



September 24, 2009

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RE: AMPGS Permit to Install 06-08138
Ohio EPA's Draft Case-by-Case MACT
Response to Questions

Dear Dean and Mike:

American Municipal Power, Inc. ("AMP") submits this letter to respond to the final requests for information posed by Ohio EPA as the agency finalizes the Section 112(g) case-by-case MACT determination for AMPGS. In addition, this letter also addresses contentions raised in NRDC's September 10, 2009 letter to Ohio EPA. As such, please consider this letter as additional information submitted by AMP relevant to Ohio EPA's case-by-case MACT process.

Ohio EPA Request 1: Confirm that the September 4, 2009 Order from the D. C. Circuit granting a voluntary EPA remand does not require any modification of the language for NSPS (including mercury).

AMP agrees with OEPA's position that the current permit language, as it appears in both the final PTI as well as the draft administrative modification, is correct. EPA finalized a New Source Performance Standard ("NSPS") for Electric Utility Steam Generating Units on February 27, 2006. 71 Fed. Reg. 9866. While this NSPS has been remanded to EPA per the September 4, 2009 Order, the NSPS has not been vacated. The 2006 NSPS sets standards for sulfur dioxide, nitrogen oxides and particulate matter (40 CFR 60.42-44Da). On May 18, 2005, EPA finalized a separate NSPS for mercury that set both emission limits for new sources and established a trading program. 70 Fed. Reg. 28606. This NSPS was vacated and the subsequent litigation concluded in February 2009. As such, there is no current, effective NSPS for mercury. Instead, as set forth in the permit modification draft, at this time Ohio EPA should regulate mercury

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emissions under the case-by-case MACT regulations. In addition, Ohio EPA should include provisions in the revised permit that require AMP to comply with any future MACT adopted by US EPA that is applicable to the AMPGS.

Ohio EPA Request 2: Confirm the emission limit established for total PM-10 (both filterable and condensable).

Total PM-10 (filterable plus condensable) has not been identified by AMP as a surrogate pollutant as part of the case-by-case MACT process. Rather, filterable PM-10 has been identified as an appropriate surrogate for non-mercury metal HAPs. The total PM-10 emission limit established as BACT in the PTI for AMPGS was derived from and continues to consist of several components, including filterable PM-10, sulfuric acid mist and ammonia. The PTI established a total PM-10 emission limit of 0.025 lb/mmBtu as BACT for the AMPGS. AMP has confirmed with Powerspan (vendor for the ammonia scrubber and wet ESP) and its project engineer, Bechtel, that the total PM-10 emission limit can be reduced to 0.024 lb/mmBtu (based on the filterable PM-10, sulfuric acid mist, potential ammonia slip and VOC). AMP expects that Powerspan and Bechtel will guarantee this emission rate. The total PM-10 emissions will be controlled primarily through the use of a fabric filter and a wet ESP. The environmental benefits of Powerspan weigh in favor of this limit. Specifically, the use of Powerspan results in a usable fertilizer product, which is environmentally superior to use of a limestone scrubber that produces FGD waste which is often placed in a landfill (due to gypsum contamination and the over-saturated gypsum market). Thus, the use of Powerspan technology will result in a significant reduction in solid waste. In addition, Powerspan technology offers the potential for future CO₂ capture. While Powerspan's CO₂ equipment is still in the R&D phase and not yet commercially available, the potential for this equipment to be added to the proposed Powerspan ECO scrubber certainly may have significant environmental benefits that weigh in favor of its use.

Comments on NRDC's September 10, 2009 Letter

As you know, NRDC submitted a second comment letter on September 10, 2009 that appears to respond to AMP's July 21, 2009 comment letter. While many of the arguments presented in the letter are repetitive of NRDC's earlier comments, the letter includes several facts that need to be corrected. As such, AMP will succinctly address the comments in order to maintain a clear record in this process.

1. Mercury Related Issues

The analyses contained in AMP's multiple filings, taken in total, are consistent with the analyses undertaken by other power plant projects, other States and EPA itself. Thus, NRDC's contention that AMP's analysis is fundamentally flawed is unfounded and does not require any specific response from AMP.

