

Appendix 4.1 Response to FLM and EPA Comments

The State of Kansas provided a draft of the Kansas Regional Haze State Implementation Plan (KS RHSIP) to federal land managers representing the US Park Service, US Fish and Wildlife Service, and the US Forest Service on November 1, 2007. In addition, draft copies were sent to the Environmental Protection Agency Region 7 and to the Iowa Tribe, the Kickapoo Tribe, the Prairie Band Potawatomi Nation, and the Sac and Fox Nation for their comments. Comments were received from the federal land managers and EPA Region 7. No comments were received from the tribes.

United State Department of Interior

Comments were received from the United States Department of Interior (DOI) on December 26, 2007. Comments are in italics and the Kansas Department of Health and Environment's responses are in bold. The letter from the DOI can be found in Appendix 4.2.

Comment:

Our general observations are as follows:

- 1. The BART determinations are generally well done, though they often lacked detailed cost information.*
- 2. The Regional Haze Agreements focus on emission limits that reflect the "presumptive" BART limits outlined in the Guidelines for Best Available Retrofit Technology Determinations, rather than the definitive technology chosen by the companies in their BART determinations that yield better than presumptive levels.*

There are two issues relating to the second bullet above. First, KDHE states on page 45 of the Regional Haze State Implementation Plan (SIP) that, "In establishing BART, Kansas determined that technological and/or economic considerations may change sufficiently by the time controls are built and the imposition of an emission standard based on a specific technology is infeasible." Given that a source that is subject to BART has only five years after the EPA approves the Regional Haze SIP to have BART controls operational, it portends that specific controls be defined in the Regional Haze SIP and not at a later date. If there are extenuating circumstances such as having to concurrently comply with another SIP requirement (e.g., the Kansas City Ozone SIP), these contingencies should be discussed in detail. Reasonable Progress milestones in the Regional Haze SIP will likely be dependent on technologies that are actually deployed.

Second, use of "presumptive" emission limits in the Regional Haze Agreements does not bind the companies to deliver BART technology determined by a full statutory five-factor BART analysis. If the cost of control options that achieve adequate and responsible visibility improvement remains reasonable after presumptive BART is achieved, adequate and responsible visibility improvement should remain an active consideration before the BART analysis is concluded.

Response:

KDHE carefully considered the presumptive limits provided in the BART guidance. Specifically, the guidance states that we must require an EGU facility greater than 200 MW located at greater than 750 MW to meet specific emissions limits depending on boiler types and current controls. KDHE followed this guidance and required these presumptive limits where applicable. From our interpretation of this guidance, we provided guidance to our sources that stated, “If your facility falls in the EGU category described above and you propose controls at or beyond these presumptive levels, you need not take into account the remaining statutory factors, as BART will be met.” EPA’s BART guidance clearly states an emissions limit is required and not a specific technology. Therefore, we will not be revisiting the BART analysis for the individual sources.

Additionally, the Agreement reached with Westar included several additional measures that went beyond BART including fuel switching at Gordon Evans Unit 1, Hutchinson Unit 4, Murray Gill Units 1, 2, 3, and 4; rebuild of scrubber, low-NOx burners, and combustion controls at Jeffrey Unit 3; and limits for SO₂ at Lawrence Units 3, 4, and 5, and Tecumseh Units 9 and 10. These additional measures will achieve reductions that go above and beyond those that would be achieved with the identification of a specific BART technology for Jeffrey Units 1 and 2, and Gordon Evans Unit 2. This is a holistic approach that ultimately achieves more reasonable further progress.

Comment:

Westar Energy, Jeffrey Energy Center Units 1 and 2 (720 MW Coal, 720 MW Coal) Westar’s BART determination commits to specific control technology that will meet the “presumptive” requirements of the BART guidelines; namely, low NO_x burner systems to control NO_x, rebuild of existing wet scrubbers to control SO₂ and an upgrade of the electrostatic precipitator to control PM₁₀. The KDHE “Regional Haze Agreement” with Westar references the presumptive limits established by 40 CFR 51 Appendix Y, but does not commit the company to follow through on deployment of the committed technologies. The Regional Haze Agreement references its own Appendix A, including specific “Proposed Controls”, but the Agreement still references only presumptive limits.

Westar assumed that the rebuild of the existing wet scrubbers for SO₂ control would generate a control efficiency of almost 83%, leading to a 0.15 lb/MMBtu emission rate, even though wet scrubbers have been shown to be up to 95% efficient. More definitive, authoritative information on control efficiency should be documented in the BART demonstration to show why higher control efficiencies cannot be realized. Demonstration of a higher efficiency could allow KDHE to use a lower emission limit to attain further reasonable progress in the Regional Haze SIP.

