



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



IN REPLY REFER TO:

January 23, 2009

N3615 (2350)

Ms. Barbara Kwetz  
Director  
Planning and Evaluation Division  
Bureau of Waste Prevention  
Department of Environmental Protection  
One Winter Street  
Boston, Massachusetts 02108

Dear Ms. Kwetz:

On November 25, 2008, the Commonwealth of Massachusetts submitted a draft implementation plan describing your proposal to improve air quality regional haze impacts at mandatory Class I areas across your region. We appreciate the opportunity to work closely with the State through the initial evaluation, development, and, now, subsequent review of this plan. Cooperative efforts such as these ensure that, together, we will continue to make progress toward the Clean Air Act's goal of natural visibility conditions at all of our most pristine National Parks and Wilderness Areas for future generations.

This letter acknowledges that the U.S. Department of the Interior, U.S. Fish and Wildlife Service (FWS), and National Park Service (NPS) have received and conducted a substantive review of your proposed 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 Manager 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, please contact Holly Salazer (NPS) or Tim Allen (FWS) at (814) 865-3100 and (303) 914-3802, respectfully.

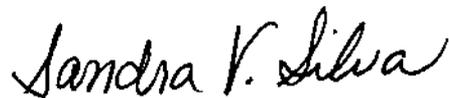
Again, we appreciate the opportunity to work closely with the Commonwealth of Massachusetts and compliment you on your hard work and dedication to significant improvement in our nation's air quality values and visibility.

Sincerely,



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

Sincerely,



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

Enclosure

cc:

Anne McWilliams  
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## **National Park Service and U.S. Fish and Wildlife Service Comments Regarding Massachusetts Draft Regional Haze Rule State Implementation Plan**

On November 25, 2008, the Commonwealth of Massachusetts 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 the U.S. Fish and Wildlife Service (FWS). The air program staff of the NPS and FWS have conducted a substantive review of the Massachusetts draft plan, and have provided the comments listed below. We look forward to the Massachusetts Department of Environmental Protection (MDEP) response as per section 40 CFR 51.308(i)(3). For further information regarding these comments, please contact Holly Salazer (NPS) at (814) 865-3100 or Tim Allen (FWS) at (303) 914-3802.

### **Overall Comment**

The MDEP has submitted a well-written draft Regional Haze SIP. The draft SIP addresses several important issue areas as well as acknowledging the many uncertainties faced by MANE-VU in regards to emission inventories, modeling assumptions and modeling results. We have provided extensive comment regarding Best Available Retrofit Technology (BART) analysis and determinations below and appreciate the willingness of MDEP to further consult with us on outstanding issues. We appreciate the opportunity to review and provide comments and all the hard work that went into the State's draft plan.

The draft SIP includes an Executive Summary, which is an effective tool for summarizing the actions intended to be taken by MDEP. However, we believe the Summary falls short in laying the foundation for a draft SIP. We believe the remand of the Clean Air Interstate Rule (CAIR) needs to be dealt with more directly. As currently written, the CAIR remand is acknowledged as a footnote in the Executive Summary. We recommend MDEP include a discussion of the implications of the remand both in the Executive Summary as well as in Section 10, Long Term Strategy.

As stated throughout the regional haze planning process, the NPS and FWS have concerns regarding how MANE-VU developed emission inventories and modeling runs. We appreciate MDEP acknowledging these inconsistencies in Sections 2 and 6, including how different Regional Planning Organizations (RPOs) developed individual inventories and explaining why MANE-VU chose the inventory that they did. The draft SIP also acknowledges the uncertainties associated with the MANE-VU final modeling runs, which were based on CAIR and the MANE-VU "Ask" control assumptions. We feel it is important to note that these controls, most notably those associated with the "Ask," are presently not realized, and all MANE-VU states may not commit to such controls in their implementation plans. We believe it will be critical for MDEP and other MANE-VU states to include updated emission projections and modeling runs that deal with these uncertainties in the 2013 mid-term review.

