

**SUMMARY OF COMMENTS AND STAFF RESPONSES
FOR PROPOSED REVISION TO
OAC 252:100-31. CONTROL OF EMISSION OF SULFUR COMPOUNDS**

**COMMENTS RECEIVED PRIOR TO AND AT THE *JULY 20, 2011*
AIR QUALITY ADVISORY COUNCIL MEETING**

Written Comments

Buzzi Unicem USA - Email from Mr. Tom Rader on behalf of Lone Star Industries, dba Buzzi Unicem USA, Pryor, Oklahoma (Lone Star), received July 15, 2011:

Regarding the proposed change to OAC 252:100-31-25:

252:100-31-25. Requirements for new Fuel-burning fuel-burning equipment

Any fuel-burning equipment that was not in being on or before July 1, 1972 or that is modified after July 1, 1972 shall comply with the following requirements.

1. **COMMENT:** It is not clear as to what constitutes a modification. Modification should be qualified to mean a modification that causes an increase in SO_x emissions.

RESPONSE: The change, as proposed, is not intended to be a substantive change, because it essentially moved the applicability language from the definitions section (OAC 252:100-31-2) to individual sections. The term “new equipment” as defined in Subchapter 31 has historically used the term “modification,” which is defined in the General Provisions of Subchapter 1. The change requested by Lone Star would be a substantive change from existing language. Staff does not feel that the requested change would be appropriate.

Regarding the proposed change to 252:100-31-25(4):

(4) **Alternative fuel.** An alternative fuel may be used in fuel-burning equipment, provided the following criteria are met.

(A) The use of an alternative fuel does not cause:

(i) the SO_x emission limits in (a) of this section to be exceeded, or

(ii) the ambient air concentration limit for H₂S contained in OAC 252:100-31-7 to be exceeded.

(B) The use of an alternative fuel does not create a condition for violation of any TAC MAAC listed in Appendix O to this chapter. (See OAC 252:100-42)

(C) The use of an alternative fuel is not disallowed under any applicable 40 CFR Part 60, 61, or 63 rule, or results in a violation of any applicable emission standard therein.

(D) The use of an alternative fuel does not create or contribute to a violation of any NAAQS or PSD increment.

(E) The use of an alternative fuel is allowed under an enforceable permit.

2. **COMMENT:** “The proposed changes are to OAC 252:100 Subchapter 31, Control of Emission of Sulfur Compounds. The proposed changes should be applicable to the subchapter.
(4)(B) does not appear to be appropriate in subtitle 31 as it is related to Toxic Air Contaminants and should be addressed in OAC 252:100-42
(4)(C) Should refer to ‘applicable emission standard for sulfur compounds therein.’
(4)(D) Should refer to ‘any NAAQS or PSD sulfur compound increment.’”

RESPONSE: Staff concurs that it is appropriate to narrow the language of this new subsection to focus better on the subject of Subchapter 31, while assuring that it does not interfere with implementation of other applicable requirements. Staff has reworded the language for the subsequent proposal.

International Paper - Email from Ms. Kathryn Crenwelge, EHS Manager of International Paper – Valliant Mill, received July 19, 2011:

3. **COMMENT:** International Paper requested that AQD remove the Subchapter 31 language for the pulp & paper industry or recognize that the industry is subject to other standards (i.e., NSPS and NESHAP requirements) which supersede or take the place of the Subchapter 31 standards.

RESPONSE: OAC 252:100-31-15 contains requirements for existing kraft pulp mills, and 252:100-31-27 contains requirements for new pulp mill process equipment. The requirements in OAC 252:100-31-15 were added to implement federal requirements for control of total reduced sulfur from existing kraft pulp mills (Section 111(d) Plans). EPA’s approval of this 111(d) plan is codified in 40 CFR Part 62, Subpart LL. Certain provisions of NSPS and NESHAPs that apply to the pulp and paper industry may include requirements that are more stringent or redundant to those of Subchapter 31. However, staff does not believe that NSPS/NESHAPs would take the place of all applicable Subchapter 31 requirements. For instance, 40 CFR Part 60, Subpart BB – Standards of Performance for Kraft Pulp Mills does not apply to existing sources or other pulp mill processes. In addition, the NESHAPs do not deal directly with the pollutants covered by the provisions of Sections 31-15 and 31-27. The requested change would be considered a substantive change, and staff does not believe the change would be appropriate at this time.

EPA Region 6 – Letter from Guy Donaldson, Chief, Air Planning Section, received July 14, 2011:

Regarding existing and proposed language in related subsections in OAC 252:100-31-13, 252:100-31-16, 252:100-31-25, and 252:100-31-27:

4. **COMMENT:** EPA suggested inserting “operation” into several taglines that currently read “Installation, calibration, and maintenance of emission monitoring systems,” in order to be consistent with the language of the subject paragraph, as proposed for amendment.

