State of Oregon

DEPARTMENT OF ENVIRONMENTAL QUALITY

**Relationship to Federal Requirements**

**New Source Review, Particulate Matter and Greenhouse Gas Permitting Requirements and Other Permitting Rule Updates**

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The Oregon Department of Environmental Quality (DEQ) is proposing rules that would update New Source Review/Prevention of Significant Deterioration (NSR/PSD) for fine particles and greenhouse gases and make other permitting rule updates.

***Answers to the following questions identify how the proposed rulemaking relates to federal requirements and the justification for differing from, or adding to, federal requirements. This statement is required by OAR 340-011-0029(1).***

**1. Is the proposed rulemaking different from, or in addition to, applicable federal requirements? If so, what are the differences or additions?**

Yes, the proposed rulemaking is different because it modifies Oregon’s existing permitting rules which are different than federal rules. Oregon’s permitting program has been structured in a different way than the federal program since it originated in 1982, but is considered equivalent by the Environmental Protection Agency.

Both programs require preconstruction approval (NSR/PSD) for new major air pollution sources or existing sources making modifications that will increase their emissions above a baseline level by a defined amount known as a “Significant Emission Rate.” The primary difference between Oregon’s existing rules and the federal rules is how the baseline emission level, or netting basis, is established. The netting basis is the emission level in a defined baseline year, adjusted by any required decreases and approved increases of emissions.

Under Oregon’s program, the netting basis is based on actual emissions from a set time period, often the year 1977 or 1978, and is adjusted accordingly based on subsequent changes at the facility. If emissions increase above the netting basis by the Significant Emission Rate for a pollutant, the source triggers NSR/PSD.

Under the federal program NSR/PSD is also triggered by an increase over a Significant Emission Rate, however the concept of baseline and netting basis is different. Instead of having a fixed baseline period, the federal program typically requires a review of the highest actual emissions at a source over any two year period in the previous ten years. Following that review, an annual highest emission level is established and that level is used as the baseline for determining if emissions will increase by more than a Significant Emission Rate.

The proposed rule does not create new differences in the major source preconstruction program from the federal program. It makes changes to Oregon’s rules to maintain equivalency with the federal program. The proposed rule incorporates two new federally regulated pollutants (greenhouse gases and fine particulates) into Oregon’s existing program which is, and has been different from the federal program since its inception.

Another change is the proposed rule to establish a Significant Impact Level (SIL), used to determine if additional air quality analysis is required during preconstruction approval. EPA’s recently adopted SILs for PM2.5 were developed by scaling the existing PM10 SILs using a PM2.5-to-PM10 National Ambient Air Quality Standard ratio.

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| --- | --- | --- | --- |
| **EPA SILs** | **Air Quality Area Designation** | | |
| **Averaging Time** | **Class I** | **Class II** | **Class III** |
| Annual | 0.06 μg/m3 | 0.3 μg/m3 | 0.3 μg/m3 |
| 24-hour | 0.07 μg/m3 | 1.2 μg/m3 | 1.2 μg/m3 |

EQC adopted the following SILs for PM2.5 in a temporary rule at the August 19, 2010 meeting based on the EPA proposed SILs at that time.

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| --- | --- | --- | --- |
| **DEQ SILs** | **Air Quality Area Designation** | | |
| **Averaging Time** | **Class I** | **Class II** | **Class III** |
| Annual | 0.04 μg/m3 | 0.2 μg/m3 | 0.2 μg/m3 |
| 24-hour | 0.08 μg/m3 | 1.0 μg/m3 | 1.0 μg/m3 |

Since EPA did not adopt the option expected, DEQ is proposing adoption of EPA’s Class I SILs to replace the SILs adopted in the temporary rule.

