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October 20, 2003

Thomas M. Dorman
Executive Director
Kentucky State Board on Electric Generation and Transmission Siting
211 Sower Boulevard
P.O. Box 615
Frankfort, Kentucky 40602

Re: Thoroughbred Generating Company, LLC
Case No. 2002-00150
Thoroughbred Generating Company, LLC's Motion to Strike
the Testimony of Durham and Watrous

Dear Mr. Dorman:

Thoroughbred Generating Company, LLC submits the original and ten copies of its Motion to Strike the Testimony of Durham and Watrous for submittal in the above proceeding.

Electronically filed copies will be submitted as well. If you have any questions, please contact me or Dianna Tickner of Thoroughbred Generating Company at (314) 342-7613.

Sincerely yours,



Carolyn M. Brown

CMB/cab

cc: Dianna Tickner
Holland N. McTyeire, V
Carl W. Breeding
Service List

COMMONWEALTH OF KENTUCKY

BEFORE THE KENTUCKY STATE BOARD ON
ELECTRIC GENERATION AND TRANSMISSION SITING

In the Matter of:

THE APPLICATION OF THOROUGHbred)	
GENERATING COMPANY, LLC FOR A MERCHANT)	CASE NO.
POWER PLANT CONSTRUCTION CERTIFICATE)	2002-00150
IN MUHLENBERG, COUNTY, KY)	

**THOROUGHbred GENERATING COMPANY, LLC'S MOTION
TO STRIKE THE TESTIMONY OF DURHAM AND WATROUS**

Applicant, Thoroughbred Generating Company, LLC ("Thoroughbred"), through counsel, respectfully moves the Board to strike the pre-filed testimony and rebuttal testimony of Mick Durham ("Durham") for Intervenor, Big Rivers Electric Corporation ("BREC") and the pre-filed testimony of Intervenor, Gary Watrous ("Watrous"). The grounds in support of Thoroughbred's Motion are set forth below.

INTRODUCTION

Intervenor BREC, through Mick Durham, and Intervenor Watrous offer testimony in this proceeding that purportedly demonstrates a negative economic impact of Thoroughbred's proposed Muhlenberg County plant. Specifically, Durham, and with less clarity Watrous, make conclusions about the air emissions from Thoroughbred's proposed plant and then allege that those air emissions may result in impacts on the region in the form of increased environmental regulation and lost development opportunity. Because of such increased regulation, Durham alleges that certain

businesses will choose not to locate in the area. Watrous alleges that the effect will be fewer new houses in Jefferson County and fewer visits to Mammoth Cave.

By Order dated September 30, 2002, this Board found:

[S]ome of the issues raised by Mr. Watrous are beyond the scope of the Board's jurisdiction under KRS 278.700 – 278.716. . . . The [NREPC] . . . has jurisdiction over factors such as air pollutants and other emissions and discharges from a proposed merchant generating facility. The Board has no jurisdiction over emissions or discharges and can consider such factors only to the extent they **directly impact** a factor enumerated in KRS 278.710.

Order granting Watrous' Motion to Intervene, September 30, 2003, pg. 2 (Emphasis added). The Board made a similar finding in its October 1, 2003 Order deferring a ruling on Big Rivers' Motion to Deny Thoroughbred's Application. There the Board concluded that emissions and discharges from Thoroughbred's proposed Electric Generating Facility could only be considered to the extent they have an economic impact on the region or the state. Order, October 1, 2003, pg. 3.

Pursuant to these Orders, the Board should strike from the record and decline to consider the testimony of Durham and Watrous on the grounds that they raise issues outside the scope of this Board's jurisdiction that do not impact, let alone directly impact, a factor enumerated in KRS 278.710. The environmental impacts Durham and Watrous testify to as the basis of their "economic impact" conclusions are not appropriate for resolution by this Agency, contradict findings by the NREPC – the state agency that is charged with the resolution of such issues, and do not directly impact any factors contained in KRS 278.710 because they are speculative in nature.

ARGUMENT

- A. The Board Should Strike The Testimony Of Durham And Watrous Because The Issues They Raise In Their Testimony Are Not Appropriate For Resolution In This Forum And Contradict The Findings Of The NREPC.
-

In his pre-filed testimony, Durham raises concerns regarding impacts of the proposed Thoroughbred facility's emissions of particulate matter less than 2.5 microns in size ("PM_{2.5}") and consumption of Class I Increment under the Clean Air Act Prevention of Significant Deterioration ("PSD") permitting program. Similarly, but more generally, Intervenor Watrous raises concerns in his testimony regarding the impact of "emissions of particulate matter and precursors of ozone" and of mercury on Louisville and the impact of "additional emissions on the Mammoth Cave area." Testimony of Watrous, October 6, 2003, pg. 2, ls. 6-8, 18-19, pg. 3 ls. 1-4. As set forth below, and as recognized in the Board's September 30, 2003 Order, the issues raised by this testimony are within the province of the Kentucky Natural Resources and Environmental Protection Cabinet ("NREPC"), not the Board, and accordingly, should not be considered in this proceeding.

Pursuant to KRS 224.10-100, the NREPC is charged with the duties to:

- (3) encourage industrial commercial, residential, and community development which provides the best usage of land areas, maximizes environmental benefits and minimizes the effects of less desirable environmental conditions;
- (4) develop and conduct a comprehensive program for the management of water, land, and air resources to assure their protection and balance utilization consistent with the environmental policy of the Commonwealth;
- (5) provide for the prevention, abatement and control of all water, land and air pollution including but not limited to that related to particulates ...

Via this statute, the Kentucky General Assembly has resolved that determinations relating to the appropriate use of air resources and allowable air emissions are expressly within

the province of the NREPC. Pursuant to such authority, and under the directive a complex body of federal and state statutes and regulations, the NREPC's Division for Air Quality ("DAQ") determines, upon application, whether and to what extent a Kentucky source should be permitted to emit regulated air contaminants. Economic impact considerations are inherent in the NREPC's administration of this and its other regulatory programs. *See Rebuttal Testimony Meyers*, October 13, 2003 at pg. 4, ls. 23-25 and pg. 5, ls. 1-9. On October 11, 2002, DAQ issued a PSD/Title V air permit to Thoroughbred, expressly determining it lawful and consistent with state and federal environmental policy to allow Thoroughbred to emit certain specified levels of certain pollutants including particulate matter from its proposed plant in Muhlenberg County, Kentucky. On November 12, 2002, Thoroughbred's permit was administratively challenged pursuant to KRS 224.10-420. At issue in that ongoing proceeding, to which neither BREC nor Watrous are parties, is whether the DAQ's determination to issue Thoroughbred an air permit was proper.

The Siting Board is not charged with the duty of considering or resolving issues related to the appropriate or safe level of air emissions from a source. *See* September 30, 2003 Order at pg. 2. Environmental impact is not included among the criteria the Board is to consider in determining whether to issue the current certificate to construct. *See* KRS 278.710. The safeguard to ensure that such measures are appropriately considered in the siting of a merchant electric generating facility is provided by KRS 278.704(1), which provides that a certificate to construct approved by the Siting Board "shall be conditioned" upon the applicant obtaining the necessary approvals and permits from the NREPC.

Although Thoroughbred vehemently contests the merits of Durham's and Watrous' claims regarding the impacts of the air emissions from its proposed facility, it is clear that this Board, as it has previously held, is not the proper entity to make factual determinations regarding air emission impacts. As such, the Board should decline to consider testimony raising such issues. Not only does the express language of KRS Chapter 224 and KRS Chapter 278 alone mandate this conclusion, but also the longstanding general rule that determinations that are within a particular agency's scope of expertise are entitled to deference. *See Puerto Rico Aqueduct & Sewer Authority v. United States Environmental Protection Agency*, 35 F.3d 600, 604 (1st Cir. 1994) ("an agency deserves ... deference with regard to factual questions involving scientific matters within its area of expertise").

Siting Boards from other jurisdictions have addressed this very issue and their holdings, although not binding on the Board, provide helpful guidance here. The New York State Board on Electric Generation Siting and the Environment, which under New York's siting statute is even expressly directed to consider "impact ... on air resources," expressly defers to the New York environmental protection agency (the equivalent of Kentucky's NREPC) for the resolution of "environmental issues":

[W]hen the [state environmental protection agency] provides air and water permits issued pursuant to federal delegation, we may appropriately make the required finding that environmental impacts covered by these programs have been minimized and will be in compliance with applicable regulatory requirements. We agree ... that [New York state siting law] comprehends the objective of the environmental review in these areas to be coextensive with compliance with the federally delegated regulatory requirements. **There is no reasonable basis, therefore for us to consider the same environmental question in a different manner.**

Application by Mirant Bowline, LLC, New York State Board on Electric Generation Siting and the Environment, Case No. 99-F-1164 at pg. 9 (Order dated June 21, 2001) (Attachment 1) (Emphasis added).

Similarly, BREC's and Watrous' objections regarding impacts of air emissions should not be considered by the Board "in a different manner" than they were considered by DAQ. This Board should instead defer to DAQ on such issues. Indeed, New York, as held in the above referenced order, has even recognized that such deference is appropriate and necessary even where the siting board has been expressly charged to consider environmental impacts, as is the case in New York. KRS 278.704 provides that a certificate to construct is contingent upon Thoroughbred obtaining an air permit from the NREPC, and thus, explicitly recognizes this deference, while providing an adequate safeguard to insure that impacts of air emissions are properly considered and permitted only as appropriate. BREC's and Watrous' concerns regarding the impacts of such emissions should have been voiced during the public comment periods held by DAQ on Thoroughbred's draft air permit or in a petition for review of the permit under KRS 224.10-420. Their concerns are not appropriate here.

In addition, it must also be noted that Durham's testimony purports to contradict the final determination by DAQ and must also be rejected for that reason. For example, Durham relies on an August 23, 2002 letter from the Department of the Interior to contend "the Department still found modeled visibility impacts at the Park at [the .41 lb/MMBtu] level." Rebuttal Testimony of Durham, October 13, 2003, pg. 2, ls. 1-2. The Updated Statement of Basis issued by DAQ as part of its air permit determination contradicts Durham's testimony on this issue when it states "[b]ased on the modeling results shown in the table above, the United States Department of the Interior has

indicated there will be no adverse impact on visibility to the Class I area – Mammoth Cave National Park.” Updated Statement of Basis (Attachment 2) at pg. 34. If for no other reason than to avoid inconsistent conclusions between agencies, the Board must strike this testimony. *See Application of Mirant Bowline* at pg. 9 (holding that to allow the siting board to accept or reject a state environmental agency’s findings would “only result in improperly countermanding conditions in a permit.” “[W]e cannot properly second guess the [state environmental agency’s] determinations in that fashion.”)

For the above reasons, the Board should, consistent with its September 30, 2003 Order, refuse consideration of the testimony of Durham and Watrous. However, aside from the fact that this is not the appropriate forum for such issues certain environmental impact issues raised by Watrous and Durham are also not ripe for consideration. As noted by Michael T. DeBusschere in his Pre-filed Rebuttal Testimony, EPA has not yet issued its implementation rule for the PM_{2.5} National Ambient Air Quality Standards (“NAAQS”), neither Kentucky nor EPA have made decisions on the attainment status of Kentucky counties, and Kentucky has until sometime in 2007 to develop a State Implementation Plan (“SIP”) for PM_{2.5}. Rebuttal Testimony of DeBusschere, October 13, 2003, pg. 8, ls. 11-18. Durham’s testimony is based on an uncertain factual predicate not ripe for consideration by any agency and should not be considered herein.

- B. The Board Should Strike The Testimony Of Durham and Watrous Because Their Testimony Regarding The Impacts of Air Emissions From Thoroughbred’s Proposed Plant Is Speculative And Thus Does Not Directly Impact A Factor Enumerated in KRS 278.710.

Durham’s and Watrous’ testimony and conclusions regarding the impact of Thoroughbred’s air emissions do not reflect realistic assumptions and are inherently speculative. For these reasons such testimony should deemed irrelevant and not considered by the Board.

It is a longstanding principle of administrative law that an agency, in making determinations, should not consider possibilities and impacts that are based on mere speculation. See *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519, 551 (1978) (holding that under the National Environmental Protection Act (NEPA), an agency is not required to consider environmental effects that cannot be readily ascertained and are deemed only remote and speculative possibilities); *Limerick Ecology Action, Inc. v. United States Nuclear Regulatory Comm.*, 869 F.2d 719, 745 (3d. Cir. 1989) (holding, in an action also under NEPA, that economic consequences that were “speculative, both in terms of their occurrence and in terms of any reasonable quantification, even given that occurrence, and ... remote” should not be considered by the agency). In fact, courts have held that an agency determination based upon speculative conclusions is arbitrary and capricious. *Natural Resources Defense Council v. EPA*, 859 F.2d 156, 210 (D.C. Cir. 1986) (holding that agency actions based upon speculation are arbitrary and capricious); see also *Horsehead Resource Development Co. v. Browner*, 16 F.3d 1246 (D.C. Cir. 1994).

Aside from the points made above as to the accuracy of their testimony, neither Durham nor Watrous provide the Board with any causal connection between their factual conclusions and any concrete resulting adverse economic impact, thus rendering their testimony inherently speculative and irrelevant to this proceeding. See Rebuttal Testimony of Meyers, October 13, 2003 at pg. 8, ls. 6-17. Durham testifies that “[t]he types of economic impacts caused by Thoroughbred Class I Increment Consumption **could** be very significant.” (Emphasis Supplied.) Testimony of Durham, October 6, 2003, pg. 9, ls. 21-22. Durham continues by discussing the impact on a “subsequent major source” when no such major source has filed an application for an air permit. *Id.*,

pg. 10, l. 5. Durham admits that “[i]t is impossible to quantify the precise economic consequences to Big Rivers and to the state arising from Thoroughbred’s Class I Increment Consumption.” *Id.*, pg. 10, ls. 9-10. Durham then chides Thoroughbred for not addressing the negative economic impact “raised” by BREC when no such negative impact exists and BREC has not provided any evidence that it does. *Id.*, pg. 10, ls. 10-14. Durham’s Testimony then concludes that these facts “could” or have the “potential” to adversely impact BREC and the state. *Id.*, pg. 9, l. 22 & pg. 10, l. 26.

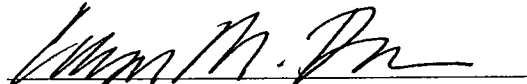
Similarly, Watrous’ testimony also provides no causal link between his concerns about the quality of environment and any economic impact. Watrous concludes that “[t]he economic health of the Louisville Metro region is dependent on the quality of our environment” and continues by noting “[t]he adverse economic effects of the additional emissions on the Mammoth Cave area are of concern” but provides absolutely no analysis of the connection between these issues and Thoroughbred’s proposed Facility, or the site itself, let alone a connection between these issues and any resulting economic impact on the region itself. Testimony of Watrous, October 6, 2003, pg. 2, ls. 2-3 & 18-19. Watrous, like Durham, criticizes Thoroughbred for failing to discuss or analyze negative economic impacts but provides no evidence to support the conclusion that there are any negative economic impacts from Thoroughbred’s proposed Facility.

Watrous’ and Durham’s conclusions regarding the economic impact of air emissions from Thoroughbred’s facility are speculative, and no support for their conclusions is provided. This testimony simply does not establish a “direct impact” on economic or other factors enumerated in KRS 278.710 and thus, should be stricken by the Board. *See* September 30, 2003 Order.

CONCLUSION

For the reasons set forth above, Thoroughbred's Motion to Strike the Testimony of Durham and Watrous should be granted.

Respectfully submitted,



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ATTACHMENT 1

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Application by Mirant Bowline, LLC (Formerly Southern Energy, LLC) for a Certificate of Environmental Compatibility and Public Need to Construct and Operate Bowline Unit 3, a 750 Megawatt Generating Facility in the Town of Haverstraw, Rockland County.

Case 99-F-1164

New York State Board on Electric Generation Siting and the Environment
June 21, 2001

Issued and Effective June 21, 2001

ORDER CONCERNING INTERLOCUTORY APPEALS

Before Bennett, Alternate for Maureen O. Helmer, Chairman, New York State Public Service Commission, Crotty, Commissioner, New York State Department of Environmental Conservation, McDonough, Alternate for Charles A. Gargano, Commissioner, Empire State Development, Smith, Alternate for Antonia C. Novello, Commissioner, New York State Department of Health, Smith, Alternate for Timothy S. Carey, Acting Chairman, New York State Energy Research and Development Authority, Wortendyke, Ad Hoc Member and Fitzgerald, Ad Hoc Member.

BY THE BOARD:

I. BACKGROUND AND INTRODUCTION

A. The Application

Mirant Bowline, LLC (formerly Southern Energy Bowline, LLC) (the Applicant), filed an application for a Certificate of Environmental Compatibility and Public Need, pursuant to Article X of the Public Service Law, on March 20, 2000. The Applicant proposes to construct and operate a 750 megawatt dual-fuel, combined cycle electric generating facility in the Town of Haverstraw, Rockland County. The proposed facility (Bowline Unit 3) would be located adjacent to the existing Bowline Units 1 and 2. The site is on the western shore of the Hudson River, about ten miles north of the Tappan Zee Bridge.

On May 2, 2000, Maureen O. Helmer, the Chairman of the New York State Board on Electric Generation Siting and the Environment (Siting Board, or the Board), informed the applicant under PSL §165(1) that the application was not in compliance with PSL §164(1), and identified additional materials to be filed. As subsequently augmented, the application was determined to be in compliance by the Chairman on August 10.

On September 12, Presiding Examiner Gerald L. Lynch (of the Department of Public Service (DPS)) and Associate Examiner Kevin J. Casutto (of the Department of Environmental Conservation (DEC)) conducted their first prehearing conference, together with an Article X public statement hearing, in the Town of Haverstraw. At that prehearing conference, the process of determining awards from the intervenor

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fund commenced. [FN1] DEC issued for public comment a draft air emission permit under the Prevention of Significant Deterioration (PSD) program on December 14, 2000. A draft Preconstruction Air Permit and Certificate to Operate and a draft State Pollutant Discharge Elimination System (SPDES) water permit were issued on January 16, 2001. A legislative hearing concerning the air and water permit applications and the draft permits was conducted by Associate Examiner Casutto on February 21.

FN1. PSL §164(6). Five written rulings concerning intervenor funds were issued from September 2, 2000 to January 5, 2001.

On March 7-8, the Examiners jointly conducted another prehearing conference, among other things to determine the issues for adjudication in the proceedings [FN2] and to further address scheduling and intervenor funding requests.

