

DRAFT BART Rule Issues and Division Responses

	Issue	Division Response
1	What are the procedures to be used by sources in conducting a multi-emissions unit BART engineering review?	The procedures would be the same as for a single unit. EPA guidance does not contain any special procedures for these types of facilities. Sources with multiple units may have the opportunity to duct multiple units to a single control device. So, part of the analysis should look at using the same control device for multiple units, if technically feasible.
2	The rule-making schedule is very tight. Should more time be taken up-front to develop a state BART proposal?	The division agrees that this is a problem. We have requested that the commission extend the hearing schedule by 30 days.
3	Should the BART determination made by the Division be placed in the SIP directly, or should it be included in a Title V permit and only referenced in the SIP? (This seems to get to the issue of how easy will it be to change any BART determination down the road.)	BART determinations for individual sources have to be in the SIP. 40 CFR 51.308(e)(1)(ii). Pursuant to White Paper #2, we should be able to change BART through the Title V permit without changing the SIP, but we should follow-up with EPA on this question.
4	Why is a state BART rule needed? Can we just use the federal guidelines directly	The state rule uses the federal guidelines very heavily, but we need a state rule to identify which option, under those provided in the guidelines, that the state would follow. Having a state rule also provides 1) a deadline for the BART determination, 2) indication of how the sources should do the BART analysis, and 3) establishes the BART process as a part of the Title V permitting process.
5	There is a concern about consistency in making BART determinations. How will the Division deal with this?	Consistency is a concern, but the division believes that by having all the BART determinations come in during a specified time period that the division can establish some consistency during the review process. Also, as necessary, the division will issue specific guidance for the BART process. This should also help.

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6	Which is the appropriate emissions rate for use in the up-front BART applicability analysis and for the visibility improvement analysis that is part of the BART engineering review. Should you use PTE? 24 hour highest emissions rate? Or what?	<p>a. Individual source attribution modeling: The emission rates used by the state are intended to reflect maximum allowable 24-hour emissions that account for high capacity utilization. Condensable and speciated PM10 emissions were not modeled.</p> <p>Revised modeling should use allowable 24-hour emission rates or peak 24-hour emissions that account for high capacity utilization and fuel/material flexibility allowed under a source's permit. Case-by-case procedures for calculating peak 24-hour emissions should be developed in consultation with the state. Revised modeling should include speciated filterable and condensable PM10 emissions, unless impacts are above 0.5 deciviews.</p> <p>b. BART engineering review modeling: The Division has not developed specific guidance yet.</p>
7	Check the proposed rule to see if the reference to 1/1/06 is correct in the section on “useful life” of a facility.	This date will be corrected in the proposed rule. The remaining useful life is the difference between: (1) The date that controls will be put in place (capital and other construction costs incurred before controls are put in place can be rolled into the first year, as suggested in EPA’s <i>OAQPS Control Cost Manual</i>); and (2) The date the facility permanently stops operations. Where this affects the BART determination, this date should be assured by a federally- or State-enforceable restriction preventing further operation.
8	Can a multi-emissions unit, subject to BART source use emissions averaging within its facility to meet any BART emissions limits?	The division will check with EPA.

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9	Some utility boilers cannot meet the Division's proposed presumptive limits for Nox. How should the source address this in its BART analysis?	The source would go through the BART determination analysis (using approved procedures) and arrive at its conclusion as to what level of control is feasible. The division will make its determination based upon the information provided and other relevant data.
10	Will the presumptive limits apply to an EGU < 750 megawatts if the EGU has a regulatory assurance in a voluntary agreement?	<ol style="list-style-type: none"> 1. The presumptive limits will not apply to units less than 750 MW; 2. Regardless of unit size, a BART analysis will likely need to be done on units subject to voluntary agreements. The division is still considering how best to address voluntary agreements.
11	Is it possible that after BART is imposed on sources subject to BART that additional emissions reductions may be needed from those sources? If so, when would we know this and how would this work? One participant wanted assurances that sources that install BART will not be asked to install additional controls to show reasonable further progress unless other measures have been exhausted first.	It is possible additional reductions beyond BART may be needed to satisfy the need to make reasonable progress toward the visibility improvement goal. We assume that if this becomes necessary, stakeholders would be involved in discussions to determine what reductions are possible.
12	There is a concern about the uncertainty associated with how well BART emissions controls will work. What if they don't work as advertised	The state would have to modify the SIP and may need to look for additional, offsetting reductions.
13	One participant asked about whether there would be flexibility to re-visit BART determinations over time as business plans and processes change.	This may be possible through an operating permit revision based on EPA's White Paper #2. A case-by-case review would probably be needed.
14	The Division needs to meet with each BART eligible source to discuss special circumstances and issues.	Agreed.