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| **DEQ SILs** | **Air Quality Area Designation** | | |
| **Averaging Time** | **Class I** | **Class II** | **Class III** |
| Annual | 0.06 μg/m3 | 0.2 μg/m3 | 0.2 μg/m3 |
| 24-hour | 0.07 μg/m3 | 1.0 μg/m3 | 1.0 μg/m3 |

DEQ’s proposed Class II and Class III SILs are lower than EPA’s values because DEQ established lower levels in the early 1990’s for PM10 due to significant air quality problems in the Medford area. Air quality in this area has improved over time but it is still an area of concern. The lower SILs have been maintained as part of Oregon’s State Implementation Plan to ensure that air quality does not deteriorate. Despite the lower PM10 SILs, Oregon currently has two areas in the state that do not meet ambient air quality standards for PM2.5

EPA’s Class II and III SILs for PM2.5 are higher than DEQ’s existing SILs for PM10. Since PM2.5 emissions consist of smaller particles and are considered a subset of PM10 emissions, DEQ is proposing that the PM2.5 SIL be set at a level equal to DEQ’s current PM10 SIL.

The proposed rules also change how small scale local energy projects are evaluated under Oregon’s rules based on recent changes to Oregon’s statutes resulting from House Bill 2952. EPA requires states to have minor source construction approval programs, in addition to the major source program described above, but gives states flexibility in how to do this. Oregon’s existing minor source construction approval program in effect applies major source NSR/PSD requirements to any source with emissions over the Significant Emission Rate. This is above and beyond what is required by the federal rules. HB 2952 revised how minor source construction approval works for small scale local energy projects in Oregon providing DEQ with greater flexibility on how to implement the program. The changes in the proposed rule still meet EPA’s general requirement to have a construction approval program for minor sources and do not change the stringency of the rule.

**2. If the proposal differs from, or is in addition to, applicable federal requirements, explain the reasons for the difference or addition (including as appropriate, the public health, environmental, scientific, economic, technological, administrative or other reasons).**

Oregon’s proposed rules maintain inherent differences between Oregon’s existing permitting program rules and the federal rules for the purpose of administrative consistency with the exception of the SILs which are more stringent for Class II and Class III areas for environmental and administrative reasons. See discussion above in response to Question 1. Adopting the federal program for some pollutants while maintaining the Oregon program for other pollutants could cause confusion and it would be resource intensive to administer two different programs in the state. Also converting the entire program to match the federal program would be a major undertaking, requiring significant resources and technical challenges. In addition to maintaining administrative consistency there are a number of other benefits to the Oregon program as described below.

Oregon’s NSR/PSD program was used as one of the models to support the development of the federal NSR reform rules. In particular, Oregon’s Plant Site Emission Limit was a model for the federal Plantwide Applicability Limit (PAL). The federal PAL is set by adding the Significant Emission Rate to the highest actual emissions over any two year period in the previous ten years.

The foundation for calculating net emission increases or decreases for determining applicability of the NSR/PSD program in the Oregon rules is the Plant Site Emission Limit established for each source. PSELs manage airshed capacity and provide the basis for:

1. assuring reasonable further progress towards attainment of ambient standards;
2. assuring compliance with ambient standards and PSD increments (the maximum concentration increase that is allowed to occur above a baseline concentration for a specific pollutant);
3. administering the emissions trading program; and
4. tracking PSD increment consumption (the cumulative impact of emissions growth in areas that meet air quality standards).

It is also important to note that any increase in actual emissions above the PSEL requires the source to apply for, and DEQ to approve, a revision to the PSEL in the state air quality construction permit. The PSEL rules are consistent with the requirements of the Clean Air Act as they allow increases in actual emissions only if such increases would not exceed applicable emission limitations, or cause ambient air quality standards, PSD increments or reasonable further progress to be violated. The Oregon rules, therefore, have a more clearly established baseline than in the EPA rules.

Because the PSEL is typically based on actual emissions in the 1978 baseline year, the Oregon approach is equivalent to how EPA determines whether there is a net emissions increase. Furthermore, DEQ accumulates **all** emissions increases and decreases from physical changes or changes in operation since the baseline year or last major source permit, whichever is more recent, rather than just during a “contemporaneous” time period. This aspect of DEQ’s program is similar to the federal PAL. Both provide a net environmental benefit and flexibility because they create an incentive for sources to voluntarily reduce emissions in order to avoid triggering NSR/PSD. The PSEL and PAL both have provisions to be reduced if emission reductions at the sources occur and make the caps excessively high. The PSEL and PAL also eliminate the possibility of a gradual increase of emissions over time by piecemeal projects not triggering NSR/PSD. Under the federal rules where a PAL is not chosen, an increase or decrease in actual emissions is contemporaneous. The increases from previous changes at the facility are only looked at if they occurred with 10 years of the date of a proposed new change.