FN2. The Presiding Examiner must issue an order identifying the issues to be addressed at the Article X hearing (PSL §165(2)) and, similarly, the DEC Associate Examiner is required to rule on party and amicus status, and to determine issues for adjudication on the permit applications (6 NYCRR § §624.4(b)(5), (c)).

B. The Rulings

On March 30, 2001, the Examiners issued two separate rulings. Associate Examiner Casutto issued his Ruling on Proposed Adjudicable Issues and Petitions for Party Status [FN3] (DEC Ruling), and in this proceeding Examiners Lynch and Casutto issued their Ruling on Issues, Intervenor Funds, Schedule, and Other Matters (March 30 Ruling).

FN3. In the Matter of the Application of Mirant Bowline, LLC, formerly Southern Energy Bowline, LLC, DEC No. 3-3922-003/00015, and SPDES No. NY0264342. Appeals from that ruling will be decided by the DEC Commissioner, and are not discussed in this order.

As pertinent here, in the DEC proceedings the Associate Examiner made several rulings concerning proposed issues for adjudication. With respect to State Pollutant Discharge Elimination System (SPDES) issues, he ruled that although several substantive and significant issues were identified for adjudication, Riverkeeper, Scenic Hudson, and the County of Rockland (the County) failed to raise an adjudicable issue regarding the discharge of pollutants from the Bowline Unit 3 cooling water return. With respect to air quality issues, he found some substantive and significant issues, but he also found that several issues proposed by the County would not require adjudication in the DEC permitting process, including: (1) the impacts of fine particulate matter (PM_{2.5}); (2) the potential applicability of SCONOX exhaust emission control technology to this facility; (3) whether the draft air permit should apply the requirements for process emission sources (6 NYCRR Part 212) to fugitive emissions from liquid ammonia storage tanks; (4) whether the application should have included an emergency response plan

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for the handling of ammonia; (5) whether the draft air permit must contain emission limits accounting for all of the 15 operating scenarios modeled in the application materials; (6) whether a Continuous Opacity Monitoring (COM) system is required for this project; (7) whether the draft air permit should state applicable federal record keeping and notice requirements rather than incorporating them by reference; (8) whether the draft air permit contains a defect or omission regarding oil storage vessel design and testing; and (9) whether a Title V permit is required instead of a State Facilities Permit (the air permit).

In their joint ruling in this proceeding, the Examiners ruled that relevant and material evidence could be submitted on specific issues identified for adjudication pursuant to Article X. The Examiners listed a number of issues for Article X adjudication, including issues relating to potable water impacts, visual impacts, public health and safety, wastes, multi-pathway risk assessment, [FN4] and the public interest. As to the water issues, they allowed consideration of impacts on Significant Coastal Fish and Wildlife Habitat areas under the New York Department of State's Coastal Management Plan, but did not include the impact of the discharge of pollutants from the Bowline 3 cooling water return, an issue found by the Associate Examiner in the DEC Ruling not to be substantive and significant, as noted above. They included none of the air quality issues, which had been raised as both Article X issues and permitting issues. In doing so, they agreed that the Associate Examiner determined in the DEC issues ruling what evidence could be presented on DEC's permitting issues, but they disagreed about whether the Siting Board could review these issues and, possibly, impose more stringent requirements than those imposed by the DEC Commissioner.

FN4. A multi-pathway risk assessment is designed to provide assessments of additional health risks associated with pollutants released into the atmosphere after fallout and deposition. This was listed as an issue by the Presiding Examiner, with the Associate Examiner dissenting. The party that originally sought to address the Applicant's analysis, the Village of Haverstraw, has now settled and indicated that it will not pursue the matter. Letter of April 12, 2001 to the Examiners.

Several issues were listed as requiring further consideration, including an issue raised jointly by PJM Interconnection, LLC and Public Service Electric & Gas Company (PJM/PSE&G), namely, the impact of the proposed facility's interconnection on the transmission system of the PJM and its member companies, including PSE&G. In that regard, the Examiners required the Applicant to submit a study it had agreed to undertake concerning the effects of Bowline Unit 3 on a 1,000 MW wheeling contract between PSE&G and Consolidated Edison Co. of New York, Inc. The Examiners rejected, however, a request by PJM/PSE&G to consider the PJM impacts of other plants proposed for Rockland County, specifically the Ramapo Energy Project and the Torne Valley Station.

The Examiners returned to this issue in a later ruling. [FN5] In their May 9 Ruling, they determined that although the Board may have jurisdiction to consider the impacts of Bowline Unit 3 on the transmission system of PJM and its member companies, the Board should decline to act on the issue in view of other forums where these matters may be addressed. They also ruled that PJM/PSE&G did not raise

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any adjudicable issues with respect to the Applicant's study of impacts on the wheeling contract.

FN5. Case 99-F-1164, Ruling Concerning Identification of Additional Issues and Three Intervenor Funding Reports (issued May 9, 2001) (May 9 Ruling).

In the March 30 Ruling the Examiners also reserved decision on whether alternative sites would be an issue for adjudication, requiring the Applicant to provide an evaluation of alternative sites owned by or under option to the Applicant's affiliates. In the May 9 Ruling, they determined the Applicant's evaluation of reasonable alternatives to be adequate, rejecting the contention of the County that sites owned by or under option to affiliates and located outside of New York should have been included.

In addition to these rulings, the Examiners made awards from the intervenor fund. [FN6] At the time of the March 30 Ruling, \$106,320 of the originally available total of \$300,000 had been awarded to applying parties. In the March 30 Ruling, requests totaling an additional \$177,537 were considered, and of that, an additional \$42,857 was awarded. These requests included a request by the County for an additional \$63,000, of which \$11,000 was awarded "at this time." [FN7]

FN6. PSL S164(6).

FN7. March 30 Ruling, p. 31.

II. THE APPEALS

A. Overview

Several appeals have been timely filed to the Examiners' March 30 Ruling. On April 6, 2001, DEC filed a letter disputing the Presiding Examiner's view that the Board could impose requirements stricter than those imposed by the DEC Commissioner pursuant to federally delegated permitting authority. Also on April 6, PSE&G/PJM appealed from the Ruling's alleged rejection for adjudication of the issue of the impacts of the proposed facility on the reliability and operation of the regional electric transmission systems of New York and New Jersey.

The County filed an interlocutory appeal on April 9, requesting that the Ruling be vacated insofar as, in identifying issues for Article X purposes, it requires use of DEC's "substantive and significant" criteria rather than the Board's "material and relevant" criteria as to air and water issues also reviewed by DEC in acting on permit applications. [FN8] The County also asks that portions of the Ruling categorically denying or delaying a determination on its request for funds be set aside, and that the matter be remanded to the Presiding Examiner for reconsideration.

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FN8. The County's Appeal, p. 2.

Riverkeeper also filed an interlocutory appeal, dated April 10, seeking reversal of so much of the March 30 Ruling as rejected consideration under Article X of issues encompassed within DEC's exercise of federal permitting authority, particularly the Ruling's refusal to adjudicate the discharges from the proposed Bowline Unit 3 facility.

The Applicant responded to the PSE&G/PJM appeal on April 17, to the Riverkeeper appeal on April 19, and to the County's appeal, including its objections to it as untimely and improperly served, on April 27. [FN9] On April 19, DPS Staff filed a response to the PSE&G/PJM and Riverkeeper appeals, and in a letter dated April 26, DPS Staff responded to the County. DEC Staff filed a response to Riverkeeper's appeal on April 17, and a response to the County's appeal, including its objection to it as untimely and improperly served, [FN10] on April 26.

FN9. Because the County did not initially complete service of its appeal on all parties, the Secretary permitted responses to the County, following completion of service, to be filed by April 27, 2001.

FN10. The service of the County's appeal has been rectified without undue prejudice to parties. Accordingly, the Applicant's and DEC's objections to consideration of this appeal are denied.

On April 20, PSE&G/PJM sought leave to file and submitted a reply to responses to its appeal. Thereafter, on April 25, the Applicant filed a letter objecting to this reply as an unauthorized document, asking that it not be considered and offering rejoinder. On April 27, Riverkeeper sought leave to reply to the responses to its appeal filed by the Applicant and DEC, and on May 1, DEC Staff filed a letter requesting that this reply be disregarded as unauthorized, and offering rejoinder.

Two appeals were filed from the May 9 Ruling. On May 15, the County appealed the Examiners' determination that alternative sites outside New York State need not be considered by the Board. PJM/PSE&G filed an appeal, on May 16, of the Examiners' ruling that the impact of the proposed facility on the transmission system in New Jersey would not be considered. The Applicant filed its reply to the PJM/PSE&G appeal on May 22, and also on that date filed a separate reply to the County's appeal. DPS Staff, on May 22, filed a response to both the County and PJM/PSE&G appeals.

B. The Riverkeeper and County Appeals from the Issues Rulings

Riverkeeper and the County have filed similar appeals with respect to the March 30 Ruling. Both contended before the Examiners that all of their environmental issues were subject to Siting Board jurisdiction and determination, including all issues that were to be considered by the DEC Commissioner in the exercise of federally delegated permitting authority.

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As indicated above, the Examiners disagreed, and therefore refused to accept as Article X issues for adjudication matters raised by Riverkeeper and the County that related to the DEC permitting process, whether or not they were found to be substantive and significant by the Associate Examiner. In so doing, they addressed the interplay between the Siting Board's and DEC's responsibilities on matters subject to the DEC Commissioner's jurisdiction under the federally delegated air and water permitting programs. They rejected the suggestion that "the Board simply accepts all the findings of the Commissioner...." [FN11] In their view, the Board has responsibilities, albeit limited, as to the permitting issues: The Examiners stated that the Board must simply "accept or reject the conclusions of the DEC Commissioner" with respect to its statutory air and water quality determinations, [FN12] and must "take the Commissioner's decisions into account as a given" as it makes other required findings and performs its overall balancing function. [FN13]

FN11. March 30 Ruling, p. 13.

FN12. PSL §§168(2)(c)(iii), (c)(iv), and (d); March 30 Ruling, p. 12.

FN13. PSL §§168(2)(b), (c)(ii), (c)(v), (c)(vi), and (d); March 30 Ruling, p. 13.

The Examiners disagreed with each other as to whether the Board could, in the context of its finding that the facility minimizes environmental impacts, [FN14] consider the imposition of requirements stricter than those adopted by the DEC Commissioner. The Presiding Examiner opined that the Board could do so, on a showing that specific circumstances related to the proposed plant rendered existing standards inadequate. [FN15] The Associate Examiner dissented, finding that view inconsistent with the Examiners' apparent point of agreement that the DEC Commissioner has exclusively delegated authority to decide all federal environmental permitting issues.

FN14. PSL §168(2)(c)(i).

FN15. Citing *In re Harbert/Triga Co.*, Decision of the DEC Commissioner, April 30, 1990, p. 4.

Although they could not agree entirely on the scope of the Board's authority and responsibilities in connection with matters addressed by the DEC Commissioner, they did agree that, while the test of Article X issues to be litigated is generally whether they are "relevant and material," [FN16] PSL §172(1) requires that the "substantive and significant issues standard, as interpreted by DEC," is to be followed "for issues encompassed within DEC's exercise of federal permitting authority." [FN17] In short, it would be up to the Associate Examiner, in the DEC Issues Conference, to determine the scope of issues to be addressed concerning the federally delegated permits.

FN16. *Ibid.*, p. 6; PSL §167(1)(a).

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FN17. March 30 Ruling, p. 12.

On appeal, Riverkeeper argues that the Siting Board is charged with conducting a plenary review and evaluation of environmental impacts as part of its responsibilities under Article X to certify environmentally compatible power plants. In this regard, Riverkeeper emphasizes the following findings that the Board must make:

PSL §168(2)(b): The nature of the probable environmental impacts, including an evaluation of the predictable adverse and beneficial impacts on the environment and ecology, public health and safety, aesthetics, scenic, historic and recreational value, forest and parks, air and water quality, including the cumulative effect of air emissions from existing facilities and the potential for significant deterioration in local air quality, with particular attention to facilities located in areas designated as severe nonattainment, fish and other marine life and wildlife;

PSL §168(2)(c): That the facility (i) minimizes adverse environmental impacts, considering the state of available technology, the nature and economics of such reasonable alternatives as are required to be examined..., the interest of the state with respect to aesthetics, preservation of historic sites, forest and parks, fish and wildlife, viable agricultural lands, and other pertinent considerations....

PSL §168(2)(e): That the construction and operation of the facility is in the public interest, considering the environmental impacts of the facility and reasonable alternatives examined as required....

In the Athens Generating Company proceeding, [FN18] Riverkeeper continues, the record contained voluminous information on aquatic issues, many of which are under consideration in this proceeding, while DEC's "stringent adjudication standards" were not applied in that proceeding to determine which issues would be subject to adjudication. [FN19] Riverkeeper notes that Article X, unlike the DEC procedures, [FN20] does not require an offer of proof from a technical expert prior to the submittal of pre-filed testimony for the record.

FN18. Case 97-F-1563.

FN19. Riverkeeper's Appeal, p. 5.

FN20. 6 NYCRR §624.5(b)(2)(ii).

Nothing in the Public Service Law, Riverkeeper argues, requires the Board to follow procedures established by DEC in conducting Article X hearings. In fact, Riverkeeper notes, the 1999 amendments to Article X allowing DEC to exercise federally delegated permitting authority with respect to major generation facilities provided that: "In issuing such permits, the commissioner of environmental conservation shall follow procedures established in this article to the extent that they are consistent with federally delegated or approved

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environmental permitting authority." [FN21] The effect of not doing so, Riverkeeper submits, has resulted in the exclusion of an issue and evidence concerning toxic pollutant discharges that is "critical to the Board's review responsibilities under PSL §168." [FN22]

FN21. PSL §172(1).

FN22. Riverkeeper's Appeal, p. 10.

These, and other related arguments, boil down to two basic contentions: (1) that "DEC issues are Article X issues, because the Siting Board has an independent responsibility under state law to hear and evaluate environmental impacts, and to ensure their minimization" [FN23]; and (2) that the Board may not properly allow DEC procedures to limit the scope of issues and evidence presented in meeting that responsibility.

FN23. *Ibid.*, p. 12.

The County, in its appeal, also asserts that the Board has plenary jurisdiction as to environmental issues, even those relating to the issuance of permits by DEC. Like Riverkeeper, the County argues that the Board must make "an independent determination... regarding the very air and water issues the [March 30] Ruling seeks to abdicate plenary jurisdiction over." [FN24] Advancing some of the arguments also made by Riverkeeper, the County also contends that the "substantive and significant" standard for adjudicable issues is inapplicable to Article X consideration of air and water quality impacts.

FN24. The County's Appeal, p. 8.

The County adds that, even if the responsibility of the Board were limited to accepting or rejecting the findings of the DEC Commissioner, it will need its own, less constrained record on air and water issues if it is to be able to make that finding. Moreover, the County continues, the Examiners misconstrue the import of PSL §172(1), which it asserts does not constrain the procedures to be followed by the Board, but rather requires the DEC Commissioner to follow Article X procedures, to the extent they are consistent with the federal delegation of permitting authority; and the "substantive and significant" standard is established by the laws of New York, not by the federal delegation. Further, the County argues, the DEC Commissioner, again to the extent consistent with the federal delegation of permitting authority, is required to base her decision on the Associate Examiners' conclusions and "the record in the [Article X] proceeding." [FN25]

FN25. PSL §167(1)(a).

In response, the Applicant argues that the March 30 Ruling properly determined that the adjudicatory record on DEC permitting issues would constitute the Article

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X record on those issues. Riverkeeper and the County improperly seek dual litigation by DEC and the Board on permitting issues, it argues, when the Board should rely on the DEC Commissioner's determination. The Applicant cites the decision in the Heritage Power proceeding, where the Board held:

The authority to issue air and water permits pursuant federal law, the Examiners noted, has been delegated by EPA to the DEC. In this proceeding, these permits ... were provided to us by the DEC Commissioner. Consequently, we may conclude that the impacts covered by these programs on air and water quality have been minimized, and make the related findings required by PSL §168(2)(c). [FN26]

FN26. Case 99-F-0558, Application of Heritage Power LLC, Opinion and Order Granting Certificate of Environmental Compatibility and Public Need (Issued January 19, 2001) (Heritage Power Opinion), pp. 7-8.

Reliance on the development of the record in the Athens Generating Company proceeding, the Applicant asserts, is misplaced, as that case was a catalyst for the 1999 amendments to Article X. Moreover, the Applicant continues, nothing in the amended Article X either improperly subjects the Board to DEC authority, or interferes with what Riverkeeper and the County assert to be the Board's plenary environmental review, because, as the Examiners determined, the Board may accept or reject the DEC Commissioner's findings. The Applicant also claims that Riverkeeper, in an earlier context, inconsistently argued to EPA for a permitting process independent of Article X review.

DEC Staff argues, essentially, for a bright line between the DEC permitting responsibilities and the Board's Article X responsibilities. DEC Staff argues that Article X contemplates either the Board or the DEC Commissioner (but not both) will "review and issue conditions pertaining to federally delegated permits." [FN27] DEC Staff agrees with the Applicant's assertion that Riverkeeper and the County improperly ask for dual consideration of permitting issues by the DEC Commissioner and the Board, and argues that this is inconsistent with the federal delegation of permitting issues to DEC.

FN27. DEC Staff's Response to Riverkeeper, p. 3.

Arguing that extraordinary circumstances do not exist to justify interlocutory appeal here, DEC Staff also cites the Heritage Power Board's reliance on the DEC permits in making its required findings under PSL §168(2). DEC Staff argues that this reliance effectuates the intention of Article X, which anticipates, as to air and water quality, determinations of compliance with "permits pursuant to federal recognition of state authority in accordance with the federal Clean Water Act, the federal Clean Air Act, and the federal Resource Conservation and Recovery Act," [FN28] and requires findings of compliance with water and air quality standards. [FN29]

FN28. PSL §164(1)(f) (footnotes omitted).

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FN29. PSL §§168(2)(c)(iii) and (iv).

In DEC Staff's view, this independent authority of the DEC Commissioner to deal exclusively with federally delegated permitting issues is fully compatible with an integrated Article X process. The federal delegation to the DEC, it asserts, requires it in permitting proceedings to use the procedures governed by the Uniform Procedures Act, [FN30] which include the "substantive and significant" test for the determination of adjudicable issues. However, "the DEC hearings record on the proposed permits will be incorporated into the whole Article X record." [FN31] Like the Applicant, DEC Staff also argues that Riverkeeper in the past has made inconsistent arguments in another context.

