Division of Air Pollution Control (DAPC)

Response to Comments

Project: AMP Ohio Generating Station, Draft Air Permit-to-Install
Ohio EPA ID #: 06-08138

Agency Contacts for this Project

Division Contacts: Dean Ponchak, DAPC, 740-380-5297, Dean.Ponchak@epa.state.oh.us
Public Involvement Coordinator: Jed Thorp, 614-644-2160, Jed.Thorp@epa.state.oh.us

Ohio EPA held a public hearing on October 25, 2007 regarding a draft air permit-to-install for the construction of a 960 MW coal-fired power plant to be located near Letart Falls, Meigs County, Ohio. This document summarizes the comments and questions received at the public hearing and during the associated comment period, which ended on November 30, 2007.

Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

The following are responses to questions and comments received during the hearing and comment period pertinent to the draft air permit. The comments received are all numbered and followed by Ohio EPA's responses. Some comments, especially those received from several different commenters, have been summarized and are not quoted word-for-word. The comments are also categorized into appropriate subject categories for reference.

General Comments

Comment 1: **Several comments were received expressing concern that this facility will produce 7.3 million tons of carbon dioxide(CO2) per year and that this amount of CO2 will adversely affect human health and the environment through global warming. Additionally, those commenting believe that Ohio EPA is obligated to address CO2 emissions before granting AMP-Ohio a final air permit-to-install.**

Response 1: Ohio EPA is not required to regulate CO_2 under any current state

law or federal regulation. Ohio EPA has not proposed or issued any rule or guidance that addresses greenhouse gas emissions, including CO_2.

On the federal level, U.S. EPA has not issued any regulation that would require Ohio EPA to include a review of CO_2 emissions as part of the Prevention of Significant Deterioration (PSD) permit. In order for Ohio to be required to regulate CO_2 under the PSD rules, U.S. EPA must regulate CO_2 under the Clean Air Act. U.S. EPA has not taken any action to regulate CO_2 under the Clean Air Act. Therefore, Ohio EPA is not required to do so under federal regulations.

Comment 2: **Several comments were received that expressed concern that this facility is planned to be an "older" technology pulverized coal fired boiler instead of "newer" technology like Integrated Gasification Combined Cycle (IGCC). Those commenting believe that Ohio EPA should require AMP-Ohio to consider IGCC in the top-down Best Available Control Technology (BACT) analysis.**

Response 2: See the attached letter to States' Attorney General Offices.

Comment 3: **Several comments expressed concern that the proposed AMP-Ohio facility is one of several power plants in a relatively small geographic area. The citizens want to know what Ohio EPA has done to account for the cumulative impacts of air pollution from the multiple plants in the area.**

Response 3: Ohio EPA has reviewed interactive modeling that includes surrounding sources, including nearby power plants, within 50 kilometers of the proposed AMP-Ohio facility. No violations of the national ambient air quality standards(NAAQS) were predicted from the cumulative source modeling.

Non-general public hearing comments received

Comment 4: **Citizens are concerned about how mercury emissions from the AMP-Ohio project will affect their health, the health of their livestock and the health of their pets.**

Response 4: The AMP-Ohio Permit to Install (PTI) contains mercury emissions limits of 86 pounds of mercury per year from each of the two main boilers, which equals approximately 0.02 pounds per hour. This emission rate was compared to the current air toxics analysis as called for in Ohio Administrative Code (OAC) rule 3745-114-01. The predicted impact of the modeled mercury emission is roughly three orders of magnitude below the limit specified in the rule. As such, we expect no short or long term additional health impact in the area of the facility as a result of these extremely small emissions.

While Ohio EPA is concerned about the potential toxic effects of this metal to the environment, these small emissions are insignificant when compared to the global mercury pool that impacts our environment amount every day. Atmospheric deposition of mercury occurs throughout the State of Ohio, the U.S. and the world, which by most estimates is caused by the general recirculation of this global pool of mercury throughout the entire atmosphere. While this deposition can have a potential effect on the soils and waters of Ohio, the additional amount contributed by emissions from this facility will not change the existing situation "in any appreciable way".