Finally, we are concerned that there is a significant lack of BART analysis and determinations. We have provided both general and specific comments regarding BART below. Without the referenced BART information, we can not fully evaluate the completeness of the draft SIP. As such, we look forward to reviewing information once it is provided by the State. We also request further consultation with MDEP regarding the outstanding BART determinations of the Mystic and Wheelabrator sources. We request this consultation prior to any submission to EPA to avoid any late term substantive issues.

### **Specific Comments**

The remaining comments, below, are organized according to the priorities that we presented in our August 1, 2006, letter, which outlined the Regional Haze concepts that are of importance to the NPS and FWS. Many of the following comments will also provide direction towards building the narrative of the draft SIP to satisfy the documentation and content area deficiencies noted above.

### **Baseline, Natural Condition, and Uniform Rate**

Page 18: Even though Massachusetts (MA) is not a Class I state, the draft SIP effectively describes the methodology used to determine baseline and natural conditions. Uniform Rate of Progress is not addressed considering it is not a Class I state.

### **Emission Inventories**

Page 17: We appreciate the efforts by MDEP to detail the differing emission inventory assumptions made by MANE-VU, MWRPO and VISTAS. We found Section 2 to be a good and effective approach on describing the uncertainties associated with final modeling results between the different RPOs.

Page 38: In Section 6, MDEP does an effective job outlining the development and production of emission inventories for all sources. The draft SIP provides summary information by pollutant for each source for 2002 and 2018 for all of MANE-VU. Also included is summary information for the State alone, by pollutant by source type for 2002 and 2018. The conclusion is that MA will reduce total regional haze pollutants by 31% compared to MANE-VU's overall reduction of 29%.

We recommend including the appendices in which the individual Pechan Technical documents are included.

### **Area of Influence**

Page 10-11, Table 2: Please explain information related to the Canadian provinces. Currently, no data or context are provided for the importance (or lack thereof) of international emission sources.

Page 52: The draft SIP only includes Shenandoah National Park (SHEN) and Brigantine Wilderness Area (BRIG) as the two Class I areas the State does **not** impact, even though figures (e.g., Figure 26) are included for Dolly Sods. Therefore, we recommend including Dolly Sods as a 3<sup>rd</sup> Class I area that MA does not contribute to (in addition to SHEN and BRIG). A follow-up comment is that the draft SIP needs to be consistent in naming the Class I areas it impacts. For example, on one occasion the draft SIP includes all Class I areas in MANE-VU, and then in Section 7, BRIG is identified as not being impacted by MA emissions.

Page 59: Organic Carbon (OC) is identified as the second largest contributor to Regional Haze after sulfate. There is no major commitment made to address OC, other than future regulations dealing with fine particles and visibility impairment may focus on OC (particularly those focused on summertime ozone problems in urban centers). We agree with MDEP that further work is needed in the Northeast on OC speciation for the development of better emission inventories for visibility planning purposes.

Page 61: Recommend including explanation why MA has a slight uptick in NO<sub>x</sub> emissions between 1996 and 1999. Same comment for figure 32 & 33, why the uptick in PM<sub>10</sub> and PM<sub>2.5</sub> emissions between 1996 and 1999 for MA.

Page 65: Section 7 includes discussion on crustal material and the potential importance to MANE-VU inventories and that more understanding is needed of its importance. We agree that control measures targeted at crustal material may prove beneficial.

### **Reasonable Progress Goals and Long Term Strategy**

Page 97: The draft SIP states MA consulted with New Jersey even though earlier, the draft SIP states the Contribution Assessment did not indicate an impact at BRIG (see page 52 comment above). See also page 98 under Long Term Strategy, again the draft SIP does not include BRIG as impacted by MA emissions.

