Appendix I: Future Commitments and FLM/Public Consultation

Appendix to Chapter 13 of the State Implementation Plan

Appendix I

Letter to FLMs notifying them of 60-day review Period

June 3, 2010

Re: Idaho's Regional Haze Plan for Federal Land Managers' 60-Day Review

Dear (Federal Land Managers):

As required by 40 CFR 51.308(h)(2), the Idaho Department of Environmental Quality (DEQ) is submitting Idaho's Regional Haze Plan (40 CFR 51.308 for the FLMs 60-day review. This plan is available online at: www.deq.idaho.gov/air/data_reports/planning/regional_haze_sip.cfm. The first five chapters provide a basic overview of the regional haze basic planning elements, consultation through WRAP, monitoring and other technical tools relied upon to develop the plan, and an introduction to Idaho's Class I areas. Chapters 6 through 9 provide information on Idaho's emissions inventory, the pollutants causing visibility impairment in Idaho and surrounding states, and establishes baseline, natural conditions and uniform rate of progress for each of Idaho's Class I areas. Chapter 10 covers Idaho's Best Available Retrofit Technology (BART) process and the determinations on the two BART subject facilities. Chapters 11 and 12 establish reasonable progress goals and long term strategies for Idaho. Chapter 13 covers the formal consultation process and future Regional Haze Plan requirements.

Because of time constraints, DEQ is submitting this plan to the federal land managers (FLMs) without a finalized permit for Amalgamated Sugar Company (TASCO). During the public comment period for TASCO's BART permit, TASCO submitted comments, continuing to contest EPA economist's findings and analysis that TASCO could afford BART as outlined in the draft permit. An executive summary of the economist's findings can be found in Appendix F of the Plan. TASCO has also submitted "receptor oriented source apportionment" results developed by Cooper Environmental Services (CES). TASCO feels the results show that the Riley Boiler visibility impacts are below the 0.5 deciview impact threshold and are exempt from BART.

In order to meet the deadline final submittal to EPA, DEQ is continuing on our timeline and submits this Regional Haze Plan for the FLMs 60-day review period. DEQ expects to review TASCOs extensive comments in the near future and may be submitting those responses to the FLMs, if appropriate, as soon as they are completed. We will be responding to the FLMs comments on TASCOs BART permit after the 30-day review.

During the next 60 days, DEQ will provide in person consultation on the Regional Haze Plan upon request. If you have questions or concerns, please call Mike Edwards at (208) 373-0438.

Sincerely,

Martin Bauer
Administrator
Air Quality Division

MB/me

Initial Comments of USDA Forest Service

Regarding the Idaho Regional Haze State Plan and Best Available Retrofit Technology Determinations

July 7, 2010

General Comments

The USDA Forest Service appreciates the opportunity to provide comment on the draft Idaho Regional Haze State Implementation Plan. While we feel there are issues with the RP analysis and the timelines to achieve natural conditions that need to be resolved, we were very pleased with the thoroughness of Idaho's efforts, and look forward to working with Idaho to resolve any outstanding issues.

Specific Comments:

Section 1.11 – The Western Regional Air Partnership

Idaho should consider rewriting this section to reflect the WRAP's new charter and webpage as well as previous WRAP work.

Chapter 7 – Pollutants Causing Visibility Impairment

Idaho identified OMC as the primary visibility impairing PM-fine component at both Sawtooth and Selway-Bitteroot Class I areas (69% and 52% respectively) in the baseline period of 2000-2004. This is contrasted by Hells Canyon and Craters of the Moon Class I areas where NO3 was the primary component leading to visibility impairment (50% and 39% respectively). On page 55 of the document, Idaho states that is "important to identify whether the source (…of OMC) is strictly wild fire or whether there are sources outside the normal fire season contributing to the problem." However, on page 192 of the document, it appears that Idaho has concluded that "it is almost exclusively from wildfire and therefore isn't a prime pollutant to look at for reductions from anthropogenic sources" without any further technical analysis to support this conclusion.

For the Sawtooth Wilderness (Section 7.4), Idaho identifies an OMC pattern (Figures 7.25 and 7.26) which indicates significant organic mass carbon in November and December. Idaho indicates that "Because organic mass carbon appears to remain steady into the early winter, there may be localized slash burning or wood stoves. This is something that will require further investigation during this Regional Haze SIP planning period."

According to Idaho's open burning rules, any citizen/entity is permitted to burn approved materials after October 21 without an open burning permit. This practice has been demonstrated to significantly increase localized PM2.5 concentrations into November in other parts of Idaho. The town of Stanley, ID is located approximately 3 miles north of the Sawtooth IMPROVE monitor; they share the same narrow valley. Data from the Stanley Remote Automated Weather Station (RAWS), which is adjacent to the IMPROVE monitor, indicates that the IMPROVE monitor is downwind of Stanley during daytime hours, and upwind of Stanley at night. Idaho should investigate whether free open burning by private entities after October 21 is contributing to the increased OMC

concentrations, and if these elevated concentrations are representative of an impact to the Class I Airshed.

Another possible suggestion would be to examine the use of receptor oriented analytical techniques such as positive matrix factorization (PMF) or principal components analysis (PCA) with IMPROVE data which do not require an *a priori* knowledge of source chemical characteristics. At a minimum, Idaho could augment the existing analysis by examining the relationship of total carbonaceous mass (TC) (IMPROVE TOR: OC1 – OC4, OP, EC1 – EC3) to non-soil potassium (IMPROVE: K - 0.6*Fe). Park et al. (2007) examined such a method that could readily be employed to further examine the origins of OMC.

Chapter 8 – Emission Inventory

Since 2007, the Montana/Idaho Airshed Group has been identifying prescribed burning activities as either natural or anthropogenic in accordance with WRAP guidelines. Members of this group include all of the major burners in Montana, and all but two major burners in Idaho. It will be a simple matter to assess whether emissions are being reduced from major anthropogenic burning. Idaho DEQ also has an established agricultural burning program which will allow emissions from those sources to be tracked.

However, private burning, especially after October 21, is a significant issue in Idaho for which DEQ has shown reluctance to address. While these sources may not necessarily impact Class I visibility, they potentially could impact IMPROVE monitor values. These emissions, to the best of our knowledge, are not a part of any WRAP emissions inventory.

FLMs and scientists have recognized the importance of fire as a natural process, and the benefits of allowing some fires to naturally treat the landscape are well documented. Over time, allowing fire to return to its natural role in Class I areas will result in an overall decrease in natural fire emissions. This is evident in the Selway-Bitterroot Wilderness. Fires have been allowed to burn in the wilderness as a natural process for more than 30 years, with the result that most fire that occur in the wilderness are of a relatively small size and produce relatively small amounts of smoke.

Chapter 9 – Source Apportionment

Under 40 CFR 51.308(d)(3)(iii), a state must document the technical basis it is relying upon to meet is reasonable progress goals. Chapter 4 of the document provides a brief summary of the WRAP technical support system (TSS) and IMPROVE air quality data. Chapter 9 of the document describes the air quality modeling source apportionment techniques relied upon to help inform strategy development. However, the document does not provide information regarding performance evaluations of either prognostic meteorological model data or the base case results from the WRAP Base02 inventory that are relied upon in this chapter. Idaho should augment this section to document both meteorological and photochemical model performance evaluations.

Likewise, the document does not describe how the component specific relative response factors (RRF's) were calculated. We request that documentation be added detailing the RRF calculations for each Class I area covered in Chapter 9.

Records for natural fires (wildfires) can be found by accessing ICS-209 records or checking with either the Eastern Great Basin or the Northern Rockies Coordination Centers. Records would indicate the duration of the fire and the total acres burned.

Prescribed burning records can be obtained through the MT/ID Airshed Group (of which Idaho DEQ is a member) dating back to 2004.

In looking at impacts to other Class I areas outside of Idaho, Idaho is using a clustering mechanism from the WRAP Attribution of Haze report to examine their contribution to only three additional Class I areas located totally outside of Idaho – Eagle Cap Wilderness (west of Idaho), Jarbidge Wilderness (South of Idaho, and Cabinet Wilderness (East of Northern Idaho). Eagle Cap and Jarbidge are part of Cluster 7, and Cabinet Wilderness is part of Cluster 9. A third cluster, Cluster 8, includes the Class I areas in Southern Idaho (Sawtooth , Craters of the Moon, and Yellowstone).

First, 51.308(d)(3)(ii) requires that the State must demonstrate that it has included all measures necessary to obtain its share of the emissions reductions necessary to meet the progress goal for the area. The discussion in Section 9.3 is presented in terms of the Idaho's contribution to a representative Class I area in each cluster. This approach does not address the specific requirement of 51.308(d)(ii) to examine the efficacy of a state's emission reduction measures to help meet the *progress goal of the area* which can only addressed by examination of the reasonable progress of specific Class I areas.

Second, we have concern about the methodologies used to generate the Attributes of Haze Work Group cluster analysis. According to Section 9.3, the WRAP Attributes of Haze Work Group used the CMAQ-TSSA results to develop the clusters previously described. According to the Attribution of Haze Phase I report, the CMAQ-TSSA results used to perform the cluster analysis were based upon a beta release of CMAQ 4.4 (p. 2-27 AOH Phase I report). Model performance evaluations of CMAQ 4.4beta indicated serious problems with mass conservation which were not resolved in time for development of many the WRAP work products, which ultimately prompted WRAP to use CAMx-PSAT rather than CMAQ-TSSA for geographical source apportionment. We believe that the cluster analysis of base case model results is a technically viable approach; however, it is not appropriate to base the cluster analysis upon TSSA results from CMAQ 4.4beta.

We reviewed the methodology used to assess contribution of primary organic carbon using the Weighted Emissions Potential (WEP) (description available at http://vista.cira.colostate.edu/docs/wrap/attribution/WEPMethods.doc) and have technical concerns. If the WEP analysis used the WRAP Plan02d inventory (which is unclear from the documentation), this represents a planning inventory, and day specific fire events are lost in the development of the planning inventory. According to p.5 of the document "Development of 2000-04 Baseline Period and 2018 Projection Year Emission Inventories", each event added to the 2000-2004 fire planning inventory was assigned a random date within the month of occurrence of the original Phase II fire inventory record with all other records cloned (copied). The fundamental weakness in this approach is that the actual fire activity data is for calendar year 2002, and therefore the approach assumes that the location and size of fires will be constant throughout the baseline period. The correspondence of location of fire events is only valid for the base year of 2002 for which actual fire activity data is used in the inventory. Therefore, any correspondence between the 20% best/worst days outside the 2002 base year for the inventory is an artificial construct and has no actual correlation to 20% best/worst days in the IMPROVE dataset for the other 4-years that make up the haze baseline period.

Chapter 10 - Best Available Retrofit Technology

Table 10 - 2 (Emission Rates Modeled) shows an increase in several pollutants between the base year and future controls scenario. Idaho has acknowledged errors in the table and the modeling input, and that the modeling will be revised accordingly. We would like an opportunity to review and provide comments on the revised BART determination once the revised modeling is completed.

Chapter 11 - Reasonable Progress Goals

Idaho has determined that the source categories identified in Chapter 11 of the draft implementation plan will not be subject to control requirements at this time because it would 1) require an additional 1-2 years to model individual sources within the source category to determine if the source(s) impact Class I areas and 2) require an additional 2-3 years to develop appropriate rules, and for sources to acquire the necessary capital and install controls (p. 204 – "Based upon the "time necessary for compliance", additional controls are unreasonable at this time").

We disagree with this determination for several reasons. First, the timeframe for implementation of individual source controls is consistent with the required timeframes for BART as established under 40 CFR 51.308(e)(1)(iv). Therefore, the timeframe for implementation of potential controls under reasonable progress can be accomplished within the first planning cycle and can be used to help achieve the RP goals of that cycle. Second, the requirement for additional modeling is not consistent with the regulatory framework established with the four factors that need to be considered for reasonable progress determinations under 40 CFR 51.308(d)(1)(i)(A). In its analysis, the State of Idaho has already demonstrated that the cost of compliance and time necessary for compliance for both NOx and SO2 controls are reasonable. The degree of visibility benefit as implied by the stated need for additional air quality modeling is not one of the four factors that must be considered for reasonable progress requirements.

Chapter 12 – Long Term Strategy

Section 12.3.1 discusses other Class I areas impacted by Idaho emissions by use of cluster analysis techniques to examine representative Class I areas. As discussed in our review of Section 9.3, we believe this approach does not satisfy the requirements of 51.308(d)(3)(ii), which specifically requires examination of the state's emissions reduction measures to help meet the *progress goal of the area* which can only addressed by examination of the reasonable progress of specific Class I areas.

Letter from: United States Department of the Interior FISH AND WILDLIFE SERVICE

United States Department of the Interior

FISH AND WILDLIFE SERVICE
National Wildlife Refuge System
Branch of Air Quality
7333 W. Jefferson Ave., Suite 375
Lakewood, CO 80235-2017

IN REPLY REFER TO:

FWS/ANWS-AR-AQ

July 23, 2010

Mr. Martin Bauer
Administrator, Air Quality Division
Idaho Department of
Environment Quality 1410
North Hilton

Boise, Idaho 83706

Dear Mr. Bauer:

On June 3, 2010, we received Idaho's draft regional haze implementation plan for review. We appreciate the opportunity to work closely with the State through the development and review of this plan. Cooperative efforts such as these ensure that, together, we will continue to make progress toward achieving natural visibility conditions at our National Parks and Wilderness Areas.

This letter acknowledges that the U.S. Department of the Interior, National Park Service and U.S. Fish and Wildlife Service have received and conducted a substantive review of the Idaho draft Regional Haze Rule implementation plan in fulfillment of your requirements under the federal regulations 40 CFR 51.308(i)(2). Please note, however, that only the U.S. Environmental Protection Agency (EPA) can make a final determination regarding the document's completeness and, therefore, ability to receive federal approval from EPA.

As outlined in a letter to each State dated August 1, 2006, our review focused on eight basic content areas. The content areas reflect priorities for the Federal Land Management agencies, and we have enclosed comments associated with these priorities.

We look forward to your response, as per section 40 CFR 51.308(i)(3). For further information regarding our comments, please contact Pat

Brewer, National Park Service, at (303) 969-2153, or Tim Allen, Fish and Wildlife Service, (303) 914-3802.

TAKE PRIDE in AMERICA

Again, we appreciate the opportunity to work closely with the State and compliment you on your hard work and dedication to improving visibility in our Class I national parks and wilderness areas.

Sincerely,

Christine L. Shaver
Chief, Air
Resources Division
National Park Service

Sincerely,

Sandra V. Silva
Chief, Branch of Air Quality
U.S. Fish & Wildlife Service

Enclosure

CC:

Steve Body
Office of Air, Waste and Toxics
U.S. EPA Region 10
1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

Judy Rocchio
National Park Service
Pacific West Regional Office
1111 Jackson Street, Suite 700
Oakland, CA 94607

James A. Morris, Superintendent
Craters of the Moon National Monument
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Bill West, Refuge Manager
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Brian McManus, Chief Branch of Fire Management
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John Reber, Physical Scientist
Physical Science Resource Program Lead
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National Park Service
12795 W. Alameda Parkway
Denver, CO 80225-0287

Comments of the National Park Service and US Fish and Wildlife Service Regarding the Idaho Regional Haze State Implementation Plan July 23, 2010

On June 3, 2010, the State of Idaho submitted a draft Regional Haze Rule State implementation plan (SIP), pursuant to the requirements codified in federal rule at 40 CFR 51.308(i)(2), to the U.S. Department of the Interior, National Park Service (NPS) and U.S. Fish and Wildlife Service (FWS). The NPS Air Resources Division staff and FWS Branch of Air Quality staff have conducted a substantive review of the Idaho draft plan, and provide the comments listed below.

We look forward to your response as per section 40 CFR 51.308(i)(3), and would be willing to work with Idaho Department of Environmental Quality (Idaho DEQ) staff towards resolving the major issues discussed below. For further information, please contact Pat Brewer, National Park Service, at (303) 969-2153, or Tim Allen, Fish and Wildlife Service, (303) 914-3802.

General Comments

The State identifies the baseline emission inventory (referred to as "02b") and the future emission inventory (referred to as "1 8d") however, a summary of the inventory development and implementation is not provided. Discussion of the modeling system is also absent from Idaho's draft Regional Haze SIP. The State, working with the Western Regional Air Partnership (WRAP), utilized originally developed inventories, meteorology, and non guideline models in fulfilling many of the requirements of the Regional Haze Rule. Therefore, a robust discussion of these technical products, performance evaluations, and applicability to the Haze Rule is required.

The emissions impacting individual Class I areas within Idaho appear to be distinctly different between several of these areas. Idaho should clearly explain these differences and maintain these distinctions in its discussion of meeting its regional haze goals.

Specific Comments

Chapter 3. Introduction to Idaho Class I Areas

While Figure 3-1 accurately depicts the Class I areas within Idaho's state boundaries, it does not adequately depict all Class I areas potentially impacted by air pollution sources located within the State. For example, Red Rocks Lakes Wilderness located on the border of Idaho and Montana, and Grand Teton National Park just east of the state boundary in Wyoming are not included on this map. This could potentially mislead the reader to think that the figure is inclusive of all impacted Class I areas. Please include all Class I areas both within Idaho and

nearby outside the State, within the domain represented on the map, so that the reader has a sense of the full list of impacted areas.

Chapter 4. Technical Information and Data Relied Upon in This Plan

The description provided in Chapter 4 is of the original, or 'old', IMPROVE equation. Please clarify if this equation was used throughout the SIP. It is our current understanding that WRAP supported analyses and most Best Available Retrofit Technology (BART) calculations utilized the newer version of the IMPROVE equation.

Chapter 7. Pollutants Causing Visibility Impairment in Idaho Class I Areas

Figure 7-1 illustrates a distinct differences in pollutant impacts between the Class I areas. For example, impacts at Craters of the Moon National Monument and Hells Canyon Wilderness Area are clearly dominated by nitrate NO_3. Organic Carbon (OC) dominates the baseline monitoring at the Yellowstone National Park, and the Sawtooth, and Selway Wilderness Areas. Since these areas are clearly impacted in distinct patterns, more discussion explaining these differences should be included in the SIP. The distinctions elucidated by this discussion should be maintained throughout the SIP, as it is clear that these areas should have different focus in identifying effective controls.

Chapter 8. Emission Source Inventory

The discussion of emissions growth from the baseline to 2018 indicates growth, from point and area sources, in nitrogen oxides (NO_x), volatile organic compounds (VOC), OC, elemental carbon (EC), fine and coarse particulate matter (PM fine, PM coarse), and ammonia. However, in later sections of the SIP, naturally occurring emissions from fire and inadequate time to implement additional sulfate and nitrate emission controls are explained as the reasons that Idaho cannot meet its Uniform Rate of Progress goals. Please discuss Idaho's reasons for excluding controls that could reduce these additional visibility impairing pollutants for which the inventories indicate emissions are growing.

