

Draft Meeting Minutes

WRAP Stationary Source Joint Forum
February 18-19, 2004 @ Denver, Colorado

The Stationary Source Joint Forum convened at the Brown Palace Hotel in Denver, Colorado at 1:00 PM February 18th and met through 12:00 Noon on February 19th, 2004. The Meeting Agenda, PowerPoint Presentations and a list of Attendees are posted on the WRAP website.

Meeting Summary

This was the initial SSJF meeting, and was intended to organize SSJF leadership and tasks. The question of BART implementation and alternatives within the Regional Haze Rule (RHR) was one of the major issues reviewed during this meeting. There also were presentations by EPA OAR representatives on the status of federal RH legislation, and the Interstate Air Quality Rule (IAQR).

To begin the meeting, Pat Cummins gave an overview of the WRAP's history, composition and approach to problem solving. He described the tasks faced by the SSJF under the RHR, and introduced the Interstate Air Quality Rule (IAQR) as a possible vehicle for carrying forward a portion of the WRAP control responsibility.

Lee Alter then gave a presentation on BART, describing the definition and the application of BART, as well as the required considerations for that application. He described a \$100K RFP that the WRAP has issued to obtain contractor assistance in identifying BART-eligible sources for the states & tribes in the region.

Joe Paise then described the status of EPA's actions on the RHR, including settlement of the American Corn Grower's suit, provisions for harmonization of PM_{2.5} and the Regional Haze SIP's, and response to suits filed over the WRAP Annex.

Tom Moore then gave an overview of the WRAP technical effort, describing the four major areas of tech effort dealing with:

- Attribution of Haze
- Emission Inventories
- Gridded Dispersion Modeling
- Ambient Monitoring

Joe Paise then described EPA's rationale in designing provisions of the IAQR, and recounted details of the current proposal for this Transport Rule. It was explained that the IAQR was designed to improve PM_{2.5} & Ozone nonattainment areas in the east, by requiring SO₂/NO_x reductions from EGU's. It was clarified that as **currently designed**, the **IAQR does not affect the west**, and was not designed to address Regional Haze questions.

Extensive discussion was directed at the type of questions that must be answered in order to determine the efficacy of extending the IAQR to the Western half of the country. The second day of the meeting was primarily devoted to SSJF discussions of the pro's and con's of seeking extension of the IAQR to the WRAP region. Pat Cummins was charged with writing up the issues raised by this discussion, and raising unanswered questions to the EPA. A SSJF workgroup was established to investigate the advisability of trying to implement control strategies under the IAQR. That group consisted of Pat Cummins, Bob Neufeld, Dean Metcalf, Bruce Polkowsky, Vickie Patton, Bruce Beynon, Greg Remer, David Steele, CV Mathai and a Pacificorp representative.

There were brief discussions of other issues including; other versions of Multi-Pollutant Legislation, revisions to the NO_x PSD Program, Mercury Legislation and New Source Review (NSR) reform. It was concluded that other Multi-Pollutant Legislation was pretty much "dead in the water, and it was not worth the Forum's effort to expend significant resources on this matter. The Environmental community is investigating whether regional trading programs might provide some sort of alternative to NO_x PSD increments for protecting nitrogen-related environmental values, but the general consensus of the group was that we need a lot more information about the details and potential ramifications before we begin trying to incorporate such nitrogen protection in our deliberations over RH NO_x control strategy. And although HG & NSR issues somewhat overlap with the SSJF mandates, it was generally felt that we already have enough on our plate and it was pointless to spend SSJF effort and resources on either of these questions.

Finally, SSJF administrative questions were addressed. Eric Massey of Arizona agreed to take over one of the Co-Chair positions for the SSJF, but there were no other volunteers identified at this meeting. It was generally concluded that it would be desirable for additional help to Chair this Forum. Other state personnel were approached to consider acceptance of a Chair position, and the Tribal Caucus will also be seeking someone from within their group to help guide the SSJF effort.

And a workgroup was formed to review the proposals and select the contractor for the WRAP BART RFP. This group will consist of Lucille Van Ommering, Steve Frey, Bruce Polkowsky, Chad Schlichtemeier and Bob Gruenig. Lee Alter will staff this effort and coordinate the review.