Comment 5: **One citizen is concerned about the ambient air quality impacts of certain pollutants and Ohio EPA's lack of a presentation regarding those impacts.**

Response 5: Ohio EPA evaluated the analysis of the ambient air quality impacts proposed by AMP-Ohio with regard to criteria pollutants that triggered the need for such modeling to predicted levels of air emissions. As such, Ohio EPA determined that the emission levels were acceptable to be protective of health and the environment.

During the information session preceding the public hearing, Ohio EPA presented a summary of the ambient air quality analysis performed. The staff necessary for an in depth presentation were unavailable the evening of the information session.

Comment 6: **One citizen suggested that Ohio EPA expressed that no violations exist in the state of Ohio with regard to ambient air quality attainment.**

Response 6: Ohio EPA did not express that the entire state of Ohio is in attainment of the NAAQS. However, Ohio EPA did express that Meigs County is currently in attainment for all criteria pollutants.

Comment 7: **A few citizens expressed concern about American Electric Power's (AEP) purchase of properties in the village of Cheshire and similarities between the Selective Catalytic Reduction (SCR) control equipment installed at the AEP facility and AMP-Ohio's proposed project.**

Response 7: The circumstances surrounding the installation of the SCR controls at the James M. Gavin Plant are not relevant to the proposed AMP-Ohio project. While it is true that the AMP-Ohio project will include SCR for control of nitrogen oxides (NOx) emissions, it will also include the installation of Wet Electrostatic Precipitators (WESP) for the purpose of controlling sulfuric acid mist emissions (among other pollutants). In addition, the AMP-Ohio project is considered a new emissions unit and as such the permit contains stringent sulfuric acid emissions limitations which serve to protect public health and the environment.

Comment 8: **A few citizens expressed concerns about coal mining and its consideration in the approval of the AMP-Ohio project.**

Response 8: Ohio EPA is not authorized to consider the speculative environmental impacts or consequences resulting from the activities used to process the fuel that AMP-Ohio intends to purchase when considering AMP-Ohio's application. However, mining is a process that needs to be permitted if located in Ohio. If such mining is undergoing permitting, Ohio EPA will have authority to consider mining at that time. Coal mining is also regulated by the Ohio Department of Natural Resources among other agencies.

Comment 9: **A few citizens are concerned about the installation of a technology that is manufactured by a company called Powerspan due to the fact that it is an unproven technology to control a source of the proposed AMP-Ohio project's scale.**

Response 9: Ohio EPA does not generally include manufacturer specifics of control equipment in PTI's. Regardless of which type of control equipment is installed, the emissions from this facility must meet the emissions limits required by the PTI. The emissions units will

be tested to ensure that the allowable emissions limits are being met.

Comment 10: **A few citizens asked why Ohio EPA did not require technologies such as wind, solar, or hydroelectric power as BACT?**

Response 10: Ohio EPA believes that the BACT analysis does not demand the evaluation of non similar facilities. Although the BACT definition does refer to the "application of production processes or available methods, systems and techniques," Ohio EPA has interpreted this language to mean the application of production processes or available methods, systems and techniques to reduce emissions only after the fundamental design of the facility has been set. Ohio EPA does not believe that this language dictates the evaluation of fundamentally different designs to the basic facility. See the response to comment #2.

Comment 11: **One citizen expressed concern about what will happen when the coal supply is diminished.**

Response 11: Ohio EPA does not have authority to consider future energy needs when evaluating the air impacts of a project.

Comment 12: **A few citizens expressed concern that the numerical limits in the draft air permit did not represent BACT for NOx, SO2, and PM.**

Response 12: Ohio EPA has reviewed and evaluated past BACT determinations for a wide variety of sources. The BACT determination reflected in the draft air permit represents what Ohio EPA believes to be BACT for sources similar to the proposed AMP-Ohio project.

NRDC et. al. environmental advocacy groups - written comments received

Comment 13: **Comments were received that stated that Ohio EPA did not consider the "no build" option to avoid adverse social, economic, and environmental consequences.**

Response 13: The "no build" option is only considered when a proven adverse environmental or socio-economic consequence exists. There has

been no adverse consequence expressed to Ohio EPA that has been accepted as a proven adverse consequence in the past.