Chapter 9. Source Apportionment

While some areas may share an IMPROVE monitoring site, impacts to Class I Areas should be discussed and evaluated individually. Impacts from neighboring states should also be discussed for each individual Class I Area. Clustering Class I Areas for source apportionment analyses is not a valid approach.

Figure 9-68 on page 131, is scaled to the entire US. Please zoom into the region around Idaho for a better illustration. Also, figures 9-7 and 9-70 appear to be mislabeled.

Please provide more discussion regarding the individual species glide slopes presented on pages 158-164. These graphs depict that the Uniform Rate of Progress goals will be met on an individual pollutant basis, however many of these pollutants are also predicted to increase.

The SIP asserts that reductions from sulfate and organic carbon are overshadowed by increases to natural fire. However, it was previously stated in Chapter 8-*Emission Source Inventory*, that

natural fire emissions estimates were held constant in the analysis. Please explain these statements in more detail.

Chapter 10. Best Available Retrofit Technology (BART) Evaluation

The BART modeling protocol, agreed to by Idaho, Washington, and Oregon, stated that the 20% best natural condition will be used for all BART analyses. The tables on pages 172-175 indicate that both 20% best natural condition and annually averaged natural condition were used for certain analyses. Please clarify if the tables are incorrectly labeled, or if Idaho varied from the agreed protocol to utilize 20% best natural condition for all BART analyses.

The BART source impact improvement is described in terms of the number of days the delta-deciview is over 0.5. While this is an accurate method to describe the frequency of visibility impacts, more information should be included to illustrate the magnitude of improvement to visibility impairment. For example, since many BART sources impact more than one Class I area, the FLMs recommend that BART determinations consider visibility improvements at multiple Class I areas.

With respect to the BART determination for the P4 Productions facility, questions remain as to the feasibility of Selective non-Catalytic Reduction Technology for the nodulizing kiln. Given the large visibility impacts of the P4 Production facility at Yellowstone and Grand Teton National Parks, as well as other Class I units, we ask that Idaho revisit this analysis. In addition, we ask that Idaho clarify what P4 Production sources are BART-eligible.

Chapter 11. Idaho Reasonable Progress Goal Demonstration

The State makes a declaration that based on "time necessary for compliance", additional controls are unreasonable. Considering that the State has missed the 2007 deadline for submittal of its Haze SIP to EPA, it seems counterproductive to now suggest that it is unreasonable to implement controls for lack of time. Idaho should revisit this statement and reconsider the importance of the goals of the Regional Haze Rule.

There appears to be a slight math error in Table 11-2-*Idaho Statewide 2002 Point Source Sulfate Emissions*. Table 11-1-*Idaho 2002 Statewide Emissions by Pollutant and Source*, Table 11-2-*Idaho Statewide 2002 Point Source Sulfate Emissions*, and Table 11-4-*Idaho Statewide 2002 Area Source Sulfate Emissions*, should refer to SO_2 and NO_x emissions rather than sulfate and nitrate emissions. Please define the acronym RRF referred to in Table 11-12-*Summary of Idaho Class I Area Sulfate and Nitrate Visibility Improvement 20% Worst Days*.

Chapter 12. Long Term Strategy

Please explain why Red Rocks Lakes Wilderness is not presented in Table 12-12 *Idaho's Contribution of SO_x and NO_x in Surrounding Class I Areas*.

Please explain in more detail Idaho's consultation with the State of Wyoming concerning this attribution.

Please describe in more detail how Idaho's Prevention of Significant Deterioration (PSD) program benefits the State's regional haze program.

And lastly, please specify whether Idaho requires Best Management Practices and emissions tracking when implementing its Smoke Management program.

State of Idaho Department of Environmental Quality

Response to comments and questions submitted during the federal land managers' 60-day review of the Idaho Regional Haze State Implementation Plan (SIP)

Introduction

The Regional Haze Rule (40 CFR 51.308(i)(2)) requires consultation between the state and federal land managers (FLMs) related to development and implementation of the regional haze plan. The FLMs are given at least 60 days to comment on the regional haze plan prior to holding any public hearings or comment periods on the plan. The federal land managers comment period for the Idaho Regional Haze SIP was held from June 3, 2010, through August 5, 2010.The USDA Forest Service submitted written comments on July 7, 2010, followed by conference call with the USDA Forest Service, the National Park Service, and the U.S. Fish and Wildlife Service the same day. The U.S. Department of Interior, Fish and Wildlife Service submitted written comments on July 23, 2010.

The Regional Haze Rule (40 CFR 308(i)(3)) requires the state to respond to comments made by the FLMs during the comment period. What follows are the responses to those comments.

Comment 1: U.S. Forest Service

Idaho should consider rewriting this section to reflect the WRAP's new charter and webpage as well as previous WRAP work.

Response:

Idaho acknowledges the changes to the WRAP charter, and will modify the RH SIP to reflect these changes during the public comment period if time permits.

Comment 2: U.S. Forest Service

Idaho identified OMC as the primary visibility impairing PM-fine component at both Sawtooth and Selway-Bitterroot Class I areas (69% and 52% respectively) in the baseline period of 2000-2004. This is contrasted by Hells Canyon and Craters of the Moon Class I areas where NO3 was the primary component leading to visibility impairment (50% and 39% respectively). On page 55 of the document, Idaho states that is "important to identify whether the source (…of OMC) is strictly wild fire or whether there are sources outside the normal fire season contributing to the problem." However, on page 192 of the document, it appears that Idaho has concluded that "it is almost exclusively from wildfire and therefore isn't a prime pollutant to look at for reductions from anthropogenic sources" without any further technical analysis to support this conclusion.

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Response:

The plan at section 11.3.1 now reflects the state's willingness to investigate the usefulness of a woodstove ordinance in Stanley, Idaho. The IMPROVE monitor is located very close to Stanley, Idaho, A small town with numerous woodstoves, which is suspected of impacting the IMPROVE monitor.

The question of controls on organic carbon is also addressed at section 9.4.

Comment 3: U.S. Forest Service

According to Idaho's open burning rules, any citizen/entity is permitted to burn approved materials after October 21 without an open burning permit. This practice has been demonstrated to significantly increase localized PM2.5 concentrations into November in other parts of Idaho. The town of Stanley, ID is located approximately 3 miles north of the Sawtooth IMPROVE monitor; they share the same narrow valley. Data from the Stanley Remote Automated Weather Station (RAWS), which is adjacent to the IMPROVE monitor, indicates that the IMPROVE monitor is downwind of Stanley during

daytime hours, and upwind of Stanley at night. Idaho should investigate whether free open burning by private entities after October 21 is contributing to the increased OMC concentrations, and if these elevated concentrations are representative of an impact to the Class I Airshed.

Response:

There is very little private land and virtually no agricultural crop lands in the Stanley basin. If burning is occurring during the winter months, it is more than likely occurring on federal lands and changing the rules would do little if anything to change OMC levels during the fall season. As pointed out above, more than likely the emissions are from woodstoves in Stanley.

Comment 4: U.S. Forest Service

Another possible suggestion would be to examine the use of receptor-oriented analytical techniques such as positive matrix factorization (PMF) or principal components analysis (PCA) with IMPROVE data which do not require an *a priori* knowledge of source chemical characteristics. At a minimum, Idaho could augment the existing analysis by examining the relationship of total carbonaceous mass (TC) (IMPROVE TOR: OC1 – OC4, OP, EC1 – EC3) to non-soil potassium (IMPROVE: K - 0.6*Fe). Park et al. (2007) examined such a method that could readily be employed to further examine the origins of OMC.

Response:

While PMF is a good analytical tool for carbon-based pollutants, the techniques employed cannot differentiate wood burned in wood stoves, slash piles, or hunters' warming fires. The best solution for identifying high wintertime impacts from carbon is local observation, which is what the state is proposing.

Comment 5: U.S. Forest Service

Since 2007, the Montana/Idaho Airshed Group has been identifying prescribed burning activities as either natural or anthropogenic in accordance with WRAP guidelines. Members of this group include all of the major burners in Montana, and all but two major burners in Idaho. It will be a simple matter to assess whether emissions are being reduced from major anthropogenic burning. Idaho DEQ also has an established agricultural burning program which will allow emissions from those sources to be tracked.

However, private burning, especially after October 21, is a significant issue in Idaho for which DEQ has shown reluctance to address. While these sources may not necessarily impact Class I visibility, they potentially could impact IMPROVE monitor values. These emissions, to the best of our knowledge, are not a part of any WRAP emissions inventory.

FLMs and scientists have recognized the importance of fire as a natural process, and the benefits of allowing some fires to naturally treat the landscape are well documented. Over time, allowing fire to return to its natural role in Class I areas will result in an overall decrease in natural fire emissions. This is evident in the Selway-Bitterroot Wilderness. Fires have been allowed to burn in the wilderness as a natural process for more than 30 years, with the result that most fire that occur in the wilderness are of a relatively small size and produce relatively small amounts of smoke.

Response:

The state agrees that natural fire plays an important role in reducing overall natural fire emissions over time. The state also agrees there are some issues with some of the small private burners after October 21st with activities such as slash piles. DEQ has developed a very comprehensive crop residue burning program. DEQ will continue to improve its open burning program through Idaho's negotiated rule process. The outcome which is then submitted to EPA for SIP approval.

Comment 6: U.S. Forest Service

Under 40 CFR 51.308(d)(3)(iii), a state must document the technical basis it is relying upon to meet is reasonable progress goals. Chapter 4 of the document provides a brief summary of the WRAP technical support system (TSS) and IMPROVE air quality data. Chapter 9 of the document describes the air quality modeling source apportionment techniques relied upon to help inform strategy development. However, the document does not provide information regarding performance evaluations of either prognostic meteorological model data or the base case results from the WRAP Base02 inventory that are relied upon in this chapter. Idaho should augment this section to document both meteorological and photochemical model performance evaluations.
Likewise, the document does not describe how the component specific relative response factors (RRF's) were calculated. We request that documentation be added detailing the RRF calculations for each Class I area covered in Chapter 9.

Response:

Information on model performance, meteorological data, and Relative Reduction Factors (RRFs) are available in Appendix E of the plan. This Appendix will also lead the reader to other Web sites with additional information.

Comment 7: U.S. Forest Service

Records for natural fires (wildfires) can be found by accessing ICS-209 records or checking with either the Eastern Great Basin or the Northern Rockies Coordination Centers. Records would indicate the duration of the fire and the total acres burned. Prescribed burning records can be obtained through the MT/ID Airshed Group (of which Idaho DEQ is a member) dating back to 2004.

Response:

The WRAP fire emission forum reviewed fire data from many sources. This information was incorporated into the base year modeling and held constant in future years. The state agrees this is a good source of information.

Comment 8: U.S. Forest Service

In looking at impacts to other Class I areas outside of Idaho, Idaho is using a clustering mechanism from the WRAP Attribution of Haze report to examine their contribution to only three additional Class I areas located totally outside of Idaho – Eagle Cap Wilderness (west of Idaho), Jarbidge Wilderness (South of Idaho, and Cabinet Wilderness (East of Northern Idaho). Eagle Cap and Jarbidge are part of Cluster 7, and Cabinet Wilderness is part of Cluster 9. A third cluster, Cluster 8, includes the Class I areas in Southern Idaho (Sawtooth , Craters of the Moon, and Yellowstone).
First, 51.308(d)(3)(ii) requires that the State must demonstrate that it has included all measures necessary to obtain its share of the emissions reductions necessary to meet the progress goal for the area. The discussion in Section 9.3 is presented in terms of the Idaho's contribution to a representative Class I area in each cluster. This approach does not address the specific requirement of 51.308(d)(ii) to examine the efficacy of a state's emission reduction measures to help meet the *progress goal of the area* which can only addressed by examination of the reasonable progress of specific Class I areas.
Second, we have concern about the methodologies used to generate the Attributes of Haze Work Group cluster analysis. According to Section 9.3, the WRAP Attributes of Haze Work Group used the CMAQ-TSSA results to develop the clusters previously described. According to the Attribution of Haze Phase I report, the CMAQ-TSSA results used to perform the cluster analysis were based upon a beta release of CMAQ 4.4 (p. 2-27 AOH Phase I report). Model performance evaluations of CMAQ 4.4beta indicated serious problems with mass conservation which were not resolved in time for development of many the WRAP work products, which ultimately prompted WRAP to use CAMx-PSAT rather than CMAQ-TSSA for geographical source apportionment. We believe that the cluster analysis of base case model results is a technically viable approach; however, it is not appropriate to base the cluster analysis upon TSSA results from CMAQ 4.4beta.

Response:

The cluster analysis that was used in section 9.3 has been removed as suggested and each of the Class I areas impacted by Idaho have been included in the analysis.

Comment 9: U.S. Forest Service

We reviewed the methodology used to assess contribution of primary organic carbon using the Weighted Emissions Potential (WEP) (description available at http://vista.cira.colostate.edu/docs/wrap/attribution/WEPMethods.doc) and have technical concerns. If the WEP analysis used the WRAP Plan02d inventory (which is unclear from the documentation), this represents a planning inventory, and day specific fire events are lost in the development of the planning inventory. According to p.5 of the document

"Development of 2000-04 Baseline Period and 2018 Projection Year Emission Inventories", each event added to the 2000-2004 fire planning inventory was assigned a random date within the month of occurrence of the original Phase II fire inventory record with all other records cloned (copied). The fundamental weakness in this approach is that the actual fire activity data is for calendar year 2002, and therefore the approach assumes that the location and size of fires will be constant throughout the baseline period. The correspondence of location of fire events is only valid for the base year of 2002 for which actual fire activity data is used in the inventory. Therefore, any correspondence between the 20% best/worst days outside the 2002 base year for the inventory is an artificial construct and has no actual correlation to 20% best/worst days in the IMPROVE dataset for the other 4-years that make up the haze baseline period.

Response:

The state agrees the WEP analysis isn't as robust as CMAQ or other dispersion models but it is a good tool to begin building a weight of evidence. Hopefully, before the next Regional Haze SIP is due, there will be new analytical tools for the job.

Comment 10: U.S. Forest Service

Table 10 - 2 (Emission Rates Modeled) shows an increase in several pollutants between the base year and future controls scenario. Idaho has acknowledged errors in the table and the modeling input, and that the modeling will be revised accordingly. We would like an opportunity to review and provide comments on the revised BART determination once the revised modeling is completed.

Response:

There were some changes to the modeling for Monsanto/P4 which was provided in draft form to some of the FLMs. The finalized modeling information for P4 is included toward the back of Appendix F. The FLMs are still free to comment any time up to the end of the public comment period.

Comment 11: U.S. Forest Service

Idaho has determined that the source categories identified in Chapter 11 of the draft implementation plan will not be subject to control requirements at this time because it would 1) require an additional 1-2 years to model individual sources within the source category to determine if the source(s) impact Class I areas and 2) require an additional 2-3 years to develop appropriate rules, and for sources to acquire the necessary capital and install controls (p. 204 – "Based upon the "time necessary for compliance", additional controls are unreasonable at this time").

We disagree with this determination for several reasons. First, the timeframe for implementation of individual source controls is consistent with the required timeframes for BART as established under 40 CFR 51.308(e)(1)(iv). Therefore, the timeframe for

implementation of potential controls under reasonable progress can be accomplished within the first planning cycle and can be used to help achieve the RP goals of that cycle. Second, the requirement for additional modeling is not consistent with the regulatory framework established with the four factors that need to be considered for reasonable progress determinations under 40 CFR 51.308(d)(1)(i)(A). In its analysis, the State of Idaho has already demonstrated that the cost of compliance and time necessary for compliance for both NO_x and SO2 controls are reasonable. The degree of visibility benefit as implied by the stated need for additional air quality modeling is not one of the four factors that must be considered for reasonable progress requirements.

Response:

The State agrees the timeframe for implementation of individual source controls is consistent with the required timeframes for BART as established under 40 CFR 51.308(e)(1)(iv). The state agrees modeling is not a regulatory requirement under the four factors. However, as with BART, the state must prove to some satisfaction that a source category is causing or contributing to visibility impairment in Class I areas before there is sufficient evidence to undertake rulemaking. Although modeling is not required under the four-factor analysis, it will be an integral part of the state rulemaking process. The state will need to identify the impacts as part of determining the "cost of compliance" such as incremental costs. Since this is a *State* Implementation Plan, the state will use state rules to implement future long-term strategies which will take some "time necessary for compliance."

Comment 12: U.S. Forest Service

Section 12.3.1 discusses other Class I areas impacted by Idaho emissions by use of cluster analysis techniques to examine representative Class I areas. As discussed in our review of Section 9.3, we believe this approach does not satisfy the requirements of 51.308(d)(3)(ii), which specifically requires examination of the state's emissions reduction measures to help meet the *progress goal of the area* which can only addressed by examination of the reasonable progress of specific Class I areas.

Response:

Section 12.3.1 has been updated to include additional Class I areas impacted by Idaho emissions.

Comment 1: Fish and Wildlife

While Figure 3-1 accurately depicts the Class I areas within Idaho's state boundaries, it does not adequately depict all Class I areas potentially impacted by air pollution sources located within the State. For example, Red Rocks Lakes Wilderness located on the border of Idaho and Montana, and Grand Teton National Park just east of the state boundary in Wyoming are not included on this map. This could potentially mislead the reader to think that the figure is inclusive of all impacted Class I areas. Please

include all Class I areas both within Idaho and nearby outside the State, within the domain represented on the map, so that the reader has a sense of the full list of impacted areas.

Response:

The map has been updated to reflect suggestions.

Comment 2: Fish and Wildlife

The description provided in Chapter 4 is of the original, or 'old', IMPROVE equation. Please clarify if this equation was used throughout the SIP. It is our current understanding that WRAP-supported analyses and most Best Available Retrofit Technology (BART) calculations utilized the newer version of the IMPROVE equation.

Response:

The IMPROVE equation is now noted as the old equation. Readers are also referred to the IMPROVE Web site for information on the revised equation.

Comment 3: Fish and Wildlife

Figure 7-1 illustrates a distinct differences in pollutant impacts between the Class I areas. For example, impacts at Craters of the Moon National Monument and Hells Canyon Wilderness Area are clearly dominated by nitrate NO_3. Organic Carbon (OC) dominates the baseline monitoring at the Yellowstone National Park, and the Sawtooth, and Selway Wilderness Areas. Since these areas are clearly impacted in distinct patterns, more discussion explaining these differences should be included in the SIP. The distinctions elucidated by this discussion should be maintained throughout the SIP, as it is clear that these areas should have different focus in identifying effective controls.

Response:

While the state agrees there are similarities in impacts at some Class I areas. The question becomes how to group Class I areas. The WRAP tried this approach with the Cluster Analysis of Class I areas and as pointed out in the comments on Chapter 9, "clustering Class I areas for source apportionment analysis is not a valid approach." The Regional Haze Rule requires the state to address each individual Class I area when looking at source contribution.