Meeting Details

★ Overview of the WRAP History/SSJF Activities ★

To begin the meeting, Pat Cummins gave an overview of the WRAP's history, composition and approach. He noted that the WRAP is composed of the 13 Western States (Nevada is not an official member, but participates in WRAP activities), and the Indian Tribes located in those states. He went over the WRAP consensus process for decision making within the organization.

He noted that the new SSJF is a "joint" forum, reporting to both the TOC & the IOC. He explained that the SSJF is a successor of the Market Trading Forum, and he gave an overview of the §309 Annex and the SO₂ Milestone program. He noted that the MTF Annex took a "big bite" out of the visibility impairment pollutant emissions with SO₂ control attributable to the stationary source milestones, but

now the SSJF will be looking at what additional stationary source control measures are appropriate for other pollutants, to achieve mandated reasonable progress under §308 of the Regional Haze Rule. He noted that the RHR requires that stationary sources meet Best Available Retrofit Technology (BART), or devise a program that is "Better than BART".

He noted that there are 156 Class I areas in the nation, and 117 of them ($\frac{3}{4}$) are in the WRAP region. He explained that under the §308 of the RHR, states and tribes are responsible for determining the visibility impairment on Class I areas within their borders, and also to determine what proportion of their emissions impact on Class I areas outside their borders.

He noted that the Interstate Air Quality Rule (IAQR) is a proposal to control NO_x & PM from Electric Generating Units (EGU's) for PM_{2.5} and ozone control in the eastern half of the country. But the EPA is asking for comment on addressing NO_x & PM from this utility sector with a national rule. Thus one of the SSJF's first tasks is to help formulate a WRAP position on this IAQR proposal.

★ Best Available Control Technology ★

Lee Alter then gave a presentation on BART. He began by noting that Stationary Sources represent a majority of the region's SO₂, and a significant portion (~ $\frac{1}{3}$ in 2018) of the WRAP's NO_x. Within the Stationary Source sector, there are quite a number of industries with SO₂ coming in decreasing order of magnitude from: utility EGU's, industrial boilers, copper smelting, oil refineries, oil & gas field production, gas sweetening, chemical manufacturing, mineral production facilities, and a miscellaneous category of others. NO_x comes from a similar source list, with utility EGU's still the biggest emitters. But natural gas compression enters the list as the second largest NO_x category, with about 30% of the emissions of EGU's, along with utility internal combustion engines (ICE's) adding about 5% to the total electric utility load.

He defined BART as "an **emission limitation** based on the degree of reduction achievable through the application of the best system of available continuous emission reduction for each pollutant", taking into account:

- costs or compliance
- energy and non-air environmental impacts of compliance
- any existing controls at the source
- remaining useful life of the source
- and the degree of visibility improvement which may reasonably be anticipated to result

BART sources belong to one of 26 specified source categories, with the potential to emit >250 TPY for any visibility impairing pollutant (SO₂, NO_x, PM, VOC & NH₃). BART-eligible sources must have been "in existence" on August 7, 1977, and "not in operation" before August 7, 1962.

Lee Alter asserted that if a source is major for one pollutant, then BART must be looked at for all pollutants emitted by that source. There was considerable discussion as to whether this was a proper interpretation, and what the implications are of such an interpretation. It was pointed out that if a source were major for NO_x for example, and they only had a few tons of some other pollutant, then applying the

BART factors like costs of compliance might eliminate controls from consideration on those other pollutants.

Mr. Alter also pointed out that the RHR provides alternatives to BART so long as that alternative program includes all BART-eligible sources. But the key provision to using an *alternative control strategy* is that it and *must provide "greater reasonable progress" than the application of source by source BART*. There is also an option to address "geographic enhancement" for possible "hot spots" under a regional control process.

To help address this problem, the WRAP has issued a \$100K RFP to provide direct assistance to states/tribes to identify BART-eligible sources. Proposals are due this date (February 18, 2004), and will be reviewed by a team from this SSJF.

★ EPA RHR Status ★

Joe Paise explained that the EPA is in a settlement agreement which calls for a draft of the revised RHR BART provisions by April 15, 2004, with comments analyzed and BART rules to be finalized a year later, by April 15, 2005.