Comment 14: **Comments were received that expressed Ohio EPA did not require AMP-Ohio to consider clean fuels as BACT.**

Response 14: If within the design of the air pollution source, clean fuels may be considered so long as the fuels are reasonably available. In this case, the burning of gaseous or liquid fuels would necessitate a redesign of the air pollution source. See the answer to comment #2.

Comment 15: **Comments were received that expressed that Ohio EPA did not require AMP-Ohio to consider a more efficient plant as BACT.**

Response 15: Ohio EPA required that the permit application meet Ohio permitting requirements. Beyond that, see the answer to comment #2.

Comment 16: **Comments were received that expressed that Ohio EPA did not require AMP-Ohio to "look forward" to future control possibilities with regard to BACT.**

Response 16: Ohio EPA does not have authority to speculate as to what may be possible in the future when requiring BACT today. We note that AMP-Ohio has; however, included design aspects in its plant that may facilitate compliance with potential future regulation of CO_2 emissions.

Comment 17: **Comments were received that expressed that Ohio EPA should have required AMP-Ohio to consider more stringent plant BACT limits.**

Response 17: See the answer to comment #12.

Comment 18: **Comments were received expressing that Ohio EPA did not adequately evaluate Powerspan technology.**

Response 18: See response to Comment #9

Comment 19: **Comments were received expressing that Ohio EPA did not set**

BACT emission limitations for PM-2.5.

Response 19: Currently, US EPA has dictated that Ohio EPA use PM-10 as a surrogate to PM-2.5. The draft permit terms has a clarifying term to convey this position. As such, Ohio EPA believes that PM-2.5 is addressed in the permit terms.

Comment 20: **Comments were received expressing that Ohio EPA did not impose adequate limits for periods of startup, shutdown, maintenance, and malfunction.**

Response 20: AMP-Ohio is expected to meet the applicable emissions limitations required by the permit during start-up and shutdown operations as well as normal operation. If a malfunction condition occurs, that event is regulated pursuant to OAC rule 3745-15-06. In addition, the facility must comply with OAC rule 3745-15-06 if scheduled maintenance is required specifically to avoid a malfunction condition.

Comment 21: **Comments were received expressing that Ohio EPA did not require AMP-Ohio to evaluate the impact to soils and vegetation in the surrounding area, especially in parts of the Ohio River National Wildlife Refuse.**

Response 21: AMP-Ohio has provided a soils and vegetation impacts analysis in that demonstrates no adverse impacts to soils or vegetation. Ohio EPA reviewed both AMP-Ohio's application and U.S. EPA's "A Screening Procedure for the Impacts of Air Pollution Sources on Plants, Soils, and Animals". Ohio EPA determined from this review that AMP-Ohio should not have an adverse impact on soil and vegetation. Additionally, Ohio's Public Utilities Commission requires a similar study and AMP-Ohio's submittal has passed their review. The Ohio River National Wildlife Refuge does not qualify as a Class I area. Given that fact, the area receives the standard consideration of a Class II PSD analysis.

Comment 22: **Comments were received expressing that the draft air permit incorrectly compares pollutant concentrations at PSD Class I areas against PSD Class II increments.**

Response 22: The comment is correct in that the Staff Determination contained several typographical errors in the PSD Increment Analysis section.

The correct concentrations were used in the analysis.

Comment 23: **Comments were received expressing that the draft air permit incorrectly refers to the PSD Class I increments as PSD Class II increments.**

Response 23: The Class I Significant Impact Levels (SIL) and PSD Increments are as follows:

Pollutant	Averaging Period	SIL Class I (ug/m3)	Class I PSD Increment(ug/m3)
NOx	Annual	0.1	2.5
SO2	Annual	0.1	2
	24-hour	0.2	5
	3-hour	1	25
PM10	Annual	0.16	4
	24-hour	0.32	8

Comment 24: **Comments were received expressing the AMP-Ohio Meigs County project will cause adverse visibility and sulfur deposition impacts at PSD Class I areas and further emission reductions or offsets should be required.**

Response 24: AMP-Ohio will be subject to the Ohio EPA Clean Air Interstate Rules (CAIR). CAIR will decrease the sulfur and nitrogen emissions from electric generating units. The total pool of available allowances is not expanded by the introduction of a new facility. Consequently, Ohio EPA believes there will be no adverse impact on the visibility of Class I areas.

