#### State of Oregon

Department of Environmental Quality Memorandum

**Date:** March 31, 2011

**To:** Environmental Quality Commission

**From:** Dick Pedersen, Director

**Subject:** Agenda item D, Rule adoption: New Source Review/particulate matter and greenhouse gas permitting requirements and other permitting updates

April 21-22, 2011, EQC meeting

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| **Why this is important** | Oregon’s rules must be updated to align with significant changes made to federal air quality permitting regulations. The Environmental Protection Agency’s rules now address permitting of greenhouse gases and fine particulate (less than or equal to 2.5 microns in diameter) emissions, but Oregon’s rules do not. As a result, DEQ is unable to issue EPA-required greenhouse gas related permits or implement the PM2.5 permitting program until the commission adopts implementing rules equivalent to EPA’s. This rulemaking is also needed to align Oregon’s administrative rules with recent statutory changes made to ORS 468A.040 and to update Oregon’s rules to match changes made to EPA’s acid rain program.  |
| **DEQ recommendation and EQC motion** | DEQ recommends that the Environmental Quality Commission adopt the proposed rule amendments to OAR Chapter 340, Divisions 200, 202, 215, 216, 222, 224, 225, 228, and 246 as presented in attachment A, including amendments to the Oregon Clean Air Act Implementation Plan, OAR 340-200-0040, to incorporate these rule amendments. DEQ also recommends that EQC authorize DEQ to submit these rule amendments to the U.S. Environmental Protection Agency for federal approval of the revisions to Oregon’s Clean Air Act Implementation Plan, also called the State Implementation Plan. |
| **Background and need for rulemaking**  | DEQ proposes rulemaking that would update Oregon’s New Source Review/Prevention of Significant Deterioration program for fine particles and greenhouse gases and update other permitting rules. New Source Review/Prevention of Significant Deterioration for PM2.5The New Source Review/Prevention of Significant Deterioration program is a pre-construction permitting program that ensures:1. Air quality is protected when manufacturing facilities, facilities with industrial boilers and power plants are built or modified by requiring an ambient air quality analysis, and
2. State-of-the art emission control technology is installed at new plants or existing plants with significant changes.