FN30. ECL Article 70; 6 NYCRR Parts 621 and 624.

FN31. In the Matter of the Application of Ramapo Energy LP, DEC Commissioner's Ruling on Motion for Leave to File an Expedited Appeal (Issued April 4, 2001), p. 3.

DPS Staff, similarly, argues for a bright line between the DEC federally delegated permitting function and the Board's responsibilities. According to DPS Staff, the Board should not allow more adjudication than is allowed in the DEC proceeding, as this would potentially create an undesirable conflict between the permits issued by DEC and the Board's certificate. In the view of DPS Staff, the additional issues proffered by Riverkeeper and the County are not "relevant and material" to the Article X process, "because they neither affect whether the Applicant should be granted a certificate nor which conditions are appropriate for imposition therein." [FN32]

FN32. DPS Staff Response, p. 7.

Reliance on the Athens Generating Company procedures is inappropriate following the 1999 Article X amendments, DPS Staff also asserts, but the provision in amended Article X that "the commissioner of environmental conservation shall follow procedures established in this article to the extent that they are consistent with federally delegated or approved environmental permitting authority" [FN33] is addressed to the DEC Commissioner. Finally, DPS Staff asserts, Article X implies that the DEC permitting process and the certification process should take place on a joint record. [FN34]

FN33. PSL §172(1).

FN34. PSL §167(1)(a).

As indicated above, Riverkeeper sought leave on April 27 to file a reply to responses made to its appeal. The reply is intended to address claims by DEC Staff and the Applicant regarding the alleged inconsistency of Riverkeeper's current appeal with its prior advocacy. DEC Staff objects, asserting the filing is

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unauthorized due to a lack of extraordinary circumstances. [FN35] DEC Staff is correct that no extraordinary circumstances have been shown for this pleading, and it will be disregarded here.

FN35. 16 NYCRR §3.6(d)(3).

Discussion

Under applicable regulations, interlocutory review of the Examiners' rulings is available "only in extraordinary circumstances." [FN36] Extraordinary circumstances exist here because the appeals and responses present a fundamental issue, regarding the interplay of DEC air and water permits and the Siting Board's authority to grant or deny certificates, upon which the Board has not previously spoken. As noted above, the Examiners have declined to accept, as Article X issues, those issues that were proffered by Riverkeeper and the County as permitting issues. As to those issues that were also rejected as not "substantive and significant" by the Associate Examiner in the DEC permitting proceedings, no information will be taken into the record. [FN37]

FN36. 16 NYCRR §4.7(a).

FN37. There is no current concern about the import of issues that will be adjudicated in the DEC permitting proceedings, as their adjudication will take place on a joint record with the Article X proceeding.

In deciding what evidence should be taken on issues before the Siting Board, it is helpful first to review the framework of Article X and the relationship between the Siting Board and DEC. Article X of the Public Service Law provides for a comprehensive review of issues pertaining to the siting of major electric generating facilities, [FN38] and vests the Board with authority to grant or deny applications for certificates of environmental compatibility and public need for such facilities. [FN39] Following a required public involvement process and a formal pre-application environmental study and stipulation process, a developer files an application for a certificate with the Siting Board. [FN40] Under PSL § 165(1), the Chairman then determines whether the application complies generally with PSL §164(1). If so, the Chairman sets a date for the commencement of public hearings.

FN38. A "major electric generating facility" is defined as a facility having a generating capacity of 80,000 kW (80 MW) or more. PSL §160(2).

FN39. PSL §162.

FN40. PSL §163; 16 NYCRR §§1000.3, 1000.4.

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Simultaneously, the applicant must seek required air emission and water discharge permits from DEC. Pursuant to a 1999 amendment to Article X and the Environmental Conservation Law (ECL), and pursuant to authority granted by the federal Environmental Protection Agency (EPA) under the federal Clean Water Act and Clean Air Act, DEC determines whether air emission and water discharge permits should be issued to power plant developers subject to PSL Article X. [FN41]

FN41. 1999 N.Y. Laws c. 636, §§6-15; PSL §171(1); ECL §§17-0701(8), 17-0823, 19-0305(2)(j).

The Board cannot issue a certificate unless it first finds that the proposed facility will not violate applicable DEC regulations and water and air quality standards. [FN42] The DEC permits, therefore, are a prerequisite to certification. The Siting Board must also find, as a prerequisite to issuing a certificate, that the proposed facility will minimize adverse environmental impacts (PSL § 168(2)(c)(i)) and will be compatible with public health and safety (PSL § 168(2)(c)(ii)).

FN42. PSL §168(2)(c)(iii)-(iv).

The DEC permits ensure that impacts to air and water quality are minimized and are compatible with public health and safety, including imposition of appropriate control technologies and permit conditions. Consequently, the Board must accept the specific findings and conclusions of the DEC Commissioner relating to the air emission and water discharge permits issued pursuant to federal delegation. After adding reasonable mitigation measures relating to other (non-DEC) matters and assuring that overall environmental impacts have been minimized, the Board then balances a proposed project's benefits against adverse impacts, and determines whether construction and operation would be in the public interest. [FN43]

FN43. See PSL §168(2)(e); Case 97-F-1563, Application by Athens Generating Company, L.P. Opinion and Order Granting Certificate of Environmental Compatibility and Public Need (June 15, 2000) (Athens Generating Opinion), p. 12, confirmed by Matter of Citizens for the Hudson Valley v. New York State Bd. on Electric Generation Siting and the Environment, A.D.2d (3rd Dept., 2001), Index No. 87928, slip. op. April 12, 2001.

In view of the foregoing, we affirm the Examiners' ruling not to accept the permitting issues in question as Article X issues. As the Heritage Power Siting Board held, when the DEC Commissioner provides air and water permits issued pursuant to federal delegation, we may appropriately make the required finding that environmental impacts covered by these programs have been minimized and will be in compliance with applicable regulatory requirements. [FN44] We agree with DEC Staff that Article X comprehends the objective of the environmental review in these areas to be coextensive with compliance with the federally delegated regulatory requirements. [FN45] There is no reasonable basis, therefore, for us to consider the same environmental questions in a different manner.

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FN44. Heritage Power Opinion, pp. 7-8; PSL §§168(2)(c)(i), (iii), and (iv).

FN45. PSL §164(1)(f).

In so holding, we disagree with the conclusion of the Examiners below that we may either accept or reject the DEC Commissioner's findings regarding permitting matters. [FN46] Rejecting such findings could only result in improperly countermanding conditions in a permit, or reversing the underlying decision, embodied in the permit, that environmental impacts are minimized and that the facility can be operated consistent with the applicable environmental laws and regulations. [FN47] Accordingly, we cannot properly second guess the DEC Commissioner's determinations in that fashion.

FN46. We further reject the Presiding Examiner's view that we could, in some circumstances, impose stricter standards or conditions than those imposed by the DEC Commissioner. The Presiding Examiner relies on Matter of Harbert/Triga Company, Interim Decision of the Commissioner [Issued May 10, 1989], pp. 3-4. He appears to regard an exercise of such discretion as a matter of state law arising under SEQRA, and therefore falling within the Board's jurisdiction under Article X. In our view, such discretion should be exercised by the permitting authority. Moreover, that decision arose in the context of the State Solid Waste Management Policy, itself a matter of state law. Discretion afforded under federally delegated permitting programs must, as DEC Staff argued in its April 6 letter, be exercised by the DEC Commissioner.

FN47. If the permits are denied, the facility could not operate even if we grant a certificate.

Inasmuch as the Board has no reason independently to consider any evidence relating to the DEC permitting issues, we have no role in determining the scope of evidence to be presented in the joint record on issues which are addressed by the DEC Commissioner in the permitting process. Arguments about the standards DEC is required to apply must be raised to the DEC Commissioner, not in this forum.

C. The PJM/PSE&G Appeal Regarding Transmission Issues

In the March 30 Ruling, the Examiners listed "PJM and member company impacts" as an issue requiring further discussion. [FN48] They explained that PJM/PSE&G sought to present evidence about the impacts of the proposed plant, together with the impacts of two other generating facilities proposed for sites in Rockland County (the Ramapo Energy Project and the Torne Valley Station), on the PJM and its member companies (including PSE&G). [FN49] The Examiners reported that PJM/PSE&G sought to demonstrate that the Applicant did not adequately study the impacts of its proposed facility, and that the costs of the necessary upgrades should be allocated among the three potential Rockland County power plant developers through the Article X process. In response, the Applicant had claimed the Board lacks jurisdiction to address these issues, that these issues are being properly

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addressed elsewhere, and that it fully complied with its pre-application stipulation regarding studies of system impacts.

FN48. March 30 Ruling, p. 22.

FN49. Such impacts are alleged to include, among other things, the need for new or upgraded breakers and phase angle regulators in Waldwick, New Jersey, at a cost of over \$30 million.

The Examiners deferred ruling on whether any impacts of Bowline Unit 3 on PJM and its member companies should be considered in this proceeding, however, until the Applicant provided a study of the proposed facility's impact on a 1000 MW wheeling contract between Con Edison and PSE&G. The Applicant had agreed to provide this study in its pre-application stipulation, but appeared not to have done so. The Examiners ruled, in any event, that "PJM impacts of other plants proposed for Rockland County will definitely not be considered in this case." [FN50]

FN50. March 30 Ruling, p. 25.

The Applicant subsequently responded by resubmitting an appendix to its application, which it said reported the effects of dispatching Bowline Unit 3 on Con Edison-PSE&G phase-shifted tie lines, and on the 1000 MW wheeling contract. PJM/PSE&G claimed in response that the Applicant failed to study properly thermal transfer limits, and reiterated its general interest in litigating the issue of the proposed facility's impact on the PJM and PSE&G transmission systems.

The Examiners then thoroughly discussed the arguments pertaining to whether the Board has jurisdiction and, if so, whether it ought to address this issue. They ruled that:

Regardless of whether the Board has any power and authority in this area, however, good reasons have been offered about why the Board should decline to exercise either with respect to Bowline Unit 3's impacts on the PJM and PSE&G transmission systems.... In sum, we decline to identify any PJM and PSE&G transmission system impacts as an issue in this proceeding as the Board should not act in this area. [FN51]

FN51. May 9 Ruling, pp. 14-15.

PJM/PSE&G have filed appeals to both of these rulings. In their appeal of the March 30 Ruling, they explain that PSE&G is a utility company which owns and operates high voltage electric transmission lines in the State of New Jersey, and that PJM is responsible for the safe and reliable operation of a centrally-dispatched transmission system which covers all or part of six states. PJM/PSE&G indicate that PSE&G's transmission system is interconnected with transmission facilities in New York via (1) a 345 KV transmission line from Ramapo, New York to Waldwick, New Jersey, (2) a 500 KV transmission line from Ramapo, New York to Branchburg, New Jersey, and (3) a 345 KV line from Hudson, New Jersey to New York,

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New York. Additionally, phase angle regulators which control current flows between the states are maintained at a PSE&G substation in Waldwick, New Jersey.

PJM/PSE&G assert that the Board has jurisdiction to address impacts of the proposed facility on these New Jersey transmission facilities because of the Board's responsibility under PSL §168(2) to determine that the facility is in the public interest. They assert that in the Athens Generating Company proceeding the Board expressly addressed the impact of that proposed plant on the transmission system, [FN52] directing that problems of loading the transmission line be resolved by the parties directly involved, and announcing that the applicant in that case must pay a proportional share of additional transmission system costs. PJM/PSE&G argue as well that in the Heritage Power case the Board included reliability of the proposed facility's electric interconnection and effects on the transmission grid in its public interest assessment. [FN53] The Board's jurisdiction is buttressed here, PJM/PSE&G continue, by the PSL §165(2) requirement to include "issues which warrant consideration in order to develop an adequate record as determined by an order of the board."

FN52. Athens Generating Opinion, pp. 103-105.

FN53. Heritage Power Opinion, pp. 10-11.

PJM/PSE&G argue that, although this issue is also subject to non-exclusive jurisdiction of the New York Independent System Operator, Inc. (NYISO) and the Federal Energy Regulatory Commission (FERC), this Article X proceeding may be the only forum where costs imposed on transmission facilities in New Jersey by Bowline Unit 3 can be addressed.

As to the determination by the Examiners not, in any event, to address the cumulative impacts of this facility and the proposed Ramapo Energy Project and Torne Valley Station, PJM/PSE&G assert that cumulative impacts and cost allocations were addressed in the Athens Generating Company case. [FN54] Moreover, PJM/PSE&G continue, in both of the proceedings involving those other Rockland County projects, the pre-application stipulations require the developer to conduct a cumulative analysis and evaluation, assuming the simultaneous operation of both facilities. The cumulative impacts of the three facilities must be considered in this proceeding as well, PJM/PSE&G argue, or "the context and real world conditions of the impact of Bowline Unit 3 will never be adequately considered." [FN55] Moreover, they continue, the three plants should be presumed to go into service contemporaneously, but if a queue-based analysis is used, Bowline Unit 3 should be considered the last to go into service, so that there will be a complete record. The Examiners, they add, did not explain in the March 30 Ruling why it would be beyond the Board's jurisdiction to consider the cumulative impacts of the three facilities.

FN54. Athens Generating Opinion, pp. 104-105.

FN55. PJM/PSE&G's April 6 Appeal, p. 10.

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In response, the Applicant argues that the Siting Board does not have jurisdiction over impacts of Bowline Unit 3 on transmission facilities subject to FERC jurisdiction or to the jurisdiction of another state. The interconnection of new generation facilities to transmission facilities used in interstate commerce, [FN56] the Applicant maintains, is within FERC's exclusive jurisdiction. The Applicant cites a determination by FERC, in an order approving a utility's pro-forma interconnection and operating agreements which, among other things, addressed an interconnecting generator's responsibilities for the cost of interconnection facilities and necessary system upgrades, that "interconnection service is a component of jurisdictional transmission services required to be provided under the Order No. 888 open access transmission tariff. Accordingly, we conclude that we have exclusive jurisdiction over the rates, terms and conditions contained in the filed agreements and procedures." [FN57]

FN56. 16 U.S.C. §824(b)(i).

FN57. Entergy Services Inc., 91 F.E.R.C. ¶61,149 (2000), 2000 FERC. LEXIS 999 at 1010; Tennessee Power Company, 90 F.E.R.C. ¶61,238 (2000).

The NYISO's open access transmission tariff (OATT), the Applicant continues, governs new generator interconnections to the New York State Power System. The tariff provides that new generators must submit their interconnection proposals to the NYISO, and that the NYISO, in cooperation with the interconnecting transmission owner, will perform a System Reliability Impact Study (SRIS) "to determine whether the proposed interconnection may degrade system reliability or adversely affect the operation of the NYS Power System.... The interconnection shall not proceed if the ISO concludes that the proposed interconnection may degrade system reliability or adversely affect the operation of the NYS Power System." [FN58] The Applicant indicates that a Bowline Unit 3 SRIS has been performed, and that the NYISO Operating Committee on January 17, 2001 approved the SRIS, thus finding that the proposed facility does not have a significant adverse effect on New York's bulk power system.

FN58. NYISO OATT, §19B.1.

Moreover, the Applicant argues, the PJM/PSE&G issue is an ISO "seams" issue, relating to interconnection among regions, and FERC has required regional transmission organizations (RTOs) to "work closely with other regions to address inter-regional problems and problems at the 'seams' between the RTOs." [FN59] In compliance with Order 2000, the Applicant asserts, the NYISO has been collaborating with other system operators, including PJM, to standardize reliability and market practices in order to address seams problems. The four ISOs involved have established a Planning Working Group which, in turn, has established a Task Force on New Interconnection Issues (TFNII) with the goal of creating procedures for coordination of new interconnection studies for projects likely to have impacts among multiple ISO regions. Accordingly, the Applicant argues, the issue PJM/PSE&G raise here is being addressed as part of a FERC RTO directive. [FN60]

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FN59. Regional Transmission Organizations, Order 2000 [III F.E.R.C. Stats. & Regs.] (CCH), ¶131,089 at 31,167 (1999).

FN60. The Applicant observes that FERC has rejected a request by PSE&G to amend the NYISO OATT "to include explicit procedures to address the safety and reliability concerns of neighboring transmission owners prior to interconnection of new generation," determining that OATT already "sufficiently addresses procedures related to interconnection," and indicating that owners and operators of interconnected systems are to establish among themselves mutually acceptable operating practices, with recourse to FERC for transmission service rate determinations. Central Hudson Gas & Electric Corp., 90 F.E.R.C. ¶61,045 (2000).

Turning to the treatment of transmission impacts in other Article X proceedings, the Applicant contends that PJM/PSE&G's reliance on the Heritage Power proceeding is misplaced. Citing the Examiners' reservations in that case about whether the cost responsibility for necessary transmission upgrades is properly part of the Board's public interest assessment, [FN61] the Applicant observes that the Board in that proceeding merely adopted a certificate condition requiring the Applicant to construct and operate its facility in accordance with approved tariffs and applicable NYISO rules. Moreover, the Applicant continues, in the Athens Generating Company proceeding, the affected transmission facility addressed by the Board was a 115 KV circuit that was neither under NYISO control nor regulated by FERC. [FN62] Rather, the facility is under the jurisdiction of the New York Public Service Commission (PSC), which enforces Siting Board orders and otherwise has jurisdiction to resolve cost allocation and associated matters among New York utilities. Neither the Siting Board nor the PSC, the Applicant notes, has jurisdiction over utilities and facilities in New Jersey.

FN61. Case 99-F-0558, Application of Heritage Power LLC, Recommended Decision (issued December 15, 2000), pp. 71-72.

FN62. Athens Generating Order, p. 103.

The Applicant also maintains that, even if the transmission impacts of Bowline Unit 3 are considered in this proceeding, the impacts of other plants proposed to be constructed and interconnected in Rockland County should not be considered. The Applicant argues that PJM/PSE&G has made no showing that including the impacts of the other facilities would reflect realistic assumptions. Indeed, the Applicant asserts, evidence on cumulative impacts would be speculative, especially in view of a recent modification reducing the size of the proposed Torne Valley Station. Moreover, at the time the Bowline Unit 3 SRIS was completed, neither the Ramapo Energy Project nor the Torne Valley Station were properly included in the SRIS, under NYISO procedures.