RESPONSE: Staff has included the suggested change in the subsequent proposal.

Regarding the proposed change to OAC 252:100-31-7:

5. **COMMENT:** EPA stated that the proposed changes would require that AQD demonstrate that dropping the existing ambient SO₂ concentration limits in Section 31-7(a) would not interfere with attainment of the NAAQS, “Reasonable Further Progress” or other applicable requirement of the Clean Air Act (CAA). AQD would be required to submit an analysis as provided for under Section 110(l) of the CAA at the time the rule revision is submitted for inclusion in Oklahoma’s SIP.

RESPONSE: Staff is preparing a Section 110(l) analysis for submittal to EPA when the rule change is submitted for inclusion in Oklahoma’s SIP.

Staff believes that the proposed change to OAC 252:100-31-7 would not result in any substantial loss of protection, considering the current NAAQS and other existing requirements. Staff believes that the Section 31-7 standards are outmoded in light of the new one-hour SO₂ NAAQS of 0.075 ppm. By comparison, the existing Section 31-7 allows a one-hour average of 0.46 ppm. Staff does not believe the existing numbers are protective, and does not have an adequate rationale or method for simply adjusting these numbers in a way that would allow permittees and permit writers to demonstrate compliance with the NAAQS and the purpose of the Subchapter using current modeling and monitoring protocols.

With the change that became effective in August 2010, EPA substantially shifted the SO₂ NAAQS emphasis to preventing high short-term exposure, by dropping both the existing annual standard of 30 ppm and the existing 24-hour standard of 140 ppm, while adding the one-hour maximum standard of 0.075 ppm.

Staff believes it would be mathematically difficult to exceed any of the Section 31-7 ambient standards without violating the NAAQS. While DEQ has expressed disagreement regarding EPA’s “hybrid” approach for demonstrating the State’s compliance with the SO₂ NAAQS, the appropriate use of modeling in the permitting process can and will assure compliance with the SO₂ standards.

Oral Comments

Citizen’s Action for Safe Energy - Mr. Tony Nuspl

6. **COMMENT:** Mr. Nuspl requested changes to OAC 252:100-31-2 and 252:100-31-25. He requested that hazardous material be excluded from the proposed definition of “alternative fuel,” in particular waste-derived fuels with high chlorine content. In addition, Mr. Nuspl requested that the rule specify a minimum BTU content for the fuel being burned. Mr. Nuspl also requested that “independent monitoring by the DEQ” be conducted for facilities that burn hazardous material.

RESPONSE: Subchapter 31 provisions are not the controlling rules for the handling, use, and/or disposal of hazardous materials. Staff believes that the provisions for use of

alternative fuel in fuel-burning equipment proposed in OAC 252:100-31-25(4), as reworded, provide an appropriate level of protection within the purpose of Subchapter 31.

Note: Mr. Nuspl primarily spoke regarding concerns over a particular Portland cement production plant and the effects of its permitted emissions on air quality in the Tulsa area. Mr. Nuspl indicated that he wished to submit written comments on the proposed Subchapter 31 rule and provided copies of a document to the Council. The document was a flyer that expressed concerns regarding the burning of hazardous waste at that cement kiln, and listed the facility's "currently emitted" and "proposed emission" levels for various pollutants. [Staff notes that several of the emissions numbers cited in the flyer do not accurately represent the facility's AQ permit limits.] In addition, the flyer expressed concern over DEQ's public notification procedures and urged the public to contact members of the Tulsa City Council. Upon review of the document, it was determined that the document did not raise or address any issues specific to Subchapter 31 or the proposed rule changes.

COMMENTS RECEIVED PRIOR TO THE *OCTOBER 5, 2011* AIR QUALITY ADVISORY COUNCIL MEETING

Conoco-Phillips – Email from Mr. David Gamble on behalf of Conoco-Phillips, Ponca City, Oklahoma (Conoco-Phillips), received September 8, 2011:

Regarding proposed language in OAC 252:100-31-25(3)(A)(ii)(I).

7. **COMMENT:** "Why is the 160 ppmv limit for sulfur instead of hydrogen sulfide, which would make it comparable to NSPS J?"

RESPONSE: The existing rule language [in OAC 252:100-31-25(c)(1)(B)(i)] refers to (total) sulfur rather than just H₂S, and it applies to fuel-burning equipment from various industry sectors. Staff has some concern that although H₂S may be the most appropriate parameter for petroleum refineries that are subject to NSPS J, other forms of sulfur compounds may also be pertinent in other sectors. In addition, the proposed language of OAC 252:100-31-25(3)(A)(ii)(I) is not intended to change the content of the provision, but is intended to clarify the language and make it more consistent with other rules in the subchapter. (As discussed below, it appears that the proposal, using the 160 ppmv sulfur content, would not be consistent with that intention.) Note that neither the existing rule language nor the proposed language constitutes a limit on sulfur emissions or fuel gas sulfur content. Rather, it provides an exception to the continuous SO₂ monitoring requirement for fuel-burning equipment that uses only low-sulfur gaseous fuel.