Under the 1999 TEA-21 legislation Congress wanted the PM_{2.5} and the Regional Haze SIP's to be harmonized, but the legislation didn't take into account the differences resulting from timing between attainment and nonattainment states. This has been corrected, and now state proposals for PM_{2.5} designations are due in February '04, with the EPA proposing final designations by December 31, 2004. The SIP's are then due 3 years hence (December 31, 2007). And the legislation now specifically requires RHR §308 SIP's on that same December 31, 2007.

He noted that the EPA has been sued over the WRAP Annex, and they have yet to address those comments received on the WRAP mobile source provisions.

In the Corn Grower's case, Mr. Paise explained that the biggest issue (which resulted in the court vacature) was BART. EPA had originally thought that the individualized approach would not be appropriate for determining regional impact, thus they came out with a provision for regional BART analysis. But the court was concerned about sources spending money for controls that may or may not have any real effect on visibility impairment. So as the criteria for determining the benefit of BART controls, the EPA is now looking to use the Cal-Puff model to determine if an individual source has greater than 0.5 dV impact above natural conditions.

EPA was also supposed to provide concrete BART guidelines (Mr. Paise noted that they had proposed these guidelines in 2001, but in the middle of analyzing the comments, they got sidetracked by the Corn Grower's decision). The new guideline will look very similar to the '01 proposal, with the exception of the modeling section. The proposals will include 95% control (0.1 to 0.15 lb/MM Btu) for SO₂, and 0.2 lb/MM Btu NO_x for >750 MW units. There will be similar guidelines for the >250 MW units.

The biggest thing not vacated by the court was the EPA's approach to "Reasonable Progress", but the court did suggest that the EPA look at the issues in the Sierra Club challenge. EPA has done that, and Mr. Paise said that they do not intend to propose any changes to this provision.

★ WRAP Technical Overview ★

Tom Moore then gave presentation on the overview of the WRAP technical effort. The four major areas of effort are:

- Attribution of Haze
- Emission Inventories
- Gridded Dispersion Modeling
- Ambient Monitoring

✦ Attribution of Haze ✦

This an attempt to integrate information from modeling, monitoring & emission inventories into a clear concise definition of the geographic and source type contributions of visibility impairment to any particular Class I areas.

✦ Emission Inventories ✦

The WRAP is looking to establish 2002 baseline EI's, including Canada and Mexico. To hold this information, the WRAP is designing a database and reporting system called the Emission Data Management System (EDMS).

✦ Gridded Dispersion Modeling ✦

The Regional Modeling Center was asked to develop an attribution mechanism, and they developed a methodology for "tagging" species in the model input emissions. We use transfer & loss mechanisms to track the mass balance over dispersion. This technique will give a state by state impact from any of the model species.

✦ Ambient Monitoring ✦

The Monitoring Forum is undertaking a "Causes of Haze" study to evaluate all information available from the IMPROVE meteorological and monitoring sites. This study will include such techniques as chemical and back-trajectory analyses. They are currently analyzing 1997-2002 data, and this project will be on-going to look at future monitoring data as it becomes available. The Causes of Haze results will be segregated by compound of interest (ie/ sulfate) and by geographic area.

★ Interstate Air Quality Rule ★

Joe Paise then took up the issue of the EPA IAQR (aka: Transport Rule) which as currently proposed, does not affect the west, and is not designed to address Regional Haze. It is designed to improve PM_{2.5} & Ozone nonattainment areas in the east, by requiring SO₂/NO_x reductions from EGU's. Historically, EPA hammered on VOC sources for ozone strategy, but with further understanding, atmospheric science started to focus more on interstate transport of NO_x. He showed a graph that showed regional transport playing a dominant role in impact in most eastern cities. Also, the Clean Air Act contains provisions for

States & EPA to address interstate pollution. The EPA is also working on ozone and PM by implementing national fuel and engine standards.

He next showed maps of ozone and PM_{2.5} nonattainment areas. Other than southern California, there are no PM_{2.5} nonattainment areas west of St. Louis (except for Libby, Montana). And there are one or two ozone problems with some of the larger western cities.

Joe indicated that the proposed *IAQR* sets a *geographic scope* based on SO₂ and NO_x air quality impacts in states with 8-hour ozone and PM_{2.5} nonattainment (*not covered* under the current IAQR proposal are the *13 continental WRAP region states, plus Oklahoma & Nebraska*). The IAQR sets emission reduction requirements for each states, based on capping EGU emissions and provides for an emissions trading program to supplement the Acid Rain program. Proposed SO₂ caps are 3.0 MM TPY in 2010 and 2.7 MM TPY in 2015. For NO_x the proposed caps are 1.6 MM TPY in 2010, down to 1.3 MM TPY in 2015.