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15	One participant asked how they could get out of the entire BART process because their facility is being re-constructed.	<p>40FR70 p. 39159- 39160states: What is a “reconstructed source?”</p> <ol style="list-style-type: none"> 1. Under a number of CAA programs, an existing source which is completely or substantially rebuilt is treated as a new source. Such “reconstructed” sources are treated as new sources as of the time of the reconstruction. Consistent with this overall approach to reconstructions, the definition of BART-eligible facility (reflected in detail in the definition of “existing stationary facility”) includes consideration of sources that were in operation before August 7, 1962, but were reconstructed during the August 7, 1962 to August 7, 1977 time period. 2. Under the regional haze regulations at 40 CFR 51.301, a reconstruction has taken place if “the fixed capital cost of the new component exceeds 50 percent of the fixed capital cost of a comparable entirely new source.” The rule also states that “[a]ny final decision as to whether reconstruction has occurred must be made in accordance with the provisions of §§ 60.15 (f)(1) through (3) of this title.” “[T]he provisions of §§ 60.15(f)(1) through (3)” refers to the general provisions for New Source Performance Standards (NSPS). Thus, the same policies and procedures for identifying reconstructed “affected facilities” under the NSPS program must also be used to identify reconstructed “stationary sources” for purposes of the BART requirement. 3. You should identify reconstructions on an emissions unit basis, rather than on a plantwide basis. That is, you need to identify only the reconstructed emission units meeting the 50 percent cost criterion. You should include reconstructed emission units in the list of emission units you identified in Step 1. You need consider as possible reconstructions only those emissions units with the potential to emit more than 250 tons per year of any visibility-impairing pollutant. 4. The “in operation” and “in existence” tests apply to reconstructed sources. If an emissions unit was reconstructed and began actual operation before August 7, 1962, it is not BART-eligible. Similarly, any emissions unit for which a reconstruction “commenced” after August 7, 1977, is not BART-eligible.
16	The modeling protocol is needed as soon as possible so sources can get started on BART-required modeling.	Agreed.

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17	How will the Division address the situation where current commitments to reduce future emissions at a facility change the way the BART engineering analysis is done?	Those commitments should be evaluated during the source’s BART determination analysis. As long as the commitments to reduce emissions are federally enforceable and will be made in a timely manner, we see no reason why the division could not consider them in its review of the BART analysis.
18	Can the source appeal to the AQCC if it turns out that the modeled improvement in visibility is small after BART is applied? Will there be a “de minimis” level of improvement below which BART will not be required?	Yes, the source may appeal the BART determination to the Air Quality Control Commission. The proposed rule establishes the appeal process for sources. In addition, EPA addresses this question in the guidelines on page 39129 by stating: “Even though the visibility improvement from an individual source may not be perceptible, it should still be considered in setting BART because the contribution to haze may be significant relative to other source contributions in the Class I area. Thus, we disagree that the degree of improvement should be contingent upon perceptibility. Failing to consider less-than-perceptible contributions to visibility impairment would ignore the CAA’s intent to have BART requirements apply to sources that contribute to, as well as cause, such impairment.” Given this, we do not believe a de minimis level for improvement is appropriate.
19	If a source has a better-than-BART limit due to a voluntary agreement, does the APCD intend to put the better-than-BART limit in the SIP?	The division needs to consider this further before providing a response. The division is not aware of any sources that fall into this category. If a source is in this situation the division will evaluate situation on a case-by-case basis.

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20	<p>What if the emission reductions from the BART sources exceed the emission reductions necessary for reasonable further progress? Shouldn't we develop the SIP at the same time so that we know the relationship between the BART determinations and the reasonable further progress goal? Are sources required to install BART (or implement a better-than-BART alternatives) even if BART is more than we need to show reasonable further progress? Even if sources were required to install BART irrespective of reasonable further progress, wouldn't the status of our reasonable further progress goal be a consideration in the BART determination?</p>	<p>The regional haze rules do not tie the BART values to reasonable progress. States must implement BART on all sources subject to BART regardless of their reasonable progress, unless an alternative to BART, such as emission trading is implemented. The "five factors" of the BART analysis apply to sources on an individual basis regardless of where the state is on the glide path. The glide path is not one of the five factors.</p>
21	<p>Are we going to submit our BART analyses to the WRAP for analysis region-wide?</p>	<p>Yes (It is public information).</p>
22	<p>How will the type of fuel be factored into a BART analysis? Some sources might comply with a prescriptive NOx limit only with a particular type of coal.</p>	<p>BART is a fuel neutral process. Fuel type is not one of the five factors in a BART analysis though it may be considered, for example, as part of the cost assessment.</p>
23	<p>How will other mandatory changes (e.g. consent decree) at a refinery fit into the BART analysis?</p>	<p>The source would evaluate the reductions associated with the consent decree and determine what, if anything, else needs to be done to achieve BART.</p>