On page 4, NRDC appears to contend that sub-bituminous coals are superior to eastern bituminous coal blends in that they "can lead to lower emissions of mercury." However,

the significant data compiled by AMP and submitted to Ohio EPA as part of this case-by-case process demonstrate otherwise. While sub-bituminous coals may have lower mercury content, the control of mercury from sub-bituminous coals is more difficult due to the form and concentration (i.e. elemental, oxidized). Supporting this, recently issued case-by-case MACT permits for purely western coal projects generally have higher case-by-case mercury limits, including Roundup (2.69 lb/TBtu), Mid-American (1.7 lb/TBtu), Plum Point (12.8 lb/TBtu), Springfield (7.5 lb/TBtu), Weston 4 (1.7 lb/TBtu) and AEP Turk (1.7 lb/TBtu). Thus, sub-bituminous coals, from an overall emissions perspective, are not superior to eastern coals. AMP has considered both coal blends in its case-by-case analysis.

Similarly, NRDC attempts to discredit AMP's factual recognition that control equipment can be distinct and a reasonable basis upon which case-by-case determinations can be appropriately made. Specifically, on p. 4, NRDC contends that EPA's 2005 NSPS for mercury did not truly support the use of a dry scrubber as part of a sub-bituminous categorization, but fails to recognize that dry scrubbers may be MACT for projects utilizing purely western coals (as evidenced by the six projects listed in the paragraph above that all intend to utilize dry scrubbers). While consideration of different control technologies is not the only relevant factor in establishing a case-by-case MACT, it certainly is a valid consideration that a particular State can consider.

On page 6, NRDC characterizes AMP's filing as an "attempt to limit the scope of its legal responsibilities by contending that MACT requirements only apply to mercury." Not only is this statement untrue and easily discredited by even a quick glance at AMP's case-by-case filings and Ohio EPA's draft modification, but it also misrepresents the requirements of MACT and the positions taken by EPA in the Trimble and Holcomb projects. AMP also notes that NRDC fails to concede the obvious fact—U.S. EPA did, in fact, chose only to regulate mercury in its proposed utility MACT. *69 Fed. Reg. 4652* (Jan. 30, 2004).

AMP has fully, completely and appropriately analyzed mercury in the context of the case-by-case MACT process. This process culminated in a proposed 1.4 lb/TBtu mercury limit as the beyond-the-floor MACT limit for AMPGS. The 1.4 lb/TBtu limit is consistent with, or lower than, all projects with issued case-by-case MACT permits that still intend to build (i.e. projects that have not been cancelled). With respect to Cypress Creek, Seminole 3, Desert Rock and Consumers, AMP notes that none of these projects have a final case-by-case MACT, despite NRDC's proclamation that they all "have mercury limits that are lower than the limit proposed" for AMPGS. That statement is false. Cypress Creek and Desert Rock have pending applications submitted well after AMP's submittal (February 2009 and July 2009, respectively), and those applications have not yet been acted on by Virginia or EPA. Seminole does not, and will not, have a MACT mercury limit (the unit was deemed a minor MACT source in a Florida draft action as noted by NRDC on p. 9, footnote 10). The distinctions between Consumers and AMPGS are documented in prior submittals. Regarding Plant Washington, a new project proposed in Georgia issued a draft MACT in August 2009, NRDC points out that Georgia has set a draft mercury limit equivalent to approximately

1.45 lb/TBtu, regardless of whether or not the plant uses bituminous or sub-bituminous coal. At 1.4 lb/TBtu, AMP has a lower mercury limit.

2. PM-10 Emission Limits

As NRDC acknowledges, the PM-10 (filterable) limit of 0.012 lb/mmBtu (as a 3-hour average with CEM) for AMPGS is consistent with the most stringent BACT limits established by permit to date.