Page 101: We appreciate that MDEP acknowledges the uncertainties in the Beyond On The Way (BOTW) inventory due to lack of enforceability and commits to evaluating whether such control measures are reasonable to adopt by 2018 and will make such determination in the 2013 mid-review report.

Page 102: When discussing CAIR in terms of reduction programs used for modeling, please include update of CAIR status in terms of its actual implementation and how that will affect MDEP reporting in 2013.

Page 102 footnote: Need to update with CAIR information.

Page 110: In regards to the MANE-VU "Ask," the draft SIP states "... this long-term strategy to reduce and prevent regional haze will allow each state up to 10 years to pursue adoption and implementation of reasonable and cost-effective NO<sub>x</sub> and SO<sub>2</sub> control measures as appropriate and necessary." We strongly recommend MDEP include a

statement that the State will provide progress reports on each of the “Ask” items in the 2013 review.

Page 118: Editorial comment, 3<sup>rd</sup> paragraph, 3<sup>rd</sup> sentence: “...may *be* subject to...”

In terms of the MANE-VU “Ask,” MDEP does include pending regulations to deal with outdoor wood-fired boilers (see page 129, Section 10.5.3 Regulation of Outdoor Hydronic Heaters). We recommend MDEP update this section, since regulations should be on the books at this time (draft SIP states by September 2008), and include the State’s intention to submit these regulations as a part of the regional haze SIP.

## **Fire**

Page 128: MDEP commits to investigating measures to mitigate impact from smoke from open burning associated with agriculture and forestry management. MDEP commits to reviewing existing State regulations associated with open burning in the context of regional haze. Prescribed burning is currently allowed under law with approval by MDEP.

## **Regional Consistency**

This draft SIP is similar to other MANE-VU draft SIPs reviewed to this point. Uncertainties associated with emission inventories and modeling assumptions are acknowledged. The CAIR remand is minimally addressed. The BART eligible sources are identified. BART analysis and determinations are included where available (please see more detailed comments regarding BART below). It is clear that MDEP consulted with the Class I states in the region and supports the reasonable progress goals of each Class I state.

## **Verification and Contingencies**

Page 22: In Section 4.0, MDEP did a good job at outlining current monitoring in MA and in Class I areas affected by MA emissions. The State is not required to have a monitoring plan, but we suggest to MDEP to include commitment to continue the existing monitoring and to work with the FLMs and EPA in the future to keep the monitoring program fully functional.

We also recommend in order to satisfy verification requirements of the regional haze rule, that MDEP commit to using the 2013 review to look at where the State is in terms of emission projections. If MA is not meeting projections, a SIP revision would be triggered allowing the FLM and public to review how the State plans on meeting projections.

We believe it is critical for each State agency, as a whole, to commit to the goal of improving visibility. This includes the need to link all State programs together, such as regional haze planning and other State permitting programs, such as New Source Review (NSR) and Prevention of Significant Deterioration (PSD). It is important to consider

projected emission growth under NSR and PSD and how that may impact regional haze and reasonable progress goals.

### **Coordination and Consultation**

Page 18: Section 2 provides good overview of how MANE-VU functioned and sets up a framework for working with FLMs on future reports and reviews. We recommend MDEP also include a list of items on which the State will consult with FLMs between now and 2013.

### **Best Available Retrofit Technology (BART)**

Comments on the BART portion of the Regional Haze SIP relate to a few general concepts.