DPS Staff also responded to the PJM/PSE&G appeals. DPS Staff agrees with PJM/PSE&G that the Board has jurisdiction to consider transmission system impacts and costs, in light of the Article X precedents cited by PJM/PSE&G, and also in light of the requirement in the Board's regulations that an application must contain "a discussion of the benefits and detriments of the proposed facility on

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ancillary services and the electric transmission system, including impacts associated with reinforcements and new construction." [FN63] DPS Staff argues, however, that these matters are more appropriately considered by an inter-ISO committee, especially since the Board, even if it determined what transmission reinforcements were required, could not require parties other than the Applicant to pay their share of associated costs. DPS Staff agrees with the Applicant that inclusion of Ramapo Energy Project and Torne Valley Station impacts in the Bowline Unit 3 SRIS would be inconsistent with NYISO procedures, and it also argues that PJM/PSE&G has not established that the additional study this issue requires would be relevant and material, or could be provided in a timely fashion, as required by 16 NYCRR §§1000.8(b)(2) and (3).

FN63. 16 NYCRR §1001.1(c).

The arguments presented in the appeal to the May 9 Ruling and responses to it are largely repetitive of the foregoing arguments. [FN64]

FN64. As noted above, PJM/PSE&F sought leave to reply to responses to its appeal of the March 30 Ruling, in a pleading dated April 20, 2001. On April 25, the Applicant requested rejection of the April 20 pleading as unauthorized, and submitted countering arguments. PJM/PSE&G's proffered reply is unauthorized and largely redundant, and these two additional pleadings are disregarded here.

In response to the May 9 Ruling, PJM/PSE&G argue that the Examiners improperly concluded that the Board should not exercise its jurisdiction here. They assert that FERC's approach of requiring utilities to work together to resolve operating issues includes no concrete measures to address its issue in this case. "The 'seams' coordination process, without real enforcement powers," they argue, "is not an effective response to the parties' present need for a regulatory authority with the ability to ensure that Applicant does not impose negative transmission impacts (and associated costs) on its neighbors." [FN65] Neither the TFNII nor its parent, the ISO MOU Planning Working Group, according to PJM/PSE&G, exists to make decisions in particular cases.

FN65. PJM/PSE&G's May 21 Appeal, p. 7.

As to the Examiners' concern that the Board has no authority over New Jersey utilities and their facilities, PJM/PSE&G assert that there is no reason for New Jersey utilities to submit to this Board's jurisdiction, as the only question presented is the need for the Applicant to assume responsibility for mitigation of impacts it causes.

Finally, PJM/PSE&G contend that the Examiners improperly failed to consider the linkage between adverse transmission system impacts in New Jersey and PSE&G's ability to fulfill its 1000 MW wheeling contract with Con Edison.

In response to the Examiners' suggestion in the May 9 Ruling that the Board may have jurisdiction over the PJM/PSE&G issue here, the Applicant argues that the Board's regulation (16 NYCRR §1001.1(c)) requiring consideration of transmission

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issues was adopted December 16, 1997, before the NYISO had been created and the NYISO OATT became effective. Moreover, the Applicant continues, the Board's broad public interest review cannot properly extend to consideration of facilities outside of New York State over which the NYPSC and the Siting Board clearly have no authority.

With respect to the Examiner's conclusion that the issue is best resolved by the TFNII, under FERC's ultimate supervision, the Applicant also points out that in discovery in the Ramapo Energy Article X proceeding (Case 98-F-1968) PJM conceded that, with respect to its own approach to transmission upgrade cost allocation, the procedure for resolving issues concerning projects outside of the PJM Control Area is being addressed as part of the ISO cooperative process among the New York, PJM, Ontario, and New England ISOs. Although the TFNII may not resolve individual disputes, the Applicant argues, it will develop a process for that purpose.

Finally, the Applicant asserts that the 1000 MW wheeling contract between Con Edison and PSE&G, which is both an interstate transmission arrangement and a wholesale sale of electricity, clearly falls within FERC's jurisdiction.

Discussion

We affirm the Examiners' ruling not to address the impacts of the proposed Bowline Unit 3 on transmission systems in New Jersey and elsewhere within the PJM. [FN66] Our regulations provide for a showing by applicants that new generating facilities will be compatible with the transmission system. [FN67] In both the Athens Generating and Heritage Power cases, however, the Siting Boards were careful not to substitute their judgment for that of another agency having authority to resolve specific transmission issues, and in Athens Generating the ultimate resolution of unresolved issues was referred to the NYPSC, the jurisdictional entity in that circumstance.

FN66. This determination renders moot the question whether any such consideration should include impacts of other proposed facilities in Rockland County. We note that the reasons we would decline to consider such impacts include possible conflicts with Siting Board decisions in the other Article X proceedings (for each Siting Board has two different ad hoc members), a difficulty which reinforces our conclusion that Article X does not present an appropriate forum for resolution of these issues.

FN67. 16 NYCRR §1001.1(c).

The NYISO OATT, filed under the auspices and supervision of FERC, has encompassed the interconnection and transmission impact matters raised by PJM/PSE&G here. The NYISO will not permit an interconnection until an applicant's SRIS is approved and it is determined that the New York transmission system under its supervision will not be adversely impacted. Although we may require compliance with such requirements, we need not and should not separately address the same issues or substitute our judgment for that of the NYISO. Moreover, the specific issues

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involved, such as allocation of cost responsibility for system upgrades, are removed from our core siting responsibility.

It would be anomolous for the Board to address "seams" issues between, and being addressed by, neighboring ISOs. Not only would that put us in the position of deciding matters relating to entities that are not under our jurisdiction at the state level (New Jersey utilities), but it would improperly challenge the work being done by inter-ISO entities under FERC's direction and guidance. The Examiners properly concluded that the inter-ISO process is the appropriate forum for the issues raised here. Any complaints regarding the alleged inadequacy of that process and its determination of cost allocation and system operation issues among ISOs should be raised at FERC, not here.

D. The County Appeal Concerning Alternative Sites

Another issue deferred for further consideration in the March 30 Ruling was an issue raised by the County, whether the Applicant failed to consider adequately alternative sites for the proposed project. [FN68] The Applicant argued that it is a private applicant, and therefore must evaluate only alternative sites that it owns or has an option to purchase. [FN69] The Examiners ruled that this requirement extends, in the circumstances of this case, to the Applicant's affiliates, and directed the Applicant to supplement its application with an evaluation of affiliates' sites.

FN68. The County asked the Board to make a prompt determination under PSL §167(5) that the Applicant's consideration of alternative sites is inadequate. Under that section, we are authorized, but not required, to make a determination early in a proceeding whether an applicant's proposed site is preferable to alternatives.

FN69. 16 NYCRR §1001.2.

In response, the Applicant provided information about seven alternative sites in New York owned by or under option to its affiliates, or its parent Mirant Corporation (Mirant). In that filing, the Applicant explained why it believes none of the alternative sites in New York are suitable for the proposed facility. The County argued that alternatives outside of New York should have been considered as well, identifying nine other sites owned by Mirant in Maryland, Virginia, eastern Massachusetts, and Maine.

The Examiners, in their May 9 Ruling, ruled that alternative sites located outside of New York State are not "reasonable" alternatives that must be evaluated by the Applicant [FN70] or considered by the Board. [FN71] Because the Siting Board's jurisdiction is limited to sites within the borders of New York, and it cannot certificate a plant for an alternative site located elsewhere, the Examiners reasoned that evidence on alternative sites located outside of New York would be neither relevant nor material to the Board's decision.

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FN70. PSL §164(1)(b).

FN71. PSL §§168(2)(c)(i) and 168(2)(e).

The County has appealed this ruling. The County argues, first, that none of the provisions of Article X, its legislative history, or the Board's regulations, addressing alternative sites, expressly limit the range of alternatives to locations within New York State.

Second, the County asserts, "[w]here power can be practically transmitted from the alternative location to the target service area just as readily as from the proposed location, then the alternative location is a reasonable alternative against which the proposed site must be compared." [FN72] Because the Applicant's stated objective is to provide power both within New York and to other areas outside of the state, the County maintains, other sites outside of New York that could serve those same areas are reasonable alternatives to consider. [FN73] The County asserts that any properties owned by Mirant within the PJM distribution area and states adjacent to New York should be considered.

FN72. The County's May 15 Appeal, p. 5.

FN73. The County cites 16 NYCRR §1001.2(c), which provides: The description and evaluation [of reasonable alternatives] shall also take into account the objectives and capabilities of the applicant"

Third, the County argues that the ruling would require the Siting Board to ignore a site clearly preferable with respect to environmental impact in favor of greater environmental impacts within New York, undermining the purpose of the alternative site evaluation.

Fourth, the County asserts that the Examiners improperly shifted the burden of proof to it to show that alternatives located outside of New York are preferable to the proposed site. [FN74]

FN74. The County cites *Tyminski v. Public Service Commission*, 38 N.Y.2d 156, 160 (1975) for the proposition that an adjudicatory body cannot impose stricter requirements than those required by the Legislature, and argues that Article X "places no burden on the County to explain why the alternative sites it identified ... are reasonable." The County's May 15 Appeal, p. 8.

Finally, the County argues that Article X is the functional equivalent of SEQRA and, therefore, incorporates a "rule of reason" established in SEQRA case law as to the extent to which alternatives must be considered. [FN75]

FN75. The County cites *In the Matter of Edgar King*, 223 A.D.2d 894, 896 (3rd Dept. 1996), and *Town of Dryden v. Tompkins County Board of Representatives*, 78 N.Y.2d 331, 333-334 (1991).

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In response, the Applicant argues that there is no legal basis for the County's argument that out-of-state locations should be considered. Nothing in Article X or its legislative history expressly requires consideration of out-of-state sites, the Applicant continues, and Tyminski, supra, simply holds that an applicant in an Article VII (high voltage transmission line siting) case must consider reasonable alternatives, but not every conceivable alternative.

The argument that out-of-state locations are reasonable alternatives to consider, the Applicant continues, ignores the transmission limitations restricting the amount of energy that can be transferred into New York from adjacent states. The Applicant cites a March 1, 2000 report issued by NYISO addressing the adequacy of electric supply in New York State.

Next, the Applicant argues that the County has failed to indicate which of the Mirant sites on its list, if any, would be reasonable alternatives to consider. The County overlooks, the Applicant argues, alleged benefits to be provided by its proposed facility at the proposed site relating to the local economy, the environment, system reliability, and energy prices.

DPS Staff also responds to the County, arguing first that, although it did not appeal the March 30 ruling, it disagrees with the Examiners that Article X requires consideration of alternative sites owned by an applicant's affiliates. According to DPS Staff, PSL §160(3) and 16 NYCRR §1001.2 limit the alternative sites that must be considered to those owned by a private developer itself, and do not include those belonging to its affiliates.

Regardless, DPS Staff continues, sites located outside of New York State need not be evaluated by the Applicant, and the Applicant need not consider any sites that are not reasonable alternatives. DPS Staff support the Examiners' conclusion that sites outside of New York are unreasonable per se because "[n]o alternative location outside of the State would allow the Applicant to compete in the wholesale electricity supply market in New York. Even if the applicant's objective were only to supply a certain quantity of generating capacity and electric energy to the New York State transmission system, no out-of-state alternative site owned by, or under option to the applicant's affiliates would permit any electric generating capacity to be made available in New York." [FN76] DPS Staff also argues that it is unlikely that the same amount of energy as would be produced by Bowline Unit 3 would be made available to New York from a similar facility at an out-of-state site.

FN76. DPS Staff's May 22 Reply, p. 5.

Discussion

We affirm the Examiners' ruling that out-of-state sites need not be evaluated by a private applicant. The Examiners concluded that no out-of-state site could be a reasonable alternative for the Applicant to evaluate, and that therefore evidence about any such site would not be relevant and material in this proceeding. That conclusion rests, in turn, on the fact that we have no authority to grant a

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certificate of environmental compatibility and public need for any site outside of New York.

As a private developer, the Applicant is required to provide "a description and evaluation of reasonable alternative locations to the proposed facility ..."
[FN77] The alternative locations that are candidates in this respect are "limited to parcels owned by, or under option to" the Applicant. [FN78] The reason that alternative sites considered by private applicants are limited to parcels they own or are under option to them is that these are the only sites we could review and, ultimately, allow applicants to use instead of the proposed site. Because we cannot grant a certificate to construct and operate a facility outside of New York State, it follows that out-of-state sites cannot be reasonable alternatives for us to consider. The Applicant, accordingly, has fulfilled its obligation to present materials on reasonable alternative sites.

FN77. PSL §164(1)(b).

FN78. 16 NYCRR §1001.2(d). DPS Staff now argues that none of the out-of-state sites at issue here would have to be considered for such a description and evaluation because they are owned by affiliates of the Applicant, and not by the Applicant itself. However, the Examiners ruled that alternative locations owned by affiliates are covered by the requirements of 16 NYCRR §1001.2(d). Neither the Applicant nor DPS Staff appealed that ruling, and it is not before us for review.

It is true that information on alternative sites (whether owned or not owned by an applicant) may be presented by other parties, at the discretion of the Presiding Examiner, in connection with our public interest assessment and may include an argument that we should deny a certificate outright (i.e., the "no action" alternative). [FN79] Any such information, to be of decisional consequence, "must show that the alternative site is both preferable and available, and would resolve a significant problem with the proposed site." [FN80] In this proceeding, however, the County has not offered to present information on alternative sites, and has merely alleged that the application is incomplete. The only issue before us is the adequacy of the Applicant's consideration of alternative sites.

FN79. Athens Order, p. 93; Case 97-F-1563, Athens Generating Company, L.P., Order Concerning Interlocutory Appeals (issued January 28, 1999) pp. 13-14.

FN80. Athens Order, p. 93. Because review of such information in connection with the no action alternative does not depend upon an applicant's ownership of a site, information on out-of-state sites theoretically could be relevant and material in that context. However, we remain skeptical about the extent to which the existence of other sites not owned by an applicant could affect the outcome of Article X cases. Further, in view of the existence of interregional transmission constraints and the ISO "seams" problems discussed earlier, it seems unlikely that the existence of suitable sites in neighboring states would be very important to us in current circumstances.

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E. The County Appeal Concerning Intervenor Funding

The County was awarded \$15,000 of intervenor funds, at the first prehearing conference held September 12, 2000, for its consultant to make a preliminary assessment of the Article X application. In a letter dated February 23, 2001, the County requested additional funds totaling \$63,000. This consisted of \$28,000 for a further review of the application on air, water, and other issues, and \$35,000 for the County's consultants to review interrogatories, prepare prefiled testimony and exhibits, and attend hearings. In the same submittal, the County accounted for the use of the \$15,000 initial award.

At the March 7-8 issues conference, the County indicated that the \$28,000 was for work that had already been performed by the consultant in reviewing the application. In supplemental submissions filed March 14 and March 20, the County (1) indicated how the \$35,000 would be allocated among air, water, solid waste and other issues, and by type of task, (2) presented invoices and explanations for the \$28,000 already expended, and (3) indicated it planned to submit a further request for presenting direct testimony at hearings, once the extent of its litigation became known.

The Examiners denied an immediate award for all or any part of the \$28,000, indicating they were unable to evaluate the reasonableness of the request. "Moreover," they continued, "by expending funds for which no award had been made, the County circumvented a review process called for under the Board's rules that would have eliminated or minimized in advance any duplication of effort among intervenors" [FN81] They noted further that funds were awarded to the Village of Haverstraw for work on air issues that appears to have been duplicated by the County. The Examiners concluded that, "at a convenient point in the future," they would review the request again in an attempt to determine whether any portion of it would have been awarded at the time a request for it should have been presented.

FN81. Ruling, p. 30.

The Examiners indicated dissatisfaction with the County's "minimal effort" to break down by issue the request for an additional \$35,000. They awarded \$1,700 to present evidence on changes for further minimizing ammonium sulfate and concerning Best Available Control Technology (BACT) for PM10, and \$8,300 to present evidence on potable water and Coastal Zone Management policy issues. These amounts were computed on the basis of the percentage these issues constituted of all issues funds were sought to address. An additional \$1,000 was awarded to address the visual impacts of smog.

In its appeal, the County argues, first, that the request for the \$28,000 portion representing expenditures already made was improperly denied and delayed. The County observes that the purpose of the intervenor fund is to "defray expenses incurred by municipal and other parties to the proceeding . . . for expert witness and consultant fees," [FN82] and argues that the use of the past tense of the verb "incur" implies that the legislature did not intend to prohibit retroactive reimbursement of municipal parties. The County also points out that the Board's regulations provide that "[t]he presiding examiner shall ensure that the funds are

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awarded on an equitable basis in a manner which facilitates broad public participation in the proceeding." [FN83] The County argues that the deferral of action on the request, pending a review of its reasonableness at the time it should have been made, was therefore unreasonable.

FN82. PSL §164(6)(a) (emphasis added).

FN83. 16 NYCRR §1000.9(e).

As to the \$35,000 portion of the request, the County alleges that that entire amount should have been awarded, in view of the requirements of the regulations. [FN84]

FN84. Id.

In response, the Applicant argues the Board's regulations make it clear that requests for funding awards must be made before services by experts and consultants are actually rendered, providing that: "Each request for funds shall ... contain: ... (6) a detailed statement of the services to be provided by experts and consultants" [FN85] The Examiners properly held the County to that requirement, the Applicant continues, in the interest of minimizing or avoiding duplication of effort. [FN86] Indeed, in this proceeding the Examiners found that the County and the Village of Haverstraw appear to have done significant duplicative work, which the County has not disputed in its appeal.

FN85. 16 NYCRR §1000.9(c).

FN86. 16 NYCRR §1000.9(d).

Moreover, the Applicant argues, the County could have requested supplemental intervenor funding at any time following the initial award, and in fact in a November 1, 2000 letter, the County's consultant requested it to do so.

With respect to the balance of the \$35,000 not awarded, the Applicant observes that the \$11,000 award was based on a pro rata allocation of the requested funds to adjudicable issues. The County does not argue or demonstrate, the Applicant continues, that it should be awarded additional funds for additional issues, or that additional funds are needed to litigate the issues found adjudicable by the Examiners.

Discussion

We affirm the Examiners on both aspects of their ruling regarding the County's request for funds. As indicated above, interlocutory review is permitted only under extraordinary circumstances. It should be noted that funding awards are

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discretionary issues that should be resolved early in the process. We therefore expect parties to recognize that funding questions will be answered by examiners.