It would be desirable to have Westar’s BART determination include detailed cost information for the chosen control technologies, but it may not be necessary if the controls are the best available technologies as claimed. However, low NO_x burners alone are likely not the best available technology, so a cost analysis for the company’s NO_x BART determination is warranted.

Response:

Jeffrey Energy Center is a source that meets the criteria for presumptive control requirements. The limits established in the Westar BART agreement are those specified as presumptive for the unit type at Jeffrey. Again, KDHE's interpretation of the presumptive requirements guidance requires a specific emissions limit and not a specific control technology be identified. Westar has agreed to the presumptive limit for this source.

Westar provided NO_x control cost information in their BART Analysis submittal in Table 5-4 (see Appendix 9.7). KDHE determined that the BART submittal is complete and the signed agreement meets the requirements of the regional haze SIP requirements.

Comment:

*Westar Energy Gordon Evans Energy Center Unit 2 (383 MW #6 Fuel Oil)
The initial choice of low NO_x burners (LNB) and 1% fuel oil as BART for NO_x control was abandoned when the fuel switching alternative of natural gas was selected. A cost analysis should be presented to show why LNB should not continue to be deployed along with the natural gas alternative.*

Response:

KDHE evaluated Westar's initial proposal of low NO_x burners and 1% sulfur fuel oil and agreed this proposal met the requirements for BART for this unit. Because Westar then agreed to an alternative to BART and demonstrated that the alternative achieved greater visibility improvements than the initial BART determination, no additional cost analysis was required by KDHE. The current fuel switching requirement is better than BART, thus no further cost analysis will be required. Should the Wichita Mountains (or other surrounding Class I areas) not show reasonable progress in the next SIP period, KDHE will re-visit this source and evaluate it further as a reasonable progress demonstration. This evaluation would include the costs of low NO_x burners and the visibility benefits such controls would achieve.

Comment:

*Kansas City Power & Light, La Cygne Generating Station Units 1 and 2
(840 MW Cyclone Coal, 710 MW Opposed-Fired Coal)*

The BART determination does not select a specific technology for BART. It reserves for a later date selection of wet scrubbers or spray dryer absorbers (SDA) for SO₂ control; and SCR or combustion controls (to possibly accommodate the Kansas City Ozone SIP) for NO_x control. The KDHE Regional Haze Agreement with KCP&L references for SO₂ a 0.10 lb/MMBtu weighted average emission limit for Units 1 and 2 and for NO_x a 0.13 lb/MMBtu weighted average emission limit for Units 1 and 2. The FWS would prefer that specific controls be documented as BART as discussed above, but KDHE's use of better-than-presumptive emission limits is to be commended.

Response:

The emissions limits established for these two units represent what can be achieved with BART controls. The source requested the additional flexibility in choosing how they meet these limits at the time the agreement was signed due to the uncertainties associated with the costs of various control technologies and the engineering analysis needed to employ them. This request is reasonable and the emissions limits that result are what are important for visibility improvements.

Comment:

Kansas City Board of Public Utilities (BPU), Nearman Unit 1 (256 MW Coal)
As mentioned above, the BPU BART determination for the Unit 1 (Appendix 9.5) could not be located in the Kansas Regional Haze SIP submittal. The FWS would like the opportunity to review this document. Even though Unit 1 is not subject to presumptive BART control levels due to its 256 MW size, the KDHE Regional Haze Agreement with BPU sets emission limitations for SO₂ at 0.09 lb/MMBtu and for NO_x at 0.23 lb/MMBtu. This is an excellent commitment, but a specific technology commitment is still appropriate. The 0.09 lb/MMBtu limit in the KDHE Regional Haze Agreement is based on the achievability of a semi-dry flue gas desulfurization technology, but Table 9.4 of the SIP allows a 0.15 lb/MMBtu SO₂ limit just because it is the “presumptive” level. These two numbers should be made consistent and both should be shown as 0.09 lb/MMBtu.

Response:

Negotiations with BPU remain ongoing and will be incorporated into the SIP once a Consent Agreement is reached or when a Regional Haze Regulation is adopted by Kansas to regulate BART sources.

United States Department of Agriculture

The State of Kansas received a letter from the United States Department of Agriculture (USDA) on April 4, 2008. The letter stated that the federal land managers representing USDA were satisfied with the Kansas Regional Haze SIP document as provided and offered no suggestions for change.