

**October 12, 2006**  
**REVISED SUMMARY OF COMMENTS AND STAFF RESPONSES**  
**FOR PROPOSED REVISION TO OAC 252:100-1-3, DEFINITIONS**

**COMMENTS RECEIVED PRIOR TO AND AT THE**  
**JULY 19, 2006, AIR QUALITY ADVISORY COUNCIL MEETING**

**Written Comments**

**EPA Region 6** – Letter dated July 13, 2006, received by FAX on July 13, 2006, signed by Thomas H. Diggs, Chief, Air Planning Section and David Neleigh, Chief, Air Permits Section.

1. **COMMENT:** We [EPA] provided comments on the amended definition for VOCs (Subchapter 1) in a letter dated July 13, 2005. As we indicated in that letter, we support the ODEQ revision to exempt tert-butyl acetate (tBAc) from VOC emissions limitations [Subchapters 1, 9, 37 and 39], but we cannot support the exemption of tBAc from emissions reporting and recordkeeping requirements. EPA made clear in its revisions to 40 CFR Part 51- Requirements for Preparation, Adoption and Submittal of Implementation Plans that tBAc was not being exempted for the purposes of recordkeeping and reporting (§51.100(s)(5)) and our Federal Register of November 29, 2004 (69 FR 69298) provides details of why exemption from reporting and recordkeeping could not be allowed. We will work with you in drafting revised language to require reporting and recordkeeping for tBAc; however, we will not be able to approve a revision to the plan that exempts tBAc from reporting and recordkeeping requirements.

**RESPONSE:** DEQ appreciates EPA's concerns, but this particular rule change only exempts TBac as a VOC. DEQ is working with EPA on this issue and, if necessary, will address EPA's concerns in future rule making.

Mike Peters (Ryan, Whaley & Coldiron), attachment to email dated July 17, 2006

2. **COMMENT:** The proposed changes to the definitions in OAC 252:100-1-3 of the OAPCR seek to specifically include both "Condensable particulate matter" and "Filterable particulate matter" in the determination of "Particulate matter" and "Particulate matter emissions." If promulgated as currently proposed, how will compliance with the existing permit particulate matter ("PM") emissions limitations, some of which are based solely on filterable PM (sometimes referenced as the "front half") be determined?

**RESPONSE:** Particulate matter is the most widely regulated air pollutant emitted from industrial sources. Health concerns regarding particulate matter concentrate on "fine" particulate matter - particulate matter equal to or less than 2.5 microns (PM2.5). Condensable particulate matter is of great concern due to the inherently small size of condensation products; overwhelmingly, condensable particulate matter can be classified as PM2.5. PM has always had these two distinct components, filterable and condensable PM. Filterable PM refers to the fraction of PM emissions in a sampling train that is a solid or a liquid at sampling conditions. Condensable PM, on the other hand, is the fraction of PM that is vapor at sampling conditions, but which will condense into both liquid and solid PM once cooled. Both these fractions are emitted to the atmosphere as PM emissions and it is

standard for DEQ to require testing for both to show compliance with state PM emission regulations. Air quality science is focusing on deleterious chronic health effects due to PM<sub>2.5</sub>. Since condensable emissions are primarily within the PM<sub>2.5</sub> size range, it is prudent to require condensable measurements. However, staff agrees that the way the proposed terms “condensable PM” and “filterable PM” were added to the definition of “PM emissions” implied a requirement to test for both in all cases. This was not the intent of the rule change and the proposed change to the definition for “PM emissions” has been modified accordingly.

As previously stated, DEQ requires “back half” testing to show compliance with state PM emission regulations (252:100-19). Conversely, DEQ has always followed EPA guidelines concerning testing to show compliance with any federal regulation (NSPS) DEQ administers.

3. **COMMENT:** If such rules are adopted, how will the DEQ allow/authorize industry to review existing permit PM emission limitations and revise the currently permitted emission limitations as necessary to account for potential PM emissions increases associated with the inclusion of condensable PM (sometimes referenced as the “back half”) which were not previously required, identified or included in previous permit determinations?