Comment 25: **Comments were received expressing the air quality and visibility impacts have been understated due to the omission of emissions of auxiliary boilers and other low-level sources.**

Response 25: The low level sources were included in the Class II modeling and did not contribute to a significant portion of the predicted high concentration. These sources are not expected to impact the Class I area.

Comment 26: **Comments were received that expressed that advanced FLAG Levels II and III procedures should have been used to assess**

regional haze but were not.

Response 26: The FLAG Level II and III procedures have been proposed by the Federal Land Managers. These procedures are not required by U.S. EPA, Ohio EPA, or the Federal Land Managers when conducting a modeling analysis for a Class I area.

Comment 27: **Comments were received that expressed the air quality and visibility impacts at PSD Class I areas may be higher under non-routine conditions such as startup, shutdown and malfunction.**

Response 27: Ohio EPA does not require modeling for non-routine conditions. Non-routine emissions are not expected to significantly add to the pollutant loading of the Class I area.

Comment 28: **Comments were received that expressed the AMP-Ohio Meigs County project's draft air permit terms and conditions should be based on air quality and visibility impacts in the original May 2006 modeling analysis that are significantly higher than those in the revised August 2006 analysis. It was also expressed that more importantly, the May 2006 modeling results show an exceedance of the PSD Class I increment for 24-hour SO2.**

Response 28: The August 2006 Class I modeling analysis is considered the official modeling of the AMP-Ohio project. The August 2006 modeling analysis was submitted to Ohio EPA as part of the permit application. Ohio EPA received a hard drive containing all the electronic modeling files from the August 2006 modeling analysis. Ohio EPA does not have electronic files of the May 2006 modeling analysis.

Comment 29: **Comments were received that expressed the proposed AMP-Ohio Meigs County facility will have significant air quality, visibility and deposition impacts and as such the mitigation measures should be explicitly described in any final permit issued to AMP-Ohio.**

Response 29: Mitigation is not necessary for AMP-Ohio. AMP-Ohio will be subject to CAIR therefore there will be no net increased impact

from Ohio's emissions due to the facility.

Comment 30: **Comments were received that expressed Ohio EPA incorrectly referred to the use of the BPIP model for calculating building dimensions for wake effect modeling.**

Response 30: The U.S. EPA Building Profile Input Program with the improved PRIME algorithm (BPIP-PRIME) for wake effects was used to determine the Good Engineering Practice (GEP) building dimensions.

Comment 31: **Comments were received that expressed that the AMP-Ohio Meigs county project's SO2 emissions may contribute significantly to exceedances of the SO2 ambient standards.**

Response 31: The modeled SO2 exceedances shown in the AMP-Ohio Interactive Class II SO2 modeling are located at receptors in West Virginia. AMP-Ohio has shown that they do not significantly contribute to the modeled NAAQS violation. The sources significantly contributing to the violation are located in West Virginia. The West Virginia Department of Environmental Protection has been alerted to the violation.

Comment 32: **Comments were received that expressed that the SO2 background concentrations are underestimated.**

Response 32: The 2004 SO2 background values were provided to AMP-Ohio by Ohio EPA during the permitting process. The 2004 data was the most current data available to the Ohio EPA at the time of the request. The background values used are conservative and representative of the area.

Comment 33: **Comments were received that expressed that no PSD Class II increment analysis has been performed.**

Response 33: The modeled impacts were below thresholds requiring increment modeling, therefore no PSD related increment modeling was necessary.

Comment 34: **Comments were received that expressed that no assessment against PM2.5 national ambient air quality standards was**

performed.

