

August 8, 2007

Chris Emery
ENVIRON International
101 Rowland Way
Novato, CA 94945

Subject: Comments on Draft Modeling Report for Gorge Scenic Area

Dear Mr. Emery:

Attached to this letter is a marked up copy of the draft report "Modeling Analyses Conducted for the Columbia River Gorge National Scenic Area" dated July 3, 2007. The report is very comprehensive in that it addresses all of the major modeling exercises that were undertaken as part of our modeling exercise. I am providing a mark up copy of the report with my comments because some of my comments have to do with formatting and style and do not lend themselves well to written comments. Overall, the report is very good.

The major points outlined in my comments are as follows:

1. The contract between ENVIRON and SWCAA Task 5 requires the report to have a section that responds to specific questions as outlined in the Gorge Study Plan. Please provide an additional section or appendix to the report to address these questions as they are applicable to or can be answered by the modeling analyses.
2. The Executive Summary should be reduced to reporting the results of the modeling by removing discussion and descriptions of the models, modeling platforms, and summaries of the different runs other than the final runs that provided the overall results and conclusions.
3. Each major section should have a general short conclusion section that describes the overall model performance for that section in terms of how well the model is performing. I recognize that performance is measured in several ways but this section should summarize from your experience as to how well the model reproduces acceptable results and the relative certainty that the technical community and public can place in these results. Note any under or over estimations that result from model inputs and how they may impact results.
4. Section 3.2 includes discussion and graphs/data that makes reference to November 10, 2004. While there was analysis of this date, the more appropriate date and data to present

here is November 12, 2004. Is this just an oversight on the date or is this really the November 10 data? If it is really November 10, then there should be another section added to show the November 12 data.

5. In several sections of the report there is reference to the sensitivity of the model results relative to the amount of ammonia that was identified in the underlying inventory. The report indicates that it appears that the Gorge area is ammonia limited. This sensitivity run was done early in the modeling analyses and led to the correction of data in the emission inventory which substantially increased the available ammonia. I am not aware that another sensitivity run was run after this adjustment. Is there any additional insight if this ammonia limitation still exists after the inventory adjustment?

6. In your summary and conclusion, please identify the top 3 or 4 source categories or regions most responsible for visibility impairment for each site (Zion and Wishram) for each season. In particular, characterize the role or impacts from initial and boundary conditions and natural/fire impacts.

7. The emission inventory section (Section 3.0) should include a discussion of the completeness/comprehensiveness and relative accuracy of the inventory. We recognize that the mobile, non-road, area and biogenic source categories are based on emission factors. This discussion should indicate if the data generated are consistent with data developed for other projects, if the most current emission factors were utilized or the methodologies employed were consistent and reasonable as compared to other projects.

8. In several sections of the report there is reference to model performance "exceeding" performance parameters. Please be more descriptive in indicating if exceeding means "better" or "worse" performance.

I am available to discuss any of my annotated comments in the mark up version. Call me at (360) 574-3058 extension 30 if you have any questions

Sincerely,

Paul T. Mairose
Chief Engineer