First, the MDEP heavy reliance on Regulation 310 CMR 7.29(5)(a) as a de facto standard for BART seems to have resulted in less adherence to the full five-factor BART analysis presented in the EPA BART Guidelines.<sup>1</sup>

Second, MDEP has not demonstrated how the SO<sub>2</sub> and NO<sub>x</sub> emission limits in Regulation 310 CMR 7.29(5)(a) comport with the presumptive SO<sub>2</sub> and NO<sub>x</sub> emission limits in the EPA BART Guidelines. For example, Regulation 310 CMR 7.29(5)(a)2.b.i. provides emission limits based on an *energy output basis* of 3.0 lbs./MWh for SO<sub>2</sub>, calculated over any consecutive twelve-month period, recalculated monthly, providing for the use of allowances and early reduction credits to meet the emission limit. The SO<sub>2</sub> presumptive requirement in the EPA BART Guidelines for certain electric generation units (EGUs) within 750 MW power plants is either 95% emission control or 0.15 lbs./MMBtu on a *heat input basis*, over a 30-day rolling average without the use of allowances or early reduction credits. The specific thermal efficiencies of the various steam power plants would need to be factored into this determination for each unit in order to make the necessary comparison. A similar situation exists for NO<sub>x</sub> emission limits. Certainly, the consecutive twelve-month period, recalculated monthly, providing for the use of allowances and early reduction credits is more forgiving than the 30-day rolling average without the use of allowances or early reduction credits.

Third, some units have proposed control technologies (e.g., selective catalytic reduction and spray dryer absorber) that are more stringent than the Regulation 310 CMR 7.29(5) control levels, but the permit emission limits are only bounded by the Regulation's stringency.

<sup>1</sup> See 40 CFR Part 51, Appendix Y. The U.S. Environmental Protection Agency finalized its BART Guidelines on June 15, 2005, and published the preamble and final rule text in the Federal Register on July 6, 2005. The rulemaking action added Appendix Y to Part 51, titled "Guidelines for BART Determinations Under the Regional Haze Rule." See Section IV.E.

Fourth, emission controls for low capacity units were merely assumed to be too expensive to install without the rigor of a full five-factor analysis.

Fifth, additional information has yet to be provided and evaluated (i.e., Mystic Station Boiler #7 and Wheelabrator – Saugus Incinerator) before the Regional Haze SIP can be considered to be complete.

#### Lack of Exemption Modeling Documentation

MDEP determined that six BART-eligible facilities had a de minimis impact of less than 0.1 deciview on the nearest Class I area, so as not to be subject to BART. The NESCAUM exemption modeling that documents these conclusions should be included in the SIP as an appendix and be referenced in the BART section of the SIP.

#### SO<sub>2</sub> Controls

##### **Low Sulfur Fuel Requirements for SO<sub>2</sub> Control**

BART determinations were made by MDEP for six oil-fired units that are currently using a #6 residual oil with a maximum 2.2% sulfur content. The units were as follows: Brayton Point #4, Canal Station #1 & #2, Mystic #7, Salem Harbor #4 and Cleary Flood #8. MDEP determined that BART would be the use of #6 residual fuel with less than or equal to 1.0% sulfur content, citing an acceptable cost differential of 5% and a reduction of SO<sub>2</sub> emissions of 55%. Connecticut requires a maximum 0.3% sulfur fuel<sup>2</sup> and New York requires varying sulfur contents with facilities in New York City being required to use 0.3% sulfur content fuel.<sup>3</sup> MDEP should consider requiring lower sulfur limits to comport with other nearby states.

<sup>2</sup> Connecticut Department of Environmental Protection (DEP). "22a-174-19a: Control of Sulfur Dioxide Emissions from Power Plants and Other Large Stationary Sources of Air Pollution," *Regulations of Connecticut State Agencies, Title 22a: Abatement of Air Pollution*, December 28, 2000. <http://dep.state.ct.us/air2/regs/mainregs/scc19a.pdf>.

<sup>3</sup> New York State Department of Environmental Conservation (DEC). "Subpart 225-1: Fuel Composition and Use – Sulfur Limitations," *Environmental Conservation Rules and Regulations (6 NYCRR)*, May 8, 2005. [http://www.dec.state.ny.us/website/regs/subpart225\\_1.html](http://www.dec.state.ny.us/website/regs/subpart225_1.html).