In establishing Reasonable Progress Goals, the rule leaves implementation of the Regional Haze Rule up to the states requiring that in establishing the goals the state consider the four-factor analysis as outlined under 40 CFR 308(d)(1)(i)(A). Grouping Class I areas together based on similarities in impacts and then analyzing individual sources that maybe impacting those Class I areas is both costly and time consuming. The BART process is a good example of the difficulties in implementing this type of approach.

Instead, Idaho has chosen to take a regional approach in identifying effective controls. Rather than looking at individual facilities and specific pollutants that are impacting a group of Class I areas, the state will analyze point, area, and mobile source categories on a state wide basis. Simply because a Class I area is more heavily impacted by one pollutant doesn't mean a source close to that Class I area shouldn't control other pollutants that could be adding to the regional impact.

Comment 4: Fish and Wildlife

The discussion of emissions growth from the baseline to 2018 indicates growth, from point and area sources, in nitrogen oxides (NO_x), volatile organic compounds (VOC), OC, elemental carbon (EC), fine and coarse particulate matter (PM fine, PM coarse), and ammonia. However, in later sections of the SIP, naturally occurring emissions from fire and inadequate time to implement additional sulfate and nitrate emission controls are explained as the reasons that Idaho cannot meet its Uniform Rate of Progress goals. Please discuss Idaho's reasons for excluding controls that could reduce these additional visibility impairing pollutants for which the inventories indicate emissions are growing.

Response:

This is now addressed in section 9.4. A review of Chapter 8 and the emissions is also a good source of information. With the exception of growth in area source VOCs, most of the point and area emissions by pollutants listed above are relatively small. And although the increase in VOCs from area source is substantial, the number of source categories contributing and the contribution from each source category are not very conducive to controls and enforcement. As an example, personal care products are one of the bigger source categories. Setting standards and enforcing those standards on personal care products at the state level would be very costly and not very effective.

Comment 5: Fish and Wildlife

While some areas may share an IMPROVE monitoring site, impacts to Class I Areas should be discussed and evaluated individually. Impacts from neighboring states should also be discussed for each individual Class I Area. Clustering Class I Areas for source apportionment analyses is not a valid approach.

Response:

See response to comment 7.

Comment 6: Fish and Wildlife

Figure 9-68 on page 131, is scaled to the entire US. Please zoom into the region around Idaho for a better illustration. Also, figures 9-7 and 9-70 appear to be mislabeled.

Response:

Figures 9-7 and 9-70 have been edited. Figure 9-68 is a standard graphic from the WEP analysis and the current scaling is sufficient to make the point that Idaho isn't contributing to some Washington Class I areas.

Comment 7: Fish and Wildlife

Please provide more discussion regarding the individual species glide slopes presented on pages 158-164. These graphs depict that the Uniform Rate of Progress goals will be met on an individual pollutant basis, however many of these pollutants are also predicted to increase.

The SIP asserts that reductions from sulfate and organic carbon are overshadowed by increases to natural fire. However, it was previously stated in Chapter 8-*Emission Source Inventory*, that natural fire emissions estimates were held constant in the analysis. Please explain these statements in more detail.

Response:

Section 9.4 has been updated to include the pollutant glide slopes for several additional Class I areas. A discussion on natural fire and organic carbon is also included.

Comment 8: Fish and Wildlife

The BART modeling protocol, agreed to by Idaho, Washington, and Oregon, stated that the 20% best natural condition will be used for all BART analyses. The tables on pages 172-175 indicate that both 20% best natural condition and annually-averaged natural condition were used for certain analyses. Please clarify if the tables are incorrectly labeled, or if Idaho varied from the agreed protocol to utilize 20% best natural condition for all BART analyses.

Response:

The graphs have been updated to reflect that the 20% best natural conditions were used.

Comment 9: Fish and Wildlife

The BART source impact improvement is described in terms of the number of days the delta deciview is over 0.5. While this is an accurate method to describe the frequency of visibility impacts, more information should be included to illustrate the magnitude of improvement to visibility impairment. For example, since many BART sources impact more than one Class I area, the FLMs recommend that BART determinations consider visibility improvements at multiple Class I areas.

Response:

Information on the Class I areas within 300km of the Amalgamated Sugar plant in Nampa and of the P4 Production/Monsanto facility are available in Tables 10-14 and 10-15. Additional information on these facilities is available in Appendix F.

Comment 10: Fish and Wildlife

With respect to the BART determination for the P4 Productions facility, questions remain as to the feasibility of Selective non-Catalytic Reduction Technology for the nodulizing kiln. Given the large visibility impacts of the P4 Production facility at Yellowstone and Grand Teton National Parks, as well as other Class I units, we ask that Idaho revisit this analysis. In addition, we ask that Idaho clarify what P4 Production sources are BART-eligible.

Response:

As requested, an e-mail was sent to Don Sheperd with the National Park Services on August 9, 2010, which addressed the issue of installing SNCR in the kiln. The contents of the e-mail follow.

```
Don,

The e-mail from James McCulloch from Monsanto explains why SNCR won't
work with in the Kiln. If you need additional information, please let
me know.

Thanks,

Mike e.

-----Original Message-----
From: MCCULLOCH, JAMES R [AG/1850]
[mailto:james.r.mcculloch@monsanto.com]
Sent: Thursday, August 05, 2010 10:27 AM
To: Mike Edwards
Cc: Carole Zundel; William Rogers; Robert Wilkosz
Subject: RE: technical feasibility of SNCR on the #5 nodulizing kiln at
P4

Mike,

In response to your email, I have reviewed the work associated with P4
Production's BART analysis.  I also reviewed the EPA document that Don
referenced (with hyperlink) below.

In response to Don's request for further discussion on "injecting
ammonia into the rotary kiln", the following should be considered:

On page 47 of EPA's guidance document, it states that "SNCR will
function best in an oxidizing atmosphere".  Then on page 48, in Table
8-1, suitable temperature/temperature ranges are presented (870°C -
1100°C).
```

Temperature profiles from P4's kiln shows temperatures at the firing end and mid-Kiln up to 1700°C. At these temperatures, injecting ammonia at or near the kiln inlet would actually increase NOx emissions. The section of kiln that shows acceptable temperatures is ~250 feet in from the firing end of the kiln, but this zone is a reducing environment with short residence time, which would inhibit NOx removal efficiency. In addition, while EPA's guidance refers to injection into a rotary kiln, those injections were at other points in the process, or at one end of the kiln or the other (i.e. precalciner, preheater tower, feed inlet, fuel inlet or flue gas).

These facts support P4's original position that SNCR would not function properly, and is not technically feasible as BART for NOx removal in our kiln.

If necessary, P4 could pursue an additional review of the guidance document from EPA by an outside contractor experienced in oxidizer, air heater, and combustion systems. Let me know if you would like us to pursue that option.

If you have further questions, please feel free to call me at (208) 547-1233.

Regards,

Jim McCulloch

Comment 11: Fish and Wildlife

The State makes a declaration that based on "time necessary for compliance", additional controls are unreasonable. Considering that the State has missed the 2007 deadline for submittal of its Haze SIP to EPA, it seems counterproductive to now suggest that it is unreasonable to implement controls for lack of time. Idaho should revisit this statement and reconsider the importance of the goals of the Regional Haze Rule.

Response:

See the response to Comment 10.

Comment 12: Fish and Wildlife

There appears to be a slight math error in Table 11-2-*Idaho Statewide 2002 Point Source Sulfate Emissions*. Table 11-1-*Idaho 2002 Statewide Emissions by Pollutant and Source*, Table 11-2- *Idaho Statewide 2002 Point Source Sulfate Emissions*, and Table 11-4-*Idaho Statewide 2002 Area Source Sulfate Emissions*, should refer to SO_2 and NO_x emissions rather than sulfate and nitrate emissions. Please define the acronym RRF referred to in Table 11-12-*Summary of Idaho Class I Area Sulfate and Nitrate Visibility Improvement 20% Worst Days*.

Response:

The suggested changes have been made. Table 11-12 defines RRF and refers the reader to Appendix E for more information.

Comment 13: Fish and Wildlife

Please explain why Red Rocks Lakes Wilderness is not presented in Table 12-12 *Idaho's Contribution of SO_x and NO_x in Surrounding Class I Areas*.

Response:

Red Rocks Lakes Wilderness and several other Class I areas are now included in Table 12-12.

Comment 14: Fish and Wildlife

Table 12-2 Other States' 2018 contribution form the State of Wyoming on Craters of the Moon.

Please explain in more detail Idaho's consultation with the State of Wyoming concerning this attribution.

Response:

Section 12.3.2 has been updated to provide some explanation on the increase shown in Table 12-2. Since Idaho and Wyoming jointly chaired the WRAP Implementation Work Group (IWG), numerous discussions occurred between the two states at the IWG meetings. Details and links to the meetings are available Appendix B.

Comment 15: Fish and Wildlife

Please describe in more detail how Idaho's Prevention of Significant Deterioration (PSD) program benefits the State's regional haze program.

Response:

Section 12.6.1 has been updated to provide a short description of the PSD program.

Comment 16: Fish and Wildlife

And lastly, please specify whether Idaho requires Best Management Practices and emissions tracking when implementing its Smoke Management program.

Response:

DEQ's current smoke management plan for prescribed burning is currently the operating guide of the Montana/Idaho Airshed Group. Both DEQ and the MT/ID Airshed Group promote the use of best management practices. The MT/ID Airshed Group currently submits both approved and completed burns to the Western Regional Air Partnerships Fire Emissions Tracking System (WRAPFets). However, this emissions tracking is not required by DEQ.

Certificate of Hearing

CERTIFICATE OF HEARING

SUBJECT: Proposed Idaho Regional Haze State Implementation Plan

LOCATION: DEQ Conference Center, 1410 N. Hilton, Boise, Idaho

HEARING DATE: September 15, 2010

The undersigned designated hearing officer hereby certifies that on the 15th day of September, 2010, a public hearing was held on the proposed Regional Haze State Implementation Plan, at the DEQ conference center in Boise, Idaho. The hearing commenced at 3:00 p.m. and was adjourned at 3:30 p.m. No members of the public attended the hearing.

The record should also reflect that there are affidavits on file regarding the publication of notice of the opportunity for public comment, and that was published at least 30 days prior to the close of the scheduled comment period as specified in 40 CFR 51.102 and adopted by reference in the Department of Environmental Quality rules, IDAPA 58-01-01-107.03.a. Such publication was made in the Coeur d'Alene Press, Lewiston Tribune, Boise Idaho Statesman, Twin Falls Times News, Pocatello Idaho State Journal, and Idaho Falls Post Register on August 31st, 2010, which included notice of this public hearing. This publication was timely made and other necessary notice requirements have been met.

DATED this 15th day of September, 2010.

Diane M Tappen

Diane Tappen
Hearing Officer

USDA Forest Service Comments Submitted during Public Comment Period.

USDA United States Department of Agriculture | Forest Service | Region One | Northern Region
200 East Broadway
Missoula, MT 59802

File Code: 2580
Date: SEP 15 2010

Mr. Rick Hardy
Idaho DEQ, Technical Services Division,
Modeling/Risk Analysis Group
1410 North Hilton Street
Boise, ID 93706-1255

Dear Rick,

Thank you for the BART modeling analysis revision on eligible sources at the P4 Kiln. The USDA Forest Service appreciates the improved clarity and accuracy of these revisions and can now provide additional comments on the BART analysis for this facility.

The Forest Service understands there is a large decrease in SO_2 emissions but the NOx emissions go up slightly due primarily to the use of actual maximum emissions for the base case and the Potential to Emit emissions in future years. Because of this potential increase in NOx and the resulting potential impacts on regional haze, we revisited IDEQ's BART analysis for NOx from this source. The nodulized kiln is the largest source of NOx emissions, with 1,625 tons per year of actual emissions and 3,750 tons per year of permitted emissions.

Idaho DEQ only listed three potentially applicable control technologies for NOx; these are good combustion control, low NOx burners, and selective non-catalytic reduction (SNCR). Idaho DEQ determined all three of these technologies to be technically infeasible and eliminated them due primarily to incompatibility with the exhaust gas temperature.

The final BART rule states:

"Air pollution control technologies can include a wide variety of available methods, systems, and techniques for control of the affected pollutants. Technologies required as BACT or LAER are available for BART purposes and must be included as control alternatives. The control alternatives can include not only existing controls for the source category in question but also take into account technology transfer of controls that have been applied to similar source categories and gas streams".

The Forest Service conducted a search of NOx control technologies for cement kilns. The search revealed LoTox™ has been identified as a technically and economically feasible control technology for cement kilns in Ellis County Texas[1]. The report states this technology should be considered transferable in nature. It has not been used on a cement kiln but it has been used on similar large sources.

Furthermore, where SNCR has been determined technically infeasible due to the exhaust gas temperature stream, LoTox ™ placed in a tail end configuration is applicable to exhaust gas streams of 150-250°F, which is suitable with the stated 176°F exhaust gas stream of P4 kiln. The Forest Service is requesting Idaho DEQ further consider LoTox™ in the BART determination for NOx from the kiln at the P4 facility.

If you have any questions, please contact Thomas Dzomba, Northern Region Air Quality Program Manager, at (406) 329-3672.

Sincerely,

for LESLIE A. C. WELDON
Regional Forester

cc: Steve Body, Harv Forsgren

---

[i] Assessment of NOx Emissions Reductions Strategies for Cement Kilns – Ellis County. Prepared for Texas Commission on Environmental Quality. ERG Inc. Cincinnati, OH July 14, 2006. http://www.tceq.state.tx.us/assets/public/implementation/air/sip/agreements/BSA/CEMENT_FINAL_REPORT_70514_final.pdf

Comments Submitted by Charles Johnson during public comment period

RECEIVED

SEP 2 3 2010

DEPARTMENT OF ENVIRONMENTAL QUALITY
STATE A.Q. PROGRAM

Comments on the deq plan required by the federal haze rule due from the states in a 2003-2008 timeframe its 2010 whats your hurry
deq says that nitrare and sulfate emissions hamper haze in hells canyon wilderness area, which we share with oregon, idaho has 25,000 acres less than oregon.
Desert research institute of nevada verifys this is a winter problem during inversions they alsoverify that vegitation and wildland fires are the main summer problems

Please note dri study on ozone for deq identified the highest readings on ozone monitors July and August of 2007 were from wildland fires inpacting them. In the valley deq did not ask epa to excuse them,thus producing the vehicle emission testing scam.

After saying visibility problems in hells canyon are caused by amalgamated sugar,deq says overall visibility in parks and wilderness areas not a major problem ,adding most of idahos class1areas are in comparison realy clean areas
Make up your mind are they a problem are is the problem deq?
Turist info on hells canyon besides reminding us it is the deepest canyon in america, descritioons that might rival the garden of eden sayTHE SCENIC VISTAS THJAT ARE FOUND HERERIVAL ANY FOUND ON THE CONTINENT

we fully support amalgamated on this issuie, although we have disagreed with their corporate office on other matters
can you absolutly prove that the pollutants from their plant are impacting hells canyon?
Transport of pollutans from asia or fires in siberia can and do inpact the bad air problems here they come in on the stratis wionds
epa also states that 58% of haze is from bigenics like the blues in the summer or the great smokey mountains
amalgamated has supported deqs agenda for at least 6 years as they demand keeping usless vehicle emission testing in ada and extendingto canyon with mccreedy on deqs rump air qualiyty council and roy eugerin writing the testing laws Now you turn on themand say your polution will cost you $18 million HAVE YOU NO SHAME?

I am charles a. johnson 67 n. happy valley rd. nampa, idaho 83687 466-4993

Charles A. Johnson

Copy: Joe Huff ASC

Comments Submitted by Dean DeLorey with Amalgamated Sugar Company LLC (TASCO) during public comment period

THE AMALGAMATED SUGAR COMPANY LLC

1951 S. SATURN WAY, SUITE 100 • BOISE, ID 83709
PHONE: (208) 383-6500 • FAX: (208) 383-6684

September 30, 2010

Faye Weber
Air Quality Division
Idaho Dept. of Environmental Quality State Office
1410 North Hilton
Boise, ID 83706

RE: Comments on Idaho's Draft Regional Haze Plan

Dear Ms. Weber;

The Amalgamated Sugar Company LLC (TASCO) appreciates the opportunity to comment on the August 31, 2010 Draft of Idaho's Regional Haze State Implementation Plan. As is evident by the hundreds of pages of documentation, evaluating regional haze at Class I Areas is an extremely complex process.

As described in the plan, potential air quality impacts to Class I Areas are from a variety of emission sources both inside and outside Idaho. Assessing visibility impacts involves complex equations, databases and mathematical models which are not easily accessible or verifiable. As discussed in the plan, due to funding concerns, some of these databases are outdated and inaccurate.

Because of the complexity of the draft plan, TASCO comments are divided into two categories. General comments on the overall plan are provided in Attachment #1, followed by more specific comments in Attachment #2.

If you have any questions, feel free to contact me at (208) 383-6500.

Sincerely,

Dean C. DeLorey

Dean C. DeLorey
Director of Environmental Affairs
The Amalgamated Sugar Company LLC

DCD/ss

Enc.

Cc: IDEQ – Martin Bauer
TASCO – Joe Huff, John McCreedy

Attachment 1

General Comments on Idaho's Draft Regional Haze Plan The Amalgamated Sugar Company LLC September 30, 2010

Attachment 1

General Comments on Idaho's Draft Regional Haze Plan
The Amalgamated Sugar Company LLC
September 30, 2010

Overall Plan Comments. Idaho's Draft Regional Haze Plan relies upon inaccurate emissions inventory and source apportionment modeling data. As discussed throughout the document, due to funding concerns some of the future year emissions inventories are not accurate. These inaccuracies result in a flawed basis for the evaluation of visibility impacts and establish a flawed baseline for development of a plan to improve the condition in Class I areas. For example, PSAT modeling results for sulfates include inaccurate and severely inflated future year SO_2 emissions estimates (page 122). It's not clear whether these inflated SO_2 emission rates were also used in PSAT modeling for all other Class I Areas. If so, then the future impacts are exaggerated and the related future visibility improvement plan is flawed. Another example is the inclusion in future emissions estimates of emissions for SO_2 and NO_x from a 500 MW power plant which was never built in Jerome County (page 88). Including these unreal emissions inflates the future visibility impacts and establishes a flawed baseline from which to plan improvements. In addition, reliance upon these inaccurate emissions estimates ripples into inaccuracies in IDEQ's source apportionment model, which is intended to calibrate the CALPUFF modeling work.

An evaluation of the SO_2 source apportionment modeling shows that there are significant errors. For example, these results include NOx emissions for the power plant which was never built in Jerome County. The errors in the future projected emission rates need to be corrected and source apportionment models rerun for all Class I Areas. Without these corrections, Idaho's Regional Haze Plan is flawed and not approvable. The plan potentially sets in motion expensive improvements that may be unnecessary if the data were corrected. Before submittal to EPA for consideration and before publication in the Federal Register, these errors need to be corrected, and the plan resubmitted to the public for review.

