United States Department of the Interior
NATIONAL PARK SERVICE
Air Resources Division
P.O. Box 25287
Denver, CO 80225

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

October 6, 2010

N3615 (2350)

Stuart Clark
Manager, Air Quality Program
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504-7600

Dear Mr. Clark:

On September 3, 2010, we received notice of availability of Washington's revised regional haze implementation plan for public review. We appreciate that the Department of Ecology (Ecology) has made substantive revisions to the draft plan since our previous review. The discussions of pollutant contributions, emissions inventory, air quality model performance, and projected visibility by 2018 are much improved. However, the reasonable progress analysis, Best Available Retrofit Technology (BART) determinations, and long- term strategy still lack a substantial commitment to reduce emissions to improve visibility in the impacted Class I national parks and wilderness areas in Washington and Oregon. The reasonable progress goals proposed by Ecology demonstrate only small improvements in visibility by 2018. To demonstrate reasonable progress we encourage Ecology to make specific commitments to complete robust four factor analyses and to require controls within the first five-year review period (by December 2015).

Please refer to our June 11, 2010, comments on Ecology's proposed BART determinations. The nitrogen oxide (NO_x) BART determination for TransAlta's Centralia power plant remains incomplete. The analyses for low NO_x burners and Selective Non-Catalytic Reduction included the currently operating Flex-Fuel, but the analysis for Selective Catalytic Reduction (SCR) did not include Flex-Fuel. As a result, the benefits of SCR were underestimated. In addition, the costs of SCR were overestimated. We continue to believe that SCR is feasible and cost-effective when cumulative impacts to twelve Class I areas are considered. We also have concerns with other BART determinations as described in our previous comments, and summarized in the enclosed follow-up comments.

We appreciate the opportunity to work with Ecology to improve visibility in our Class I national parks and wilderness areas, and we look forward to resolving these outstanding issues before you finalize the visibility protection plan. If you have questions, please contact Pat Brewer of my staff, at (303) 969-2153.

Sincerely,

John Bunyak

John Bunyak
Acting Chief, Air Resources Division

Enclosure

cc:
Rick Albright
Director, Office of Air, Water, and Toxics
U.S. EPA Region 10
1200 Sixth Avenue
Seattle, Washington 98101

National Park Service Comments
Revised Washington Regional Haze Implementation Plan
October 6, 2010

General Comments:
The National Park Service submitted written comments on Washington's draft regional haze implementation plan on June 11, 2010, and provided oral testimony at the September 28, 2010, public hearing on the draft plan. The comments below supplement our previous comments.

The Department of Ecology (Ecology) has made substantive revisions to the draft regional haze implementation plan. The discussions of pollutant contributions, emissions inventory, air quality model performance, and projected visibility by 2018 are much improved. However, the reasonable progress analysis, Best Available Retrofit Technology (BART) determinations, and long-term strategy still lack a substantive commitment to reduce emissions to improve visibility in the impacted Class I areas in Washington and Oregon. Several of our previous comments were not addressed in the revised draft plan and are reiterated in the specific comments below.

Chapter 6 Emissions Inventory
The discussion of the emissions inventories used by Ecology for 2002 and 2018 is much improved. However, Ecology did not address our questions regarding differences in emissions projections for specific point sources between the 2018 PRPa and 2018 PRPb inventories. The 2018 PRPb inventory reports 12,000 fewer tons of sulfur dioxide (SO_2) than the 2018 PRPa inventory used by Ecology. We asked Ecology to investigate the differences in emissions between the two inventory versions to determine which emissions best represented actual controls. Ecology did not answer this question but identified emissions reductions from three refineries totaling 9000 tons as the basis for revising the reasonable progress goal for North Cascades National Park and Glacier Peak Wilderness Area. If the emissions estimates reported in 2018 PRPb are more accurate, Ecology could demonstrate greater visibility improvement than shown by the earlier 2018 PRPa inventory.

Chapter 8 Best Available Retrofit Technology (BART)

Because Ecology has not adequately addressed our June 11, 2010, BART comments, we are summarizing them below and again requesting appropriate responses.

<u>TransAlta Centralia Generation</u>

We continue to request that Ecology re-consider its BART determination for TranAlta's Centralia power plant. Ecology and TransAlta have not provided a complete BART analysis of nitrogen oxide (NO_x) controls for the Centralia power plant. We believe that a valid "top-down" approach to reducing NO_x demonstrates that addition of Selective Catalytic Reduction (SCR) is BART for Centralia.

- Ecology did not consider other, potentially less-expensive, locations for SCR.
- Ecology has underestimated the ability of modern NO_x control systems. SCR is capable of reducing emissions below Ecology's target, and the amount of the reductions will increase.
- Ecology's SCR costs are overestimated and unsubstantiated. EPA guidance advises that its Control Cost Manual should be used; Ecology should follow this guidance.
- Ecology has not properly evaluated the impact upon visibility of adding SCR to the existing Flex Fuel configuration.
- Ecology should consider the cumulative effects of improving visibility across all of the 12 Class I areas affected.

Tesoro Refining and Marketing Company's Anacortes refinery We continue to recommend that Ecology require controls on Tesoro by 2018. The controls have been demonstrated to be cost-effective if installed in 2018. Ecology should require controls by 2018 under reasonable progress.

Port Townsend Paper Corporation Mill

- Ecology should have included evaluations of upgrades to existing control equipment.
- Ecology must evaluate the visibility impacts of switching to lower sulfur fuels.
- Ecology should consider the visibility improvements that would occur at all of the Class I areas within 300 km of the BART source.
- A RFO limit of 0.5% sulfur should be considered as the default presumption for SO_2 BART.
- Addition of a wet ESP to control PM_{10} emissions from the Power Boiler #10 is cost-effective and represents BART.
- Ecology must re-evaluate all of the technically-feasible and proposed options against the proposed BART limits.