A general statement was made that any requirement to use #2 distillate oils (e.g., 0.0015%, 0.05%, and 0.5% sulfur content) would double fuel costs and was deemed too expensive for meeting BART. MDEP should not make such a single, sweeping generalization as a BART determination. First, the applicability of using progressively lower sulfur oils and the associated costs should be examined for each unit. Separate analyses of each unit should examine the cost of progressively decreasing sulfur content for each type of oil. This would show a cost gradient as the sulfur in oil decreases, rather than the dichotomy (i.e., a “doubling” of cost) suggested by MDEP. Dispersion modeling for a unit should also determine visibility impacts of that given unit on nearby Class I areas for each viable fuel-oil alternative.

### **Examination of Wet and Dry Flue Gas Desulphurization**

The MDEP BART determinations for the six fuel oil-fired units noted above did not examine the costs or visibility impacts of wet or dry flue gas desulphurization (FGD) techniques. Although the EPA BART Guidelines for oil-fired utility boilers suggest only that oil-fired units evaluate limiting the sulfur content of the fuel oil burned to 1 percent or less by weight<sup>4</sup>, it is still incumbent on the source to examine all technically feasible alternatives under the full five-factor analysis and adopt the best alternative.<sup>5</sup> MDEP should provide the full five-factor analyses for FGD alternatives. In doing so, MDEP should not presume that the use of 1% sulfur fuel-oil is a baseline from which FGD alternatives are measured. FGD alternatives should be evaluated along with the fuel switching alternatives. The proposed BART of requiring 1% sulfur fuel-oil where 2.2% sulfur fuel-oil is now being used is stated to result in a 55% reduction in SO<sub>2</sub> emissions. Retrofit FGD systems can result in 90% - 95% reductions. The cost tradeoffs should be analyzed.

### **Massachusetts Regulation 310 CMR 7.29(5)(a)2.b.i.**

Regulation 310 CMR 7.29(5)(a) 2.b.i. requires that regulated facilities will not exceed an SO<sub>2</sub> emission rate of 3.0 lbs/MWh on an *energy output basis* over any consecutive, rolling 12-month period, recalculated monthly, including allowances and early reduction credits as a means of reaching compliance. MDEP was not clear in designating which facilities were considered to be subject to the ‘presumptive’ control limits of the BART Guidelines<sup>6</sup>, but it is likely that Canal Station #1 & #2 and Mystic Station #7 meet the definition of units that are subject to the presumptive control limit criteria. The criteria

<sup>4</sup> See 40 CFR Part 51, Appendix Y. The U.S. Environmental Protection Agency finalized its BART Guidelines on June 15, 2005, and published the preamble and final rule text in the Federal Register on July 6, 2005. The rulemaking action added Appendix Y to Part 51, titled “Guidelines for BART Determinations Under the Regional Haze Rule.” See Section IV.E.4.

<sup>5</sup> Ibid, Section IV.E.

<sup>6</sup> Ibid, Section IV.E.4.

for meeting Regulation 310 CMR 7.29(5)(a)2.b.i. may not be as stringent as the 95% control efficiency or the 0.15 lb/MMBtu of *heat input* control limit with a 30-day averaging period and no provision for the use of allowances in the EPA BART Guidelines. MDEP should demonstrate that the units subject to the presumptive control limit criteria meet the presumptive criteria BART Guidelines and investigate FGD as discussed in the previous section.

MDEP seems to have also used the limit provided in Regulation 310 CMR 7.29(5) for some non-presumptive sources as a 'target' for compliance with BART (i.e., Brayton Point #4, Salem Harbor #4 and Cleary Flood #8 & #9). The BART Guidelines require that the full five-factor analysis be performed as discussed in the previous section.