Failure to correct these errors now will inevitably require more resources from IDEQ to be spent in the future. While funding may be short at this time prompting IDEQ to submit the plan before correction, this approach is shortsighted. In addition, implementing a plan based upon flawed data and results could result in expenditures by the Idaho regulated community that may be unnecessary.

Emissions Inventory Summaries. It is recommended that Chapter 8 of the report include overall summaries of Idaho's contribution to the regional haze conditions that address potential pollutants and emission sources in Idaho which may impact visibility in Class I Areas. This information provides the agencies, the regulated community, and the public, an indicator of the scope of the contribution from Idaho in order to develop reasonable and cost effective control measures. Based on a detailed review of the emissions and

source apportionment modeling data in the report the following helpful highlights are suggested for inclusion in Chapter 8 of the plan:

- Point sources in Idaho account for only 4% of the total visibility constituent emissions.
- The largest source of visibility constituents are area sources and natural fires accounting for over 60% of the emissions in Idaho.
- VOC's are the largest visibility constituent in Idaho, accounting for approximately 40% of the total emissions.
- SO_2 accounts for less than 5% of Idaho's total visibility emissions.
- Mobile sources in Idaho currently account for approximately 50% of the overall NO_x emissions while point sources account for less than 10% of the total.
- Regionally, Idaho accounts for less than 10% of the SO_2 and NO_x emissions compared to the surrounding states.
- Wyoming SO_2 emissions account for approximately 30% of the regional emissions primarily due to EGU's.
- Regionally, VOC's are emitted in the largest quantities compared to other constituents.
- Based on source apportionment modeling results, "out of domain" sources account for a majority of the sulfate concentrations in most Class I Areas.

This information provides context for Idaho's Regional Haze Plan. It offers the reader a comparison of the contribution from Idaho in relation to others, and it summarizes the scope of impacts from Idaho on regional haze. This summary along with periodic review and update of emissions inventories will ensure reasonable and cost effective visibility control measures are developed.

These bulleted highlights of data collected for the plan also clarify that Idaho point sources are only a small fraction of overall statewide emission sources contributing to regional haze and are even a smaller fraction of regional and "out of domain" emission sources. Even more specifically, then, Riley boiler emissions from The Amalgamated Sugar Company LLC (TASCO) account for an even smaller fraction of the overall statewide and regional emissions.

Because of the small percentage of point source emissions, any additional emission controls on point sources cannot be reasonably anticipated to result in any improvement in visibility at any Class I Area. This is especially true for SO_2 and/or NO_x emission controls for the Riley boiler at the TASCO Nampa facility required to address "modeled

impacts" at Class I Areas located hundreds of miles upwind of the TASCO facility. Requiring costly emission controls on the TASCO Riley boiler and any other point source to address this level of contribution and based upon inaccurate model results simply does not follow good science, good government, nor common sense principles.

Finally, Idaho's Regional Haze Plan is out of step with current economic realities. During these extremely difficult economic times for both US industry and state/federal governments, resources need to be focused on high priorities, where improvements can be measured and observed. Regarding the visibility improvements urged by the federal Clean Air Act, the focus needs to be on emissions controls associated with improved forest management activities to reduce natural fires, mobile source emission reductions, and emissions reductions associated with regional power plants which clearly impact Class I Areas (out of domain vs. regional plants). The draft plan ignores these realities, ignores the relative contribution of Idaho emissions to the regional impacts in Class I areas, and proposes a path based upon acknowledged inaccuracies and errors. As drafted the plan is not approvable without additional work and further public review.

Attachment 2

Specific Comments on Idaho's Draft Regional Haze Plan The Amalgamated Sugar Company LLC September 30, 2010

Attachment 2

Specific Comments on Idaho's Draft Regional Haze Plan
The Amalgamated Sugar Company LLC
September 30, 2010

Chapter 7 Pollutants & Estimated Visibility Impairment in Idaho

Light Extinction General Comment. Chapter 7 needs to clearly explain that all light extinction values (Mm^{-1}) are estimates based on the equation provided in Chapter 4 (see page 22). Light extinction bar charts labeled as "Monitoring Data" are inaccurate and misleading. Numerous variables and assumptions are required to calculate light extinction values including relative humidity estimates and pollutant concentrations from IMPROVE site samplers. Monitoring data only applies to the pollutant concentrations from the IMPROVE monitors. Please either: 1) For each bar chart with light extinction values, replace "Monitoring Data" with "Estimated Light Extinction Data" or; 2) Clearly explain throughout Section 7 that light extinction values are rough calculated estimates and not measured data.

In addition, visibility impacts throughout Chapter 7 are expressed as light extinction (inverse megameters) while Chapter 11 expresses visibility impacts as deciviews. All charts and data associated with calculated visibility impacts in each chapter should be consistent (either deciviews or Mm-1) so that the data can be easily compared and verified.

Pg 48 Figure 7-11. Hells Canyon Wilderness 20% Worst Days. This pie chart is not accurate and does not properly reflect the magnitude of each calculated light extinction constituent in Figure 7-13. For example, the chart does not properly show that the calculated light extinction for NO_3 is 50% of the total. There are also errors with the other calculated constituents. Please correct.

Chapter 8 Emissions Source Inventory

Pg. 71 General Comment. For SO_2 and NO_x, there are inconsistencies between the data provided in Chapter 8 and source apportionment predicted modeling results in Chapter 9. For example, throughout Section 9 many if not all of the future modeled impacts have not been adjusted for: 1) SO2 controls installed on the rotary kiln at the P4 Production facility in Caribou County and; 2) The elimination of emissions from a 500 MW electric generating unit which was never built in Jerome County. For the Idaho Statewide Inventory, Chapter 8 needs to clearly identify both the actual reductions and those reductions which were modeled in Section 9.

Pg 78 Summary of Idaho Statewide Emissions. At the end of Section 8.1, a new section should be added to the report which summarizes the overall emissions contribution from each visibility constituent and source category for the baseline year and future

projections. Summaries of the Idaho Statewide data are provided in Attachment A. Also include a narrative discussion of the data.

Pg 86 Summary of Regional Emissions Sources. In addition to the bar chart data for each state, summary tables of the emissions table would be beneficial for the report. This data will help the public to better understand the magnitude of emissions from each state. Attachment B provides this data. Please add this summary to the report. Also, regional ammonia emissions is missing from the report.

Other Emissions Data. Source apportionment projections throughout Section 9 include emissions data from other regional planning organizations (CENRAP, Eastern U.S., etc.), countries (Canada, Mexico) and outside the domain. As shown, model projections suggest that SO_2 emissions from outside the domain significantly impact the Class I Areas. Please provide a summary of the overall emissions estimates from these other regional sources and sources outside the domain.

Chapter 9 Source Apportionment

Pg. 88 Corrections to 2018 Emissions Inventory. The report states that due to inadequate funding, the 2018 emissions inventories will not be updated and erroneously include emissions from a 500MW coal fired Electric Generating Unit (EGU) which was never built. Therefore, future year emissions inventories and model predicted visibility impacts are inflated and not accurate. These errors should be corrected before the plan is submitted to EPA for approval.

Pgs 90 thru 194 Sections 9.2 & 9.3 General Comment Source Apportionment Clarification. The report needs to clarify that source apportionment concentration data is based on modeling results and these predicted concentrations are only rough estimates. The current report language regarding visibility impacts for individual pollutants is misleading. For example in Section 9.2.1 it is stated that:

"The regional source contribution pie charts in Figure 9-1 show the WRAP states are only contributing a third of the calculated visibility impairment on the 20% worst days at Craters of the Moon."

This statement should be modified as follows:

"The regional source contribution pie charts in Figure 9-1, based on source apportionment modeling, suggest that the WRAP states are predicted to contribute a third of the calculated visibility impairment on the 20% worst days at Craters of the Moon."

Please provide these corrections or similar corrective language throughout Section 9.0.

Pgs 90 thru 194 Predicted Modeling Impacts – Source Apportionments. PSAT predicted modeling results for sulfates and nitrates are expressed in terms of concentrations ($\mu g/m^3$) (for examples see Figures 9-1 and 9-8). However, for all other visibility constituent

precursors (i.e., OC, EC, Fine PM, Coarse PM), predicted impacts are expressed as percentages and predicted concentrations are not provided. Please include the predicted concentration data for each of these constituents in the report. This data is needed to compare the predicted modeled results to actual measured concentrations at each Class I Area.

Pg 102 and 103 Hells Canyon WEP Predicted OC & EC Impacts Natural Fires. In Figures 9-21 and 9-23, during the 20 % worst days at Hells Canyon, WEP predicted OC and EC impacts are dominated by Idaho natural fires. Please explain why Idaho's downwind natural fire impacts are greater than upwind impacts from Oregon natural fires. For example, predicted OC & EC model impacts for the Eagle Cap Wilderness Area are dominated by Oregon fires with Idaho fires contributing only a small fraction.

Also, predicted PSAT impacts for sulfate and nitrate (Figs. 9-17 and 9-18, respectively) indicate a much lower natural fire impact for the 20% worst days. Therefore, sulfate and nitrate predicted modeling results indicate the highest concentrations occur during the winter while OC & EC model predictions suggest that the highest impacts occur during the summer. Please explain.

Pg. 109 Figure 9-31. Nitrate Concentrations at Sawtooth 20% Worst Days. The bar charts regarding predicted nitrate concentrations for the 20% Worst Days and 20% Best Days appears to be incorrect. The "y axis" predicted concentration ranges for the 20% Best Days, appear to be higher than the 20% Worst Days. Please correct.

Pg. 114 Selway-Bitterroot Predicted Sulfate Impacts (Fig. 9-41). Please explain why natural fires in Idaho are the largest contributor of predicted sulfate concentrations at the Selway-Bitterroot Wilderness Area. Idaho's contributions are significantly greater than any other state. In addition, generally natural fires are not considered to be a significant source of sulfates. Please also explain.

Pg.122 Yellowstone National Park Predicted Sulfate Impacts (Figs. 9-53 & 9-55). As discussed in the draft report, predicted PSAT modeling results for sulfates include inaccurate and severely inflated future year SO2 emissions estimates. Future SO_2 emissions inventories do not account for emissions reductions associated with 2005 SO_2 controls at the P4 Production facility (see pg 228). In addition, the once anticipated EGU in Jerome County was never built. However, future year emissions inventories inaccurately include the emissions from the EGU. It is critical that the source apportionment modeling be updated with 10,000 tons/year less SO_2 emissions. The SIP is critically flawed without these updates. Please discuss.

In addition, please discuss whether overly inflated SO_2 emissions (and NO_x for the Jerome EGU) were utilized for source apportionment modeling for all other Class I Areas included in IDEQ's Draft Regional Haze Plan.

Pg.125 Nitrate Concentrations at Yellowstone. Predicted nitrate concentrations in Figures 9-57 and 9-58 appear to be switched. Please correct and check all predicted nitrate concentrations for all Class I Areas.

Pg.134 Glacier Park. Please explain why WEP modeling does not include data for Wyoming.

Pg.179 Eagle Cap Wilderness Predicted Sulfate Concentrations. Please explain the major differences in the predicted modeling results for sulfates for the 20% worst days between Eagle Cap and Hells Canyon. State contributions are significantly different between these 2 areas. Hells Canyon model predicted results appear to be overly inflated and in error.

Pg.181 Eagle Cap Wilderness Predicted Nitrate Concentrations. Please explain why the Idaho's contributions for nitrate (Fig. 9-146) and sulfate (Fig. 9-144) are so much different for the Worst 20% Days.

Pg.199 Hells Canyon Projected Visibility on 20% Worst Days. As described in Section 9.3, RPG's for Hells Canyon are set by Oregon. This information is unnecessary for Idaho's draft plan since Oregon has jurisdiction over this area.

Chapter 10 Best Available Retrofit Technology (BART) Evaluation

Pg.214 Section 10.2 BART – Eligible Sources Step 3. Language in Step 3 is not consistent with Appendix Y to Part 51 requirements. The phrase, "The following are definitely visibility impairing pollutants:" is not included in Appendix Y. Please replace with the following language included in Section II.3.of Appendix Y, "Visibility impairing pollutants include the following:"

Pg.222 Section 10.3.2 CALPUFF Modeling Results. Modeling results for the P4 Production facility in Caribou County appear to be mistakenly left out of Section 10.3.2. Please add the P4 modeling results to this table.

Pg.222 Section 10.4 BART Control Determination Process. – Further clarification of the applicability of Appendix Y is recommended in the draft report. Please replace the last sentence on page 222 with the following: "EPA requires each state to follow Appendix Y guidelines for large electric utility generating facilities (EGU's) with capacities of 750 MW's (megawatts) or greater. EPA does not require states to use the guidelines for other sources. Nonetheless IDEQ followed the Appendix Y guidelines for Idaho BART sources, even though the guidelines are not designed for industrial sources."

For example, and as previously discussed with IDEQ, Appendix Y guidelines are not appropriate for grower-owned sugar beet processing facilities with small industrial boilers. Fuel usage rates and emissions from EGU's are orders of magnitude greater than small industrial boilers. Most importantly, significant capital expenditures for EGU's can be passed on to customers through rate increases approved by public utility commissions.

Beet sugar production economics are completely different than EGU's. As a result, these guidelines and specifically Appendix Y cost of compliance recommendations are not appropriate for small industrial boilers at any sugar beet processing facility.

Pg. 223 Section 10.5.1 TASCO NO_x Controls. The cost of the 2006 steam pulp dryer project was $20.1 million. Please add to the report. Also, the second sentence is inaccurate and should be changed as follows: "Pulp drying typically occurs during the fall and winter months. Predicted modeling results suggest that the 20% worst days at Class I Areas are 100 miles upwind of the TASCO facility occur during the winter months."

Pg. 224 Section 10.5 TASCO BART Determination. Section 10.5 is not complete and does not entirely reflect TASCO/IDEQ discussions and correspondence since TASCO's original BART determination was submitted on November 20, 2007 and updated on February 6, 2009. TASCO's affordability analysis (incorrectly referenced as financial hardship in the draft regional haze plan) is only one of many of the components for a BART determination. TASCO's primary concern is that IDEQ mandated BART controls for the Riley boiler will not result in any "degree of improvement and visibility which may reasonably be anticipated" or measurable visibility improvements at any Class I area. TASCO has continually questioned CALPUFF modeling results for predicted impacts at Class I Areas over 100 miles upwind of the TASCO Nampa facility (Hells Canyon, Eagle Cap and Strawberry Mountain Wilderness Areas). TASCO has expressed concern about the agency's reliance upon conservative dispersion modeling as the sole basis for its BART applicability determination for this relatively small industrial source.

TASCO's concerns are well founded based upon past experience with inaccurate air dispersion modeling relied upon by IDEQ that led to a significant capital expenditure at TASCO's Nampa facility. In support of the Treasure Valley PM_{10} Maintenance Plan published in 2002, DEQ relied upon PM_{10} modeling analyses for the Nampa facility which over predicted ambient PM_{10} concentrations attributable to the plant. DEQ modeled a predicted value of 354 $\mu g/m^3$ then added an estimated background concentration of 90$\mu g/m^3$ for an estimated impact of 444 $\mu g/m^3$ from the Nampa facility. This value was above the applicable National Ambient Air Quality Standard of 150 $\mu g/m^3$ and DEQ required to TASCO to reduce emissions at a significant cost. During the interim period when the coal-fired rotary drum pulp dryers were operating, (2004 and 2005) actual PM_{10} concentrations measured by a DEQ approved monitor located at the Nampa facility fence line averaged only 22 $\mu g/m^3$ - twenty times less than the value predicted by modeling – and proving the model to be grossly inaccurate. Notably, monitored $\mu g/m^3$ concentrations did not materially change after the installation of the pulp steam dryer and shutdown of the rotary pulp drum dryers.

In addition, on numerous occasions TASCO provided to IDEQ, several BART alternatives which result in greater overall emissions reductions than IDEQ's Riley boiler BART determination. In addition to the pulp steam dryer project discussed below, TASCO has also requested that IDEQ consider as an additional BART alternative emissions reductions associated with the 2005 termination of sugar beet processing at the

Nyssa facility. The termination of these activities at the Nyssa facility provides significant emissions reductions and additional air quality benefits because the facility is approximately 27 miles closer to the Eagle Cap, Hells Canyon and Strawberry Mountain Wilderness areas where the CALPUFF model predicted the highest impacts. States can approve alternative BART control measures in accordance with 40 CFR 51.308(e) requirements. TASCO's proposed BART alternative of the combination of the shutdown of the Nampa pulp dryers along with the termination of beet processing at the Nyssa facility provides emissions reduction greater than IDEQ's determination for the Riley. These alternatives reduce PM_{10}, SO_2 and NO_x emissions by over 140%. A detailed discussion of these alternatives was submitted to IDEQ on November 18, 2009 (Supplemental Information – Riley BART Determination). It remains unclear why IDEQ rejected consideration of these emission reductions.

Supporting documentation for additional concerns raised by TASCO regarding IDEQ's BART determination for the Riley boiler are detailed in several written submittals to IDEQ. TASCO's most recent comments to IDEQ were submitted on May 19, 2010 as part of TASCO's review of the draft Tier II BART Operating Permit for the Riley boiler.

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Section 10 of the draft plan further omits discussion of obligations imposed by Idaho's rules for development of a regional haze plan. The rules adopted at IDAPA 58.01.01.665-668 afford IDEQ substantial discretion in development of a reasonable long-term strategy for regional haze. These rules require the Department to consider multiple factors and to coordinate with neighboring states to develop a reasonable plan. The draft permit issued by IDEQ to TASCO requires approximately $18,000,000 in emissions controls for the TASCO Riley Boiler that may not achieve any improvement to visibility, according to IDEQ's evaluation. The evaluation omitted consideration and interstate coordination prescribed by the regional haze rules and is unreasonable.

First, IDEQ observes that the highest impacts from TASCO's Nampa boiler are predicted to occur at Eagle Cap Wilderness (high impacts are also predicted to occur at the Strawberry Mountain and Hells Canyon Wilderness Areas) in Oregon. IDEQ states that "[a]lthough Eagle Cap Wilderness is outside of Idaho, the regional haze rule requires that state to address impacts in other states." This is not a completely accurate description of the regional haze rule requirement for interstate impacts. Under IDAPA 58.01.01.677, the Department is to develop a long-term strategy that addresses regional haze within the state and for areas outside the state that may be affected by emissions from the state. Specific requirements for development of the long-term strategy include consideration of the following factors, at a minimum: emissions reductions due to ongoing air pollution programs; source retirement replacement schedules; enforceability of emissions limitations and control measures. (IDAPA 58.01.01.667. 03(c)). Specific provisions for development of the long-term strategy also require interstate coordination with other states to develop coordinated emission management strategies "where Idaho has emissions that are reasonable anticipated to contribute to visibility impairment" in an area located in another state.