**RESPONSE:** DEQ has modified the original proposal. See response two above. DEQ will continue to require “back half” testing to show compliance with state PM emission regulations (252:100-19). Most existing permit PM emissions limitations are based upon filterable and condensable PM. The majority of affected facilities would most likely be major (Title V) manufacturing facilities. Therefore, Title V applications that were received before March 9, 1999 (original Title V applications) and were issued less than 5 years ago (after October 4, 2001) could potentially have language that might need clarification on this issue. It is estimated that 0.04% of the facilities with DEQ Air Quality permits may need a special review.

4. **COMMENT:** If such rules are adopted and assuming the DEQ allows/authorizes industry the opportunity to revise existing PM emission limitations to incorporate condensable PM, will affected industry be authorized to continue current operations at currently permitted PM emission rates until such time as the permit emission limitations are revised?

**RESPONSE:** See responses above. Most existing permit PM emissions limitations are based upon filterable and condensable PM. It is estimated that 0.04% of the facilities with DEQ Air Quality permits may need a special review.

5. **COMMENT:** For those facilities which are currently subject to an NSPS standard which includes a PM emission limitation which has been adopted and /or otherwise incorporated in the currently applicable permit, will compliance with such limitation be based on the currently proposed PM definitions (i.e., filterable and condensable PM) or will compliance be based on filterable PM only as previously determined by EPA?

**RESPONSE:** DEQ has always followed EPA guidelines concerning testing to show compliance with any federal regulation (NSPS) DEQ administers. The EPA has stated that

condensables are a significant portion of PM10 emissions and therefore should be quantified for emissions inventories purposes. EPA has stated this in numerous publications:

US EPA Publication (September 1994). PM-10 Emission Inventory Requirements - Final Report. Emission Inventory Branch: RTP, N.C.

"2.1.2 Condensible PM-10

Condensible particulate matter (or condensed particulate matter, as it is synonymously described) can be broadly defined as material that is not particulate matter at stack conditions but which condenses and/or reacts (upon cooling and dilution in the ambient air) to form particulate matter immediately after discharge from the stack. Condensable particle matter forms in a few seconds in the stack exhaust due primarily to immediate cooling and air dilution. Condensable particulate matter is of potential importance because it usually is quite fine and thus falls primarily within the PM-10 fraction. **As a consequence, condensable particulate matter should always be included in the emission inventory.**"

Federal Register: Volume 55, Number 74, April 17, 1990, pp.14246-14249. 40 CFR Part 51: Preparation, Adoption, and Submittal of State Implementation Plans; Methods for Measurement of PM10 Emissions from Stationary Sources.

"However, the EPA recognizes that condensable emissions are also PM10, and that emissions that contribute to ambient PM10 concentrations are the sum of in-stack PM10, as measured by Method 201 or 201A, and condensable emissions. Therefore, for establishing source contributions to ambient concentrations of PM10 for emission inventory purposes, EPA recommends that source PM10 measurements include both in-stack PM10 and condensable emissions."

Letter from Thompson G. Pace, EPA OAQPS to Sean Fitzsimmons, Iowa DNR, March 31, 1994 (regarding PM 10 Condensables).

"The definition of PM-10 includes [Condensable Particulate Matter] CPM. CPM is of potential importance to attainment of the PM-10 national ambient air quality standards because it usually is quite fine and thus falls primarily within the PM-10 fraction (see e.g., "PM-10 SIP Development Guideline," June 1987, USEPA EPA-450/2-86-001 at p. 5-32 and 56 FR 65432, December 17, 1991). The EPA ambient monitoring method for the determination of PM-10 in the atmosphere is intended to include any particles that are caught by the filter at "ambient" conditions and thus, in providing for the determination of ambient PM-10 concentrations, includes any CPM (see 40 CFR part 50, Appendix J)."