### **NO<sub>x</sub> Controls**

#### **Dominion -- Brayton Point Boiler #1 and #3**

For NO<sub>x</sub> control at Brayton Point Boilers #1 and #3, MDEP has proposed Low NO<sub>x</sub> Burners (LNB), Over-Fire Air (OFA) and Selective Catalytic Reduction (SCR) with compliance meeting Regulation 310 CMR 7.29(5)(a)1.a (1.5 lbs./MWh on a consecutive, rolling 12-month period). The MDEP declaration that LNB, OFA and SCR is similar to the most stringent control technologically feasible and would certainly seem to meet BART however, requiring control a efficiency bounded only by 1.5 lbs./MWh (*energy output basis*) based upon any consecutive twelve-month period, recalculated monthly, including allowances and early reduction credits, may not meet 0.28 lbs./MMBtu (*heat input basis*) on a 30-day rolling average without the use of allowances or early reduction credits as required by the BART Guidelines.<sup>7</sup> It is expected that LNB, OFA and SCR can easily meet the BART Guidelines control limits, but the permitted control limit that is referenced in the Regional Haze SIP should be a level that can actually be attained by the technology. The control efficiency that is attainable should be determined (likely 0.07 lbs./MMBtu on a *heat input basis*) and be reflected in the facility's permit and in the Regional Haze SIP.

<sup>7</sup> Ibid, Section 4.E.5.

## **Dominion – Brayton Point Boiler #2**

The BART determination for Brayton Point Boiler #2 should have been more exhaustive. Even if a facility can meet the presumptive control level (e.g., 0.25 lbs./MMBtu on a *heat input basis* per MANE-VU), the EPA BART Guidelines still require that all cost-effective emission controls, determined by the five-factor analysis be adopted. The general capital cost estimates for SCR were not developed down to an annual cost using the OAQPS Control Cost Manual<sup>8</sup>, with commensurate tons of NO<sub>x</sub> being reduced, so as to arrive at an annual cost per ton or a cost per deciview (at the closest Class I areas). The EPA BART Guidelines state, “The basis for equipment cost estimates also should be documented, either with data supplied by an equipment vendor (i.e., budget estimates or bids) or by a referenced source (such as the OAQPS Control Cost Manual). In order to maintain and improve consistency, cost estimates should be based on the OAQPS Control Cost Manual, where possible.”<sup>9</sup> Likewise, a commensurate cost analysis of other combustion controls in addition to the existing LNB should be provided.

## **Dominion – Brayton Point Boiler #4**

A low capacity unit is not excused from performing a BART five-factor analysis of alternative combustion controls in addition to the existing LNB. Of course, lower capacity units make it more difficult to demonstrate cost-effective controls, but the decision as to the level of control, if any, should be determined on the basis of an objective analysis, rather than an assumption that cost per ton or cost per deciview of visibility improvement will be excessive. Upon selection of additional combustion controls, emission limits for the facility’s permit and the Regional Haze SIP should reflect the efficiency of the adopted combustion controls if they result in greater efficiency than is required by Regulation 310 CMR 7.29(5)(a)1.a.

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<sup>8</sup> U. S. Environmental Protection Agency, Office of Air Quality Planning and Standards, OAQPS Control Cost Manual, Fifth Edition, February 1996, EPA 453/B-96-001.

<sup>9</sup> See 40 CFR Part 51, Appendix Y. The U.S. Environmental Protection Agency finalized its BART Guidelines on June 15, 2005, and published the preamble and final rule text in the Federal Register on July 6, 2005. The rulemaking action added Appendix Y to Part 51, titled “Guidelines for BART Determinations Under the Regional Haze Rule.” See Section IV.D.4.Step 4.a.5.