As to the \$28,000 requested to reimburse the County for work already done, it is important to emphasize that there is no right to retroactive reimbursement for funds already spent. The funding process anticipates that requests will be made expeditiously, on the basis of projected services, and will not be based on the premise that awards can be justified by proof of previously unauthorized expenditures. The County misapprehends the thrust of PSL §164(6). Although it provides that the purpose of the fund is "to defray expenses incurred by municipal and other local parties," [FN87] it also provides that "the board shall assure that the purposes for which moneys in the intervenor fund will be expended will contribute to an informed decision ..." [FN88] Thus, the language of the statute itself does not establish a right to consideration of retroactive reimbursement. The thrust of our regulations makes it clear as well that funding requests are to commence at the beginning of a proceeding, before expenditures are incurred. [FN89]

FN87. PSL §164(6)(a) (emphasis added).

FN88. PSL §164(6)(b) (emphasis added).

FN89. 16 NYCRR §§1000.9(a), 1000.9(c)(6).

In the Athens Generating case, the Presiding Examiner confronted the same issue, and ruled:

It is crucial that awards be made only on a prospective basis. If an intervenor spends money not yet awarded to it, and submits bills for ex post awards, essentially it is requesting a "blank check" from the intervenor fund. Such an approach would make the amount of the initial award immaterial ... Indeed, if any overspending is to be automatically recovered the award process becomes completely irrelevant. [FN90]

FN90. Case 97-F-1563, Athens Generating Company, Ruling on "Request for Additional Funds in Light of the April 20, 1999 Ruling" (issued June 9, 1999), p. 2.

The Examiner offered in that instance to review the municipality's past overspending for a possible award, based on what would have been a reasonable award at the time it should have been requested.

The Examiners in this proceeding, though not required to do so, have made an analogous offer to the County. Their ruling in this regard is entirely reasonable.

As to the \$35,000 for supplemental hearing related expenses, the County's appeal lacks merit, especially in light of our determination above to affirm the Examiners as to the scope of the issues to be adjudicated in the Article X hearing, and of the Associate Examiner's issues rulings in the DEC permitting proceedings. The Examiners properly awarded hearing-related funds only for issues

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that will actually be adjudicated. Their method for doing so, to which the County has not objected, is a discretionary matter we would leave to them in any event.

The County's appeal on funding issues is denied.

III. CONCLUSION

For the reasons stated above, the interlocutory appeals of Riverkeeper and the County from the Examiners' ruling that certain issues relating to air and water quality and arising under federally delegated permitting programs, but rejected for adjudication in the DEC permitting process, should not be adjudicated under Article X, are denied. The interlocutory appeal of PJM/PSE&G from the Examiners' ruling that the impacts of Bowline Unit 3 on the transmission systems of PJM and its member companies will not be considered is also denied. The County's appeal from the Examiners' determination that the Applicant is not required in its application to consider potential out-of-state sites in its alternative sites analysis is denied. The County's appeal from the Examiners' rulings regarding its intervenor fund requests is denied. The Presiding Examiner will establish a schedule consistent with our disposition of these matters.

The Board on Electric Generation Siting and the Environment for Case 99-F-1164 orders:

1. The interlocutory appeals described in the foregoing order are decided as discussed above.
2. The parties are not authorized to submit evidence, for Article X purposes, on issues rejected for adjudication in the DEC permitting proceedings, including discharge of pollutants from the Bowline Unit 3 cooling water return, the impacts of PM2.5 particulates, the potential use of SCONOx exhaust emission control technology at this facility, the application of requirements for process emission sources to fugitive emissions from liquid ammonia storage tanks, an emergency response plan for handling of ammonia, the application of additional operating scenarios in determining draft air permit emission limits, the need for a Continuous Opacity Monitoring (COM) system for this project, inclusion in the draft air permit of applicable federal record keeping and notice requirements, the adequacy of the draft air permit regarding oil storage vessel design and testing, and whether a Title V permit is required instead of a State Facilities Permit (Air permit).
3. The parties are not authorized to present evidence concerning the impact of interconnection of the proposed Bowline Unit 3 on transmission systems of PJM Interconnection, LLC, and its member companies.
4. The Presiding Examiner will set the schedule for this proceeding consistent with the above discussion.
5. This proceeding is continued.

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ATTACHMENT 2

UPDATED STATEMENT OF BASIS

**DIVISION FOR AIR QUALITY
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
803 SCHENKEL LANE
FRANKFORT, KENTUCKY 40601**

**PROPOSED/FINAL DETERMINATION AND STATEMENT OF BASIS
ON THE APPLICATION OF**

**THOROUGHbred GENERATING COMPANY, LLC
THOROUGHbred GENERATING STATION**

**TO CONSTRUCT AND OPERATE A PULVERIZED COAL STEAM ELECTRIC
GENERATING STATION**

REVIEW AND ANALYSIS BY: Ben Markin

**AFS NUMBER: 21-177-00077
REGION: Owensboro
LOG NUMBER: 53619-20
UTM COORDINATES: 4129.55N, 492.02E**

**SIC CODE: 4911
COUNTY: Muhlenberg
DATE COMPLETE: April 23, 2001
TYPE OF REVIEW: NSR, PSD, NSPS,
Title V, Acid Rain,
MACT, CAM**

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ATTACHMENT A

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PERMIT APPLICATION SUMMARY

PROPOSED FINAL PSD/TITLE V/PHASE II ACID RAIN
PERMITS

PERMIT APPLICATION

PUBLIC NOTICE

LETTERS

1. EXECUTIVE SUMMARY

Thoroughbred Generating Company, LLC submitted a revised permit application dated October 26, 2001, to construct and operate a Pulverized Coal steam electric generating station in Muhlenberg County, Kentucky. The construction will consist of two 7443 MM BTU/hr Pulverized Coal Boilers (PCB) which will operate with a total nominal output capacity of 1500 megawatts (MW). Each PCB is to be equipped with its own exhaust stack located within a common chimney and will be equipped for fuel oil start-up. Other facilities to be constructed will include Flue Gas Desulfurization (FGD) reagent, ash, and solid waste by product storage and handling equipment; an auxiliary boiler; two cooling towers; oil storage tank; an emergency generator; and two diesel and one electric powered fire pumps. The plant is to be permitted to operate 8760 hours per year for each unit. The proposed plant will be a major source as defined in Kentucky State Regulation 401 KAR 51:017 (40 CFR 52.21), *Prevention of Significant Deterioration (PSD) of air quality*. The potential emissions of regulated air pollutants including particulate matter (PM & PM10), sulfur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC) are in excess of 250 tons per year. Additionally, the emissions of volatile organic compounds (VOCs), fluorides as HF, mercury (Hg), beryllium (Be), and Sulfuric Acid (H₂SO₄) mist are subjected to PSD review since these emissions exceed the significant emission rates as presented in Regulation 401 KAR 51:017, Section 22.

The proposed plant will belong to one of the 28 major source categories listed in the PSD regulation, 401 KAR 51:017, because the PCBs will be used as indirect heat exchangers to produce electricity. Additionally, the source will be located in a county classified as "attainment" or "unclassified" for each of these pollutants pursuant to Regulation 401 KAR 51:010, *Attainment Status Designations*. Consequently, the proposed facility meets the definition of a major stationary source and is subject to evaluation and review under the provisions of the PSD regulation for all these pollutants. A PSD review involves the following six requirements:

1. Demonstration of the application of Best Available Control Technology (BACT).
2. Demonstration of compliance with each applicable emission limitation under Title 401 KAR Chapters 50 to 65 and each applicable emissions standard and standard of performance under 40 CFR 60, 61, and 63.
3. Air quality impact analysis.
4. Class I area impact analysis.
5. Projected growth analysis.
6. Analysis of the effects on soils, vegetation and visibility.

Furthermore, this source will also be subject to Title V and Title IV Phase II Acid Rain permitting. The Title V permitting procedures are contained in State Regulation 401 KAR 52:020, *Permits* and Federal Regulation, 40 CFR Part 70. The Title IV permitting procedures are within State Regulation 401 KAR 52:020, *Permits*, 401 KAR 52:060, *Acid Rain Permit*, and Federal Regulation 40 CFR part 76. This proposal represents the final PSD/Proposed Title V permit and the final Title IV Phase II Acid Rain permit. The final determination is also provided as a statement of basis for the Title V permit. This review

demonstrates that all regulatory requirements will be met and includes a final/proposed permit that establishes the enforceability of all applicable requirements.

2. BACKGROUND

On March 01, 2001, the Division received a permit application to construct and operate pulverized coal fired boilers for electricity generation from Thoroughbred Generating Company, LLC. The application was logged administratively complete on April 23, 2001. A revised application was received on October 26, 2001. During the technical review process additional information was requested and responses received on the following dates:

INFORMATION SUBMITTAL TIMELINE
for the
THOROUGHbred GENERATING STATION

Recipient	Date	Document Title	Received
KDAQ	Sept. 16, 2002	TGS response to comments	Sept. 16, 2002
KYDAQ, NPS	Aug 23, 2002	TGS letter summarizing resolution of issues with NPS	August 23, 2002
KYDAQ	August 22, 2002	Letter from US DOI withdrawing adverse impact determination	August 22, 2002
KYDAQ	August 9, 2002	TGS response to issues raised by NPS regarding BACT and acid disposition issues at Mammoth Cave National Park	August 9, 2002
KYDAQ	August 8, 2002	TGS details in support of 0.41 lb/SO ₂ 24-hour limit (email)	August 9, 2002
KYDAQ	July 25, 2002	TGS submittal of short-term limit modeling results	July 25, 2002
KYDAQ	July 24, 2002	Summary of cumulative PSD Increment analysis (email)	July 24, 2002
	June 19, 2002	Notice of Public Hearing/Availability of Draft Permit	June 19, 2002
KDAQ	June 18, 2002	TGS comments on pre-draft preliminary determination/permit	June 18, 2002

INFORMATION SUBMITTAL TIMELINE for the THOROUGHbred GENERATING STATION

Recipient	Date	Document Title	Received
KYDAQ/EPA R4	June 5, 2002	Emailed copies of information supplied to KYDAQ regarding May 14, 2002 meeting; CAM; and the SO2 NAAQS and PSD increment limit	June 5, 2002
KYDAQ	June 4, 2002	Hand delivered responses to May 14, 2002 meeting in Frankfort with KYDAQ, EPA R-IV, and TGC	June 5, 2002
KYDAQ	June 4, 2002	Hand delivered updated Cam plan per KYDAQ, EPA and TGC agreement	June 5, 2002
KYDAQ	June 4, 2002	Hand delivered analysis of an emission limitation for SO2 to protect the short-term NAAQS and Class II PSD increment	June 5, 2002
KYDAQ	June 4, 2002	Emailed responses to May 14, 2002 meeting in Frankfort with KYDAQ, EPA R-IV, and TGC	June 4, 2002
KYDAQ	June 4, 2002	Emailed updated Cam plan per KYDAQ, EPA and TGC agreement	June 4, 2002
KYDAQ	June 4, 2002	Emailed analysis of an emission limitation for SO2 to protect the short-term NAAQS and Class II PSD increment	June 4, 2002
KYDAQ	May 29, 2002	Addendum to October 2001 application (Paper copy) 1 Refined BACT; 2 Refined MACT; 3 CAM Plan; 4 Refined SO2 Increment; 5 Refined CALPUFF 90, 92 & 96; 6 Dep Forms; 7 Site Location Map.	May 29, 2002
KYDAQ	May 28, 2002	Email copies of DEP 7007 Forms for ESP and WESP	May 28, 2002
KYDAQ	May 24, 2002	Mine Information (Paper copy)	May 28, 2002
KYDAQ	May 24, 2002	Response to NPS Bunyak Letter with Dr. Honaker Analysis (Paper copy)	May 28, 2002
KYDAQ	May 24, 2002	TGS NAAQS Compliance Demonstration	May 24, 2002
KYDAQ	May 24, 2002	Email mine information	May 24, 2002
KYDAQ	May 24, 2002	Email Response to NPS Bunyak Letter with Dr. Honaker Analysis	May 14, 2002
KYDAQ	May 24, 2002	Responses to Inquiries from KYDAQ, US EPA Region IV and Others on the TGS Draft Permit and Revisions	May 10, 2002
KYDAQ/EPA R4	May 14, 2002	Letter Addressing CAM with Respect to SO2 and NOx	May 10, 2002
KYDAQ	May 10, 2002	Responses to Inquiries from KYDAQ, US EPA Region IV and Others on the TGS Draft Permit	May 10, 2002

INFORMATION SUBMITTAL TIMELINE for the THOROUGHbred GENERATING STATION

Recipient	Date	Document Title	Received
KYDAQ	April 24, 2002	Coal Washing Info	April 24, 2002
KYDAQ	April 17, 2002	Responses to Comments	April 17, 2002
KYDAQ	March 10, 2002	TGS Responses to EPA Region IV's February 26, 2002 comments on draft permit, Repeat of Information on CAM, MACT, BACT Modeling Control Equipment, Flow Diagrams, and Responses	March 10, 2002
KYDAQ	February 28, 2002	TGS Responses to EPA's December 21, 2001 comments on air permit and application	February 28, 2002
KYDAQ	February 21, 2002	Explanation of PM 20D Demonstration	February 25, 2002
KYDAQ	February 19, 2002	Additional Copies of CALPUFF Modeling Disks Public and Copyright	February 19, 2002
KYDAQ	February 15, 2002	Assertion of Confidentiality Modeling Input Files 90,92, & 96	February 18, 2002
KYDAQ	February 12, 2002	Increment Consumption Modeling Results for TGS	February 12, 2002
KYDAQ/EPA R4	February 4, 2002	Increment Consumption Modeling Methodology for Christian, Davless, Ohio and Webster Counties	February 6, 2002
KYDAQ	February 6, 2002	Addendum to CALPUFF Modeling 90& 92/Confidential Request/Public and Copyright CDS	February 6, 2002
EPA-R4	February 5, 2002	Addendum to CALPUFF Modeling 90& 92/Public and Copyright CDS	February 5, 2002
NPS	February 5, 2002	Addendum to CALPUFF Modeling 90& 92/Public and Copyright CDS	February 5, 2002
KYDAQ/EPA R4	January 11, 2002	Letter Addressing Increment Consumption Modeling and Emails on 1-10-2002	January 11, 2002
KYDAQ	January 2, 2002	Case-By-Case MACT Supporting Information	February 2, 2002
KYDAQ	December 21, 2002	Case-By-Case MACT Determination	December 21, 2002
KYDAQ	December 12, 2001	Response to Comments Received from US EPA Region IV and US DOI, Included Information on Control Equipment and Flow Diagrams as Requested by EPA	December 13, 2001
KYDAQ	October 26, 2001	Revised PSD/Title V/Acid Rain Permit Application for Thoroughbred Generating Station	October 26, 2001
KYDAQ	October 9, 2001	Revised Class I CALPUFF Visibility Information (Information from meeting)	October 9, 2001
KYDAQ	October 1, 2001	Revised CALPUFF Class I Modeling Results	October 1, 2001
KYDAQ	September 6, 2001	Response Comments from the National Park Service on the Thoroughbred Generating Station PSD Construction Permit Application	March 1, 2001
KYDAQ	February 28, 2001	PSD/Title V/Phase II Acid Rain Permit Application for Thoroughbred Generating Station	March 1, 2001

3. EMISSIONS ANALYSIS

The proposed Thoroughbred Generating Station will produce electricity as an independent power producer. The electricity generation operations will consist of: two (2) pulverized coal-fired boilers PCBs (nominally 750 MWe each) equipped with selective catalytic reduction (SCR); ~~11~~ electrostatic precipitator (ESP); wet flue gas desulfurization (FGD); and a wet electrostatic precipitator (WESP). Additional processes at the facility will include a diesel fired auxiliary boiler (to operate 500 hrs or less per year); two diesel and one electric emergency fire-water pumps (to operate 500 hours or less per year for testing and emergencies); an emergency diesel fired generator (to operate 500 hours or less per year for testing and emergencies); coal and FGD handling facilities; two cooling towers; coal storage piles; ash handling facilities; and two (2) fuel oil storage tanks. Detailed descriptions of the plant processes and expected emissions at each emissions point and emissions unit are contained in the application, please see Volume I, Section 3, Section 4 and Volume II, Appendix A of the October 26th application respectively. In addition, hourly and annual emission rates and pollutant identification for each respective emission unit can be referenced from the application. Emissions were based on the maximum rated capacity of the plant, worst-case operating conditions, and 8760 hours per year after controls. The PCBs' annual emissions, as shown below in Table 3.1 and in Table 4.0-1 of the application, are calculated for worst-case conditions while operating at 100% load. Evaluations at 50% and 75% load were also performed.

Table 3.1 –Applicant Annual Emission Summary

POLLUTANTS	EMISSION RATE TONS PER YEAR
CARBON MONOXIDE (CO)	6,599
NITROGEN OXIDES (NO _x)	6,029
PARTICULATE MATTER (PM ₁₀)	1,328
SULFUR DIOXIDE (SO ₂)	10,954
VOLATILE ORGANIC COMPOUNDS (VOC)	509
MERCURY (Hg)	0.21
BERYLLIUM (Be)	0.0615
FLUORIDES (AS HF)	10.34
SULFURIC ACID MIST (H ₂ SO ₄)	326

4. REGULATORY REVIEW

This section presents a discussion on the air quality regulations applicable to this project in addition to the PSD requirements. In some cases the emission limit or technology standard based on these regulations may be superseded by the BACT requirements which are more stringent under PSD (see Section 5, Best Available Control Technology Review); however, any specific testing, monitoring, record keeping, and reporting requirements contained in these regulations will still have to be met by the source in addition to any requirements under PSD.

The following regulations will apply to the proposed plant (please see the application for a detailed description of the plant and specific processes/units within the plant):

A. New Source Performance Standards (NSPS)

The Clean Air Act of 1970 directed U.S. EPA to establish New Source Performance Standards, or NSPS, for specific industrial categories. There are four NSPS applicable requirements to the Thoroughbred project.

New Source Performance Standards for Steam Electric Generating Units

Under the NSPS directive, U.S.EPA developed 40 CFR Part 60, Subpart Da, for all new, modified, or reconstructed steam generating units with a maximum heat input capacity greater than 250 MMBTU/hour for which construction is commenced after September 18, 1978. The proposed PCBs will be subject to Subpart Da, since the PCBs will be constructed after September 18, 1978. The emission limits being proposed for the PCBs are much lower than the applicable standard for NO_x, SO₂ and PM/PM₁₀ emissions in Subpart Da. Therefore the NSPS requirements will be met.