6. **COMMENT:** How will the increased levels of water born, non-process related solids which are naturally occurring be accounted for by the DEQ?

**RESPONSE:** DEQ will continue to follow testing procedures set forth in OAC 252:100 and applicable EPA guidelines and methods concerning testing.

7. **COMMENT:** For those facilities which previously did not report condensable PM, will the DEQ require such facilities to file amended emissions inventory documents and remit past annual operating fees based on the indicated level of condensable PM?

**RESPONSE:** See responses above. It is believed that most existing permit PM emissions limitations take condensable PM into account. Facilities are required to submit emissions inventories each year that accurately reflect emissions levels.

8. **COMMENT:** Will the DEQ seek to differentiate between process generated condensable PM vs. non-process generated condensable PM?

**RESPONSE:** DEQ will continue to follow testing procedures set forth in OAC 252:100 and applicable EPA guidelines and methods concerning testing. In most cases all condensable PM is process generated.

Rusty Kroll (Doerner, Saunders, Daniel & Anderson, L.L.P.) written comments hand delivered to the Air Quality Advisory Council on July 19, 2006 and forwarded to staff on October 10, 2006.

9. **COMMENT:** The proposed rules depart from the long-standing definition of “particulate matter” and “particulate matter emissions”, which include only liquid or solid in a finely divided form. The proposed definition broadens the current definition to include materials that exist as vapor when exiting a source, but condense in certain testing equipment. This proposed expansion in the definition is not a clarification but a new substantive requirement of the regulations.

**RESPONSE:** See responses above. The proposed rule changes do not depart from the long standing definitions of “particulate matter” or “particulate matter emissions” nor do they broaden the definitions. Before June of 2003 the definitions for these were:

**"Particulate matter"** means any material that exists in a finely divided form as a liquid or a solid.

**"Particulate matter emissions"** means any finely divided solid or liquid material as measured during a stack test of the source's emissions.

After June of 2003 the definitions were changed to:

**"Particulate matter"** means any material that exists in a finely divided form as a liquid or a solid.

**"Particulate matter emissions"** means particulate matter emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method.

As can be seen, the change in June of 2003 during the agency rules examination process merely removed language from the definition of “particulate matter emissions” while leaving the definition for “particulate matter” unchanged. The proposed change adds the term,

“filterable and/or condensable” to the definition of “particulate matter emissions.” This does not add a new requirement because the addition is dependent on the clause “as measured by applicable reference methods...” Condensables are vapor coming out of the stack. Then these particulates condense in the atmosphere at ambient temperature. EPA considers these emissions as potentially contributing to the ambient PM10 levels. As stated above, these methods test for both filterable and condensable PM and thus the inclusion of the term “filterable and/or condensable” in the definition for “particulate matter emissions” is justified.

10. **COMMENT:** We believe that for many regulated entities in the State of Oklahoma, ODEQ has not previously required that condensable particulate matter be counted to determine compliance with various state particulate matter regulations. We believe that ODEQ’s records will show that many entities’ permits incorporated a test that captured only filterable particulate matter. Accordingly, for entities, the requirement of the proposed rules to include condensable particulate matter, may affect the ability of their facilities to achieve and maintain compliance with applicable particulate matter standards.

**RESPONSE:** See responses above. The DEQ in the past has required that condensable and filterable emissions be counted when determining compliance with state particulate matter emission rules (252:100-19). Subchapter 19 permit limits are based on expected total emissions. EPA has stated that “since [condensable particulate matter] CPM is considered PM-10 and, when emitted, can contribute to ambient PM-10 levels, applicants for PSD permits must address CPM if the proposed emission unit is a potential CPM emitter.” Letter from Thompson G. Pace, EPA OAQPS to Sean Fitzsimmons, Iowa DNR, March 31, 1994 (regarding PM 10 Condensables).

