

**From:** Schuler, Alan E (DEC)  
**Sent:** Tuesday, December 11, 2007 1:46 PM  
**Subject:** PSD Vegetation and Soil Assessments

This e-mail is being sent to industry representatives and consultants who have, or who could have, have future projects that require a Prevention of Significant Deterioration (PSD) permit. It contains information regarding the soil and vegetation assessment required under 40 CFR 52.21(o).

### **Background**

40 CFR 52.21(o), which is adopted by reference in 18 AAC 50.040(h)(13), says: "The owner or operator shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification and general commercial, residential, industrial and other growth associated with the source or modification."

While the obligation for providing a soil and vegetation assessment is evident and the remaining portions of 40 CFR 52.21(o) provide *some* additional clarification regarding the analysis, neither EPA nor the Department has adopted a formal methodology for actually conducting the analysis. If modeling is used (the typical approach), it must comply with EPA's *Guideline on Air Quality Models*, per 18 AAC 50.215(b). However, there are no formal standards or thresholds for evaluating whether the modeled impacts are acceptable.

When applicants have asked the Department for suggestions on how to comply with this requirement, the Department has typically suggested that they compare their modeled impacts to the "vegetation sensitivity thresholds" listed in the 1980 EPA document, *A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals*. The Department has further suggested that applicants compare their SO<sub>2</sub> impacts (if applicable) to the 13 microgram per cubic meter (µg/m<sup>3</sup>) sensitivity threshold reported by the U.S. Forest Service for some types of Alaska lichens (*Air Quality Monitoring on the Tongass National Forest – Methods and Baselines Using Lichens*; Forest Service Alaska Region; R10-TB-46; September 1994).

### **Discussion**

The Department will no longer recommend comparison of modeled impacts to the 1980 sensitivity thresholds. This document is out of print (has been for at least 10 years) and appears to be no longer used by EPA.

The Department will instead recommend that applicants compare their modeled impacts to the "secondary" air quality standards. The Department has recently found that this is the approach used by the other EPA Region 10 states (Washington, Oregon and Idaho). Unlike the "primary" standards which were developed to protect public health, the secondary standards were developed to protect public welfare. The primary and secondary designations are indicated in 40 CFR 50.

The Department will also continue recommending that applicants compare their annual average SO<sub>2</sub> impacts (when SO<sub>2</sub> is a triggered pollutant) to the 13 µg/m<sup>3</sup> lichen sensitivity threshold. This value is based on a study of some Alaskan lichens, and therefore, it is appropriate to continue using this threshold for Alaska projects.

The Department intends to update the *ADEC Modeling Review Procedures Manual* with the above information.

Please contact me if you have any questions regarding this announcement.

Alan

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