IDEQ failed to conform to the requirements in developing the BART portion of the long-term strategy set forth in Section 10 of the Regional Haze Plan. While IDEQ acknowledges that "the shutdown of the old pulp dryers has provided more visibility improvement than low NO_x burners (LNB) would and nearly the improvement that would be expected from LNB with over-fire-air (LNB w/OFA)," IDEQ nevertheless imposed more emissions controls. These source retirement commitments, now reflected in the Tier II permit issued to TASCO on September 7, 2010 are sufficient NO_x control, according to IDEQ's own evaluation. Consideration of the permanent shutdown is consistent with the factors presented in IDAPA 58.01.01.677.03(c).

IDEQ further failed to conform to the requirements in developing the BART portion of the long-term strategy set forth in Section 10 of the Regional Haze Plan by omitting coordination with the State of Oregon. The "best" BART recommendation presented by IDEQ in Section 10.5 appears to ignore the need to coordinate with Oregon despite IDEQ's emphasis on predicted impacts in Eagle Cap, Strawberry Mountain and Hells Canyon Wilderness areas located in Oregon. IDEQ is required to consult and coordinate on development of an emissions management strategy under IDAPA 58.01.01.667.04. Specifically, the termination of sugar beet processing activities at the TASCO factory in Nyssa, Oregon was overlooked by both Oregon and Idaho in development of a long-term strategy and the impacts of these significant emissions reductions were excluded from any coordinated emissions management strategy, as required by IDAPA.

Under IDAPA 58.01.01.668.02(c)(v) IDEQ is required to consider the degree of improvement in visibility which may reasonably be anticipated to result from the use of BART imposed on TASCO. TASCO urges IDEQ to reconsider the degree of improvement that may reasonably be anticipated to result from the shutdown of pulp dryers in Nampa and the termination of sugar beet processing at the factory in Nyssa, and conclude that these measures are sufficient to achieve the BART portion of a long-term strategy for TASCO. Given IDEQ's statements regarding NO_x and SO_2 emissions sources from Idaho, this approach can be supported in the final plan.

Pg. 224 Section 10.5.1 TASCO NO_x Controls. The first sentence of the second paragraph regarding the economics of shutting down the old pulp dryers is misleading and inaccurate. The capital cost of the pulp steam dryer was $20.1 million. As noted above, this significant environmental improvement project was required because of inaccurate air dispersion modeling as part of IDEQ's 2002 Treasure Valley PM_{10} Maintenance Plan. Even though there are some operating cost savings due to reduced fuel usage rates, these savings only pay for the lease payment for the $20.1 million capital expenditure for the pulp steam dryer.

As discussed above, TASCO has previously requested that IDEQ consider emissions reductions associated with the 2005 shutdown of the Nyssa facility. Equivalent emission control costs for the Riley boiler associated with the Nyssa facility emissions reductions have not been quantified. However, based on a rough estimate the equivalent capital

costs for these SO_2 and NO_x emissions reductions are well above $30 million (based on dry flue gas desulfurization and selective catalytic reduction emissions controls).

Pg. 231 Section 10.8 Visibility Improvements. Visibility improvements in Tables 10.14 for P4 Production and Table 10.15 for the TASCO Riley boiler are expressed utilizing different formats. Predicted visibility improvements in each table should be expressed using similar methodologies. Attachment C provides a summary of P4 Production facility and TASCO Riley boiler predicted modeling results expressed as: 1) Improvement in Highest Delta-Deciview Values and Reduction in Days 0.5 DV for Individual and 3-Year Improvement and 2) Delta-Deciview Value larger than 0.5 from one-year period. The tables need to be included for each facility. Where necessary, please add these tables to the report.

For the P4 Production facility, predicted CALPUFF modeling results in Attachment C were copied from IDEQ's April 2010 and June 2010 Draft Regional Haze Plans. It's unclear why the data changed in each of IDEQ's drafts. The most representative data needs to be included in the final plan.

Attachment A

Idaho Statewide
Emissions Inventory Summaries

Chapter 8.1 Idaho Statewide Emissions Inventory
Summary of Source Categories - Total Emissions
2002 & 2018 Projections

Source Category	2002		2018	
	(t/y)	%	(t/y)	%
Area	233,327	31%	327,805	43%
On-Road Mobile	75,686	10%	25,499	3%
Off-Road Mobile	57,758	8%	34,567	4%
Anthropogenic Fire	26,600	4%	12,802	2%
Natural Fire	231,974	31%	231,974	30%
Road Dust	22,004	3%	29,040	4%
Fugitive Dust	20,350	3%	28,519	4%
Windblown Dust	50,501	7%	50,501	7%
Point	33,321	4%	27,533	4%
Total	751,521	100%	768,240	100%

Chapter 8.1 Idaho Statewide Emissions Inventory
Summary of Visibility Pollutants
2002 & 2018 Projections

Pollutant	2002		2018	
	(t/y)	%	(t/y)	%
Volatile Organic Carbon(VOC)	271,211	36%	323,276	42%
Nitrogen Oxides (NOx)	157,200	21%	124,780	16%
Coarse Particulate Matter	113,128	15%	126,635	16%
Fine Particulate Matter	19,493	3%	21,841	3%
Ammonia (NH3)	79,282	11%	80,275	10%
Organic Carbon(OC)	58,304	8%	53,887	7%
Elemental Carbon(EC)	13,743	2%	11,660	2%
Sulfur Dioxide(SO2)	39,160	5%	25,886	3%
Total	751,521	100%	768,240	100%

Idaho Statewide 2002 Emission Inventory (tons/y)
Chapter 8 - IDEQ Draft Regional Haze Plan

Source Category	Total %	Total	VOC	NOx	Coarse PM	Fine PM	NH3	OC	EC	SO2
Point	4%	33,321	2,113	11,487	643	305	1,043	106	11	17,613
Area	31%	233,327	124,137	30,318	2,933	4,749	67,293	425	192	3,280
On-Road Mobile	10%	75,686	26,972	44,611	238	0	1,430	383	390	1,662
Off-Road Mobile	8%	57,758	23,511	27,922	0	0	17	747	1,859	3,702
Anthropogenic Fire	4%	26,600	8,316	3,461	1,354	1,536	1,253	8,454	1,331	895
Natural Fire	31%	231,974	86,162	39,401	25,323	3,013	8,246	47,883	9,938	12,008
Road Dust	3%	22,004			19,690	2,153		150	11	
Fugitive Dust	3%	20,350			17,496	2,687		156	11	
Windblown Dust	7%	50,501			45,451	5,050				
Total	100%	751,521	271,211	157,200	113,128	19,493	79,282	58,304	13,743	39,160

Idaho Statewide Projected 2018 Emission Inventory (tons/y)
Chapter 8 - IDEQ Draft Regional Haze Plan

Source Category	Total %	Total	VOC	NOx	Coarse PM	Fine PM	NH3	OC	EC	SO2
Point	4%	27,533	3,017	12,057	937	386	1,593	133	15	9,395
Area	43%	327,805	203,867	42,068	3,216	6,343	67,898	617	257	3,539
On-Road Mobile	3%	25,499	10,332	12,326	259	0	1,930	341	102	209
Off-Road Mobile	4%	34,567	15,931	17,235	0	0	24	424	663	290
Anthropogenic Fire	2%	12,802	3,967	1,693	655	713	584	4,089	656	445
Natural Fire	30%	231,974	86,162	39,401	25,323	3,013	8,246	47,883	9,938	12,008
Road Dust	4%	29,040			25,987	2,841		197	15	
Fugitive Dust	4%	28,519			24,807	3,495		203	14	
Windblown Dust	7%	50,501			45,451	5,050				
Total	100%	768,240	323,276	124,780	126,635	21,841	80,275	53,887	11,660	25,886

VOC - volatile organic compounds
NOx - nitrogen oxides
Coarse PM - PM10
Fine PM - PM2.5
OC - organic carbon
EC - elemental carbon
NH3 - ammonia
SO2 - sulfur dioxide

Idaho Statewide 2002 Emission Inventory (tons/y)
Chapter 8 - IDEQ Draft Regional Haze Plan

	SO2		NOx		VOC		OC		EC		Fine PM		Coarse PM		NH3		
Source Category	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	Total
Point	17,613	44.98%	11,487	7.31%	2,113	0.78%	106	0.18%	11	0.08%	305	1.56%	643	0.57%	1,043	1.32%	33,322
Area	3,280	8.38%	30,318	19.29%	124,137	45.77%	425	0.73%	192	1.40%	4,749	24.36%	2,933	2.59%	67,293	84.88%	233,328
On-Road Mobile	1,662	4.24%	44,611	28.38%	26,972	9.95%	383	0.66%	390	2.84%	0	0.00%	238	0.21%	1,430	1.80%	75,686
Off-Road Mobile	3,702	9.45%	27,922	17.76%	23,511	8.67%	747	1.28%	1,859	13.53%	0	0.00%	0	0.00%	17	0.02%	57,759
Anthropogenic Fire	895	2.29%	3,461	2.20%	8,316	3.07%	8,454	14.50%	1,331	9.68%	1,536	7.88%	1,354	1.20%	1,253	1.58%	26,600
Natural Fire	12,008	30.66%	39,401	25.06%	86,162	31.77%	47,883	82.13%	9,938	72.31%	3,013	15.46%	25,323	22.38%	8,246	10.40%	231,977
Road Dust		0.00%		0.00%		0.00%	150	0.26%	11	0.08%	2,153	11.04%	19,690	17.41%		0.00%	22,004
Fugitive Dust		0.00%		0.00%		0.00%	156	0.27%	11	0.08%	2,687	13.78%	17,496	15.47%		0.00%	20,350
Windblown Dust		0.00%		0.00%		0.00%		0.00%		0.00%	5,050	25.91%	45,451	40.18%		0.00%	50,502
Total	39,160	100%	157,200	100%	271,211	100%	58,304	100%	13,743	100%	19,493	100%	113,128	100%	79,282	100%	751,528

[a] Chapter 8 - IDEQ Draft Visibility SIP

Idaho Statewide 2018 Projected Emission Inventory (tons/y)
Chapter 8 - IDEQ Draft Regional Haze Plan

	SO2		NO3		VOC		OC		EC		Fine PM		Coarse PM		NH3		
Source Category	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	(tons/y)	%	Total
Point	9,395	36.29%	12,057	9.66%	3,017	0.93%	133	0.25%	15	0.13%	386	1.77%	937	0.74%	1,593	1.98%	27,533
Area	3,539	13.67%	42,068	33.71%	203,867	63.06%	617	1.14%	257	2.20%	6,343	29.04%	3,216	2.54%	67,898	84.58%	327,806
On-Road Mobile	209	0.81%	12,326	9.88%	10,332	3.20%	341	0.63%	102	0.87%	0	0.00%	259	0.20%	1,930	2.40%	25,499
Off-Road Mobile	290	1.12%	17,235	13.81%	15,931	4.93%	424	0.79%	663	5.69%	0	0.00%	0	0.00%	24	0.03%	34,567
Anthropogenic Fire	445	1.72%	1,693	1.36%	3,967	1.23%	4,089	7.59%	656	5.63%	713	3.26%	655	0.52%	584	0.73%	12,802
Natural Fire	12,008	46.39%	39,401	31.58%	86,162	26.65%	47,883	88.86%	9,938	85.23%	3,013	13.80%	25,323	20.00%	8,246	10.27%	231,977
Road Dust		0.00%		0.00%		0.00%	197	0.37%	15	0.13%	2,841	13.01%	25,987	20.52%		0.00%	29,040
Fugitive Dust		0.00%		0.00%		0.00%	203	0.38%	14	0.12%	3,495	16.00%	24,807	19.59%		0.00%	28,519
Windblown Dust		0.00%		0.00%		0.00%		0.00%		0.00%	5,050	23.12%	45,451	35.89%		0.00%	50,502
Total	25,886	100%	124,780	100%	323,276	100%	53,887	100%	11,660	100%	21,841	100%	126,635	100%	80,275	100%	768,247

[a] Chapter 8 - IDEQ Draft Visibility SIP

Table 8.1 Idaho SO_2 Statewide Emission Inventory 2002-2018
Idaho Statewide Sulfate Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	17,613	9,395	-8,218	-46.7%	45%
Area	3,280	3,539	259	7.9%	8%
On-Road Mobile	1,662	209	-1,453	-87.4%	4%
Off-Road Mobile	3,702	290	-3,412	-92.2%	9%
Anthropogenic Fire	895	445	-450	-50.3%	2%
Natural Fire	12,008	12,008	0	0.0%	31%
Total	39,160	25,886	-13,274	-33.9%	100%

Table 8.2 Idaho NO_x Statewide Emission Inventory 2002-2018
Idaho Statewide Nitrate Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	11,487	12,057	570	5.0%	7%
Area	30,318	42,068	11,750	38.8%	19%
On-Road Mobile	44,611	12,326	-32,285	-72.4%	28%
Off-Road Mobile	27,922	17,235	-10,687	-38.3%	18%
Anthropogenic Fire	3,461	1,693	-1,768	-51.1%	2%
Natural Fire	39,401	39,401	0	0.0%	25%
Total	157,200	124,780	-32,420	-20.6%	100%

Table 8.3 Idaho VOC Statewide Emission Inventory 2002-2018
Idaho Statewide VOC Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	2,113	3,017	904	42.8%	1%
Area	124,137	203,867	79,730	64.2%	46%
On-Road Mobile	26,972	10,332	-16,640	-61.7%	10%
Off-Road Mobile	23,511	15,931	-7,580	-32.2%	9%
Anthropogenic Fire	8,316	3,967	-4,349	-52.3%	3%
Natural Fire	86,162	86,162	0	0.0%	32%
Total	271,211	323,276	52,065	19.2%	100%

Table 8.4 Idaho Organic Carbon Statewide Emission Inventory 2002-2018
Idaho Statewide Primary Organic Aerosol Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	106	133	27	25.5%	0%
Area	425	617	192	45.2%	1%
On-Road Mobile	383	341	-42	-11.0%	1%
Off-Road Mobile	747	424	-323	-43.2%	1%
Anthropogenic Fire	8,454	4,089	-4,365	-51.6%	14%
Natural Fire	47,883	47,883	0	0.0%	82%
Road Dust	150	197	47	31.3%	0%
Fugitive Dust	156	203	47	30.1%	0%
Total	58,304	53,887	-4,417	-7.6%	100%

Table 8.5 Idaho Elemental Carbon Statewide Emission Inventory 2002-2018
Idaho Statewide Elemental Carbon Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	11	15	4	36.4%	0%
Area	192	257	65	33.9%	1%
On-Road Mobile	390	102	-288	-73.8%	3%
Off-Road Mobile	1,859	663	-1,196	-64.3%	14%
Anthropogenic Fire	1,331	656	-675	-50.7%	10%
Natural Fire	9,938	9,938	0	0.0%	72%
Road Dust	11	15	4	36.4%	0%
Fugitive Dust	11	14	3	27.3%	0%
Total	13,743	11,660	-2,083	-15.2%	100%

Table 8.6 Idaho PM Fine Statewide Emission Inventory 2002-2018
Idaho Statewide Fine Particulate Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	305	386	81	26.6%	2%
Area	4,749	6,343	1,594	33.6%	24%
On-Road Mobile	0	0	0	0.0%	0%
Off-Road Mobile	0	0	0	0.0%	0%
Anthropogenic Fire	1,536	713	-823	-53.6%	8%
Natural Fire	3,013	3,013	0	0.0%	15%
Road Dust	2,153	2,841	688	32.0%	11%
Fugitive Dust	2,687	3,495	808	30.1%	14%
Windblown Dust	5,050	5,050	0	0.0%	26%
Total	19,493	21,841	2,348	12.0%	100%

Table 8.7 Idaho PM Coarse Statewide Emission Inventory 2002-2018
Idaho Statewide Coarse Particulate Matter Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	643	937	294	45.7%	1%
Area	2,933	3,216	283	9.6%	3%
On-Road Mobile	238	259	21	8.8%	0%
Off-Road Mobile	0	0	0	0.0%	0%
Anthropogenic Fire	1,354	655	-699	-51.6%	1%
Natural Fire	25,323	25,323	0	0.0%	22%
Road Dust	19,690	25,987	6,297	32.0%	17%
Fugitive Dust	17,496	24,807	7,311	41.8%	15%
Windblown Dust	45,451	45,451	0	0.0%	40%
Total	113,128	126,635	13,507	11.9%	100%

Table 8.8 Idaho Ammonia Statewide Emission Inventory 2002-2018
Idaho Statewide Ammonia Emissions (tons/year)

Source Category	Plan02d 2002	Prp18b 2018	Net Change		2002 Source Contribution
Point	1,043	1,593	550	52.7%	1%
Area	67,293	67,898	605	0.9%	85%
On-Road Mobile	1,430	1,930	500	35.0%	2%
Off-Road Mobile	17	24	7	41.2%	0%
Anthropogenic Fire	1,253	584	-669	-53.4%	2%
Natural Fire	8,246	8,246	0	0.0%	10%
Total	79,282	80,275	993	1.3%	100%

Attachment B

Regional Emissions Summaries

Chapter 8 - Regional Emissions Summaries

Section 8.2.2 WRAP 2002 & 2018 SO2 Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	39,163	7.79%	25,891	6.95%
MT	51,923	10.32%	45,794	12.30%
NV	68,979	13.71%	59,731	16.04%
OR	52,449	10.43%	31,537	8.47%
UT	55,640	11.06%	43,380	11.65%
WA	86,323	17.16%	40,325	10.83%
WY	148,487	29.52%	125,692	33.76%
Total	**502,964**	**100.00%**	**372,350**	**100.00%**

Section 8.2.3 WRAP 2002 & 2018 NOx Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	174,186	9.99%	141,768	11.64%
MT	243,142	13.94%	180,043	14.78%
NV	162,475	9.32%	124,570	10.22%
OR	257,131	14.75%	161,052	13.22%
UT	240,060	13.77%	168,382	13.82%
WA	378,565	21.71%	194,258	15.94%
WY	288,095	16.52%	248,234	20.38%
Total	**1,743,654**	**100.00%**	**1,218,307**	**100.00%**

Section 8.2.4 WRAP 2002 & 2018 VOC Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	1,105,514	14.75%	1,157,578	14.92%
MT	1,181,318	15.77%	1,174,587	15.14%
NV	897,102	11.97%	897,310	11.57%
OR	1,621,287	21.64%	1,654,231	21.32%
UT	827,515	11.04%	874,292	11.27%
WA	1,042,867	13.92%	994,616	12.82%
WY	816,904	10.90%	1,005,916	12.97%
Total	**7,492,507**	**100.00%**	**7,758,530**	**100.00%**

Section 8.2.5 WRAP 2002 & 2018 Organic Carbon Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	58,304	16.27%	53,888	15.53%
MT	48,089	13.42%	46,502	13.40%
NV	24,734	6.90%	24,596	7.09%
OR	118,340	33.02%	115,220	33.21%
UT	29,407	8.21%	29,070	8.38%
WA	50,273	14.03%	49,255	14.19%
WY	29,194	8.15%	28,464	8.20%
Total	**358,341**	**100.00%**	**346,995**	**100.00%**

Section 8.2.6 WRAP 2002 & 2018 Elemental Carbon Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	13,743	15.50%	11,659	15.90%
MT	11,873	13.39%	9,901	13.50%
NV	6,409	7.23%	5,557	7.58%
OR	26,728	30.14%	23,685	32.29%
UT	8,769	9.89%	6,663	9.08%
WA	13,102	14.77%	9,033	12.32%
WY	8,066	9.09%	6,849	9.34%
Total	**88,690**	**100.00%**	**73,347**	**100.00%**

Section 8.2.7 WRAP 2002 & 2018 PM Fine Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	19,492	8.06%	21,842	8.33%
MT	77,239	31.95%	83,047	31.67%
NV	20,969	8.67%	20,023	7.64%
OR	45,203	18.70%	44,294	16.89%
UT	14,876	6.15%	17,240	6.57%
WA	41,151	17.02%	47,713	18.20%
WY	22,833	9.44%	28,055	10.70%
Total	**241,763**	**100.00%**	**262,214**	**100.00%**

Section 8.2.8 WRAP 2002 & 2018 PM Coarse Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	113,127	7.95%	126,633	8.00%
MT	621,276	43.69%	675,985	42.69%
NV	161,142	11.33%	159,483	10.07%
OR	170,964	12.02%	202,003	12.76%
UT	97,501	6.86%	109,705	6.93%
WA	155,430	10.93%	193,576	12.23%
WY	102,660	7.22%	116,054	7.33%
Total	**1,422,100**	**100.00%**	**1,583,439**	**100.00%**

Section 8.2.9 WRAP 2002 & 2018 Ammonia Emissions Summaries Bordering States

State	2002 (t/y)	2002 %	2018 (t/y)	2018 %
ID	79,282	23.54%	80,275	23.14%
MT	66,229	19.66%	67,030	19.33%
NV	12,092	3.59%	14,503	4.18%
OR	57,154	16.97%	58,177	16.77%
UT	29,999	8.91%	31,840	9.18%
WA	59,054	17.53%	61,042	17.60%
WY	33,032	9.81%	33,974	9.80%
Total	**336,842**	**100.00%**	**346,841**	**100.00%**

RegionalEmissionSourceSummary10Sept27.xls

Attachment C

CALPUFF Predicted Modeling Results

P4 Production Facility &
The Amalgamated Sugar Company LLC

CALPUFF Predicted Modeling Results

P4 Production Facility
Caribou County

April 2010

Table -2 Difference in the number of days over .5 deciview based on base year and future controls for P4.