11. **COMMENT:** Additionally, the proposed regulations will have a significant impact on air emissions fees paid by such entities. We believe that a significant number of entities in the State of Oklahoma have reported particulate matter emissions in annual air emissions inventories based upon test results or emission factors that did not include condensable particulate matter within their scope...

**RESPONSE:** Test methods or emission factors used to show compliance with applicable state and federal emission regulations are not linked to the responsibility of the owners or operators to provide “true, accurate and complete” emission inventories. Reported actual particulate matter emissions should be complete and include both condensable and filterable particulate matter emissions.

12. **COMMENT:** Oklahoma law requires that before a state regulation that is more stringent than a federal requirements can be proposed, the ODEQ must prepare a justification analysis of the economic impact compared to the environmental benefit of the rule, which must be submitted to the Governor and State Legislature, to our knowledge, this required analysis has not been performed and, if that is the case, applicable rulemaking procedures have not been followed. The Rule Impact Statement states that the proposed regulations will not have any impact on public, health, safety or the environment. It appears that no information on any benefit of the proposed rule has been developed by ODEQ.

**RESPONSE:** Such an analysis was not required because as stated above there are no new emission regulations being proposed in this rulemaking. Further, the PM emissions limitations contained in 252:100-19 predate any applicable federal PM emission regulations (NSPS).

13. **COMMENT:** The ODEQ's Proposed Definitional Changes May Have Great Economic Impact.

**RESPONSE:** As the responses above indicate, DEQ is not proposing new standards or requirements. The proposal clarifies long standing policy. If there are unforeseen compliance problems DEQ will work with facilities to correctly comply.

14. **COMMENT:** The ODEQ's Proposed Definitional Amendments Are Substantive Changes that Affect Individual Rights And Not Mere Clarifications.

**RESPONSE:** As the responses above indicate, DEQ is not proposing new standards or requirements.

15. **COMMENT:** Oklahoma Law, Which Requires an Economic Cost-Benefit Analysis to precede State Air Rules That Are More Stringent Than Federal Standards, Has Not Been Met.

**RESPONSE:** As the responses above indicate, DEQ is not proposing new or more stringent standards or requirements.

**VERBAL COMMENTS RECEIVED  
AT THE JULY 19, 2006 COUNCIL MEETING**

16. **COMMENT:** Mike Peters (Ryan, Whaley & Coldiron) reiterated his written comments above.

**RESPONSE:** See responses above.

17. **COMMENT:** Rusty Kroll (Doener, Saunders, Daniel and Anderson) reiterated Mr. Peters comments and supplied written comments.

**RESPONSE:** See responses above.

**COMMENTS RECEIVED PRIOR TO THE  
OCTOBER 18, 2006, AIR QUALITY ADVISORY COUNCIL MEETING**

Mark Lawson (Spirit AeroSystems, Inc.) email dated September 20, 2006

18. **COMMENT:** The change in the particulate matter definition brings in the law of unintended consequences.

"Particulate matter emissions" means filterable and/or condensable particulate matter emitted to the ambient air as measured by applicable reference methods, or an equivalent or alternative method. (252:100-1-3. Definitions)

The particulate matter proposed definition includes condensable particulate matter. By definition condensable matter is

"Condensable particulate matter" means material that is vapor at stack conditions, but which condenses and/or reacts upon cooling and dilution in the ambient air to form solid or liquid particulate matter immediately after discharge from the stack. Condensable particulate matter is considered PM-2.5. (252:100-1-3. Definitions)

Steam, visible as a white emission, coming out of a stack vent (i.e. from a boiler or a cooling tower) becomes condensable particulate matter since it is cooled and diluted in the ambient air and forms fine liquid particulate matter (which gives it the white appearance) after discharge from the stack and would now count in our annual air emission inventory as PM2.5.

Was water intended to be counted as condensable particulate matter?

**RESPONSE:** The methods used to measure condensable PM emissions exclude water because water is not a regulated air pollutant.