The schedule has EPA holding public hearing in Chicago, Philadelphia and RTP, NC in February, while the comment period closes March 30, 2004. A supplemental notice on IAQR will go out in Spring '04, and the rule would be finalized in December 2004.

★ WRAP Discussions: Extension of IAQR to the WEST?? ★

The EPA has indicated that if EGU's meet the provisions of the IAQR, that compliance will also satisfy the BART requirements for these utilities and satisfy the "portion" of Reasonable Progress attributable to EGU's.

Ruben Plantico asked what the timeframe would be, if the WRAP decided to try to implement something within the IAQR. The EPA indicated that if something were proposed, that would have to be included in the April/May Supplemental Proposal.

Lee Gribovicz asked about western emission caps, noting that determining an acceptable level seems like a very daunting task to undertake in short order. Sarah Dunham indicated that the Clear Skies bills would be the marker for a beginning point, but one problem is that some of the IAQR states were included in the Western "Zone 2" of the Clear Skies proposals, thus some adjustment of the numbers would be required. It was noted that NO_x was technology driven, while the WRAP milestones provide some target for SO₂.

It was also pointed out that if a trading program included western sources, there may be lower actual emission reductions in the east because of selling and transfer of already earned western allowances. The reverse was also true, in that there are probably more cost effective reductions in the east, such that WRAP actual emissions would show no decrease. To address that, the Clear Skies bill included a "nested" region where a certain sub-cap had to be met in the WRAP region (270K Tons SO₂ for WRAP utilities).

Another problem was brought up in that the purpose of the Eastern IAQR was entirely different (ozone & PM_{2.5} NAAQS's) than the problems we seek to solve in the west (visibility).

There was discussion on whether the WRAP should investigate entering into the IAQR, & a list of issues was developed that a workgroup will have to look at:

- non-utility sources?
- satisfy BART?
- cap levels?
- allowances (tribal set aside)
- New Source Review (regulations, PSD?)
- timing (Spring '04 vs longer allowable timeframe)
- different issues (nonattainment in the east vs. RH in the west)
- EPA modeling

★ Multi-Pollutant Legislation ★

Pat Cummins was on the a Federal discussion panel (along w/ David Steel, Paul Seby, Frank Prager & others) regarding Multi-Pollutant Legislation. It was his impression that currently, there was no real forward movement on any multi-pollutant legislation. Sarah Dunham agreed that there wasn't much happening in EPA headquarters regarding this type of EGU emission control strategy. The question was raised as to whether the SSJF ought to be looking at multi-pollutant legislation, and the general feeling was that the Forum ought to track activity, but not spend excessive effort on working with this issue.

★ Revisions to NO_x PSD Program ★

EPA promulgated an annual PSD NO_x increment in the 1980's, and Environmental Defense filled a request for remand at that time. This suit was left hanging, and now ED is requesting that the EPA to look at a whole suite of nitrogen impacts through the west. The question was raised of whether there is a nexus where the WRAP RH effort could converge with this action. Vicki Patton explained that ED was investigating whether some regional trading program might provide some sort of alternative to PSD increments for protecting these nitrogen-related environmental values.

Pat Cummins summarized the issue by saying that since we have to develop a NO_x strategy for RH, the question is raised as to whether we need to be including the protection of other nitrogen in these strategies? The general consensus of the group was that we need a lot more information about the details and potential ramifications of such a proposal.

★ Discussions of SSJF Direction ★

Bob Neufeld began the discussion and expressed the opinion that it would be good to try to combine issues such as NSR, PSD, Regional Haze and etc. The question was raised as to whether this should be a "national" approach vs. a localized regional approach. A national approach would be less flexible, and it was suggested that we'll certainly get Clear Skies caps if we go that way. A regional approach would allow the WRAP to define sources and emission levels more specifically for our particular circumstances. But Bob noted that this IAQR was "the only train leaving the station", and it would be a good vehicle for moving forward.

On the other hand, Bob Palzer noted that although he wanted the cheapest controls possible, his sponsor, the Sierra Club, wanted to assure that there were real reductions in the west. And he felt that a national program would not necessarily get us there.