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24	<p>EPA’s Regional Impairment Analysis (RIA) indicates that the benefits of BART outweigh the costs by at least a factor of from 4 to 7 (70 Fed. Reg. 39104, 39148 (July 6, 2005)), even when benefits are only partially counted. These very favorable benefit-cost ratios extend to the most stringent BART scenarios EPA examined. The Division should take these significant benefits (which include both health and visibility benefits) into account in its BART determination rule.</p>	<p>The division will evaluate the BART determinations carefully.</p>
25	<p>The Division should not categorically exclude VOCs from BART requirements. According to the preamble to the Final BART Rule, “the best approach for states to follow in considering whether VOC emissions are precursors ... is a case-by-case approach. States should consider, in particular, whether a source’s VOC emissions are those higher-carbon VOCs that are more likely to form secondary organic aerosols.” 70 Fed. Reg. 39104, 39114. The Division should examine this issue on a source-by-source basis, considering the magnitude and nature of VOC emissions and source proximity to Class I areas. It should not recommend a blanket exclusion for VOC emissions.</p>	<p>The inventory of VOC emissions from the BART eligible sources shows that there are very few VOCs emitted by these sources. Additionally the modeling tools for individual source VOC modeling are very poor or non-existent. However, the division is retaining the option of looking at VOCs as part of the broader regional haze SIP process, where the universe of VOC emitting sources is larger.</p>
26	<p>BART eligibility must be based on PTE, as the Division is recommending. 70 Fed. Reg. 39158.</p>	<p>SEE RESPONSE NUMBER 6.</p>

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27	While EPA guidance says the State may use maximum actual 24-h emissions rates in modeling, the Division should use maximum allowable 24-h emissions rates where sources could increase capacity utilization in the future.	SEE RESPONSE NUMBER 6.
28	As the Division recognizes, PM should be defined as PM10 for purposes of BART eligibility determinations (70 Fed. Reg. 39160, 39162), because both PM10-2.5 and PM2.5 components of PM contribute to visibility impairment.	Agreed.
29	The Division should recommend using a lower threshold for contribution to impairment than 0.5 dv. According to EPA, “states should consider the number of emissions sources affecting the Class I area and the magnitude of the individual sources’ impacts. In general, a larger number of sources causing impacts in a Class I area may warrant a lower contribution threshold.” 70 Fed. Reg. 39121. See also 70 Fed. Reg. 39161-2. Several of Colorado’s Class I areas are likely to be impacted by more than one BART-eligible source. Obviously, and as EPA notes in its hypothetical example on p. 39121 of the preamble, if there are a number of sources each contributing 0.1 dv to impairment, the combined contribution could be substantial.	The division has proposed the 0.5dv threshold and is interested in comments regarding this choice. The 0.5 dv number was chosen to conform with EPA’s guidance, and, in addition, from a technical perspective, it appears to be a reasonable starting point for BART applicability. As noted, the air commission may choose to require emissions reductions even from those sources not subject to BART.
30	The Division should develop a modeling protocol as required by the BART guidelines (70 Fed. Reg. 39125, 39162) and provide an opportunity for the public to review it before proceeding with modeling for individual sources.	Because of the extremely short timeline to develop the Regional Haze SIP, the division is presenting the modeling protocol and results together and soliciting comments on both at the same time.

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31	As called for in the preamble and guidelines (70 Fed. Reg. 39123, 39126, 39162), the Division should consult with EPA and the FLMs for each relevant Class I area before conducting modeling to determine emissions impacts on impairment.	The Division has been consulting with the FLMs on the modeling protocol.
32	Presumptive BART limits given for EGUs are not a floor. The Division must consider more stringent limits, with a final determination based on its analysis of the BART factors. See 70 Fed. Reg. 39132. EPA's presumptive limits are based on highly cost effective control technology and give rise to highly favorable benefit-cost ratios; more stringent limits are likely to remain cost-effective in many cases. Consideration of more stringent limits should not be restricted to the case where the source currently has equipment that is capable of achieving lower levels, as suggested in the draft BART regulation.	We have sent this issue on to EPA. They are discussing it internally and will get back to us.
33	BART determinations should be performed using top-down methodology. Sources should be required to consider technology transfer and control methods that have been demonstrated in other countries besides the U.S. In contrast to the statement made by the Division at the stakeholder meeting, lack of vendor guarantees does not mean a control option is infeasible. 70 Fed. Reg. 39165.	The division will follow the guidance. If sources would like to meet with the division prior to submitting the analysis the division would be happy to discuss the analysis format and content. The division stated that a vendor guarantee could indicate whether an option was commercially available 70 Fed. Reg. 39165 (3 rd column). The division realizes that this is not sufficient in and of itself to prove a technology is not commercially available.