3. CO Limits

NRDC argues that AMP's CO limit is "near the bottom" of the range of what other plants are committed to achieving. That statement is simply not true, and NRDC's own examples cannot support such a position. Specifically, the proposed and established CO emission limit of 0.15 lb/mmBtu, based on a 3-hour average and monitored using a CEM is consistent with or more stringent than any other recently permitted pulverized coal power projects, with the exception of Longview. The analysis of Longview and rejection of the Longview limit as an outlier has been well documented and accepted by Ohio EPA (as well as U.S. EPA and various other states in PSD and MACT permits that post-date issuance of Longview's permit). The five other projects that NRDC alleges "have committed to lower CO limits" are all actually higher limits than those proposed for AMPGS as explained below:

Thoroughbred: NRDC alleges that a May 10, 2006 permit establishes a 0.10 lb/mmBtu CO limit. However, NRDC fails to acknowledge that the 0.10 lb/mmBtu limit is based on a 30-day average, which makes it much less stringent, not more stringent, than the 3-hour average established by Ohio EPA for AMPGS.

Prairie State: NRDC alleges that an April 2005 PSD permit establishes a CO limit of 0.12 lb/mmBtu. However, NRDC fails to acknowledge that the 0.12 lb/mmBtu limit is based on 24-hour block average, which makes it less stringent, not more stringent, than the 3-hour averaged established by Ohio EPA for AMPGS.

Elm Road: NRDC alleges that a PSD permit (no date identified) establishes a CO limit of 0.12 lb/mmBtu. However, NRDC fails to acknowledge that the 0.12 lb/mmBtu limit is based on 24-hour average, which makes it less stringent, not more stringent, than the 3-hour average established by Ohio EPA for AMPGS.

Plant Washington: NRDC alleges that a draft permit, issued August 2009, established a 0.10 lb/mmBtu CO limit (both as BACT and as a organic HAPs surrogate limit). The reference to Plant Washington by NRDC is interesting as it supports the position that, more than a year after the issuance of the AMPGS PTI, projects are still proposing higher BACT limits than those established by Ohio EPA for AMPGS. The draft permit for Plant Washington actually sets a limit of 0.30 lb/mmBtu as a 1-hour limit and establishes 0.1 (not 0.10) as a 30-day rolling average limit (compared to AMP's more stringent 3-hour average). Under

current EPA guidelines, an average of 0.14 lb/mmBtu can be deemed to comply with a limit expressed as 0.1 lb/mmBtu. Thus, both Plant Washington and the State of Georgia have recognized CO limits as BACT and MACT for a project that is currently in the permitting process now that are significantly higher than the limits established for AMPGS. Since BACT and beyond-the-floor MACT are case-by-case analyses, AMP draws no conclusions regarding the limits set by Georgia, rather AMP only points out that the proposed limits are higher to show the inaccuracy of NRDC's statements. See, August 2009 Preliminary Determination for Plant Washington PSD Permit at pp. 36-38 (BACT limits on p. 38), Appendix A (MACT Case-by-case at p.14).

Desert Rock: NRDC alleges that a MACT application, submitted in July 2009, commits to a CO limit of 0.10 lb/mmBtu. However, this limit, consistent with the limit established in the final PSD permit for Desert Rock, issued in June 2008, is 0.10 lb/mmBtu based on a 24-hour average, which makes it less stringent, not more stringent, than the 3-hour averaged established by Ohio EPA for AMPGS.

4. HCl Limits

AMP disagrees with NRDC's characterization that enough reliable stack test data exists to identify an achieved limit for purposes of the MACT floor. Specifically, the testing data identified by NRDC was part of a U.S. DOE project and was performed under set operating conditions and fuel usage. The Burns & Roe summary of the testing, at p.3, states that emission factors, removal efficiencies and other results presented in this report rely on measurement data that vary with time and/or may be near the limit of detection or below it. In addition, the U.S. DOE report demonstrates a range of emission testing results. The Gilbert unit is a CFB unit, which is not a similar source to AMPGS. In addition, AMP has reviewed HCl testing data for the following three facilities: Water Scott, Weston 4 and Santee Cooper Cross. Walter Scott and Weston 4 are sub-bituminous projects (utilizing dry scrubber and fabric filter control) and Santee Cooper Cross is a solely eastern bituminous coal project (utilizing ESP and wet limestone scrubber technology). However, the testing data consisted of single testing events (three 1-hour runs). Thus, these results cannot be utilized to determine with any certainty the ability to meet a limit on a long-term, on-going basis.