New Source Performance Standards for Coal Preparation Plants

Subpart Y of 40 CFR part 60, Standards of Performance for Coal Preparation Plants, incorporated by reference in regulation 401 KAR 60:005, Section 3(1), requires coal processing facilities to comply with certain particulate standards. Activities regulated by this NSPS include crushing, screening, conveying, transferring and storage of coal. Emission points are subject to an opacity limitation of 20%. Proposed BACT emission limits for coal processing activities will meet all NSPS requirements.

New Source Performance Standards for Non-Metallic Mineral Processing Plants

40 CFR part 60 Subpart OOO, Standards of Performance for Non-Metallic Processing Plants, incorporated by reference in regulation 401 KAR 60:670, regulates particulate emissions from crushing, screening, milling, transferring and truck unloading of Non-Metallic Minerals. Operations enclosed in buildings are allowed zero fugitive emissions. Emissions vented through a stack are limited to 7% opacity and 0.05 gr/dcm. Conveyors and transfer points are allowed 10% fugitive visible emissions, while crushing operations are allowed 15% opacity if a capture system is not used. Trucks unloading into screening operations, hoppers or crushers are exempt from the particulate matter standard. The proposed BACT emission limits for non-metallic mineral processing will meet these NSPS requirements.

New Source Performance Standards for Industrial-Commercial-Institutional Steam Generating Units

Under the NSPS directive, U.S.EPA developed 40 CFR Part 60, Subpart Db, for all new, modified, or reconstructed steam generating units with a maximum heat input capacity greater than 100 MMBTU/hour for which construction is commenced after June 19, 1984. The proposed Auxiliary Boiler will be subject to Subpart Db, since it will be constructed after June 19, 1984. Proposed BACT emission limits for the auxiliary boiler will ensure these NSPS requirements are met.

B. State Requirements

The State of Kentucky has developed specific new source standards in 401 KAR 59:016 for new electric utility steam generating units. 401 KAR 59:016 standards apply to each electric utility steam generating unit built after September 19, 1978, that is capable of combusting more than 250 MMBTU/hr heat input of fossil fuel. Additionally, Kentucky has developed new source standards in 401 KAR 59:015 which apply to indirect heat exchangers built after the classification dates and that are capable of a heat input capacity greater than 1 MMBTU/hr. Regulation 401 KAR 59:015 does not apply to units subject to 401 KAR 59:016. The state's emission standards parallel the Federal NSPS standards therefore, the proposed facility will also be in compliance with Kentucky emission standards if it is in compliance with NSPS standards. Regulation 401 KAR 63:020, applies to potentially hazardous matter or toxic substances

C. Maximum Achievable Control Technology Standards (MACT)

40 CFR 63, Subpart B, Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j) ("Case by Case MACT")

Section 112(g) of the 1990 Clean Air Act Amendments (CAAA), requires certain new major sources of HAPs to implement maximum achievable control technology (MACT) standards. MACT standards are used to ensure a performance-based method for reducing toxic and HAP emissions. The control technology to be used to ensure maximum control is determined by establishing a MACT floor. The MACT floor for existing units is the average emission limitation achieved by the best performing 12% of existing sources. The floor for new sources can be no less stringent than the emission control achieved in practice by the best-controlled similar source.

Currently there are no finalized MACT standards for HAP emissions from oil and/or coal fired electric utility steam generating units. However, in a notice of regulatory finding released in December 2000, the U.S. EPA indicated that the development of regulations under Section 112 of the Clean Air Act for HAP emissions from this industry is warranted. The U.S. EPA further indicated that the proposed emission standards for HAP emissions from oil and/or coal fired electric utility steam generation units will be issued no later than December 2003 with promulgation of these standards no later than December 2004.

The applicant has submitted to the Division case-by-case a MACT determination for possible HAPs. Additional information received indicates that the control technologies being proposed at the facility will be equal to or better than any similar source. KYDAQ concurs with the applicant's determination. Based on the control technologies being used at the facility and the data provided in the USEPA documents the proposed control technology and emission limits will meet the control levels at other sources. According to the application the overall mercury removal from the facility is estimated to be greater than 80 percent with possible removals in excess of 90 percent. Similarly, other HAP emissions from the facility will be controlled by the combination of dry ESP, wet FGD and WESP. Based on the proposed control technologies and the reductions expected, the facility should meet the requirements for the best-controlled similar sources and therefore complies with all applicable MACT requirements.

Please see all relevant requirements for HAPs on case-by-case MACT in the permit. Pursuant to 63.41 this permit will serve as the Notice of MACT approval.

D. Phase II Acid Rain Permits

Title IV of the Clean Air Act requires reductions in emissions of SO₂ and NO_x in an effort to reduce formation of acid rain. U.S. EPA, in promulgating regulations in 40 CFR Part 72, requires the submittal of application forms (incorporated by reference in Regulation 401 KAR 52:060) no later than two years prior to commencing operations of a regulated unit. This source is required to apply for a Phase II Acid Rain permit. Under Phase II Acid Rain requirements, filing of a Title V application for a new source subject to the Acid Rain requirements requires the source to file the Phase II application at the same time. Additionally, Part 75 requires continuous emission monitoring for NO_x and sulfur dioxide. Proposed emission limits for NO_x and SO₂ are much lower than Title IV Acid Rain requirements. Therefore, Title IV requirements will be met.

E. CAM-Compliance Assurance Monitoring

Regulation 40 CFR 64.2 and 64.4 are applicable requirements for the source. Therefore, in accordance with 40 CFR 64, the applicant has submitted additional information on the monitoring plan for particulate matter (PM), particulate matter less than ten micrometers in diameter (PM₁₀), hydrogen fluoride (HF) and sulfuric acid (H₂SO₄). Sulfur dioxide (SO₂), and nitrogen oxides (NO_x) will be monitored by Continuous Emissions Monitors (CEM), which will be used as the continuous compliance determination method to demonstrate BACT compliance, and to preclude applicability of Regulation 40 CFR 64. Pursuant to 401 KAR 52:020 the plan has received public notice to ensure federal enforceability.

Monitoring Approach

Applicable CAM Requirement	PM/PM ₁₀ limits	HF limits	H ₂ SO ₄ limits
General Requirements	0.018 lb/MMBTU filterable particulates	0.000159 lb/MMBTU 30-day rolling average	0.00497 lb/MMBTU 30-day rolling average
	20% Opacity		
Monitoring Methods and Location	Initial Source Test & (1) installation of a COM at outlet of the dry ESP and monitoring of the WESP electrical field and other relevant parameters identified during initial testing* or (2) visual observation of plume from stack	SO ₂ CEMs plus initial source test, coal sampling	SO ₂ CEMs plus initial source test, coal sampling
Indicator Range	(1) Initial source testing to establish COM and equipment parameter indicator ranges, including the WESP electrical fields, as appropriate or (2) Initial source testing to establish compliance with the PM limit at 20% opacity. The permittee must conduct weekly (daily if COM is not used) stack observations. If visible emissions are seen, the permittee must conduct a Method 9 observation to determine the opacity of the emissions.	Initial source testing to establish correlation to SO ₂ and coal quality, then establish SO ₂ CEM and coal range appropriate	Initial source testing to establish correlation to SO ₂ and coal quality, then establish SO ₂ CEM and coal range appropriate
Data Collection Frequency	(1) Continuous COM and control device operating parameters or (2) daily observations	Continuous CEM, quarterly coal	Continuous CEM, quarterly coal

		composites	composites
Averaging Period	(1) Opacity – 6 minute averages COM control device parameters – 3 hours or (2) Visible Emission Surveys – 1 minute; Method 9	30-day	30-day
Recordkeeping	COM data system records and control device parameters will be maintained for a period of 5 years or visible observation records and method 9 observations will be kept in a designated logbook and maintained for a period of 5 years.	Coal quality information will be kept in a designated log book, plus CEM data system records	Coal quality information will be kept in a designated log book, plus CEM data system records
QA/QC	COM will be maintained and operated in accordance with 401KAR 59:005 / 40CFR 60 Appendix B and/or other requirements as applicable, ESP/WESP monitored parameters will be maintained and operated in accordance with manufacturer recommendations; or records of method 9 certifications will be maintained	FGD/WESP will be maintained and operated in accordance with manufacturer recommendations	FGD/WESP will be maintained and operated in accordance with manufacturer recommendations

* 40 CFR 60, Subpart Da, allows the alternative location of COMS, in cases where the stack is considered to be wet (as the TGS stack will be upstream of the wet scrubber after the particulate control device). In the case of TGS, the particulate control consists of the dry ESP prior to the wet scrubber and a WESP after the wet scrubber. Therefore, COMS cannot be installed in TGS's wet stacks due to the inaccurate opacity readings. Hence, TGS proposes to install COMS at the outlets of the ESPs, and to identify appropriate PM operating parameters for the ESPs and WESPs (such as electrical field monitoring or operation or other parameters) within 180 days after initial source testing, with appropriate collection frequencies, recordkeeping, indicator ranges and QA/QC. In the alternative, TGS proposes to use periodic visible observations with requirements to use method 9 surveys as needed.

Monitoring Approach Justification

Particulate matter emissions are controlled by the ESP and WESP prior to discharge through wet stacks. The HF and H₂SO₄ emissions are controlled by the FGD and WESP prior to discharge to the stacks. The design collection efficiency of the PM₁₀ control equipment is 99% or greater. The design removal efficiency for HF and H₂SO₄ control equipment is above 95% based on the SO₂ removal efficiency.

Rationale for Selection of Performance Indicator

The use of CEMs provides continuous compliance results in units of the standard for the pollutants of interest and meets the criteria in 40 CFR Part 64.3 (d) (2) and is considered acceptable CAM. Therefore the SO₂ CEM may be used as a surrogate for HF and H₂SO₄ that behave similarly and are controlled by the same devices.

TGS is proposing a continuous opacity monitor (COM) at the location recommended by the control equipment vendor that would not cause corrosive, plugging or wet stack problems with long term operation of a COM, that location being immediately after the dry ESP. Since the dry ESP's, are the first PM control device (the second being the WESP), the COM data would be supplemented with appropriate equipment operating parametric monitoring for the WESP, with indicator ranges to be determined during initial stack testing of the entire control equipment sequence (SCR, ESP, FGD scrubber and WESP). Since the entire control system sequence may influence final PM emission rates and ultimate compliance with the proposed emission standard, the CAM Plan will be finalized upon completion of the stack testing program and submitted for review and approval within 180 days of completion of the initial stack testing.

In the event the above method is determined to be unachievable, TGS proposes as an alternative, that qualitative visual observation of the opacity of emissions from the stack will be performed on a daily basis and a log of the observations shall be maintained. If visible emissions from any stack are seen, then the opacity of emissions shall be determined by Reference Method 9 and an inspection of the control equipment for any necessary repairs shall be performed. Additionally, a Method 9 analysis shall be performed weekly and the results recorded in the same log.

Compliance with the PM₁₀ emission limits is assured when the voltage recording of electrostatic precipitator is within the manufacturer's specified optimum operating range. The permittee will check this voltage on a continuous basis through the use of a strip recorder or other continuous recording device. The permittee will also conduct weekly (daily if COM is not used) visual observations of stacks for the PCB unit to check for opacity limit compliance. For the Coal and Ash handling systems, the permittee will perform weekly visual observations of the stacks. This is comparable to the reading frequency conducted at other coal-fired electric generating units and is sufficient to assure compliance.

Rationale for Selection of Indicator Range

PM CAM indicator ranges for the ESPs and WESPs will be established for parameters commonly monitored, since reliance solely on COMs after the ESPs may not provide complete compliance assurance. Additional PM control will be achieved by the WESPs. However, COMs are not appropriate at the outlet of each WESP, based on prior operating history of COMs in a wet stack environment. This proposed CAM Plan initially identifies monitoring of WESP electrical fields as the indicator. TGS may modify the proposed CAM Plan to use other or additional indicators pending results of initial source testing to establish the PM control efficiency effects of fluctuating coal quality, operation of the SCRs, FGDs and the ESPs and WESPs.

The use of the initial source test, coupled with coal analyses for the initial test and CEMs readings for SO₂ during the test would allow development of a correlation on HF and sulfuric acid mist to CEM measurement and coal quality. The use of coal sulfur content would be a direct indicator of expected sulfuric acid uncontrolled emissions, which would then be correlated to CEM SO₂ results to determine compliance. Also quarterly coal composite information will be used to predict fluoride emissions.

F. Additional Requirements

The owner is required to conduct a performance test within 60 days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities. Under the NSPS, indirect heat exchangers of greater than 250 MMBTU/hr heat input, firing coal derived fuels are required to be performance tested for pollutants to which the standard applies.

Subpart Da requires an initial performance test for particulates, sulfur dioxide and nitrogen oxides. 40 CFR 60 Subpart Da refers to 40 CFR 60.8 for testing requirements. The facility will perform an initial compliance test for particulates, sulfur dioxide and nitrogen oxides per Appendix A of 40 CFR 60.

The source will have a continuous emission monitor (CEMs) for SO₂, NO_x, CO and oxygen or CO₂, as well as, COMs for opacity monitoring on the PC boilers.

Compliance with 40 CFR 75 will constitute compliance for the appropriate monitoring, testing, reporting, and record keeping requirements of Subpart Da.

G. PSD Requirements

As stated earlier, Regulation 401 KAR 51:017 (40 CFR 52.21), Prevention of Significant Deterioration (PSD) of air quality, applies to the proposed plant. The facility will be located in Muhlenberg County, which is currently designated as "attainment" or "unclassified" for all ambient quality standards. Total plant wide potential emissions of all criteria pollutants including fugitive emissions are listed in Table 4.1.

TABLE 4.1 – Total Plant Wide Potential Emissions

Pollutant	PTE * (tons per year)	Significant Emission Rate ** (tons per year)
Nitrogen oxides (NO _x)	6,029	40
Carbon monoxide (CO)	6,599	100
Sulfur dioxide (SO ₂)	10,954	40
Particulate (PM/PM ₁₀)	1,328	25
Volatile organic compounds (VOC)	509	40
Fluorides (as HF)	10.34	3
Mercury (Hg)	0.21	0.01

Pollutant	PTE * (tons per year)	Significant Emission Rate ** (tons per year)
Beryllium (Br)	0.0615	0.0004
Sulfuric Acid Mist (H ₂ SO ₄)	326	7

* PTE - Potential to emit, emissions for PCBs calculated with 8760 hours/year operation and worst case operating conditions, and include ancillary equipment.

** Significant emission rate as given in Regulation 401 KAR 51:017, Section 22.

As seen in the preceding table, the plant will be a major source for all of the pollutants listed. The PSD review applies to every pollutant that the proposed plant will emit in significant quantities, i.e., in amounts that will exceed the respective significant net emission rate. For each of these pollutants, the applicant has performed a best available control technology (BACT) demonstration and an ambient air quality analysis. Each of these components of the PSD review process have been discussed in detail in the following sections.

5. BEST AVAILABLE CONTROL TECHNOLOGY REVIEW

Pursuant to Regulation 401 KAR 51:017, Section 9(1) and (2), a major stationary source subject to a PSD review shall meet the following requirements:

- (a) The proposed source shall apply the best available control technology (BACT) for each pollutant that it will have the potential to emit in significant amounts.
- (b) The proposed source shall meet each applicable emissions limitation under Title 401, KAR 50 to 65, and each applicable emission standard and standard of performance under 40 CFR 60, 61, and 63.

The proposed source will be a major source resulting in emissions of sulfuric acid mist, beryllium, mercury, fluorides as HF, VOCs, nitrogen oxides, carbon monoxide, sulfur dioxide, and PM/PM₁₀ that exceed the corresponding PSD net significant emission amounts. Therefore, each of these pollutants was subjected to a BACT review.

Thoroughbred Generating Station has presented, in the permit application, a study of the best available control technology for each pollutant and each emissions unit at the proposed source. The Division has reviewed the proposed control technologies in conjunction with information available in the USEPA's RACT/BACT/LAER Clearinghouse (RBLC) database and other similar sources. A summary of the control technology determined to be the best available control technology for each pollutant and each emissions unit is presented in Table 5.1.

TABLE 5.1 – BACT Summary for PC Boilers

EIS No.	Emissions Unit/Process	Pollutant	Best Available Control Technology	Emission Standard
01, 02	Pulverized Coal Fired Utility Boilers Operation limitation: None The emission control equipment and emission limits proposed will ensure compliance with all future MACT requirements.	NO _x	Proper Boiler Design, Low NO _x Burners & SCR Visibility Limit	0.08lb/MMBTU
		CO	Proper Boiler Design & Operation	0.1 lb/MM BTU
		SO ₂	Proper Boiler Design, WFGD & WESP Visibility Limit	0.167 lb/MM BTU
		PM/PM ₁₀	ESP/WESP	0.018 lb/MM BTU
		VOCs	Proper Boiler Design and operation	0.0072 lb/MM BTU
		Beryllium Mercury	ESP, WESP, WFGD	9.44e ⁻⁷ lb/MM BTU 3.21e ⁻⁶ lb/MM BTU
		Fluorides as HF	Proper Boiler Design & Control Technology, WET FGD Scrubbing and WESP	1.59e ⁻⁴ lb/MM BTU
		Sulfuric Acid Mist	Proper Boiler Design & Control Technology, ESP, FGD, and WESP Visibility Limit	0.00497lb/MM BTU

The permittee submitted a top-down Best Available Control Technology (BACT) analysis following the U.S. EPA guidance, "New Source Review Workshop Manual" (U.S. EPA, October 1990). The key steps involved with the top-down BACT process are as follows:

1. Identify all control technologies
2. Eliminate technically infeasible options
3. Rank remaining control technologies by control effectiveness
4. Evaluate most effective controls considering economic, environmental, and energy impacts, and document results.

5. Select BACT.

A. BACT for Pulverized Coal (PCB) Fired Boilers

The following section summarizes the BACT determinations for criteria pollutants from the proposed facility. Using the top-down approach, the applicant selected various technologies for analysis of technical and practical feasibility, and then applied economic cost-effectiveness analyses where the top ranked technology was not selected. Table 4.0-4 from the application is provided below as Table 5.2, and lists various technologies considered by the applicant in its BACT evaluation.