Alcoa's Intalco Works primary aluminum smelter

- Intalco and Ecology should better explain its rejection of seawater and sodium-based scrubbing (versus LSFO) for potline SO_2 emissions.
- Intalco appears to have overestimated costs for LSFO scrubbing. Intalco and Ecology should have used the EPA Control Cost Manual to estimate costs, or better document and justify costs that deviate from the Cost Manual approach. Intalco should justify the need for a redundant scrubbing module, or revise its estimates to eliminate it.
- Intalco and Ecology should provide modeling results for all Class I areas within 300 km for the base case as well as the 95% potline SO_2 removal case. Ecology should explain how it objectively evaluated the resulting visibility benefits to all of those Class I areas. We believe that, when Ecology does so, it will conclude that 95% SO_2 scrubbing of potline emissions is BART at Intalco.

Alcoa Wenatchee facility

We continue to disagree with Ecology that the non-protocol CALMET modeling is suitable for exempting the Alcoa Wenatchee facility from BART. Even using the non-protocol approach, the visibility impacts from Alcoa were significant. We recommend that Ecology conduct a focused four factor analysis for Alcoa Wenatchee Works (costs of a wet scrubber were estimated generally in the materials presented in Appendix F) and require controls on the facility in the current five-year review period under reasonable progress.

Chapter 9: Reasonable Progress Goals
The discussion of pollutant contributions at each of the Class I areas is improved.

Four Factor Analysis
Ecology refers the reader to Appendix F for a description of the required Four Factor Analysis. In Appendix F, Ecology cites the four factor analysis done by the contractor for the Western Regional Air Partnership (WRAP). These analyses provided general analyses for several source categories. We encourage Ecology to complete more rigorous source-specific four factor analyses.

We refer Ecology to the reasonable progress analyses performed by Colorado, Oregon, and Wyoming as examples of states that are requiring controls under reasonable progress to improve visibility at Class I areas. Colorado set a threshold of $5,000 per ton and 0.2 dv visibility improvement in evaluating cost-effectiveness of controls. Oregon has determined that $7,300 per ton is reasonable for BART. Oregon and Wyoming are requiring addition of SCR to certain electric generating units under reasonable progress.

As discussed above for the BART determinations, Alcoa Wenatchee and Tesoro were not required to install controls under BART, yet both sources have significant emissions that could be controlled for reasonable progress. In Appendix F, Ecology estimates that a wet scrubber for Alcoa Wenatchee could cost $5,000-7,500 per ton. No supporting documentation was provided.

In the BART analysis for Tesoro, Ecology reported that NO_x controls were feasible by 2018 but were not considered BART because the controls could not be implemented cost-effectively by 2015. NO_x controls for Tesoro are feasible and cost-effective and should be required in this SIP to be installed as expeditiously as possible.

In addition, BART-eligible sources listed in Table 11-3 that had visibility impacts below 0.5 dv should be evaluated for reasonable progress.

Reasonable Progress Goals
Ecology has revised the reasonable progress goals for the 20% worst visibility days at North Cascades National Park and Glacier Peak Wilderness Area to maintain visibility at baseline 2000-2004 levels. In the previous draft plan Ecology projected degradation in visibility by 2018 compared to the 2000-2004 baseline, based on WRAP air quality modeling. Ecology has documented additional reductions in sulfur dioxide emissions by 2006 from three refineries that are located near these two Class I areas. These reductions were not included in the WRAP 2018

emissions inventory and air quality modeling. We agree that these reductions should reduce sulfate concentrations and the visibility impact from sulfate at these two Class I areas, but the magnitude of response is not known.[1]

Ecology should provide a stronger weight of evidence to support the revised goal. The IMPROVE monitoring data for the Class I areas for the period 2000-2008 should be presented to demonstrate that visibility has been maintained or improved compared to the 2000-2004 baseline. The 2008 emissions data (data available from the draft 2008 National Emissions Inventory for Washington) should be presented similar to Table 6-1 to establish that overall emissions are being reduced during the period 2002 to 2008. CALPUFF modeling could be applied to each refinery to demonstrate the relative magnitude of visibility changes after emissions reductions from these sources.

We remain concerned that the reasonable progress goals for several Class I areas do not demonstrate significant improvement in visibility. Ecology should be more proactive in reducing its emissions contributions to these Class I areas.

In Section 9.3 Ecology reports that the WRAP modeling projects that visibility on the 20% best visibility days will improve by 2018 compared to the 2000-2004 baseline. Yet Ecology sets the reasonable progress goals for the 20% best visibility days the same as the baseline. This does not meet the requirement at CFR 51.308.d.vi:

> "The State may not adopt a reasonable progress goal that represents less visibility improvement than is expected to result from implementation of other requirements of the Clean Air Act during the applicable planning period."

Ecology should set reasonable progress goals consistent with the WRAP modeling results that represent visibility benefits from existing controls. It is not consistent for Ecology to set a reasonable progress goal for 20% worst days at North Cascades National Park and Glacier Peak Wilderness Area that is better visibility than projected by the WRAP modeling and then set a reasonable progress goal for the 20% best days at the same Class I areas that is less visibility improvement than projected by the WRAP modeling.

Chapter 10: Long Term Strategy

We believe that Ecology should commit to complete within two years a detailed technical analysis of control options as discussed in Chapter 10 Long Term Strategy and commit within the first five-year review period (by 2015) to implement controls for specific sources or source categories. As written, there is no commitment to follow through on controls by a specific schedule.

[1] Deciview is a logarithmic measure of visibility. It is not appropriate to assume that a linear percentage reduction will yield a linear percentage change in visibility as measured by the deciview metric.