Bruce Polkowsky, noted that if we followed the IAQR, we would address the largest source sector in the EGU's, and take a large chunk of NO_x off the table. But we would have to work intimately with the EPA to assure that controls were done well. Lee Gribovicz noted that if we addressed EGU's under the IAQR, that would effectively take that sector off the table for any future control discussions. Thus there would likely be more pressure on the other sectors to achieve the necessary goals. The point was made then, that if we choose to pursue the IAQR, the controls selected under that program must be complete and very well designed.

Pat Cummins felt that there might be an opportunity to have some sort of hybrid of control strategies. With a Western and Eastern sub-caps, it might provide acceptable sulfur control, but he was worried that NO_x wouldn't be as well addressed.

Bob Habeck noted that the only tool that we've explored is a "cap & trade program", and he wondered what other tools might be used to achieve the RH goals. Because of the complexity and work that goes into a trading program, he wanted the states to have the option of simply controlling emissions on a source by source level, if a particular air shed needed just a fixed number of reductions to protect the impacted Class I area.

Bob Neufeld noted that a trading program would not necessarily proscribe local agency control. He wondered whether in fact, the source might put up less resistance, because they would be generating allocation credits that they may put on a market to sell.

Vicki Patton noted that the IAQR would only provide a "budget" for the states, and the flexibility of controlling individual sources would still be a state prerogative under such a program.

Pat Cummins felt that the alternative to some "flavor" of market trading program was clear. He noted that the States have to meet BART, if they don't go through the market program. The GCVTC conclusion was that a market approach was the most effective and efficient strategy for SO₂. But it appears that we need to ask that question again, as to whether a market approach still is the best option for §308 implementation. But since some states were expressing some skepticism, perhaps the WRAP needs to be prepared to support both approaches.

Bob Neufeld noted that individual BART results in large uncertainties for industry in terms of control requirements. But since there is some concern over market programs, he acknowledged that we needed much more information about the effects of the IAQR. And he proposed that we certainly need to explore that option in more detail, especially with regard to the capability to incorporate non-utility sources. Steve Frey noted that a way to accomplish this non-utility incorporation is for EPA to provide some sort of "opt in" provision for the other industry sources.

The point was made that the EPA's modeling "zeroed out" all emissions, both from EGU's and from other industry, in determining the impact of the rule. But because EGU's dominated the emission

inventories in eastern states, they chose to focus on that source category in the rule proposal. But it is clear that EGU's are not as big a piece of the pie in the west, especially for NO_x.

Pat Cummins committed to writing up the issues raised by this discussion. He felt that a lot of the questions must be directed to EPA, as we are asking quite a lot from them. He expressed the opinion that if we went with the IAQR, the EPA would find that the WRAP is "high maintenance".

A workgroup was established to work on this issue, consisting of Pat Cummins, Bob Neufeld, Dean Metcalf, Bruce Polkowsky, Vicki Patton, Bruce Beynon, Greg Remer, David Steele, CV Mathai and a Pacificorp representative.

★ HG & NSR ★

Although these issues somewhat overlap with the SSJF mandates, it was generally felt that we already have enough on our plate. Therefore the group's consensus was that we do not spend SSJF effort and resources on either of these questions.

★ SSJF Administrative Issues ★

❖ Co-Chairs ❖

Eric Massey of Arizona volunteered to take one of the co-chair positions. Dave Ouimette of Colorado and Mary Hilbert of New Mexico both were petitioned, and said that they would think about taking another chair. Pat Cummins noted that the IOC and TOC had suggested that the Tribal Caucus should be given the opportunity to take a Co-Chair position, but Bob Gruenig hadn't been able to come up with a candidate.

❖ BART RFP ❖

Frank Prager asked why we were moving forward with this project, as industry had been intensively grilled over the past decade. Lee Gribovicz explained that the states/tribes had mostly asked for SO₂ information, and they were concerned about finding BART-eligible sources for PM & NO_x. Pat explained that the contract was for \$100K, and Lee Alter noted that we received five proposals in response to the RFP. A workgroup was formed to review the proposals and select the contractor, consisting of Lucille Van Ommering, Steve Frey, Bruce Polkowsky, Chad Schlichtemeier and Bob Gruenig. Lee Alter will staff this effort and coordinate the review.