TABLE 5.2 - Ranking of Control Technologies by Effectiveness

Pollutant	Control Technology	Add-on Control Efficiency (%)
PM/PM ₁₀ *	Electrostatic Precipitator (ESP)	99.9 [†]
	Wet Scrubber	90.0 [†]
	Cyclone	90.0 [†]
SO ₂	Wet Scrubbers/ Wet ESP	90+
Sulfuric Acid Mist	Proper Boiler Design control technology, ESP, FGD, WESP	90+
NO _x	Selective Catalytic Reduction (SCR)	60-90
	Low NO _x Burner, Startup Operations	15-30**
	Proper Boiler Design and Operation	
CO	Thermal Oxidation	95 [†]
	Catalytic Incineration	90-95 [†]
	Excess Air	75 [†]
	Proper Boiler Design and Operation	
VOCs	Proper Boiler Design and Operation	
Beryllium	ESP, WESP, WFGD	99.9 [†]
Mercury	Scrubbing and Baghouse	
HF	Proper Boiler design and control Technology, ESP, FGD, WESP	

[†]Cooper, C.D. and F.C. Alley, *AIR POLLUTION CONTROL: A Design Approach*, Waveland Press, 1986.

** Alternative Control Technologies Document NO_x Emissions from Utility Boilers, US EPA-453/R-94-023, 1994

NO_x

Control methods for NO_x can be divided into two types of control technologies: post-combustion controls and combustion controls. Post-combustion NO_x control removes NO_x from the exhaust gases of the boiler. Combustion NO_x control reduces the amount of NO_x that is generated during combustion.

The applicant is proposing low NO_x burners to address the combustion generating part of the analysis. Low NO_x burners have been accepted as BACT for combustion control technology consistently for similar sources in the past. Post-combustion NO_x control techniques were also considered to further control NO_x.

The applicant has elected to utilize selective catalytic reduction (SCR) in conjunction with low NO_x burners to reduce NO_x emissions to levels below those required by recent EPA proposed regulations regarding ozone, and to meet the most stringent NO_x emission limitation in the RBLC.

SCR and low NO_x burners are supported by recent determinations in the RBLC database for PC boilers and other similar applications currently being reviewed in other regulatory agencies. In consideration of RBLC, the applicant is proposing that the NO_x emission limitation be set at 0.08 lb/MM BTU heat input on a 30 day rolling average, which also addresses visibility concerns expressed by the National Parks Service at Mammoth Cave.

CO

Carbon monoxide is formed as a result of incomplete combustion of fuel. For carbon monoxide control, the permittee evaluated the available control technologies, which are: high temperature oxidation, catalytic oxidation and the front-end technique of good combustion control. The most stringent CO control level available for PCBs would be achieved with the use of a high temperature oxidation system added at the exhaust of the baghouses, which can remove approximately 95 percent of CO in the flue gas. Proper boiler design and operation is BACT for CO emissions. The CO emissions shall not exceed 0.10 lbs/MMBTU from each unit based on a thirty (30) day rolling average.

The Division has reviewed the EPA BACT/RACT/LAER Clearinghouse for PC boilers and the overwhelming majority of determinations specify good combustion practice; good combustion control and operation; proper design; and in some cases no controls.

There are environmental impacts associated with the use of a catalytic oxidation system on a PC boiler due to the oxidation of SO₂ to SO₃. The SO₃ can react with water or ambient ammonia in the exhaust and form sulfuric acid or ammonia sulfates. There is also generation of hazardous waste from the spent catalyst.

The economic analyses provided for the CO thermal and catalytic oxidation options provided by the applicant are shown in Section 4 of the permit application additional information submitted on May 10, 2002. The Division has reviewed and accepted cost data provided by the applicant. This information indicates the total capital investment costs, annualized costs, and overall cost effectiveness for CO emissions calculated by the permittee. Table 5.3 summarizes the results of the overall cost effectiveness of CO removal for each PCB:

Table 5.3 – CO Removal Cost Effectiveness

PCB Model	Overall Cost Effectiveness (\$/ton)
Thermal Oxidation	13,899
Catalytic Oxidation	9,795

The Division has determined that the overall cost effectiveness numbers indicate that the application of high temperature or catalytic oxidation for CO is not economically feasible.

Considering the potential environmental and energy impacts associated with extended startup times and the economic impact of oxidation catalyst technology, the Division consider a proper boiler design and operation as BACT for CO emissions. CO formation is minimized when the boiler temperature and excess oxygen availability is adequate for complete combustion. Minimization of the CO emitted is in the economical best interest of the boiler operator as CO represents unutilized energy exiting the process. No incremental costs are associated with this option. In Section 4 of the application, the applicant, in discussing NO_x control, noted that CO emission rates are identified as a potential factor, which affects NO_x emissions inverse proportionally (i.e., lower CO produces higher NO_x.)

SO₂

The applicant considered coal washing and several potential Flue Gas Desulfurization systems and acid gas control technologies for the proposed project. These technologies are listed in Table 4.2-1 *SO₂ Emission Control Options* of the revised application. All of the control technologies are capable of removal efficiencies in excess of 90%, however not all technologies are capable of effectively reducing the amount of acid gases emitted. The source is proposing revised BACT emission limit of 0.167 lbs/MMBTU with a list of possible control technologies for SO₂ and a H₂SO₄ mist emission limit of 0.00497 lbs/MMBTU based on a 30 day rolling average. In addition, the source is identifying a maximum average emission rate of 0.41 lbs./MMBTU over a 24-hour block average that would be protective of the SO₂ 24-hour National Ambient Air Quality Standards (NAAQS) and Class II increment of 91 ug/m³. Also, in response to a request by the United States Department of the Interior, Thoroughbred Generating will undertake a study after commencement of operation to further reduce their 24-hour average SO₂ concentration, with a goal in the range of 0.23 lbs./MMBTU.

The applicant performed additional analysis of available technologies, which would result in further reductions of SO₂ and acid gas emissions. It was determined that a combination of two technologies would reduce emission levels to ensure negligible change in visibility at the Mammoth Cave National Park, a Class I Area. The technologies included wet limestone scrubbing, which will effectively control SO₂ and other pollutant emissions, and wet electrostatic precipitation, which will reduce HAP and acid gas emissions including HF and H₂SO₄.

The applicant also submitted analysis on coal washing as a method of reducing SO₂ emissions. Based on the information provided the Division concurs that the adverse environmental, energy, and economic impacts are unacceptable, therefore coal washing is not considered BACT for this facility.

PM/PM₁₀

Particulate matter emission from the PC boilers are primarily the result of ash content and other contaminants in the fuel. There are several control technologies for removing particulates from a gas stream but a baghouse and electrostatic precipitator (ESP) have the highest control efficiency of any of the particulate matter control options, and therefore, according to the "top-down" approach, must be considered first.

Baghouse:

A baghouse removes pollutants and condensed metals (beryllium, lead and mercury) from the exhaust gas by drawing the dust-laden air and condensables through a bank of filter tubes suspended in a housing. A filter "cake", composed of the removed particulate, builds up on the "dirty" side of the bag. Periodically, the cake is removed through physical mechanisms (e.g., a blast of compressed air from the "clean" side of the bag, shaking the bags, etc.), which cause the cake to fall. The dust is then collected in a hopper and eventually removed.

Dry Electrostatic Precipitator (ESP):

Dry Electrostatic Precipitators remove aerosol and particulate matter from exhaust gas streams by means of electrostatic attraction. Particles in the gas stream are negatively charged by discharge electrodes located in the dry ESP. Once the particles are negatively charged they migrate toward the grounded collection plates in the dry ESP, which have been positively charged. The particulate continues to accumulate on the collection plate until it is removed. The particulate is removed from the plates either by rapping or spraying. It is then collected in a hopper for disposal. Dry ESPs have the ability to handle large gas streams and high particulate loading with very few complications and restrictions, as opposed to baghouses. While a baghouse and dry ESP are capable of similar removal efficiencies the dry ESP has a much broader operating range and can be utilized at higher temperature and pressure conditions as well as with wet or dry gas streams.

Wet Electrostatic Precipitator (WESP):

Wet electrostatic precipitators operate in much the same way as a dry or standard ESP; charging, collecting and finally cleaning. It is the cleaning step that is different. Cleaning is performed by washing the collection surfaces with water, in place of the usual mechanical means such as rapping of the collection plates. The delivery of the liquid or water can be made by a series of spray nozzles

located in the control device or by condensing moisture from the flue gas on the collection surfaces. WESPs are able to control a larger variety of pollutants than an ESP can alone. WESPs are significantly better at controlling acid droplets and SO₃ gases. This has been well supported by installations at acid production plants and other industrial sources that have highly acidic exhaust streams. Higher levels of SO₃ in the exhaust gas actually greatly improve the collection efficiency of the WESP by reducing the electrical dust resistance. WESPs are also very effective in reducing re-entrainment of particles due to the constant cleaning of the collection surfaces by liquid. Additionally, WESPs can operate under much higher electrical power than ESPs, therefore enabling much greater reductions in sub micron particulates.

According to information supplied in the application when used in conjunction with wet flue gas desulfurization, WESPs are very effective in reducing SO₃, metals and other sub micron particulates. WESPs are discussed further in the section on SO₂ and acid gas controls.

The applicant has selected a electrostatic precipitator (ESP) and Wet electrostatic precipitator (WESP) as BACT for PM/PM₁₀, ESP, WFGD & WESP for mercury, beryllium, and other metals for the PC boilers. The current market information and other sources in the RBLC and the control technology being proposed for the PC Boilers PM/PM₁₀ technology in conjunction with a PM/PM₁₀ BACT, sets emission limits of 0.018 lb/MMBTU based on a three (3) hour average.

Control of Non-Criteria Pollutants

The combustion of coal may release trace amounts of a number of non-criteria pollutants. Three of the PSD regulated pollutants (mercury, beryllium, and sulfuric acid mist) require BACT analysis as defined by EPA. For all of these pollutants the RBLC database and other recently issued permits have indicated best available control technology is a baghouse control, FGD and proper boiler design and operation.

The BACT for metals, acid gases and other non-criteria pollutants is an ESP in combination with a flue gas desulfurization unit and proper design and operation of the boilers and system. However, due to the concerns expressed with regards to the possible visibility change at Mammoth Cave National Park, the applicant has agreed to install a electrostatic precipitator (ESP), wet Flue Gas desulfurization (WFGD) and wet electrostatic precipitator (WESP), which will further reduce the emissions of non-criteria pollutants such as acid gases (see prior section related to acid gases). The Division considers a dry ESP equivalent to baghouse for control of non-criteria pollutants from this facility. Removal efficiencies for these constituents are based on worst case coal.

B. PM/PM₁₀-Material Handling

In the case of limestone, coal, and ash handling equipment, bin vent fabric filters and baghouses constitute BACT. This includes the emission from the silos, mills, crushers, and other devices. With respect to the conveyors and transfers, enclosure and coverings in addition to filter controls is deemed to be BACT for particulates. These types of controls are consistent with similar sources and equipment found in the RBLC and other recently issued permits.

C. PM/PM₁₀-Cooling Towers

Particulate emissions from the cooling towers in the form of drift shall be controlled by Drift Eliminators. The applicant has proposed 0.002% drift eliminators to control the emission of PM/PM₁₀ from the cooling towers. Based on the information provided and the design of the system the Division agrees that the proposed 0.002% drift eliminators constitute BACT for particulate control from the cooling towers.

D. Auxiliary Boiler

The auxiliary boiler will be a 300 MMBTU/hr unit. The boiler will minimize emissions by utilizing low NO_x burners and firing low sulfur diesel fuel. The boiler will be used for the startup of the first boiler and operate on a limited basis. The Division agrees that the proposed design and operation of the boiler must be included in the BACT analysis and hour of operation for the boiler capped at 500 hours per year or less.

E. Fire Water Pumps

The applicant has proposed to install two 265hp fire pumps for emergencies. The Division agrees that the use of low sulfur diesel fuel and limiting operation of the pumps to 500 hours or less per year constitutes BACT for fire pumps.

F. Emergency Diesel Generator

Similar to the firewater pumps the applicant has proposed to install a 2.25 MW generator for emergency use. The Division agrees that the use of low sulfur diesel fuel and limiting the operation of the generator to 500 hours or less per year constitutes BACT.

G. Source Emission Units

The following table identifies and describes each emissions unit, such as process units and control devices.

Table 5.4 Source Emission Units

Emissions Units		Air Pollution Control Devices	
ID No.	Description	ID No.	Description
01-02	7446 MM Btu/hr Pulverized Coal Fired Unit (each)- Steam Generating Combined Cycle; #2 Fuel as startup and stabilization	None	Equipped with SCR, ESP, WESP & WFGD
03	300 MM Btu/hr Auxiliary Boiler -Low sulfur diesel fired	None	None
04	Coal Handling Systems	MP01- MP12	Enclosure/Baghouse/Bin Vents/Filters
05	Coal Handling Systems	MP01- MP04	Partial Enclosure/Low Pressure Drop/Telescopic Chute

Emissions Units		Air Pollution Control Devices	
ID No.	Description	ID No.	Description
06	Coal Piles	MP01- MP05	Compaction/Suppressants
07	FGD Reagent Prep Handling	MP01- MP06	Enclosures/Filters
08	FGD Reagent Prep Handling-Fugitives	MP01- MP06	Compaction/Partial Enclosures/Filters
09	Fly Ash Handling System	None	Filters
10-11	Two Cooling Towers	None	0.002% Drift Eliminators

The steam electric generator, boiler, coal handling etc. are considered separate emissions units because they are individual activities that emit or have the potential to emit regulated air pollutants. Emissions unit means any part or activity of a stationary source that emits or has the potential to emit any regulated air pollutant or any pollutant listed under section 112(b) of the Act. This term is not meant to alter or affect the definition of the term "unit" for purposes of Title IV of the Act [40 C.F.R. § 70.2]. However, similar emissions units were combined in this permit into one emissions unit ID to simplify the permit. These emissions units have the same applicable requirements.

Insignificant Emission Units/Applicable Regulations

Pursuant to 401 KAR 52:020, Section 6 allows sources to separately list in the permit application emissions units or activities that qualify as "insignificant" based on potential emissions. The insignificant emissions unit has the potential to emit below 5 tons/year for all regulated air pollutants and/or ½ ton per year for combined HAPs (Hazardous Air Pollutants). These units that that qualify as "insignificant" are in no way exempt from compliance demonstration and applicable requirements or any other requirements of the PSD/Title V permit. The following table describes each insignificant emissions unit located at the source.

Table 5.5 Insignificant Emission Units

Insignificant Emissions Unit/Description/Applicable Regulation
3, 265 Hp (500 hr/yr) Water Pumps (2) Diesel Fired (1) Electric – None
Maintenance Shop Activities –None
Fuel Oil Storage Tanks – 401 KAR 59:050
Miscellaneous Water Storage Tanks – None
FGD Solid Waste By-product Handling and Long-term Storage – 401 KAR 63:010
2.25 MW (500 hr/yr) Diesel Fired emergency Generator – None
Ammonia tanks – 401 KAR 68

III. APPLICABLE REQUIREMENTS

Table 5.6. The following table lists the emissions units and their applicable requirements.

Emissions Unit ID	Pollutant	Emissions Limitation (Operational Restrictions)	Applicable Requirements	Monitoring Record Keeping	Reporting	Compliance/Testing
01-02 1500 MW 750 each Primary Fuel: coal 40 CFR 60, Subpart Da 40 CFR 63, Subpart B 40 CFR 64 40 CFR 75 & 76 401 KAR 51:017 401 KAR 59:016	PM	0.018 lb/MMBTU based on a 3-hour average	401 KAR 59:016, Section 3(1)b and 51:017	401 KAR 59:005 Section 3(2) & Section (4)	401 KAR 59:005 Section 3(3), 401 KAR 59:016 Sections 4, 7 & 9, Part 60 requirements	Initial and annual performance testing/ EPA Reference Methods 5, 9, 201 or 201A, & 202
	SO ₂	0.167 lb/MMBTU based on a 30-hour average 0.45 lb/MMBTU based on a 24 hr block average	401 KAR 59:016 Section 4(1), and 51:017	Continuous Emissions Monitoring	Part 60 & 75 requirements and reports for all required monitoring	Initial Performance Testing using CEMs
	NO _x	0.08 lb/MMBTU based on a 30 day average	401 KAR 59:016 Section 4(1), and 51:017	Continuous Emissions Monitoring	Part 60 & 75 requirements and reports for all required monitoring	Initial Performance Testing using CEMs
	CO	0.10 lb/MMBTU based on a 30 day average	401 KAR 51:017	Continuous Emissions Monitoring	Reports of all required monitoring	Initial Performance Testing using CEMs
	VOC	0.0072 lb/MMBTU based on a 30-day average	401 KAR 51:017	CO CEM use CO emissions as surrogate for VOC emissions	Reports of all required monitoring	Initial and annual Performance Tests/EPA reference methods 18 or 25

Unit ID	Pollutant	Emission Limit (Normal Operations)	Applicable Requirements	Monitoring Record Keeping	Reporting	Compliance Testing
	HF	0.000159 lb/MMBTU based on a 30-day average	401 KAR 51:017	SO2 CEMs, Use SO2 emissions as surrogate for HF emissions	Reports of all required monitoring	Initial Performance Tests/EPA reference method 26A
	Be	0.000000944 lb/MMBTU based on a quarterly average	401 KAR 51:017	ESP Voltage	Reports of all required monitoring	Initial Performance Tests/EPA reference method 104
	Acid Mist	0.00497 lb/MMBTU based on a 30-day average	401 KAR 51:017	SO2 CEMs, Use SO2 emissions as surrogate for H2SO4 emissions	Part 60 & 75 requirements and reports for all required monitoring	Initial Performance Tests/EPA reference method 8
	Hg	0.00000321 lb/MMBTU based on a quarterly average	401 KAR 59:016 Section 4(1), and 51:017	ESP Voltage, pH level liquid flow rate	Reports of all required monitoring	Initial Performance Tests/EPA reference method 29
	Pb	0.00000386 lb/MMBTU based on a quarterly average	401 KAR 51:017	ESP Voltage	Reports of all required monitoring	Initial and annual performance tests/EPA Methods 12 or 29
03 Auxiliary Boiler	PM	0.06 lb/MMBTU based on a 3-hour average	401 KAR 59:015, Section 4(1)b	401 KAR 59:005 Section 3(2) & Section (4)	401 KAR 59:005 Section 3(3), 401 KAR 59:016 Sections 4, 7 & 9, Part 60 requirements	Initial and annual performance testing/EPA Reference Methods 5, 9, 201 or 201A, & 202