For purposes of beyond-the-floor control, AMP has not identified a single plant that has HCl control equipment superior to the control proposed by AMP (wet FGD, fabric filter and wet ESP). As our engineer R.W. Beck explained in our August 27, 2009 submittal, the proposed limit takes into account the first-of-a-kind ammonia Wet FGD. AMP recognizes that there are recently-permitted projects that have agreed to lower HCl emission limits as part of a case-by-case MACT process. These projects have been identified by AMP and presented to Ohio EPA in writing during this case-by-case MACT process.

As explained earlier, while the HCl limit for AMPGS is slightly higher than other recently permitted projects, the environmental benefits of Powerspan must weigh in favor of a slightly higher case-by-case limit. Specifically, the use of Powerspan results in a usable fertilizer product, which is environmentally superior to use of a limestone scrubber that produces FGD waste which is often placed in a landfill (due to gypsum contamination and the over-saturated synthetic gypsum market). The use of Powerspan technology will allow for a significant reduction in solid waste. In addition, Powerspan technology offers the potential for future CO₂ capture. While Powerspan's CO₂ equipment is still in the R&D phase and not yet commercially available, the potential for this equipment to be added to the proposed Powerspan ECO scrubber certainly may have significant environmental benefits that weigh in favor of the slightly higher HCl case-by-case MACT limit.

5. HF Limits

Again, AMP disagrees with NRDC's characterization that enough reliable stack test data exists to identify an achieved limit for purposes of the MACT floor. Specifically, the testing data identified by NRDC was part of a U.S. DOE project and was performed under set operating conditions and fuel usage. The Burns & Roe summary of the testing, at p.3, states that emission factors, removal efficiencies and other results presented in this report rely on measurement data that vary with time and/or may be near the limit of detection or below it. In addition, the U.S. DOE report demonstrates a range of emission testing results Gilbert and JEA Northside are CFB units, which are not similar sources to AMPGS. In addition, AMP has reviewed HF testing data for Walter Scott and Santee Cooper Cross. Walter Scott is a sub-bituminous project (utilizing dry scrubber and fabric filter control) and Santee Cooper Cross is a solely eastern bituminous coal project (utilizing ESP and wet limestone scrubber technology). However, the testing data consisted of single testing events (three 1-hour runs). Thus, these results cannot be utilized to determine with any certainty the ability to meet a limit on a long-term, on-going basis.

For purposes of beyond-the-floor control, AMP has not identified a single plant that has HF control equipment superior to the control proposed by AMP (wet FGD and wet ESP). As our engineer R.W. Beck explained in our August 27, 2009 submittal, the proposed limit takes into account the first-of-a-kind ammonia Wet FGD. AMP recognizes that there are recently-permitted projects that have agreed to lower HF emission limits as part of a case-by-case MACT process. These projects have been identified by AMP and presented to Ohio EPA in writing during this case-by-case MACT process.

As explained earlier, while the HF limit is slightly higher than other recently permitted projects, the environmental benefits of Powerspan must weigh in favor of a slightly higher case-by-case limit. Specifically, the use of Powerspan results in a usable fertilizer product, which is environmentally superior to use of a limestone scrubber that produces FGD waste which is often placed in a landfill (due to gypsum contamination and the over-saturated synthetic gypsum market). The use of Powerspan technology will allow for a significant reduction in solid waste. In addition, Powerspan technology

offers the potential for future CO2 capture. While Powerspan's CO2 equipment is still in the R&D phase and not yet commercially available, the potential for this equipment to be added to the proposed Powerspan ECO scrubber certainly may have significant environmental benefits that weigh in favor of the slightly higher HF case-by-case MACT limit.

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We hope that this additional information responds fully to Ohio EPA's final request for additional information. That said, please do not hesitate to contact me if you have any questions regarding this submittal.

On Behalf of the Members,



Randy Meyer
Director of Environmental Affairs

cc: Misty Parsons
Bob Hodanbosi