

Preliminary BART Comments on Omaha Public Power District (OPPD) Nebraska City Station Unit #1

This facility contains one operating 650 MW coal-fired (Powder River Basin coal) boiler with a second 660 MW coal-fired boiler currently under construction. It appears that facility, as now permitted, is considered a 750 MW or greater power plant and is required to meet the presumptive emission limits for emission units found in the BART Guidelines¹. The status of the plant capacity should be resolved by communication between the State and U.S. EPA.

OPPD proposes to meet the NO_x presumptive emission limit of 0.23 lb/MMBtu by installing retrofitted Low Nitrogen Oxide (Low- NO_x) combustion control technology “as necessary” to complement the existing overfire air system at an estimated cost of \$166/ton (see Table 5) and \$5.4 million/deciview (see Table 9). OPPD proposes no additional NO_x, or SO₂ or PM BART controls. Respectively, the reasons for no additional controls were excessive cost per deciview for SCR for NO_x, excessive cost per deciview for spray dryer absorber (SDA) scrubber for SO₂ and “negligible impact” for particulate matter.

In section 2.1.3, OPPD states an argument that the cost of materials is rising so rapidly that cost estimates may be too low. It seems that they attempted to reflect this in Appendix A where project costs are outlined, by adding an arbitrary “contingency” cost of 25% to the calculated costs. This adjustment was not explained or justified and seemed to unreasonably expand estimated costs. For example, the OPPD cost estimate for an SDA scrubber and filter baghouse is \$1,759/ton, but without the 25% contingency the cost may be closer to \$1,319/ton. Either cost falls within a reasonable BART range.

Page 7 indicates that cost estimates were developed following guidance provided in the January 2002 OAQPS Control Cost Manual, using “limited vendor data obtained from various vendors in 2003” and then “scaled-up” to the present. In an effort to make OPPD’s results for a SDA scrubber comparable to the universe of other companies’ BART determinations it would be instructive to recalculate the numbers based strictly on use of the OAQPS Control Cost Manual.

Section 2.2.1 correctly states that all of the flue gas desulfurization technologies can achieve SO₂ removal efficiencies of 90 to 95%. However, in costing the selected SO₂ control technology, an SDA scrubber, a removal efficiency of only 81.6% was used (see Table 2). The discrepancy should be explained or a more realistic removal efficiency should be used. In addition, several regenerative FGD processes are identified in Section 2.2.1, but none were subjected to BART steps 2 (technical feasibility) or 3 (evaluating control effectiveness). Each of these control technologies must be evaluated.

Section 2.5 evaluates visibility impacts by incrementally adding emission controls to arrive at an additive deciview impact as each pollutant is added. However, the visibility improvement of *each* pollutant control should be evaluated individually so that the cost

of visibility improvement (e.g., cost per deciview improvement) from a given control technology can be compared to the universe of similar controls in all other BART analyses (as OPPD did in Table 10) in an effort to judge reasonableness. OPPD should evaluate the visibility improvement efficiency of SDA for SO₂ and SCR for NO_x separately.

Section 3.1 attempts to make a case that certain visibility improvements are “well below the minimum perceptible dV change”. It is incorrect to dismiss a control strategy on the basis that the resulting improvement is not perceptible or significant. EPA states in the preamble to its BART Guidelines² that, “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 areas. Thus, we disagree that the degree of impairment 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.” However, it is recognized that a minimal deciview change can lead to objective documentation of excessive cost per deciview of visibility improvement which is a legitimate argument.

Taking into account the results obtained (particularly for a SDA scrubber for SO₂ control) by reflecting the above procedural changes in the OPPD BART determination may result in a reasonable cost per deciview improvement in addition to the already-acceptable cost per ton for SO₂ control.

Particulate matter controls were dismissed on the basis of “negligible impact” of PM. However, relatively inexpensive improvements/upgrades on the existing electrostatic precipitator should have been considered and only dismissed upon a showing of excessive cost.

¹ 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.5.

² Ibid, see Preamble, 70FR30129, middle column.