Emissions Unit ID	Pollutant	Emission Limitation / Operational Restrictions	Applicable Requirements	Monitoring Record Keeping	Reporting	Compliance / Testing
	NOx	0.12 lb/MMBTU based on a 3-hour average	401 KAR 59:016 Section 4(1), and 51:017	Continuous Emissions Monitoring	Part 60 & 75 requirements and reports for all required monitoring	Initial Performance Testing using CEMs
	CO	0.06 lb/MMBTU based on a 30 day average	401 KAR 51:017	Continuous Emissions Monitoring	Reports of all required monitoring	Initial Performance Testing using CEMs
	VOC	0.03 lb/MMBTU as a 30 day average	401 KAR 51:017	CO CEM use CO emissions as surrogate for VOC emissions	Reports of all required monitoring	Initial and annual Performance Tests/EPA reference methods 18 or 25
	SO2	0.05 lb/MMBTU based on a 3-hour average	401 KAR 59:015 Section 5(1)	Continuous Emissions Monitoring	Part 60 & 75 requirements and reports for all required monitoring	Initial Performance Testing using CEMs
04 Coal Handling Systems	PM	40 CFR 60.252	Standards of Performance for Coal Preparation Plants, 40 CFR 60, Subpart Y	Maintain Records of Coal received and processed and weekly visual observation	50:055 Section 1, 52:020 Section 21 & 22	Method 9
05 Coal Handling System	PM	401 KAR 63:010, Section 3	401 KAR 63:010 & 51:017	Maintain Records of Coal received and processed and weekly visual observation	50:055 Section 1, 52:020 Section 21 & 22	Method 9
06 Coal Piles	PM	None	401 KAR 63:010	Maintain Records of Coal received and processed and weekly visual observation	50:055 Section 1, 52:020 Section 21 & 22	Method 9

Emission Unit ID	Pollutant	Control Limitation / Operational Restriction	Applicable Requirements	Monitoring Record Keeping	Reporting	Compliance / Testing
07 FGD Reagent Prep Handling	PM	401 KAR 51:017, 40 CFR 60.672(a), 0.05 gr/dscm, shall not exhibit greater than 7% opacity. 60.672(b) < 10% opacity	40 CFR 60, Subpart OOO, standards of Performance for Nonmetallic Mineral Processing Plants, 401 KAR 51:017	40 CFR 60:676. Maintain records of visual observations	40 CFR 60:672	Method 9
08 FGD reagent Prep Handling -Fugitives	PM	None	401 KAR 63:010	Maintain Records of Coal received and processed and weekly visual observation	50:055 Section 1, 52:020 Section 21 & 22	Method 9
09 Fly Ash Handling System	PM	401 KAR 59:010, Opacity <20%	401 KAR 51:017 & 59:010, New Process Operations	Maintain Records of Ash processed and weekly visual observation	50:055 Section 1, 52:020 Section 21 & 22	Method 9
10-11 Cooling Towers	PM	401 KAR 63:010, Section 3	401 KAR 63:010 & 51:017	Maintain Records of Maximum pumping capacity and total liquid drift	50:055 Section 1, 52:020 Section 21 & 22	Monthly measurements of total dissolved solids content of circulating water

6. AIR QUALITY IMPACT ANALYSIS

Pursuant to Regulation 401 KAR 51:017, Section 12, an application for a PSD permit shall contain an analysis of ambient air quality impacts, in the area that the proposed facility will affect, for each pollutant that it will have the potential to emit in significant amounts as defined in Section 22 of the same regulation. The purpose of this analysis shall be to demonstrate that allowable emissions from the proposed source will not cause or contribute to air pollution in violation of:

- (1) A national ambient air quality standard in an air quality control region; or
- (2) An applicable maximum allowable increase over the baseline concentration in an area.

The proposed facility will have potential emissions in excess of the significant net emission rates for nitrogen oxides, PM/PM₁₀, sulfur dioxide, VOCs, fluorides as HF, beryllium, mercury, sulfuric acid mist and carbon monoxide.

A. Modeling Methodology

The application for the proposed source contains ISCST3 air dispersion modeling analysis for criteria and non-criteria pollutants (nitrogen oxides, PM/PM₁₀, sulfur dioxide, fluorides as HF, beryllium, mercury, sulfuric acid mist and carbon monoxide) to determine the maximum ambient concentrations attributable to the proposed plant for each of these pollutants for comparison with:

1. The significant impact levels (SIL) found in 40 CFR 51.165 (b)(2).
2. The Significant Air Quality Impact levels (SAI) found in Regulation 401 KAR 51:017, Section 24.
3. The PSD Class I and Class II increments found in Regulation 401 KAR 51:017, Section 23.
4. The National Ambient Air Quality Standards (NAAQS) found in Regulation 401 KAR 53:010, Ambient air quality standards.

All applicable ambient air quality concentration values are presented in Table 6.1. Based on U.S. EPA procedures, if the maximum predicted impacts for any pollutant are found to be below the SILs, then it is assumed that the proposed facility cannot cause or contribute to a violation of the PSD pollutant increments or the national ambient air quality standards (NAAQS). Therefore, no further modeling would be required for such a pollutant. The applicant may also be exempted from the ambient monitoring data requirements if the impacts are below the significant monitoring concentrations or SAI. The SAI levels determine if the applicant will be required to perform pre-construction monitoring. If the modeled impacts equal or exceed the SAI levels, pre-construction monitoring may be required. As shown in the application, the SAI levels were exceeded for the 3-hour, 24-hour, and annual modeled impacts. However, if existing air quality data is available that is representative of the air quality area in question an exemption may be granted. The applicant requested that data from the TVA Paradise monitors be accepted as representative of the area. The Division determined the location of the monitor, quality of the data, and the data's collection time frame all met the requirements listed in the NSR guidance manual and issued a letter of approval on September 22, 2000. Therefore, the applicant is exempted from the pre-construction ambient monitoring data requirements for sulfur dioxide.

TABLE 6.1 – Ambient Air Quality Concentration Values

Pollutant	Averaging Period	SIL (µg/m ³)	SAI (µg/m ³)	PSD Class II Increments (µg/m ³)	NAAQS (µg/m ³)
NO _x	Annual	1	14	25	100
PM ₁₀	Annual	1	NA	17	50
	24-hour	5	10	30	150
SO ₂	Annual	1	NA	20	80
	24-hour	5	13	91	365
	3-hour	25	NA	512	1300
CO	8-hour	500	575	NA	10000
	1-hour	2000	NA	NA	40000

The permittee used the Industrial Source Complex Short Term model (ISCST3, Version 00101, EPA, 1999) in the analysis. The ISCST3 model fulfills the requirements of Supplement C of the Guideline on Air Quality Models (Appendix W to 40 CFR 51). All of the parameters used in the modeling analysis for each pollutant appear satisfactory and consistent with the prescribed usage for this model. Per EPA guidance, the ISCST3 model was run with the regulatory default option in a sequential hourly mode using five years of meteorological data. Surface data and concurrent upper air data used were based on weather observations taken at the National Weather Service (NWS) station at the Paducah, Kentucky and Nashville, Tennessee respectively from 1985 to 1987 and 1990 to 1991.

With respect to the Class I modeling the applicant used the CALPUFF model with refined inputs to better predict possible impacts for the particular region in question. Detailed documentation of the modeling inputs and the techniques used are provided in Volume II, Appendix E of the application.

In consultation with the Federal Land Manager (FLM) and the National Park Service (NPS) the permittee has considered two more years of modeling, using 1992 and 1996 MM5 data with the concurrent surface, upper air, and precipitation data.

B. Modeling results - Class II Area Impacts

The proposed facility will be located in Muhlenberg County, a Class II area. The applicant modeled the impact of the emissions from the proposed facilities on the ambient air quality and the results of the modeled impacts on the Class II area have been presented in Table 6.2.

The modeling results show that the maximum impacts from the proposed facility for NO_x and CO are less than the EPA prescribed significant ambient impact levels (SIL) and no further analysis are required. However, the 24-hr and annual PM/PM₁₀ impacts and the 3-hour, 24-hour, and annual sulfur dioxide impacts all exceeded the prescribed SILs. All major PM₁₀ and SO₂ sources within 50 km of SIA were included in the refined modeling. The SIA for PM₁₀ is 2.5 km and for SO₂ is 50 km. The refined modeling required for NAAQS and PSD Increment analysis is presented in Tables 6.3 and 6.4. Modeling concentrations all were significantly lower than the NAAQS and PSD Increments allowed. A block maximum average emission rate over 24 hour period to protect the NAAQS and the Class II PSD increments has been set at 0.41 lbs./MMBTU based on additional modeling. Detailed descriptions of the modeling inputs and results are in supplemental information submitted by Thoroughbred Generating dated August 8, 2002.

TABLE 6.2 – Applicants Modeled Predicted Impacts

Pollutant	Averaging Period	SIL ($\mu\text{g}/\text{m}^3$)	SAI ($\mu\text{g}/\text{m}^3$)	Max Impact of Emission ($\mu\text{g}/\text{m}^3$)	SIA (km)	Preconstruction Monitoring Required
NO ₂	Annual	1	14	0.697		No
PM ₁₀	Annual	1	NA	1.69	2.5	NA
	24-hour	5	10	8.86		No
SO ₂ ¹	Annual	1	NA	3.25	50	NA
	24-hour	5	13	53.8		Exempt
	3-hour	25	NA	186.5		NA
CO	8-hour	500	575	39.12		No
	1-hour	2000	NA	168.94		NA
Beryllium	24-hour	NA	0.001	0.00088		No
Mercury	24-hour	NA	0.25	0.00285		No

1. Based on 0.41 lbs./MMBTU

TABLE 6.3 – Refined Modeling Results for Predicted impacts in Muhlenburg County

Pollutant	Averaging Period	Class II PSD Increment ($\mu\text{g}/\text{m}^3$)	Applicant's Class II Increment Consumption ³ ($\mu\text{g}/\text{m}^3$)	NAAQs ($\mu\text{g}/\text{m}^3$)	Source Plus Other Sources Modeling Results ($\mu\text{g}/\text{m}^3$)	Source Plus Background Modeling Results ($\mu\text{g}/\text{m}^3$)
PM ₁₀	Annual ¹	17	1.69	50	1.97	27.69
	24-hour	30	8.86	150	13.17	75.17
SO ₂ ⁴	Annual ¹	20	3.25	80	28.67	18.97
	24-hour	91	53.8	365	186.76	169.37
	3-hour	512	186.5	1300	779.37	578.65
NO _x	Annual ²	25	0.697	100	NA	NA

1. Annual geometric mean
2. Annual arithmetic mean
3. Increment consumption based on high-second-high
4. Based on 0.41 lbs./MMBTU

TABLE 6.4 – Refined SO₂ Maximum Increment Consumption Modeling Results for other Affected Counties

County	3-hour ug/m ³	24-hour ug/m ³	Annual ug/m ³
Christian	173.19 ¹	42.81 ²	3.42 ¹
Daviess	117.42 ¹	39.37 ¹	6.16 ¹
Ohio	268.92 ²	50.56 ²	4.3 ¹
Webster	210.77 ²	56.38 ¹	4.55 ¹

1. Based on 0.167 lbs./MMBTU limit

2. Based on 0.41 lbs./MMBTU limit

C. Modeling Results - Class I Area Impacts

The nearest federally designated Class I area to the project site is Mammoth Cave National Park. The nearest park boundary is approximately 74 km to the East-Southeast of the proposed facility and was analyzed by the applicant using the CALPUFF model at the request of the FLM and the Division. Results of this modeling are presented in Volume I, Section 8 of the revised application. Table 6.5 lists the modeled increment consumption for the proposed source and illustrates no Class I increments will be exceeded. Additional information regarding the Class I modeling is presented in Volume I, Section 8 and Volume II, Appendix E of the application.

Table 6.5 – Modeled Class I Increment Consumption

Pollutant	Averaging Period	Class I Increment (µg/m ³)	Source Class I Increment Consumption (µg/m ³)
NO _x	Annual	2.5	0.018
PM ₁₀	Annual	4	0.016
	24-hour	8	0.137
SO ₂	Annual	2	0.142
	24-hour	25	1.16
	3-hour	5	4.37
CO	8-hour	500	Not Required, less than Significant Level
	1-hour	2000	

Calpuff modeling was submitted with the application, however, on February 6, 2002, the Division received a revised air quality analysis for the TGS. The analysis identified an error in the previous analysis that tended to over-estimate potential impacts. The NPS performed independent visibility analyses that replicated and expanded upon the TGS modeling. The results of the NPS independent analysis concluded that TGS alone could cause a change in visibility in excess of 5% at Mammoth Cave National Park on 2 days during the 3 years modeled (maximum of 7.47% in 1996). In addition the NPS has conducted a cumulative visibility analyses modeling TGS with 58 SO₂ PSD sources, using same fine and coarse grid that TGS used in its visibility and increment analysis. The maximum visibility impact of all these sources at Mammoth Cave National Park is 15.75 % (1996) of which 7.75% is attributable to TGS alone. For summary of the visibility impacts at Mammoth Cave National Park see Table below.

**TGS and Cumulative Visibility Impacts
Mammoth Cave National Park**

Change in Extinction	Thoroughbred Generating Station Only (Fine Grid)			Thoroughbred Generating Station with 58 SO ₂ PSD sources within 100 km of Mammoth Cave National Park (Coarse Grid)				
	>5% Change in Extinction	Max Change in Extinction	Extinction Value at Max Change Mm ⁻¹	>5% Change in Extinction	>10% Change in Extinction	Max Change in Extinction	Extinction Value at Max Change Mm ⁻¹	TGS Change at Cumulative Maximum
1990- Number of days and magnitude of impact against the 20% cleanest days	1	7.40%	9.0	15	4	15.05%	18.4	5.35%
1992- Number of days and magnitude of impact against the 20% cleanest days	0	4.98%	3.0	19	2	12.52%	7.5	2.70%
1996- Number of days and magnitude of impact against the 20% cleanest days	1	7.47%	5.0	16	2	15.75%	10.6	7.75%

Based on the modeling results shown in the table above, the United States Department of the Interior has indicated there will be no adverse impact on visibility to the Class I area -Mammoth Cave National Park. Based on additional modeling, the inclusion of a short term limit of 0.41 lbs SO₂/mmBtu and the commitment by TGS to reevaluate the limit based on two years of operating data with a target SO₂ limit of 0.23 lbs. SO₂/mmBtu on a 24 hour average basis, the Department of the Interior has withdrawn its adverse impact determination that was contained in their letter of February 2, 2002. The Division will reevaluate that short-term limit and establish a new limit of operation that is equal to 110%, at the 95% confidence level, of the short-term emission readings

collected over the first two years of operation. The 95% confidence level shall be established by using the student-t test or similar statistical analysis. The revised limit will in no case exceed 0.41 lbs. SO₂/MMBTU.

7. ADDITIONAL IMPACTS ANALYSIS

A. Growth Analysis

The proposed project, as reported in the application, will employ approximately 1000 personnel during the construction phase. The project will employ approximately 500 people on a permanent basis. Thoroughbred indicated their intention to hire from the local community therefore, there should be no substantial increase in community infrastructure, such as additional school enrollments. The proposed project is also not expected to result in an increase in secondary emissions associated with non-project related activities. Thus, in accordance with PSD guidelines, the analysis of ambient air quality impacts need consider only emissions from the facility and its ancillary devices.

B. Soils and Vegetation Impacts Analysis

The project lies in an area of mainly post mining use. No significant off-site impacts are expected from the proposed action. Therefore, the potential for adverse impacts to either soils or vegetation is minimal. It is concluded that no adverse impacts will occur to sensitive vegetation, crops or soil systems as a result of operation of the proposed project.

C. Visibility Impairment Analysis

As discussed previously in Section C and 6(a) of the application the visibility at Mammoth Cave National Park was reviewed using the visibility function in the CALPUFF model. The projected change in visibility associated with the operation of the proposed facility has been determined to be minimal as a result of the multiple control technologies that will be utilized. Additionally, the Commonwealth of Kentucky has not determined any Class II areas in the vicinity of the proposed plant to have visual sensitive criteria established. Therefore, no significant change in visibility is expected from the facility.

D. Ozone

The Division does not anticipate violations of either the 1-hour or 8-hour ozone standard due to the construction of the Thoroughbred Generating Station based on the level of estimated emissions of nitrogen oxides and volatile organic compounds from proposed facility and the amount of these pollutants currently being emitted to the atmosphere in the area. Additionally, the Division's U.S. EPA approved NO_x State Implementation Plan (SIP), and regulations approved to that SIP should ensure substantial NO_x reductions in the area.

8. CONCLUSION AND RECOMMENDATION

In conclusion, considering the information presented in the application, the Division has made a final determination that the proposed source meets all applicable requirements:

1. All the emissions units are expected to meet the requirements of BACT for each significant pollutant. Additionally, each applicable emission limitation under 401 KAR Chapters 50 to 65 and each applicable emission standard and standard of performance under 40 CFR 60, 61, 63 and 64 will also be met prior to proposed/final permit.
2. Ambient air quality impacts on Class II areas are expected to be below the significant impact levels. No adverse impact is expected on any Class I area.
3. Impacts on soil, vegetation, and visibility have been predicted to be minimal.

A draft permit to construct and operate a nominal 1500 MWe pulverized coal fired electric generating facility in Central City, Muhlenberg County, Kentucky containing conditions which ensure compliance with all the applicable requirements listed above has been prepared by the Division and issued for public notice and comment. The Division recommends the issuance of the proposed/final permit upon satisfaction of the public comments. A copy of this final determination will be made available for public review at the following locations:

1. Affected public at the Muhlenberg County Clerk's office.
2. Division for Air Quality, 803 Schenkel Lane, Frankfort, KY 40601.
3. Division for Air Quality, Owensboro Regional Office, 3032 Alvey Park Drive West, Suite 700, Owensboro, KY 42303.

CREDIBLE EVIDENCE

This permit contains provisions which require that specific test methods, monitoring or recordkeeping be used as a demonstration of compliance with permit limits. On February 24, 1997, the U.S. EPA promulgated revisions to the following federal regulations: 40 CFR Part 51, Sec. 51.212; 40 CFR Part 52, Sec. 52.12; 40 CFR Part 52, Sec. 52.30; 40 CFR Part 60, Sec. 60.11 and 40 CFR Part 61, Sec. 61.12, that allow the use of credible evidence to establish compliance with applicable requirements. At the issuance of this permit, Kentucky has not incorporated these provisions in its air quality regulations.

CERTIFICATE OF SERVICE

It is hereby certified that a copy of the forgoing was sent by United States First Class Mail, sufficient postage prepaid, to the following this the 20th day of October, 2003.

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