### **Mirant – Canal Station Boilers #1 and #2**

For NO<sub>x</sub> control at Canal Station Boilers #1 and #2, MDEP has proposed Low NO<sub>x</sub> Burners (LNB), Over-Fire Air (OFA) and Selective Catalytic Reduction (SCR) with compliance meeting Regulation 310 CMR 7.29(5)(a)1.a (1.5 lbs./MWh on an *energy output basis* in any consecutive twelve-month period, recalculated monthly, including allowances and early reduction credits). The MDEP declaration that LNB, OFA and SCR is similar to the most stringent control technologically feasible and would certainly seem to meet BART, but requiring control efficiency bounded only by 1.5 lbs./MWh on an *energy output basis* in any consecutive twelve-month period, recalculated monthly, including allowances and early reduction credits does not match the control efficiency of the technology. The control limit that is put into the facility's permit and referenced in the Regional Haze SIP should be a level that can actually be attained by the technology. The control efficiency that is attainable should be determined (likely 0.07 lbs./MMBtu on a *heat input basis*) and be reflected in the facility's permit and in the Regional Haze SIP.

### **Boston Generating – Mystic Station Boiler #7**

MDEP is commended for requiring a detailed engineering and cost-effectiveness study of LNB, SNCR and SCR. This study should be complete and the results adopted by MDEP and included in the Regional Haze SIP. This should occur before the SIP can be considered complete. Please forward a copy of the study to the reviewing agencies when it is completed. Again, the control efficiency of the adopted technology should be used to set emission limits in the facility's permit and in the SIP, rather than Regulation 310 CMR 7.29(5).

### **Dominion – Salem Harbor Boiler #4**

A low capacity unit (e.g., 30%) is not excused from performing a BART five-factor analysis of alternative combustion controls in addition to the existing LNB. Of course, lower capacity units make it more difficult to demonstrate cost-effective controls, but the decision as to the level of control, if any, should be determined on the basis of an objective analysis, rather than an assumption that cost per ton or cost per deciview of visibility improvement will be excessive. Upon selection of additional combustion controls, emission limits for the facility's permit and the Regional Haze SIP should reflect the efficiency of the adopted combustion controls if they result in greater efficiency than is required by Regulation 310 CMR 7.29(5)(a)1.a.

### **TMLP – Cleary Flood Boilers #8 & #9**

Low capacity units are not excused from performing a BART five-factor analysis of alternative combustion controls in addition to the existing LNB. Of course, lower capacity units make it more difficult to demonstrate cost-effective controls, but the decision as to the level of control, if any, should be determined on the basis of an objective analysis, rather than an assumption that cost per ton or cost per deciview of visibility improvement will be excessive. Upon selection of additional combustion

controls, emission limits for the facility's permit and the Regional Haze SIP should reflect the efficiency of the adopted combustion controls if they result in greater efficiency than is required by Regulation 310 CMR 7.29(5)(a)1.a.

**General Electric – Lynn Industrial Boiler #3**

NO<sub>x</sub> emissions from this industrial boiler are currently controlled with LNB and OFA. The analysis that was presented, \$2,000 - \$4,000 per ton with 80% NO<sub>x</sub> reduction for an SCR system, lacks the engineering rigor provided for in the EPA BART Guidelines. If a full five-factor BART determination exists that examines SCR and other combustion controls, please provide it. Otherwise, the conclusions were derived from an inadequate basis and a five-factor BART determination should be developed.

**Trigen – Kneeland Station Industrial Boiler #3**

NO<sub>x</sub> emissions from this industrial boiler are currently controlled with combustion modification and fuel reburning. The analysis that was presented lacks the engineering rigor provided for in the EPA BART Guidelines. If a full five-factor BART determination exists that examines SCR and other combustion controls, please provide it. Otherwise, the conclusions were derived from an inadequate basis and a five-factor BART determination should be developed.

**Wheelabrator – Saugus Incinerator**

The NO<sub>x</sub> emission limit that will be proposed by MDEP for the BART emission limit for this incinerator is not known at this time. Therefore, any comment at this time would be premature. However, the Regional Haze SIP can only be considered complete when each source that is subject to BART has federally enforceable emission limits. Thus, the finalization process should be accelerated so as to meet the needs of the Regional Haze SIP process.