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34	In addition to considering add-on controls, sources must be required to consider pollution prevention and work practice control methods such as fuel cleaning or use of inherently cleaner fuels. Sources must also consider combinations of pollution prevention and add-on controls.	<p>40FR70 p. 39164 states:</p> <p>3. Potentially applicable retrofit control alternatives can be categorized in three ways.</p> <ul style="list-style-type: none"> • Pollution prevention: use of inherently lower-emitting processes/practices, including the use of control techniques (<i>e.g.</i> low-NOX burners) and work practices that prevent emissions and result in lower “production specific” emissions (note that it is not our intent to direct States to switch fuel forms, <i>e.g.</i> from coal to gas), • Use of (and where already in place, improvement in the performance of) add-on controls, such as scrubbers, fabric filters, thermal oxidizers and other devices that control and reduce emissions after they are produced, and • Combinations of inherently lower emitting processes and add-on controls.
35	In assessing control cost effectiveness, the Division should take into account the potential for sources to sell pollution allowances. For SO ₂ , these are currently trading at \$750 - \$800 per ton.	<p>Allowance prices would need to be addressed as part of the BART analysis.</p> <p>Current prices for Acid rain allowances.</p> <p>2055 spot auction results:</p> <p style="padding-left: 40px;">Lowest: \$300.00 Highest: \$750.00 Average: \$702.51</p> <p>7 year advance:</p> <p style="padding-left: 40px;">Lowest: \$130.00 Highest: \$ 350.00 Average: \$297.49</p>
36	The Division should not use a bright line threshold for visibility impacts in its BART determinations, but rather should bear in mind that when multiple sources make what would individually be viewed as small changes in visibility, the overall improvement can be substantial.	SEE RESPONSE TO ITEM 18.

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37	In making BART determinations by balancing the costs and benefits of BART requirements, the Division must consider co-benefits of emissions reductions, including health benefits of reduced PM, ozone, and air toxics and ecological benefits of reduced ozone and reduced nitrogen deposition.	EPA has indicated that these co- benefits were considered by EPA in the promulgation of the BART guidance and regional haze rule, but do not need to be considered by states.
38	Do the presumptions for 750 megawatt EGUs apply to a 425 megawatt BART-eligible unit at a plant that exceeds 750 megawatts if only the 425-megawatt source is BART-eligible?	No, EPA has informed the state that the 750 MW (design capacity) must be made up of BART-eligible units.
39	Do we need to include the term integral vista?	The division defined the term because we clarify that integral vistas are not part of the BART process.
40	Are BART limits required to be expressed as short-term (24 hour) limits, or does state have the discretion to set 30-day limits? PSD is an example where 30-day limits are acceptable.	
41	How will voluntary agreements be factored into BART determinations?	The voluntary agreement would be considered in the five-factor test.
42	What level of detail will be required for the BART analysis performed by the sources?	The division anticipates that the BART analysis will be similar to a BACT analysis.

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43	<p>We disagree with the Division's proposal to categorically exclude VOCs from BART requirements. This could lead to businesses being liable for these emissions under other haze-related regulatory efforts in the future. Further, it is premature to exclude VOCs across the board, rather the Division should consider VOC requirements on a case-by-case basis. The Division's case-by-case examination should include consideration of the amount of the emissions and the proximity of the source to a Class I area.</p>	
44	<p>How will the Division factor in potential increases in emissions in the future? Will modeling protocols be available for public review and comment? Modeling was a major issue in the ozone EAC discussions and will likely be an issue of concern in this rule as well.</p>	
45	<p>How will the Division account for cumulative emissions (e.g., a high number of sources emitting at low levels which combined represent a large number)? This should be considered in establishing threshold limits and in any modeling.</p>	
46	<p>Are public health and environmental benefits (e.g., nitrogen deposition in Rocky Mountain National Park), in addition to visibility, being considered and addressed in the fiscal analysis? These additional impacts should be taken into account and clearly articulated to the public and the AQCC.</p>	

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47	According to EPA's July 6 RIA, the benefits of BART outweigh the costs by at least a factor of 4. The Division should consider this very favorable benefit-cost ratio in determining what BART scenarios it will propose to the AQCC and should, therefore consider EPA's more stringent BART scenarios.	