The Clean Air Act requires EPA to set National Ambient Air Quality Standards for certain air pollutants to limit pollution nationally. Areas that meet these standards are designated as attainment areas, and those that do not are designated as nonattainment areas. New Source Review is the preconstruction permitting program for nonattainment areas and Prevention of Significant Deterioration is the program for attainment or unclassifiable areas. In 1997, EPA adopted the first NAAQS for PM2.5, particulate matter less than 2.5 microns in diameter, because exposure can cause respiratory and pulmonary symptoms, increased hospital admissions and emergency room visits and premature death for those with heart and lung disease. New and modified major sources of PM2.5 became subject to the NSR/PSD program once EPA adopted these standards. However, technical challenges with implementation led EPA to issue a PM10 surrogate policy. This policy allowed sources to conduct an ambient air quality analysis for PM10, particulate matter less than 10 microns in diameter, in lieu of PM2.5. EPA subsequently adopted implementing rules and procedures for PM2.5. This proposal would adopt equivalent PM2.5 rules and replace a temporary rule adopted by the commission Aug. 19, 2010.Prevention of Significant Deterioration and Title V Operating Permits for Greenhouse GasesGreenhouse gas emission sources became subject to Prevention of Significant Deterioration construction and Title V operating permitting when the first greenhouse gas permitting regulations adopted by EPA became effective. In anticipation of this major change in the permitting program, EPA set greenhouse gas emission thresholds that trigger PSD permitting in a regulation known as the tailoring rule, which was adopted in May 2010. The tailoring rule reduces regulatory impacts by phasing in the applicability of PSD and Title V permitting programs to greenhouse gas sources, starting with the largest emitters that are otherwise subject to permitting. This rulemaking is necessary for DEQ to regulate greenhouse gas sources in Oregon and to maintain an EPA-approvable State Implementation Plan **— a federally-approved plan detailing how states meet Clean Air Act requirements.** EPA has determined that unless Oregon’s PSD program is modified, Oregon’s SIP would not meet Clean Air Act requirements because it does not address greenhouse gas-emitting sources. Since Oregon did not have greenhouse gas rules adopted by Jan. 2, 2011, EPA, in cooperation with DEQ, imposed a Federal Implementation Plan in Oregon; EPA will issue greenhouse gas PSD permits for facilities in Oregon until DEQ’s rules are adopted, after which EPA may delegate authority to Oregon to implement the federal rules for greenhouse gas PSD permit issuance until EPA approves the state rules. On March 11, 2011, EPA proposed rule language to defer PSD and Title V permitting requirements for carbon dioxide emissions from the combustion or decomposition of biomass for three years. During the three-year deferral period, EPA will study these emissions and develop a final rule to establish how they should be regulated. DEQ has revised the proposed rules to exempt biomass emissions to the extent they are exempt from federal permitting requirements. Small-Scale Local Energy ProjectsEPA requires states to have construction approval programs for smaller, minor, air pollution sources, but gives states flexibility in how to do this. Oregon’s minor source construction approval program generally applies more rigorous major source New Source Review/Prevention of Significant Deterioration program requirements to sources with emissions well below the federal major source thresholds. Oregon House Bill 2952 (2009) revised how the minor source construction approval program works for small-scale local energy projects to allow sources greater flexibility when siting projects while ensuring that these projects can be constructed without imposing a material threat to air quality. The proposed rules incorporate the changes made to ORS 468A.040 by House Bill 2952. Acid Rain Permitting Rule UpdateEPA updated the federal acid rain program rules, and DEQ proposes to adopt the updated rules by reference to keep Oregon’s rules current.  |
| **Effect of rule**  | DEQ expects the proposed rules to affect approximately 1,256 permitted sources in Oregon in addition to future applicants.New Source Review/Prevention of Significant Deterioration for PM2.5The proposed rule amendments would adopt a threshold or significant emission rate of 10 tons per year of PM2.5 as a significant change at an existing facility. Facilities would trigger NSR/PSD permitting only if a physical change increased emissions above this threshold. The rulemaking would also adopt levels to determine if additional ambient air quality analysis is required, track the cumulative impact of emissions growth in areas that meet air quality standards and determine if preconstruction monitoring is required for PM2.5. Adoption of the rules will allow DEQ to continue implementing the New Source Review Program. Prevention of Significant Deterioration and Title V Operating Permits for Greenhouse GasThe rulemaking would establish a major source threshold for greenhouse gases of at least 100,000 tons per year on a carbon dioxide equivalent basis and at least 100 tons per year of a greenhouse gas on a mass basis, and a threshold for defining a significant change, of 75,000 tons CO2e per year, consistent with EPA’s greenhouse gas tailoring rule. Carbon dioxide equivalent is a unit of measurement that allows the effect of different greenhouse gases to be compared using carbon dioxide as a standard unit for reference. The rulemaking would also clarify other aspects of the NSR/PSD program for greenhouse gases and other pollutants. Small-Scale Local Energy ProjectsIf adopted, this rulemaking would provide small-scale local energy projects more flexibility in obtaining reductions to offset proposed emission increases, unless DEQ determines the project will pose a compliance threat in geographic areas that are working to either maintain or do not meet air quality standards. Acid Rain Permitting Rule UpdateOregon’s rules would reflect EPA’s changes in the federal acid rain program. A summary of rule changes including the reason or basis for each change is shown in attachment B.  |