Difference between Existing Control and PTC Future Control with normal operation at P4 (Existing - Future)

	Change in Visibility Compared Against 20% Best Days Natural Background Conditions							
	Delta-Deciview Value larger than 0.5 from one year period						Delta-Deciview Value larger than 0.5 from 3 year period	
	2003		2004		2005		2003-2005	
Impacted Class I Areas (within 300km range from sources)	8th highest[a]	Total days[b]	8th highest	Total days	8th highest	Total days	22nd Highest[c]	Number of Days[d] (2003,2004,2005)
Bridger Wilderness, WY (brid2)	2.85	82	2.796	97	2.415	95	2.846	274
Craters of the Moon NM - Wilderness, ID (crmowild)	2.419	25	2.48	21	3.077	14	2.621	60
Fitzpatrick Wilderness, WY (fitz2)	1.886	102	1.73	114	1.471	111	1.809	327
Grand Teton NP, WY (grte2)	4.564	48	4.525	64	4.492	57	4.566	169
Jarbidge Wilderness, NV (jarb2)	0.281	3	0.363	5	0.648	9	0.477	17
North Absaroka Wilderness, WY (noab2)	1.443	72	1.545	72	1.606	81	1.521	225
Red Rock Lakes Wilderness, MT (redrwild)	2.158	41	2.212	48	2.24	43	2.209	132
Sawtooth Wilderness, ID (sawt2)	0.64	13	0.732	10	0.916	20	0.779	43
Teton Wilderness, WY (teto2)	3.253	72	3.139	78	3.081	98	3.14	248
Washakie Wilderness, WY (wash3)	1.569	105	1.535	103	1.544	122	1.547	330
Yellowstone NP, WY (yell4)	3.296	58	4.668	64	4.307	86	4.348	208

a. The 8th highest delta-deciview for the calendar year.

b. Total number of days in 1 year that exceeded 0.5 delta-deciviews.

c. The 22nd highest delta-deciview value for the 3-year period.

d. Total number of days in the 3-year period that exceed 0.5 delta-deciviews.

10.8 Visibility Improvements Based on Emission Limits

The following tables show the visibility improvements at Monsanto/P4 and TASCO based on the before emission controls and after BART technologies have or will be installed. These tables look at the visibility improvements at all of the class I areas within 300km from the source. The BART controls at P4 reduced the total number of days over 0.5 deciviews impact by 2033 days as shown in table 10-14.

Table 10-14 Difference in the number of days with visibility impairment of more than 0.5 decivew between base year and future controls

Table 10-13 Regional Haze Improvement Due to 2002 Controls on BART Eligible P4 Sources

Impacted Class I Areas (within 300km range from P4)	Change in Visibility Compared Against 20% Best Days Natural Background Conditions (Delta-Deciview Values Larger than 0.5ΔDV in the 3 year period 2003 - 2005)					
	Before BART Upgrades		After BART Upgrades		Difference (Before - After)	
	ΔDV on 22nd Highest Day[a]	Number of Days > 0.5ΔDV[b]	ΔDV on 22nd Highest Day[a]	Number of Days > 0.5ΔDV[b]	Reduction in ΔDV for 22nd Highest Day[a]	Reduction in Days > 0.5ΔDV[b]
Bridger Wilderness, WY (brid2)	4.733	581	1.887	307	2.846	274
Craters of the Moon NM - Wilderness, ID (crmowild)	4.410	153	1.789	93	2.621	60
Fitzpatrick Wilderness, WY (fitz2)	2.881	472	1.072	145	1.809	327
Grand Teton NP, WY (grte2)	8.384	628	3.818	459	4.566	169
Jarbidge Wilderness, NV (jarb2)	0.708	28	0.231	11	0.477	17
North Absaroka Wilderness, WY (noab2)	2.476	318	0.955	93	1.521	225
Red Rock Lakes Wilderness, MT (redrwild)	3.699	238	1.490	106	2.209	132
Sawtooth Wilderness, ID (sawt2)	1.234	59	0.455	16	0.779	43
Teton Wilderness, WY (teto2)	5.379	563	2.239	315	3.14	248
Washakie Wilderness, WY (wash3)	2.528	469	0.981	139	1.547	330
Yellowstone NP, WY (yell4)	7.717	517	3.369	309	4.348	208
Total Days > 0.5ΔDV for all Class I Areas Combined:		4026		1993		2033

a. The 22nd highest delta-deciview value for the 3-year period.

b. Total number of days in the 3-year period that exceed 0.5 delta-deciviews.

June 2010

CALPUFF Predicted Modeling Results

TASCO Riley Boiler
Nampa Facility

Table 8 – Visibility Impact Summary - Eagle Cap Wilderness Area

Control Scenario	Reduction in deciviews & days above 0.5 dv																Annual Cost	Cost per Deciview*
	2003				2004				2005				2003-2005					
	8th	%	Days	%	8th	%	Days	%	8th	%	Days	%	22nd	%	Days	%	($x1,000)	$x1,000/dv
Base - Riley Boiler only	0.721		15		1.086		41		1.109		41		1.086		97			
NO_X - Low NOx Burners (LNB)	0.210	29%	4	27%	0.264	24%	12	29%	0.238	21%	12	29%	0.270	25%	28	29%	$480	$1,780
NO_X - LNB with overfire air (LNBwOFA)	0.267	37%	8	53%	0.344	32%	17	41%	0.306	28%	16	39%	0.350	32%	41	42%	$860	$2,460
NO_X - Selective Catalytic Reduction (SCR)	0.338	47%	9	60%	0.461	42%	25	61%	0.456	41%	23	56%	0.473	44%	57	59%	$3,534	$7,470
SO_2 - Low Sulfur Coal	0.039	5%	0	0%	0.070	6%	2	5%	0.081	7%	5	12%	0.072	7%	7	7%	$1,024	$14,220
SO_2 - Dry Lime FGD	0.135	19%	6	40%	0.272	25%	13	32%	0.303	27%	12	29%	0.280	26%	31	32%	$2,687	$9,600
SO_2 - Dry Trona FGD	0.156	22%	6	40%	0.322	30%	17	41%	0.370	33%	16	39%	0.325	30%	39	40%	$2,422	$7,450
SO_2 - Spray Dryer FGD	0.194	27%	6	40%	0.383	35%	19	46%	0.402	36%	21	51%	0.400	37%	46	47%	$2,521	$6,300
SO_2 - Wet FGD	0.222	31%	8	53%	0.439	40%	22	54%	0.464	42%	24	59%	0.448	41%	54	56%	$4,053	$9,050
NO_X LNB + SO_2 Dry Trona FGD	0.392	54%	10	67%	0.603	56%	35	85%	0.629	57%	35	85%	0.606	56%	80	82%	$2,902	$4,890
NO_X LNB + SO_2 Spray Dryer	0.427	59%	12	80%	0.684	63%	39	95%	0.692	62%	38	93%	0.684	63%	89	92%	$3,001	$4,410
NO_X LNB + SO_2 Wet FGD	0.451	63%	13	87%	0.727	67%	40	98%	0.757	68%	53	129%	0.738	68%	92	95%	$4,515	$6,600
NO_X LNBwOFA + SO_2 Dry Trona	0.463	64%	13	87%	0.691	64%	39	95%	0.715	64%	38	93%	0.692	64%	90	93%	$3,282	$4,740
NO_X LNBwOFA + SO_2 Spray Dryer	0.493	68%	14	93%	0.767	71%	40	98%	0.779	70%	40	98%	0.767	71%	94	97%	$3,381	$4,410
NO_X LNBwOFA + SO_2 Wet FGD	0.520	72%	14	93%	0.815	75%	41	100%	0.846	76%	41	100%	0.825	76%	96	99%	$4,895	$6,930
Base - Riley Boiler & Pulp Dryers	0.956		23		1.454		49		1.388		55		1.399		127			
Coal-Fired Pulp Dryers Shutdown	0.235	25%	8	35%	0.368	25%	8	16%	0.279	20%	14	26%	0.313	22%	30	24%		

* Cost per deciview is the annual cost divided by the corresponding increment of deciview improvement for the 2003-05 period.

The visibility modeling for TASCO looked at the scenarios of the Riley boiler emissions with the shutdown of the old pulp dryers (present emissions), the Riley boiler emissions including the old pulp dryer (baseline conditions), and the Riley Boiler with projected emission reductions from the selected BART technologies. The modeling analysis included all of the class I areas within 300km.

Table 10-15 TASCO, Nampa - BART Visibility Improvements

Class I Area/Scenario	Change in Visibility Compared Against 20% Best Days Natural Background Conditions							
	Delta-Deciview Value larger than 0.5 from one year period						Delta-Deciview Value larger than 0.5 from 3 year period	
	2003		2004		2005		2003-2005	
	8th highest [a]	Total days[b]	8th highest	Total days	8th highest	Total days	22nd Highest[c]	Number of Days[d] (2003,2004,2005)
Eagle Cap Wilderness, Oregon								
Base Riley Boiler Scenario (wzl10471)	0.721	15	1.086	41	1.109	41	1.086	97
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.956	23	1.454	49	1.388	55	1.399	127
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.228	1	0.319	1	0.330	1	0.319	3
Hells Canyon National Recreation Area, ID/OR								
Base Riley Boiler Scenario (wzl10471)	0.577	9	0.888	20	0.763	19	0.786	48
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.799	16	1.056	30	0.954	32	1.018	78
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.187	1	0.255	0	0.214	0	0.228	1
Sawtooth Wilderness Area								
Base Riley Boiler Scenario (wzl10471)	0.207	1	0.249	1	0.208	0	0.224	2
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.318	2	0.327	3	0.268	0	0.317	5
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.064	0	0.066	0	0.057	0	0.064	0
Jarbidge Wilderness, NV								
Base Riley Boiler Scenario (wzl10471)	0.131	0	0.181	0	0.202	0	0.172	0
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.166	1	0.237	2	0.251	2	0.230	5
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.038	0	0.047	0	0.054	0	0.047	0
Craters of the Moon National Monument, ID								
Base Riley Boiler Scenario (wzl10471)	0.183	0	0.197	0	0.144	0	0.192	0
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.215	0	0.245	3	0.208	1	0.232	4
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.054	0	0.060	0	0.041	0	0.054	0
Selway-Bitterroot, ID								
Base Riley Boiler Scenario (wzl10471)	0.151	0	0.289	0	0.235	1	0.219	1
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.197	0	0.337	1	0.294	2	0.255	3
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.042	0	0.076	0	0.064	0	0.058	0

Strawberry Mountain Wilderness, OR								
Base Riley Boiler Scenario (wzl10471)	0.517	3	0.410	6	1.168	23	0.685	37
Base Riley Boiler plus Pulp dryer full operation Scenario (wzl10469)	0.912	13	0.680	16	1.550	31	0.992	60
NOx scenario 2 + SO2 scenario 4 (wzl10484)	0.189	0	0.112	0	0.351	2	0.217	2

DEQ Response to Public Comments

Comments taken from United States Department of Agriculture Forest Service, Received September 21, 2010

Forest Service Comment 1:

The Forest Service conducted a search of NOx control technologies for cement kilns. The search revealed LoTox™ has been identified as a technically and economically feasible control technology for cement kilns in Ellis County Texas. The report states technology should be considered transferable in nature. It has not been used on a cement kiln but it has been used on similar large sources. . . . The Forest Service is requesting Idaho DEQ further consider LoTox™ in the BART determination for NOx from the kiln at the P4 facility.

Reference: Assessment of NOx Emissions Reductions Strategies for Cement Kilns – Ellis Count. Prepared for Texas Commission on Environmental Quality. ERG Inc. OH July 14, 2006.

Response:

DEQ reviewed the document referenced in letter. Reference was dated 2006, the EPA BACT clearing house was reviewed to see if the technology has been installed and in operation on any kilns. The search did not turn up any kilns using the technology within the last 4-years but did show that it was primarily used in the petroleum industry. DEQ contacted Texas Commission on Environmental Quality since the original study was done for Texas to identify appropriate technologies for Cement kilns. According to Erik Hendrickson at the Commission, LoTox™ *was never used because it turned out to be too expense.*

Since this technology has not been proven effective for cement kilns let alone kilns for phosphate production it will not be considered technically feasible at this time. It may prove to be a control technology that can be again reviewed for reasonable progress.

Comments taken from E-mail received from Charles Johnson of Nampa Idaho DEQ, Received on September 23, 2010

Johnson Comment 1:

Mr. Johnson seems to be questioning whether TASCO is causing or contributing to visibility impairment in Hells Canyon Wilderness. “Can you absolutely prove that the pollutants from their plant are impacting Hells Canyon?”

Response:

Based on CALPUFF modeling preformed by DEQ, the Riley Boiler at the TASCO Nampa facility is contributing to visibility impairment in Hells Canyon Wilderness. This information is available in Chapter 10 and Appendix F of the plan.

Comments taken from The Amalgamated Sugar Company LLC (TASCO), Received on September 30, 2010

TASCO Comment 1:

Overall Plan Comments. Idaho's Draft Regional Haze **Plan relies upon inaccurate emissions inventory and source apportionment modeling data**. As discussed throughout the document, due to funding concerns some of the future year emissions inventories are not accurate. These inaccuracies result in a flawed basis for the evaluation of visibility impacts and establish a flawed baseline for development of a plan to improve the condition in Class I areas. For example, PSAT modeling results for sulfates include inaccurate and severely inflated future year SO2 emissions estimates (page 122). It's not clear whether these inflated SO2 emission rates were also used in PSAT modeling for all other Class I Areas. If so, then the future impacts are exaggerated and the related future visibility improvement plan is flawed. Another example is the inclusion in future emissions estimates of emissions for SO2 and NO_x from a 500 MW power plant which was never built in Jerome County (page 88). Including these unreal emissions inflates the future visibility impacts and establishes a flawed baseline from which to plan improvements. In addition, reliance upon these inaccurate emissions estimates ripples into inaccuracies in IDEQ's source apportionment model, which is intended to calibrate the CALPUFF modeling work.

An evaluation of the SO2 source apportionment modeling shows that there are significant errors. For example, these results include NOx emissions for the power plant which was never built in Jerome County. The errors in the future projected emission rates need to be corrected and source apportionment models rerun for all Class I Areas. Without these corrections, Idaho's Regional Haze Plan is flawed and not approvable. The plan potentially sets in motion expensive improvements that may be unnecessary if the data were corrected. Before submittal to EPA for consideration and before publication in the Federal Register, these errors need to be corrected, and the plan resubmitted to the public for review.

Failure to correct these errors now will inevitably require more resources from IDEQ to be spent in the future. While funding may be short at this time prompting IDEQ to submit the plan before correction, this approach is shortsighted. In addition, implementing a plan based upon flawed data and results could result in expenditures by the Idaho regulated community that may be unnecessary.

Response

Emission inventories are a snapshot of emission taken in time based upon assumptions made at that time. The assumptions at the time of the emissions used for the source apportionment included emissions from a power plant in Jerome, Idaho and was part of the WRAP assumption that states would need to increase electrical power to meet future demands – the assumption was also based on a permit application for a power

plant in that area. As the Regional Haze mentions throughout the document, this assumption changed in future emission inventories based upon a moratorium placed on the development of coal fired power plants. In instances where the source apportionment was showing an increase in visibility impacts due to the previous assumptions of a power plant in Jerome, a weight of evidence approach is included to show Idaho is in fact addressing Idaho's reduction in contribution of SO_x to visibility impairment. The analysis in Chapter 9 on Craters of the Moon Source apportionment and the use of the WEP analysis is an example of using the weight of evidence approach.

TASCO Comment 2:

Emissions Inventory Summaries. It is recommended that Chapter 8 of the report include overall summaries of Idaho's contribution to the regional haze conditions that address potential pollutants and emission sources in Idaho which may impact visibility in Class I Areas. This information provides the agencies, the regulated community, and the public, an indicator of the scope of the contribution from Idaho in order to develop reasonable and cost effective control measures. Based on a detailed review of the emissions and
source apportionment modeling data in the report the following helpful highlights are suggested for inclusion in Chapter 8 of the plan:

- Point sources in Idaho account for only 4% of the total visibility constituent emissions.
- The largest source of visibility constituents are area sources and natural fires accounting for over 60% of the emissions in Idaho.
- VOC's are the largest visibility constituent in Idaho, accounting for approximately 40% of the total emissions.
- SO2 accounts for less than 5% of Idaho's total visibility emissions.
- Mobile sources in Idaho currently account for approximately 50% of the overall NO_X emissions while point sources account for less than 10% of the total.
- Regionally, Idaho accounts for less than 10% of the SO2 and NO_X emissions compared to the surrounding states.
- Wyoming SO2 emissions account for approximately 30% of the regional emissions primarily due to EGU's.
- Regionally, VOC's are emitted in the largest quantities compared to other constituents.
- Based on source apportionment modeling results, "out of domain" sources account for a majority of the sulfate concentrations in most Class I Areas.