8. **COMMENT:** "If the 160 ppmv and 0.1 wt% limits are intended to be applicable to total sulfur in the fuel gas, does the state intend for the fuel gas to be continuously monitored to demonstrate compliance, or is a single sample or process knowledge adequate? The Ponca City refinery continuously monitors its fuel gas systems for hydrogen sulfide as required by NSPS J, but does not monitor for total sulfur."

RESPONSE: Both the existing rule language and the proposed language of OAC 252:100-31-25(3)(A)(ii)(I) references the sulfur content (rather than hydrogen sulfide).

The existing rule does not specify a monitoring protocol for gaseous fuel. Therefore, a demonstration that the facility qualifies for the SO₂ monitoring exception for lower sulfur gaseous fuel is determined on a case-by-case basis. The rigor of a demonstration would need to match the likelihood of exceeding the requirement, and would be consistent with Subchapter 43 and any applicable federal requirements. Staff does not believe that the proposed amendments (if the change described below is included) would change this approach.

- 9. COMMENT:** “The original version of the rule limited the fuel gas sulfur content to 0.1 wt%, but the revised rule includes the 160 ppmv limit. I’ve calculated a few cases to see what the characteristics of a fuel gas stream would need to be for the 160 ppmv and 0.1 wt% to represent the same amount of sulfur. I found that the molecular weight of the fuel gas (excluding the sulfur) would need to be about 5 lbs/lb-mole, which is very low. Assuming a mixture of methane and hydrogen, the gas composition would need to be about 78% hydrogen and 22% methane and the resulting heating value of the gas would be about 476 BTU/SCF, which is also very low and not really practical as a fuel.”

“Assuming the case of a fuel gas stream made up of 100% methane and no hydrogen, the sulfur content would need to be about 500 ppmv in order to also be 0.1 wt%, or 0.03 wt% sulfur in order to also be 160 ppmv. As such, the 160 ppmv, when applied to natural gas or refinery fuel gas, appears to be more stringent than the 0.1 wt% limit.”

RESPONSE: The proposed 160 ppmv level is approximately the field gas maximum sulfur content limit in some AQ permits for fuel-burning equipment at oil & gas compressor stations, etc. However, staff agrees that it is probably not the best number for this particular rule. Staff intends to recommend that the Council substitute a level of 500 ppmv for the 160 ppmv. As the commenter stated, the 500 ppmv is roughly 0.1 weight percent total sulfur for methane (and corresponds to the ratio of “equivalents” listed in the NSPS GG definition of “natural gas”: 20.0 gr/100 scf total sulfur \approx 0.068 wt% \approx 338 ppmv at 20° C).

Georgia-Pacific – Email from Mr. Stephen Landers on behalf of Georgia-Pacific Consumer Products LP, Muskogee, Oklahoma (Georgia-Pacific), received September 26, 2011:

Regarding proposed language in OAC 252:100-31-25(3)(A)(i).

- 10. COMMENT:** The proposed language states in part: “The owner or operator shall continuously monitor opacity, except where gaseous fuel is the only fuel burned.” Georgia-Pacific expressed concern that “...the loss of opacity monitoring for any reason other than routine maintenance or calibration would arguably be an immediate deviation.” The company also stated that “Continuous monitors will experience malfunctions and/or downtime during their operation, and it does not seem that the ODEQ would expect deviation reporting for such monitor downtime so long as the downtime is within applicable allowances.”

Georgia-Pacific requested that the proposed sentence be restated as: “The owner or operator shall install, maintain and operate a continuous opacity monitoring system, except where gaseous fuel is the only fuel burned.”

RESPONSE: Staff intends to present substitute language for the Council to consider for OAC 252:100-31-25(3)(A)(i), and four other locations where the same phrase was proposed [252:100-31-13(2), 252:100-31-16(1), 252:100-31-25(3)(A)(ii), and 252:100-31-27(2)].

Verallia – Email from Mr. Steven B. Smith, V.P., Environmental and Regulatory Affairs, on behalf of Verallia (formerly Saint-Gobain Containers), Sapulpa, Oklahoma, received September 30, 2011:

Regarding proposed language in OAC 252:100-31-25(1).

11. COMMENT: Verallia proposed a language change to assure that only emissions of SO₂ attributable to the burning of fuel are subject to the emission limits for fuel-burning equipment.

RESPONSE: Staff intends to present substitute language for the Council to consider for OAC 252:100-31-25(1),