| **Commission authority** | The commission has authority to take this action under ORS 468.020, ORS 468.065, ORS 468A.025, ORS 468A.040, ORS 468A.055 and ORS 468A.310. |
| **Stakeholder involvement** | Public stakeholder meetings were held July 19, 2010, and Aug. 13, 2010, to discuss the proposed temporary rule changes. All permit holders and individuals who indicated interest in air quality rule makings were notified and invited to attend. An announcement of the meetings was posted on DEQ’s website. Input from the stakeholder meetings was incorporated into the proposed rules where appropriate. Additional meetings were held with individual stakeholders in late September, early October, late November, and mid December, 2010. |
| **Public comment** | DEQ held a public comment period for this proposed rule adoption from Oct. 14, 2010, to Nov. 24, 2010, and convened public hearings in Medford, Bend, Portland and Salem. DEQ received no oral comments at the public hearings and 19 written comments. Based on the comments received, DEQ reopened the comment period asking for additional input on alternative approaches to incorporate PM2.5 and greenhouse gases into the NSR/PSD program. This second comment period started Dec. 10, 2010, and closed Jan. 14, 2011. Revised draft language was released for comment Dec. 23, 2010. During the second public comment period, DEQ held meetings with industry, environmental stakeholders and EPA. DEQ received comments from 14 organizations, some of which had commented previously. A summary of comments and DEQ responses is provided in attachment D. Copies of the public comments are provided in attachment E.  |
| **Key issues** | New Source Review/Prevention of Significant Deterioration for PM2.5The key issue for PM2.5 NSR/PSD was how to incorporate PM2.5 as a new pollutant into the existing Oregon program. Because Oregon’s underlying NSR/PSD rules are different from the federal rules, DEQ considered a number of options for incorporating PM2.5 into the program and asked for public comment on each option. After deliberating with stakeholders and reviewing comments, DEQ is recommending a straightforward and implementable option. This approach treats PM2.5 and PM10 similarly since the two pollutants are closely related. In fact, PM2.5 is a subset of PM10, which is a pollutant already addressed by the existing permitting rules. As a result, DEQ would evaluate the amount of PM10 that is PM2.5 at a facility and use that fraction to calculate permitted levels for PM2.5. This approach incorporates PM2.5 at this time as if it had been part of the program all along; ensuring that previously approved expansions can continue to operate and that new expansions are reviewed consistent with state and federal requirements. It also avoids the need to select a unique starting point – or baseline period – for counting changes in PM2.5 emissions towards triggering NSR/PSD, which commenters indicated could advantage or disadvantage their individual facilities.Prevention of Significant Deterioration and Title V Operating Permits for Greenhouse GasesThe key issue for greenhouse gas PSD was how to incorporate greenhouse gases as a new pollutant and whether to stay with Oregon’s approach to implement PSD or use the federal approach to implement PSD for greenhouse gases. DEQ received comments on both sides of this issue and consulted with EPA about how the federal system might be used in Oregon. After evaluating the strengths and weaknesses of each program, DEQ is recommending that Oregon retain its unique approach to PSD for greenhouse gases because it provides equal environmental protection while creating incentives for voluntary early reductions and reducing administrative costs. Because greenhouse gas is a new pollutant, DEQ is recommending that the baseline period be selected as any year during the last ten years. This would reflect current operations at facilities, but allow flexibility in case emissions were low in any given year due to temporary economic conditions.Program ImprovementOne additional issue, which applies to any pollutant under Oregon’s NSR/PSD program, was raised during the comment period. This issue has to do with the way Oregon’s rules set the starting emission level – or netting basis – for counting emission changes for new and expanding facilities when they are initially permitted. To ensure that the NSR/PSD program is protective, companies are required to evaluate the air quality effects that would occur if a new or expanded facility operated at its capacity. Once this level is approved, it is also added to a facility’s netting basis even though the facility may never actually operate at that level. This unrealistically high starting emission level could allow a future expansion to avoid NSR/PSD. To address this concern, DEQ is recommending the addition of a process to reset the netting basis once a new or expanded facility has been operating for up to 10 or 15 years to establish a realistic level. This would apply to major greenhouse gas sources that were permitted but not yet operating before the greenhouse gas rules were adopted and to future NSR/PSD sources. The process would not limit the ability of a facility to operate permitted equipment, but would prevent use of the added netting basis until the level is reset. |
| **Next steps** | DEQ will continue to provide outreach and technical assistance to sources affected by the new rules and will submit a revised State Implementation Plan to EPA in May 2011. DEQ will update Title V and Air Contaminant Discharge Permits to incorporate rule changes. |
| **Attachments** | 1. Proposed rule with amendments shown in redline format
2. Summary of proposed rule changes including basis for changes
3. Alternative rule options
4. Summary of public comments and agency responses
5. Public comments
6. Statement of Need and Fiscal and Economic Impact
7. Land Use Evaluation Statement
8. Notice of proposed rulemaking hearing
9. Relationship to Federal Requirements questions
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| **Available upon request** | 1. ORS 468.020, ORS 468.065, ORS 468A.025, ORS 468A.040, ORS 468A.055 and ORS 468A.310.
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