This information provides context for Idaho's Regional Haze Plan. It offers the reader a comparison of the contribution from Idaho in relation to others, and it summarizes the scope of impacts from Idaho on regional haze. This summary along with periodic review and update of emissions inventories will ensure reasonable and cost effective visibility control measures are developed.

These bulleted highlights of data collected for the plan also clarify that Idaho point sources are only a small fraction of overall statewide emission sources contributing to regional haze and are even a smaller fraction of regional and "out of domain" emission sources. Even more specifically, then, Riley boiler emissions from The Amalgamated Sugar Company LLC (TASCO) account for an even smaller fraction of the overall statewide and regional emissions.

Because of the small percentage of point source emissions, any additional emission controls on point sources cannot be reasonably anticipated to result in any improvement in visibility at any Class I Area. This is especially true for SO2 and/or NO_X emission controls for the Riley boiler at the TASCO Nampa facility required to address "modeled impacts" at Class I Areas located hundreds of miles upwind of the TASCO facility. Requiring costly emission controls on the TASCO Riley boiler and any other point source to address this level of contribution and based upon inaccurate model results simply does not follow good science, good government, nor common sense principles.

Finally, Idaho's Regional Haze Plan is out of step with current economic realities. During these extremely difficult economic times for both US industry and state/federal governments, resources need to be focused on high priorities, where improvements can be measured and observed. Regarding the visibility improvements urged by the federal Clean Air Act, the focus needs to be on emissions controls associated with improved forest management activities to reduce natural fires, mobile source emission reductions, and emissions reductions associated with regional power plants which clearly impact Class I Areas (out of domain vs. regional plants). The draft plan ignores these realities, ignores the relative contribution of Idaho emissions to the regional impacts in Class I areas, and proposes a path based upon acknowledged inaccuracies and errors. As drafted the plan is not approvable without additional work and further public review.

Response:

There are numerous ways to look at the emission inventory and summarize the data dependent upon the view point of the reader. DEQ has provided links to the various websites that contain the emission inventories and supporting documentation so the reader can make various comparisons. The charts TASCO provided will not change the Reasonable Progress Goals, Long Term Strategies or BART analysis and therefore are not include. The BART process relies upon whether an EPA approved model shows a BART eligible facility is causing or contributing to visibility impairment and not a percentage of a facility's emissions in comparison to other states etc. The BART modeling did demonstrate that Nampa TASCO facility had one boiler over the 1 deciview

threshold which required the facility to go through the 4 factor analysis to determine if emission controls are appropriate.

Chapter 7 Pollutants & Estimated Visibility Impairment in Idaho

TASCO Comment 3:

Light Extinction General Comment. Chapter 7 needs to clearly explain that all light extinction values (Mm^{-1}) are estimates based on the equation provided in Chapter 4 (see page 22). Light extinction bar charts labeled as "Monitoring Data" are inaccurate and misleading. Numerous variables and assumptions are required to calculate light extinction values including relative humidity estimates and pollutant concentrations from IMPROVE site samplers. Monitoring data only applies to the pollutant concentrations from the IMPROVE monitors. Please either: 1) For each bar chart with light extinction values, replace "Monitoring Data" with "Estimated Light Extinction Data" or; 2) Clearly explain throughout Section 7 that light extinction values are rough calculated estimates and not measured data.

In addition, visibility impacts throughout Chapter 7 are expressed as light extinction (inverse megameters) while Chapter 11 expresses visibility impacts as deciviews. All charts and data associated with calculated visibility impacts in each chapter should be consistent (either deciviews or Mm-1) so that the data can be easily compared and verified.

Response:

Several pages in section 4.2 provide an explanation on how IMPROVE monitoring data is used to calculate light extinction. The label at the top of the graphs in Chapter 7 identifies that the data used to calculate light extinction came from IMPROVE "monitoring data" as apposed to "modeled" concentrations.

The Federal Regional Haze rule (40 CFR 51.308(d)(1) and 308(d)(2)) requires "reasonable progress goals," as well as "Baseline and Natural Conditions" to be express in deciview. The monitoring and modeling out puts are expressed as inverse megameters. To avoid rounding errors and other conversion issues, unless expressly required by Regional Haze Rule, light extinction should be expressed in inverse megameters.

TASCO Comment 4:

Pg 48 Figure 7-11. Hells Canyon Wilderness 20% Worst Days. This pie chart is not accurate and does not properly reflect the magnitude of each calculated light extinction constituent in Figure 7-13. For example, the chart does not properly show that the calculated light extinction for NO3 is 50% of the total. There are also errors with the other calculated constituents. Please correct.

Repsonse:

Figure 7-11 has been corrected so each slices of the pie chart is in better proportion to the percent of the pollutants impacting visibility.

Chapter 8 Emissions Source Inventory

TASCO Comment 5:

Pg. 71 General Comment. For SO2 and NO_X, there are inconsistencies between the data provided in Chapter 8 and source apportionment predicted modeling results in Chapter 9. For example, throughout Section 9 many if not all of the future modeled impacts have not been adjusted for: 1) SO2 controls installed on the rotary kiln at the P4 Production facility in Caribou County and; 2) The elimination of emissions from a 500 MW electric generating unit which was never built in Jerome County. For the Idaho Statewide Inventory, Chapter 8 needs to clearly identify both the actual reductions and those reductions which were modeled in Section 9.

Response:

This very issue is both identified and dealt with throughout the document using a weight of evidence approach to resolve issues caused by using different assumptions for the emissions inventories which are the backbone of the models. See Craters of the Moon National Monument in section 9.2 as just one example how WEP analysis and refined emissions inventory are used to build the weight of evidence that Idaho projects reductions in SO_x contributions.

TASCO Comment 6:

Pg 78 Summary of Idaho Statewide Emissions. At the end of Section 8.1, a new section should be added to the report which summarizes the overall emissions contribution from each visibility constituent and source category for the baseline year and future projections. Summaries of the Idaho Statewide data are provided in Attachment A. Also include a narrative discussion of the data.

Response:

This information is already in summary form included in the bar charts shown in Tables 8-9 through 8-16.

TASCO Comment 7:

Pg 86 Summary of Regional Emissions Sources. In addition to the bar chart data for each state, summary tables of the emissions table would be beneficial for the report. This data will help the public to better understand the magnitude of emissions from each state. Attachment B provides this data. Please add this summary to the report. Also, regional ammonia emissions is missing from the report.

Response:

The Ammonia Emissions inventory is provided in Table 8-16. Also see response to comment 6.

TASCO Comment 8:

Other Emissions Data. Source apportionment projections throughout Section 9 include emissions data from other regional planning organizations (CENRAP, Eastern U.S., etc.), countries (Canada, Mexico) and outside the domain. As shown, model projections suggest that SO2 emissions from outside the domain significantly impact the Class I Areas. Please provide a summary of the overall emissions estimates from these other regional sources and sources outside the domain.

Response:

Providing this information in this plan will not change the technical aspects of the plan such as the long term strategies, reasonable progress goals or BART analysis. This information is available on the WRAP Technical support website by clicking on "emissions and source apportionment, selecting a Class I area from the map and then clicking on "emissions data review" at the bottom of the page. The information is available by emission inventory, pollutant, state, Regional Planning Organization (and the states within the region) Canada, Mexico etc.

Chapter 9 Source Apportionment

TASCO Comment 9:

Pg. 88 Corrections to 2018 Emissions Inventory. The report states that due to inadequate funding, the 2018 emissions inventories will not be updated and erroneously include emissions from a 500MW coal fired Electric Generating Unit (EGU) which was never built. Therefore, future year emissions inventories and model predicted visibility impacts are inflated and not accurate. These errors should be corrected before the plan is submitted to EPA for approval.

Response:

Emission inventories were developed during the planning process that used planning assumptions that were appropriate at the time of the emission inventory development. As assumptions changed there was a need to explain the differences in the emissions and modeling which was done through the weight of evidence. See the response to comment 5.

TASCO Comment 10:

Pgs 90 thru 194 Sections 9.2 & 9.3 General Comment Source Apportionment Clarification. The report needs to clarify that source apportionment concentration data is based on modeling results and these predicted concentrations are only rough estimates. The current report language regarding visibility impacts for individual pollutants is misleading. For example in Section 9.2.1 it is stated that:

"The regional source contribution pie charts in Figure 9-1 show the WRAP states are only contributing a third of the calculated visibility impairment on the 20% worst days at Craters of the Moon."

This statement should be modified as follows:

"The regional source contribution pie charts in Figure 9-1, based on source apportionment modeling, suggest that the WRAP states are predicted to contribute a third of the calculated visibility impairment on the 20% worst days at Craters of the Moon."

Please provide these corrections or similar corrective language throughout Section 9.0.

Response:

Section 9.1 provides a three page overview of source apportionment and WEP modeling. The overview provides the reader an overview of what emission inventories are associated with the PSAT CAMx , CMAQ TSSA and WEP models as well as some of the shortcomings of the modeling and emission inventories. The reader is also provided with additional information resources at the bottom page 88. Because the reader has been adequately informed of where the information for source apportionment was derived, it is not misleading and there is no need to change the language.

TASCO Comment 11:

Pgs 90 thru 194 Predicted Modeling Impacts — Source Apportionments. PSAT predicted modeling results for sulfates and nitrates are expressed in terms of concentrations (pg/m^3) (for examples see Figures 9-1 and 9-8). However, for all other visibility constituent precursors (i.e., OC, EC, Fine PM, Coarse PM), predicted impacts are expressed as percentages and predicted concentrations are not provided. Please include the predicted concentration data for each of these constituents in the report. This data is needed to compare the predicted modeled results to actual measured concentrations at each Class I Area.

Response:

The WEP analysis results are presented as a percent of contribution based on the weighting of emission source strength and the residence time of an air mass over

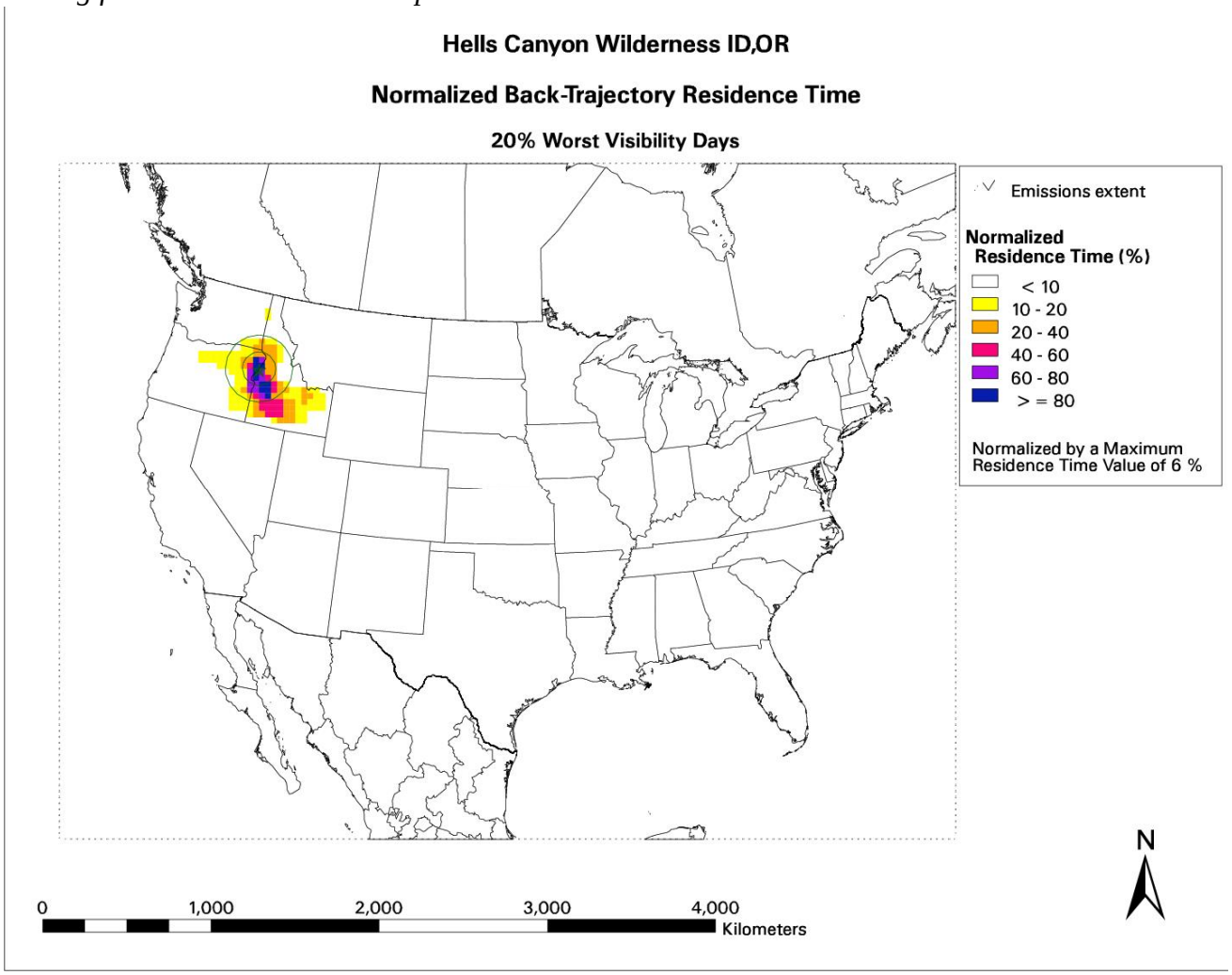
emission source and therefore concentration levels for the other pollutants cannot be provided.

TASCO Comment 12:

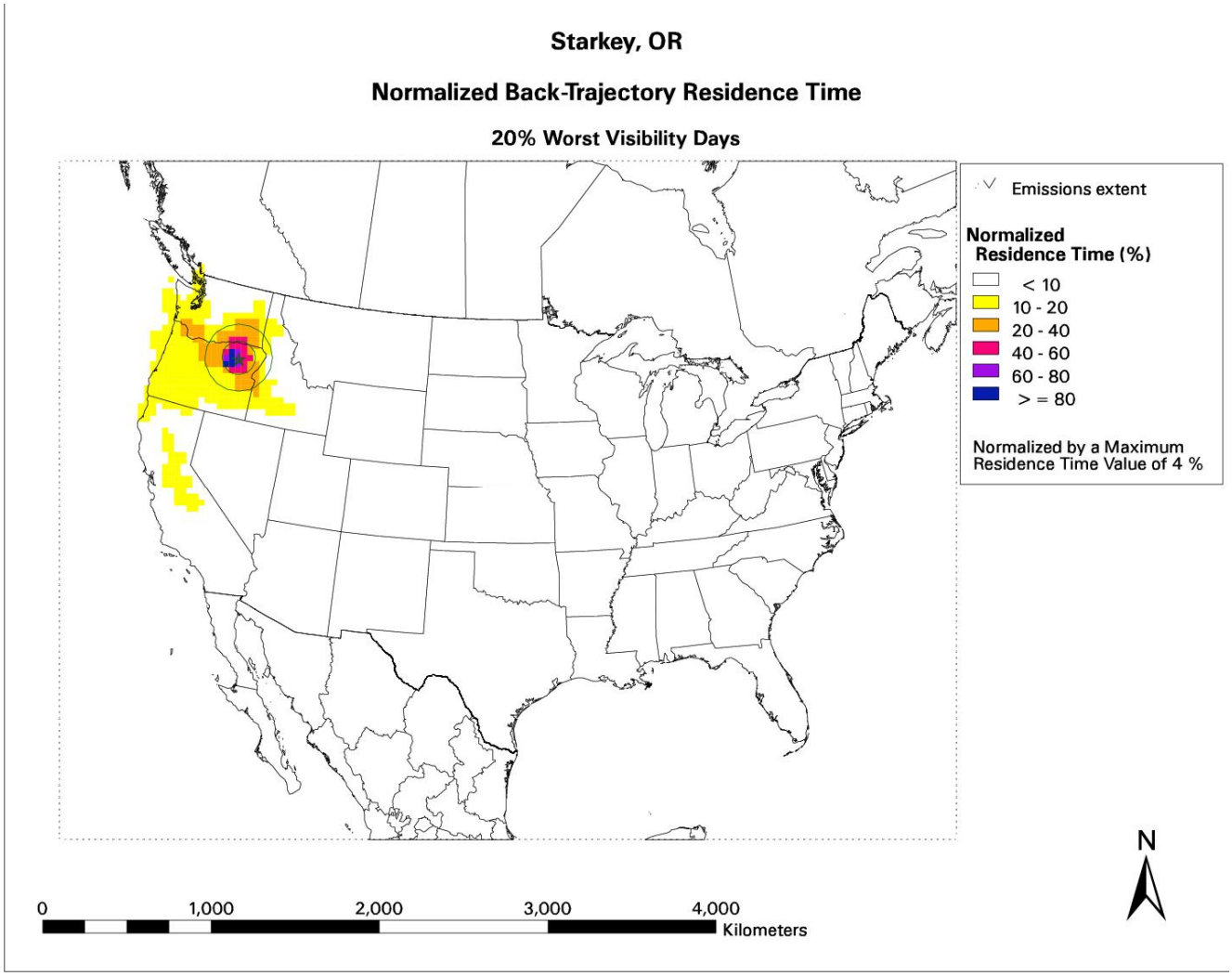
Pg 102 and 103 Hells Canyon WEP Predicted OC & EC Impacts Natural Fires. In Figures 9-21 and 9-23, during the 20 % worst days at Hells Canyon, WEP predicted OC and EC impacts are dominated by Idaho natural fires. Please explain why Idaho's downwind natural fire impacts are greater than upwind impacts from Oregon natural fires. For example, predicted OC & EC model impacts for the Eagle Cap Wilderness Area are dominated by Oregon fires with Idaho fires contributing only a small fraction.

Response:

The assumption that Idaho is always down wind of Hells Canyon is an incorrect assumption. The graphic below taken from the WRAP TSS website shows back trajectories of air masses during the worst 20% days at Hells Canyon are often coming from Idaho's Snake River plan.



In contrast, the back trajectory and residence time of air mass going to Eagle Cap Wilderness are spending more time over Oregon Source. See below.