In Oregon all emissions units that contribute to the emissions increase above the SER are required to install retrofit Best Available Control Technology. BACT, an emission limitation based on the maximum degree of emission reduction by the most stringent technology available for controlling emissions, is required unless it can be demonstrated that it is not feasible for energy, environmental, or economic reasons. Under the federal program, the BACT requirement applies to each individual new or modified affected emissions unit and pollutant emitting activity at which a net emissions increase would occur. Individual BACT determinations are performed for each pollutant subject to a PSD review emitted from the same emission unit. Consequently, the BACT determination must separately address, for each regulated pollutant with a significant emissions increase at the source, air pollution controls for each emissions unit or pollutant emitting activity subject to review.

The DEQ program, although substantially different from EPA’s regulations, provides a workable program which is equivalent to EPA’s and will accomplish the Clean Air Act goal of preventing significant deterioration of air quality.

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HB 2952 (2009) requires these changes to the rules in order to match Oregon’s revised statutes.

**3.****If the proposal differs from, or is in addition to, applicable federal requirements, did DEQ consider alternatives to the difference or addition?**  **If so, describe the alternatives and the reason(s) they were not pursued.**

Greenhouse Gas Prevention of Significant Deterioration

DEQ considered not taking delegation of the NSR/PSD program for GHGs. The result of this alternative would be confusion in terms of administering, issuing, enforcing and complying with these requirements since NSR/PSD permits would be issued by both DEQ and EPA. Depending on the pollutant, the NSR/PSD programs are implemented differently. It would require additional coordination and staffing to ensure DEQ and EPA approved permits within a similar timeframe, otherwise construction could be delayed. This alternative was not pursued because it would make the NSR/PSD program very disconnected and would make administration of the program impractical.

There are two steps in EPA’s Tailoring Rule that phase-in applicability for PSD and Title V permits for the largest emitters of GHGs. For the first step, beginning on January 2, 2011, PSD or Title V requirements will apply to sources’ GHG emissions only if the sources are subject to PSD or Title V anyway due to their non-GHG pollutants. Therefore, EPA will not require sources or modifications to evaluate whether they are subject to PSD or Title V requirements solely on account of their GHG emissions. The second step of the Tailoring Rule, beginning on July 1, 2011, will phase in additional large sources of GHG emissions. New sources as well as existing sources not already subject to title V that emit, or have the potential to emit, at least 100,000 tons per year CO2e (carbon dioxide equivalent) will become subject to the PSD and title V requirements. In addition, sources that emit or have the potential to emit at least 100,000 tpy CO2e and that undertake a modification that increases net emissions of GHGs by at least 75,000 tpy CO2e will also be subject to PSD requirements.

DEQ considered implementing the second step of the phase-in which would begin January 2, 2011 rather than July 1, 2011; however permitting resources would not be available to meet the earlier deadline and the GHG PSD rules will not be adopted until February, 2011.

DEQ is also considering and requests comments on three other options as described in the rulemaking’s Alternative Rule Options document. In particular, DEQ is contemplating and would like comment on adopting EPA’s method for establishing when PSD is triggered for greenhouse gas emissions.

PM2.5 Significant Impact Levels

DEQ considered adopting EPA’s proposed options for SILs for Class II and III areas. However, EPA’s Class II and III SILs for PM2.5 are higher than DEQ’s existing SILs for PM10. This idea was rejected because it did not make sense to have a PM2.5 SIL that is higher than the state’s PM10 SIL since PM2.5 emissions consist of smaller particles and are considered a subset of PM10 emissions. Also adopting higher SILs for PM2.5 would not be consistent with the need to bring Oakridge and Klamath Falls back into attainment, or meeting the ambient air quality standards for PM2.5.

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DEQ did not considered alternatives because the proposal is consistent with changes directed by the legislature.