Response 34: Ohio EPA considers PM10 to be a surrogate of PM2.5. Ohio EPA does not require a separate modeling analysis of PM2.5

Comment 35: **Comments were received that expressed that PM10/PM2.5 emissions from the AMP-Ohio Meigs County project will cause exceedances of the 24-hour PM2.5 national ambient standard.**

Response 35: Ohio EPA considers PM10 to be a surrogate of PM2.5. As a result, the modeled concentrations are compared to the PM10 NAAQS. No exceedances of PM10 is expected.

Comment 36: **Comments were received that expressed that air toxics emissions from the AMP-Ohio Meigs County project have been understated from the auxiliary boiler, diesel engines and other low-level sources have been neglected.**

Response 36: The air emissions looked to be correctly quantified upon evaluation from Ohio EPA staff. The estimated toxic air contaminant emissions rates are below the level that requires an air toxics analysis pursuant to OAC Rule 3745-114-01. Other emission levels did not trigger review based on the requirements of Ohio policy i.e. the Air Toxics Policy.

Comment 37: **Comments were received that expressed the project will emit several toxic air contaminants and their health risks have not been fully quantified.**

Response 37: The estimated toxic air contaminant emissions rates are below the level that requires an air toxics analysis pursuant to OAC Rule 3745-114-01.

Comment 38: **Comments were received that expressed that project impacts on ozone air quality may be significant, but they have not been addressed.**

Response 38: Ohio EPA does not require ozone modeling for new source review.

Comment 39: **Comments were received that expressed that plume blight impacts from the AMP-Ohio Meigs County project may be**

significant, but they have not been analyzed.

Response 39: The plume blight analysis is a recommendation, not a requirement. Beyond the initial vapor plume, it is not expected that a well controlled unit will contribute to significant plume blight.

Comment 40: **Comments were received that expressed that air quality and visibility impacts in PSD Class II areas may be higher under non-routine conditions such as startup, shutdown and malfunction.**

Response 40: See the response to comment #27.

Comment 41: **Comments were received that expressed that health risks from mercury have not been analyzed.**

Response 41: Ohio EPA thoroughly analyzed the impact of mercury from the proposed AMP-Ohio Meigs County project. See the response to comment #4.

Comment 42: **Comments were received that expressed that soil and vegetation impacts have not been analyzed.**

Response 42: See the response to comment #21.

Federal Land Manager comments

Comment 43: **Comments were received that expressed that the emissions rates (specifically short term emission rates) from the proposed AMP-Ohio Meigs County project appear to be higher than what the Federal Land Manager has seen recently from new coal burning electric generating stations, including new pulverized coal boilers.**

Response 43: See the answer to comment #12.

Comment 44: **Comments were received that expressed concerns the Federal Land Manager had concerning the model selected and the information submitted for review.**

Response 44: AMP Ohio elected to submit the modeling results from the VISTAS

version of CALPUFF to evaluate impacts in the Class I areas. Ohio EPA has reviewed the results from the USEPA regulatory version of CALPUFF and the VISTAS version. The VISTAS results were more conservative than the regulatory results. Ohio EPA has accepted the modeling results from the VISTAS version of CALPUFF.

Comment 45: **Comments were received that expressed that visibility and sulfur deposition impacts are quite high.**

Response 45: Please see the response to Comment #24.

Comment 46: **Comments were received that expressed that the Federal Land Manager does not agree with the use of the Clean Air Interstate Rules (CAIR) to mitigate the Class I impact of the AMP-Ohio Meigs County project.**

Response 46: As indicated in response #24 above, the CAIR program establishes the maximum amount of SO2 and NOx that can be emitted within the Eastern United States from electric generating utilities. SO2 and NOx are the two primary contributors to the visibility impairment attributed to the AMP facility and are the focus of CAIR.

U.S. EPA comments

Comment 47: **Comments were received that expressed Ohio EPA should consider requiring the option of burning 100% low sulfur coal as BACT.**

Response 47: Due to the availability of coal in Ohio and surrounding areas, Ohio EPA accepts AMP-Ohio's proposal to burn a blend of low sulfur Powder River Basin (PRB) coal and regional coal in the boilers. Historically, Ohio EPA has evaluated proposed air contaminant sources to determine if they meet all applicable air pollution rules, including BACT, LAER and BAT requirements. We have not required companies to switch fuels in order to meet a more stringent BACT. , at least not to the extent of requiring substantial shipments of coal from distant states.