Comment 13:

Also, predicted PSAT impacts for sulfate and nitrate (Figs. 9-17 and 9-18, respectively) indicate a much lower natural fire impact for the 20% worst days. Therefore, sulfate and nitrate predicted modeling results indicate the highest concentrations occur during the winter while OC & EC model predictions suggest that the highest impacts occur during the summer. Please explain.

Response:

DEQ can not respond to this comment because Figures 9-17 and 9-18 do not show seasonal variations.

Comment 14:

Pg. 109 Figure 9-31. Nitrate Concentrations at Sawtooth 20% Worst Days. The bar charts regarding predicted nitrate concentrations for the 20% Worst Days and 20% Best Days appears to be incorrect. The "y axis" predicted concentration ranges for the 20% Best Days, appear to be higher than the 20% Worst Days. Please correct.

Response:

These figures are correct. The 20% worst days are dominated by organic carbon from fire with only a small portion coming from NOx. See figures 7-20 and 7-28.

TASCO Comment 15:

Pg. 114 Selway-Bitterroot Predicted Sulfate Impacts (Fig. 9-41). Please explain why natural fires in Idaho are the largest contributor of predicted sulfate concentrations at the Selway-Bitterroot Wilderness Area. Idaho's contributions are significantly greater than any other state. In addition, generally natural fires are not considered to be a significant source of sulfates. Please also explain.

Response:

Although the bars representing Idaho's contribution to Sulfate concentrations at Selway-Bitterroot are large in comparison to other states the actual concentration is very low. Since the concentration levels are very low, even a very small amount of sulfate coming from fire ends up showing as a large contribution to the overall impact.

TASCO comment 16:

Pg.122 Yellowstone National Park Predicted Sulfate Impacts (Figs. 9-53 & 9-55). As discussed in the draft report, predicted PSAT modeling results for sulfates include inaccurate and severely inflated future year SO2 emissions estimates. Future SO2 emissions inventories do not account for emissions reductions associated with 2005 SO2 controls at the P4 Production facility (see pg 228). In addition, the once anticipated EGU in Jerome County was never built. However, future year emissions inventories inaccurately include the emissions from the EGU. It is critical that the source apportionment modeling be updated with 10,000 tons/year less SO2 emissions. The SIP is critically flawed without these updates. Please discuss.

In addition, please discuss whether overly inflated SO2 emissions (and NO_x for the Jerome EGU) were utilized for source apportionment modeling for all other Class I Areas included in IDEQ's Draft Regional Haze Plan.

Response:

See response to comment 5 and 9.

TASCO Comment 17:

Pg.125 Nitrate Concentrations at Yellowstone. Predicted nitrate concentrations in Figures 9-57 and 9-58 appear to be switched. Please correct and check all predicted nitrate concentrations for all Class I Areas.

Response:

These results are correct. See figures 7-42 and 7-50 for an explanation similar to response to comment14.

TASCO Comment 18:

Pg.134 Glacier Park. Please explain why WEP modeling does not include data for Wyoming.

Response:

The Regional Haze SIP available on DEQ's website for "public comment" includes Wyoming in the WEP analysis for Glacier National Park.

TASCO Comment 19:

Pg.179 Eagle Cap Wilderness Predicted Sulfate Concentrations. Please explain the major differences in the predicted modeling results for sulfates for the 20% worst days between Eagle Cap and Hells Canyon. State contributions are significantly different between these 2 areas. Hells Canyon model predicted results appear to be overly inflated and in error.

Response:

There are numerous variables that cause changes in concentrations of visibility impairing pollutants at class I areas including: elevation, humidity, source strength of those sources contribution, meteorology (wind direction, air stagnation conditions) temperature etc. The response to comment 12 is only one of the issues playing a part in the difference in concentrations at Hells Canyon Wilderness verse Eagle Cap Wilderness.

TASCO Comment 20:

Pg.181 Eagle Cap Wilderness Predicted Nitrate Concentrations. Please explain why the Idaho's contributions for nitrate (Fig. 9-146) and sulfate (Fig. 9-144) are so much different for the Worst 20% Days.

Response:

During the Best 20% days at Eagle Cap Wilderness, the air mass is spending less time over Idaho's strong nitrate emission sources.

TASCO Comment 21:

Pg.199 Hells Canyon Projected Visibility on 20% Worst Days. As described in Section 9.3, RPG's for Hells Canyon are set by Oregon. This information is unnecessary for Idaho's draft plan since Oregon has jurisdiction over this area.

Response:

As pointed out in section 9.1, the Regional Haze Rule (40 CFR 51.308(d)(d)), "Where the State has emissions that are reasonably anticipated to contribute to visibility impairment in any mandatory Class I Federal area located in another State or States, the State must consult with the other State(s) in order to develop coordinated emission management strategies." Chapter 9 includes Class I areas outside of Idaho in an effort to demonstrate Idaho's long term strategies are improving visibility.

Chapter 10 Best Available Retrofit Technology (BART) Evaluation

TASCO Comment 22:

Pg.214 Section 10.2 BART — Eligible Sources Step 3. Language in Step 3 is not consistent with Appendix Y to Part 51 requirements. The phrase, "The following are definitely visibility impairing pollutants:" is not included in Appendix Y. Please replace with the following language included in Section II.3.of Appendix Y, "Visibility impairing pollutants include the following:"

Response:

The language has been changed.

TASCO Comment 23:

Pg.222 Section 10.3.2 CALPUFF Modeling Results. Modeling results for the P4 Production facility in Caribou County appear to be mistakenly left out of Section 10.3.2. Please add the P4 modeling results to this table.

Response:

As stated on page 22, "Monsanto/P4 Production did not go through the subject-to-BART determination process because the facility had recently undertaken a Best Available Control Technology (BACT) analysis and it was believed the "Best" BART control technologies had been installed during this process. DEQ and P4 agreed to move directly to the BART determination process."

TASCO Comment 24:

Pg.222 Section 10.4 BART Control Determination Process. — Further clarification of the applicability of Appendix Y is recommended in the draft report. Please replace the last sentence on page 222 with the following: "EPA requires each state to follow Appendix Y guidelines for large electric utility generating facilities (EGU's) with capacities of 750 MW's (megawatts) or greater. EPA does not require states to use the guidelines for other sources. Nonetheless IDEQ followed the Appendix Y guidelines for Idaho BART sources, even though the guidelines are not designed for industrial sources."

For example, and as previously discussed with IDEQ, Appendix Y guidelines are not appropriate for grower-owned sugar beet processing facilities with small industrial boilers. Fuel usage rates and emissions from EGU's are orders of magnitude greater than small industrial boilers. Most importantly, significant capital expenditures for EGU's can be passed on to customers through rate increases approved by public utility commissions.

Beet sugar production economics are completely different than EGU's. As a result, these guidelines and specifically Appendix Y cost of compliance recommendations are not appropriate for small industrial boilers at any sugar beet processing facility.

Response:

States are required to use Appendix Y for EGU's and encouraged by EPA to use it for other sources. During negotiated rule making which TASCO participated in was decided to not include Appendix Y in the Idaho's Regional Haze Rule but instead follow it as "guidance" which is what the state has done.

TASCO Comment 25:

Pg. 223 Section 10.5.1 TASCO NO Controls. The cost of the 2006 steam pulp dryer project was $20.1 million. Please add to the report. Also, the second sentence is inaccurate and should be changed as follows: "Pulp drying typically occurs during the fall and winter months. Predicted modeling results suggest that the 20% worst days at Class I Areas are 100 miles upwind of the TASCO facility occur during the winter months."

Response:

Since the costs associated with the steam pulp dryers occurred before the BART process, the costs can not be included as part of the incremental cost increases. During air stagnation periods the Nampa TASCO facility is actually upwind of Eagle Cap Wilderness and Hells Canyon. No change to the language is necessary.

TASCO Comment 26:

Pg. 224 Section 10.5 TASCO BART Determination. Section 10.5 is not complete and does not entirely reflect TASCO/IDEQ discussions and correspondence since TASCO's original BART determination was submitted on November 20, 2007 and updated on February 6, 2009. TASCO's affordability analysis (incorrectly referenced as financial hardship in the draft regional haze plan) is only one of many of the components for a BART determination. TASCO's primary concern is that IDEQ mandated BART controls for the Riley boiler will not result in any "degree of improvement and visibility which may reasonably be anticipated" or measurable visibility improvements at any Class I area. TASCO has continually questioned CALPUFF modeling results for predicted impacts at Class I Areas over 100 miles upwind of the TASCO Nampa facility (Hells Canyon, Eagle Cap and Strawberry Mountain Wilderness Areas). TASCO has expressed concern about the agency's reliance upon conservative dispersion modeling as the sole basis for its BART applicability determination for this relatively small industrial source.

TASCO's concerns are well founded based upon past experience with inaccurate air dispersion modeling relied upon by IDEQ that led to a significant capital expenditure at TASCO's Nampa facility. In support of the Treasure Valley PM10 Maintenance Plan published in 2002, DEQ relied upon PM10 modeling analyses for the Nampa facility which over predicted ambient PM_{10} concentrations attributable to the plant. DEQ modeled a predicted value of 354 fag/m^3 then added an estimated background concentration of 90pg/m^3 for an estimated impact of 444 pg/m^3 from the Nampa facility. This value was above the applicable National Ambient Air Quality Standard of 150 pg/m^3 and DEQ required to TASCO to reduce emissions at a significant cost. During the interim period when the coal-fired rotary drum pulp dryers were operating, (2004 and 2005) actual PM_10 concentrations measured by a DEQ approved monitor located at the Nampa facility fence line averaged only 22 pg/m^3- twenty times less than the value predicted by modeling — and proving the model to be grossly inaccurate. Notably, monitored pg/m^3 concentrations did not materially change after the installation of the pulp steam dryer and shutdown of the rotary pulp drum dryers.

Response:

DEQ used CALPUFF (EPA's recommended model for BART model) and for consistency followed a three state modeling protocol developed for Washington, Oregon and Idaho with input from EPA and Federal Land Managers. The CALPUFF modeling does show visibility improvements based upon the installation of BART controls.

The plan was changed to reflect TASCO's affordability analysis. See section 10.5.

TASCO Comment 27:

In addition, on numerous occasions TASCO provided to IDEQ, several BART alternatives which result in greater overall emissions reductions than IDEQ' s Riley boiler BART determination. In addition to the pulp steam dryer project discussed below, TASCO has also requested that IDEQ consider as an additional BART alternative emissions reductions associated with the 2005 termination of sugar beet processing at the Nyssa facility. The termination of these activities at the Nyssa facility provides significant emissions reductions and additional air quality benefits because the facility is approximately 27 miles closer to the Eagle Cap, Hells Canyon and Strawberry Mountain Wilderness areas where the CALPUFF model predicted the highest impacts. States can approve alternative BART control measures in accordance with 40 CFR 51.308(e) requirements. TASCO's proposed BART alternative of the combination of the shutdown of the Nampa pulp dryers along with the termination of beet processing at the Nyssa facility provides emissions reduction greater than IDEQ's determination for the Riley. These alternatives reduce PM10, SO2 and NO_x emissions by over 140%. A detailed discussion of these alternatives was submitted to IDEQ on November 18, 2009 (Supplemental Information — Riley BART Determination). It remains unclear why IDEQ rejected consideration of these emission reductions.

Supporting documentation for additional concerns raised by TASCO regarding IDEQ's BART determination for the Riley boiler are detailed in several written submittals to IDEQ. TASCO's most recent comments to IDEQ were submitted on May 19, 2010 as part of TASCO's review of the draft Tier II BART Operating Permit for the Riley boiler.

Section 10 of the draft plan further omits discussion of obligations imposed by Idaho's rules for development of a regional haze plan. The rules adopted at IDAPA 58.01.01.665-668 afford IDEQ substantial discretion in development of a reasonable long-term strategy for regional haze. These rules require the Department to consider multiple factors and to coordinate with neighboring states to develop a reasonable plan. The draft permit issued by IDEQ to TASCO requires approximately $18,000,000 in emissions controls for the TASCO Riley Boiler that may not achieve any improvement to visibility, according to IDEQ's evaluation. The evaluation omitted consideration and interstate coordination prescribed by the regional haze rules and is unreasonable.

First, IDEQ observes that the highest impacts from TASCO's Nampa boiler are predicted to occur at Eagle Cap Wilderness (high impacts are also predicted to occur at the Strawberry Mountain and Hells Canyon Wilderness Areas) in Oregon. IDEQ states that "although Eagle Cap Wilderness is outside of Idaho, the regional haze rule requires that state to address impacts in other states." This is not a completely accurate description of the regional haze rule requirement for interstate impacts. Under IDAPA 58.01.01.677, the Department is to develop a long-term strategy that addresses regional haze within the state and for areas outside the state that may be affected by emissions from the state. Specific requirements for development of the long-term strategy include consideration of

the following factors, at a minimum: emissions reductions due to ongoing air pollution programs; source retirement replacement schedules; enforceability of emissions limitations and control measures. (IDAPA 58.01.01.667. 03(c)). Specific provisions for development of the long-term strategy also require interstate coordination with other states to develop coordinated emission management strategies "where Idaho has emissions that are reasonable anticipated to contribute to visibility impairment" in an area located in another state.

Response:

As taken from a letter to Joe Huff (Vice President of Operations and Chief Operations Officer of Amalgamated Sugar) from Martin Bauer (DEQ Administrator of Air Quality Division) on April 1, 2010,

> *"While DEQ agrees with TASCO that the emission reductions from the Nyssa plan improved visibility in several Class I areas, Idaho cannot take credit for these reductions. These reductions have already been credited in the Oregon Regional Haze State Implementation Plan, and Idaho has no mechanism to trade emissions or procedures to enforce control on Oregon facilities as would be required under 40CFR51.308(e)(2)(iii). Idaho would be required to provide a state enforceable condition or permit in our State Implementation Plan to limit the Nyssa, Oregon facility, which Idaho doesn't have the jurisdiction to do."*

During the negotiated rule making for the IDAPA Regional Haze Rules referenced above, DEQ promoted the idea of joining several other WRAP states in a back stop trading program instead of BART. The trading program would have satisfied both Idaho and Federal Regional Haze requirements by setting emission reduction goals for each state and the trading program would only be initiated if the state emission reduction goals were not met. TASCO along with the other facilities involved in the negotiated rule making process decided they didn't want to participate in the program because of the extensive monitoring and reporting requirements.

Also see response to TASCO comment 30 concerning interstate coordination.

TASCO Comment 29:

IDEQ failed to conform to the requirements in developing the BART portion of the long-term strategy set forth in Section 10 of the Regional Haze Plan. While IDEQ acknowledges that "the shutdown of the old pulp dryers has provided more visibility improvement than low NO_X burners (LNB) would and nearly the improvement that would be expected from LNB with over-fire-air (LNB w/OFA)," IDEQ nevertheless imposed more emissions controls. These source retirement commitments, now reflected in the Tier II permit issued to TASCO on September 7, 2010 are sufficient

NO_X control, according to IDEQ's own evaluation. Consideration of the permanent shutdown is consistent with the factors presented in IDAPA 58.01.01.677.03(c).

Response:

TASCO provided a BART determination to DEQ which claimed selective catalytic reduction (SCR) was a "technically feasible" option for TASCO.

DEQ has given credit to TASCO if they wish to take it and install low NOx burners with over-fire-air LNB w/OFA) or they may install SCR.

TASCO Comment 30:

IDEQ further failed to conform to the requirements in developing the BART portion of the long-term strategy set forth in Section 10 of the Regional Haze Plan by omitting coordination with the State of Oregon. The "best" BART recommendation presented by IDEQ in Section 10.5 appears to ignore the need to coordinate with Oregon despite IDEQ's emphasis on predicted impacts in Eagle Cap, Strawberry Mountain and Hells Canyon Wilderness areas located in Oregon. IDEQ is required to consult and coordinate on development of an emissions management strategy under IDAPA 58.01.01.667.04. Specifically, the termination of sugar beet processing activities at the TASCO factory in Nyssa, Oregon was overlooked by both Oregon and Idaho in development of a long-term strategy and the impacts of these significant emissions reductions were excluded from any coordinated emissions management strategy, as required by IDAPA.

Response:

DEQ has been heavily involved in consultation with Oregon and other states through the WRAP process. See Appendix B for a complete list of meetings and participants.

Also see response to TACO comment 28 concerning emission credit for the shut-down of the Nyssa facility.

TASCO Comment 31:

Under IDAPA 58.01.01.668.02(c)(v) IDEQ is required to consider the degree of improvement in visibility which may reasonably be anticipated to result from the use of BART imposed on TASCO. TASCO urges IDEQ to reconsider the degree of improvement that may reasonably be anticipated to result from the shutdown of pulp dryers in Nampa and the termination of sugar beet processing at the factory in Nyssa, and conclude that these measures are sufficient to achieve the BART portion of a long-term strategy for TASCO. Given IDEQ's statements regarding NO„ and SO2 emissions sources from Idaho, this approach can be supported in the final plan.

Response:

See response to comments 28 and 29.

TASCO comment 32

224 Section 10.5.1 TASCO NO_x Controls. The first sentence of the second paragraph regarding the economics of shutting down the old pulp dryers is misleading and inaccurate. The capital cost of the pulp steam dryer was $20.1 million. As noted above, this significant environmental improvement project was required because of inaccurate air dispersion modeling as part of IDEQ's 2002 Treasure Valley PM_{10} Maintenance Plan. Even though there are some operating cost savings due to reduced fuel usage rates, these savings only pay for the lease payment for the $20.1 million capital expenditure for the pulp steam dryer.

As discussed above, TASCO has previously requested that IDEQ consider emissions reductions associated with the 2005 shutdown of the Nyssa facility. Equivalent emission control costs for the Riley boiler associated with the Nyssa facility emissions reductions have not been quantified. However, based on a rough estimate the equivalent capital costs for these SO2 and NO_x emissions reductions are well above $30 million (based on dry flue gas desulfurization and selective catalytic reduction emissions controls).

Response:

See response comments 28 and 29.

TASCO comment 33

Pg. 231 Section 10.8 Visibility Improvements. Visibility improvements in Tables 10.14 for P4 Production and Table 10.15 for the TASCO Riley boiler are expressed utilizing different formats. Predicted visibility improvements in each table should be expressed using similar methodologies. Attachment C provides a summary of P4 Production facility and TASCO Riley boiler predicted modeling results expressed as: 1) Improvement in Highest Delta-Deciview Values and Reduction in Days 0.5 DV for Individual and 3-Year Improvement and 2) Delta-Deciview Value larger than 0.5 from one-year period.

The tables need to be included for each facility. Where necessary, please add these tables to the report. For the P4 Production facility, predicted CALPUFF modeling results in Attachment C were copied from IDEQ's April 2010 and June 2010 Draft Regional Haze Plans. It's unclear why the data changed in each of IDEQ's drafts. The most representative data needs to be included in the final plan.

Response:

As previously mentioned, P4 installed "Best" of BART so there is no need to include the visibility improvements at Class I areas with 300 km based on several technology scenarios. A different format was needed to portray the reductions from the pulp dryers.