spr_1.html

step to avoid these problems. Applying the proposed emissions standards to these fuels will likely prevent boilers and water heaters using existing technologies from being installed in the District. Staff notes that Rapak Inc. currently only sells units fired on natural gas and propane.

Comment #3: Are the proposed changes for the water heaters rated less than 75,000 Btu per hour (excluding those used in mobile homes) limited to tank type water heaters? Raypak also makes water heaters in this input range that are not tank type heaters and this needs to be clarified.

Response: The proposed changes apply to water heaters of any type, including tank type and instantaneous/tankless. Language has been added to Section 102 of the proposed rule to clarify the applicability. The proposed limits in SMAQMD Rule 414 for all types of water heaters rated less than 75,000 Btu/hr have been in effect in the South Coast AQMD (Rule 1121) since 1/1/2006 and in the Yolo-Solano AQMD (Rule 2.37) since 1/1/2010. The same standards will take effect in the Ventura County APCD (Rule 74.11) on 7/1/2010.

Comment #4: For units rated greater than or equal to 75,000 Btu/hr and less than 400,000 Btu/hr - why is the NOx level set at 40 ng/J (55 ppmv at 3% O₂) until 1/1/2013? The previous SCAQMD levels (prior to 1/1/2010) were 20 ng/J (30 ppmv at 3% O₂). Whereas the current SCAQMD levels for units in this rated capacity are 14 ng/J (20 ppmv at 3% O₂) - effective 1/1/2010. We see that the proposal looks to make the new levels of 14ng/J (20 ppmv at 3% O₂) effective 1/1/2013.

Response: The SCAQMD emission standards and effective dates stated in the comment actually apply to units greater than or equal to 400,000 Btu/hour but less than 2,000,000 Btu/hr. For this size range in proposed Rule 414 new units need to meet a 14 ng/J standard by the first effective date of 1/1/2011. Units greater than or equal to 75,000 Btu/hr but less than 400,000 will have to meet a standard of 40 ng/J on 1/1/2011, which is the standard currently effect in the SCAQMD. On 1/1/2012 this size range of units will need to meet a 14 ng/J standard in the SCAQMD. Staff decided to set a 14 ng/J standard in the SMAQMD a year later than the SCAQMD so that we can evaluate whether there are any early problems with manufacture, certification, or availability of units meeting this standard in the South Coast district.

Comment #5: Are pool/spa heaters rated greater than or equal to 400,000 Btu/hr and less than 1,000,000 Btu/hr excluded from revisions like the exclusion for pool/spa heaters less than 400,000 Btu/hr listed in the proposal?

Response: No. New pool/spa heaters greater than or equal to 400,000 Btu/hr and less than 1,000,000 Btu/hr must meet a standard of 14 ng/J by 1/1/2011. Please note that not all pool/spa heaters are exempt from Rule 414. New pool/spa heaters less than 75,000 Btu/hr are exempt from Rule 414 but new units greater than or equal to 75,000 Btu/hr and less than 400,000 Btu/hr must meet an emission standard of 40 ng/J by 1/1/2011. The emissions standards for new units greater than or equal to 75,000 Btu/hr are equivalent to SCAQMD Rule 1146.2.

Comment #6: Since propane is excluded from NOx requirements under Rule 414 (both current and proposed amendments), would it be correct to state that a dual fuel product (fueled by natural gas or propane gas) would ONLY have to show compliance with the stated NOx levels on natural gas?

Response: Yes. A unit that is capable of firing either natural gas or propane must demonstrate compliance only for firing on natural gas.