Comment 48: **Comments were received that expressed that AMP-Ohio should provide the range of sulfur content of the different coal**

types to be burned at the facility.

Response 48: AMP-Ohio provided that the blended sulfur concentration is expected to be around 2 to 3% with an expected inlet to control 3.5 lbs/million Btu for sub-bitumious coals. The expected heat input provided was 12,000 - 13,500 Btu/lb range for bituminous coals and 8,400 - 8,800 Btu/lb for sub-bituminous coals.

Comment 49: **Comments were received requesting Ohio EPA to provide rationale for why, after analyzing the energy, environmental, and economic feasibility of available control technologies, lower NOx, PM10, SO2, H2SO4,VOC, and CO BACT limits cannot be achieved by the AMP-Ohio facility.**

Response 49: Ohio EPA has reviewed the permits referenced by U.S. EPA and determined that the BACT limits contained in the AMP-Ohio permit are well within an acceptable range derived from recent similar source permits. Additionally, in some cases U.S. EPA was comparing dissimilar emissions limits, e.g., 0.07 pound NOx/million Btu (as a 30-day rolling average versus 0.05 pound NOx/million Btu as a 12-month rolling average).

Comment 50: **Comments were received requesting Ohio EPA to make BACT a percent SO2 removed control efficiency and a floating pounds per million Btu limit.**

Response 50: Ohio EPA's suggested terms and conditions for the SO2 BACT are consistent with the format of past determinations and with the terms and conditions of other BACT pollutant limitations in the draft permit. Therefore, Ohio EPA does not believe a revision is necessary.

Comment 51: **Comments were received requesting Ohio EPA to require bag leak detectors on the baghouses in the AMP-Ohio Meigs County project's air permit.**

Response 51: Bag leak detectors will be added to those sources that warrant these monitors and the terms of the permit revised. Due to technical reasons, bag leak detectors will not be added to the small baghouses. The boilers will continue to rely on CEMs and a few material handling sources will rely upon visual observation due to

design restrictions.

Comment 52: **Comments were received requesting Ohio EPA put requirements in the AMP-Ohio Meigs County air permit that contain language requiring the recording of the time of the daily visible emission inspection for emission units F001 - F006, P003, P901- P907 (and any other emission units with a visible emission inspection requirement.)**

Response 52: The permit will be revised to reflect the additional record keeping suggested by this comment.

Comment 53: **Comments were received requesting Ohio EPA put requirements in the AMP-Ohio Meigs County air permit for a Carbon Monoxide Continuous Emission Monitoring Systems (CO CEMS) included as a permit requirement, and stipulate that the data be used to demonstrate compliance.**

Response 53: Ohio EPA does not believe that requiring a carbon monoxide CEM is necessary. Carbon monoxide is a product of incomplete combustion and if a combustion problem with the boiler exists then it will become evident due to insufficient oxygen or carbon dioxide levels that will be monitored as required by the permit. If incomplete combustion becomes a reoccurring problem then testing could be requested.

Comment 54: **Comments were received requesting Ohio EPA to remove the requirements of the vacated boiler MACT that were put into the permit terms for compliance with OAC rule 3745-31-28.**

Response 54: The permit has been revised to put specific requirements for compliance with OAC rule 3745-31-28 into unit B003.

Comment 55: **Comments were received requesting Ohio EPA to redraft the air permit for the AMP-Ohio Meigs County project for additional public comment period.**

Response 55: Ohio EPA evaluates the changes between the draft permit and proposed final permit to determine if an additional comment period is necessary. We evaluate the significance of the changes and make a judgement as to whether the changes are significant

enough to warrant another public comment period. We consider things like increased emissions limits, major changes in rule applicability, and the likelihood of additional significant comment to decide on significance. Based on our review of "significance", Ohio EPA decided an additional draft period was unnecessary.

End of Response to Comments