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U.S. ENVIRONMENTAL PROTECTION AGENCY  
ENVIRONMENTAL APPEALS BOARD

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August 12, 2005

**Via Facsimile and Federal Express**  
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Ms. Eureka Durr, Clerk of the Board  
U.S. Environmental Protection Agency  
Environmental Appeals Board  
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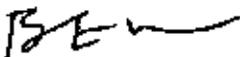
Re: Appeal Number: PSD 05-02  
Permit Number: 189808AAB  
Prairie State Generating Company

Dear Ms. Durr:

Enclosed for filing is one original and three copies of Petitioners' Motion for Leave To File a Reply Brief.

Thank you for your assistance in this matter. If you have any questions about this filing or if I can be of any further assistance please call me.

Sincerely,

  
Bruce E. Nilles

Enclosures



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ENVIRONMENTAL APPEALS BOARD

BEFORE THE ENVIRONMENTAL APPEALS BOARD  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C.

IN THE MATTER OF:	)	APPEAL NUMBER: 05-05
PRAIRIE STATE	)	APPLICATION NUMBER: 01100065
GENERATING STATION	)	PSD PERMIT NUMBER: 189808AAB

**MOTION FOR LEAVE TO FILE REPLY BRIEF**

Petitioners hereby move for leave to file a reply brief in this matter no later than Friday, September 16, 2005. Good cause exists for this motion.

On April 28, 2005 the Illinois EPA issued a PSD permit for Peabody Energy to construct the Prairie State Generating Station, a large and controversial coal-fired power plant 1.8 miles from the St. Louis ozone and fine particulate matter nonattainment area. On June 8, 2005 Petitioners filed a timely Petition for Review challenging various provisions of the PSD permit. On July 7, 2005, the Illinois EPA filed a motion requesting an eighteen-day extension of time to file its response. Petitioners did not oppose that motion. On that same day, Prairie State Generating Station, LLC, filed a Motion for Response Date Consistent with IEPA's Response Date because this "will prevent piecemeal filings in support of the Permit at issue ... [and] could eliminate duplicative filing of exhibits from the record ...." Petitioners did not oppose that motion. By Order dated July 11, 2005 the Board granted both Illinois EPA's and Prairie State's motions and required responses be filed no later than July 29, 2005.

On August 1, 2005 Petitioners received from Illinois EPA a 339-page Response to Petition and two boxes of exhibits. On the first page of its response Illinois EPA notes

that “[t]he permitting of the proposed facility has represented one of the largest and time-consuming undertakings for the Illinois EPA’s air pollution program in recent years.”

On that same day, August 1, 2005, Petitioners also received a 210-page response from Intervenor Prairie State and another box of exhibits because “due to their volume, it was infeasible” for Prairie State and Illinois EPA to develop a joint set of exhibits. Cover Letter from Kevin Finto to Eurika Durr, July 29, 2005.

On August 8, 2005, the hearing officer in the matter of Sierra Club vs. Environmental and Public Protection Cabinet, issued a 387-page “Hearing Officer’s Report and Recommended Secretary’s Order” that recommended that the PSD permit for the proposed Peabody Energy Thoroughbred project in Kentucky be remanded. The Peabody Energy Thoroughbred project is essentially identical to the Peabody Energy Prairie State project. Peabody describes the two projects as “sister projects.”<sup>1</sup> Both are 1500 megawatt mine-mouth coal plant projects that propose to use pulverized coal technology to burn high-sulfur coal with an identical pollution control train. In her decision, the Kentucky hearing officer recommended that the permit be remanded for multiple reasons including, the failure to consider IGCC in the BACT analysis, the failure to consider cost-effectiveness in rejecting coal washing, the failure to consider coal blending, the failure to set a NOx BACT limit, the failure to explain why a 99% SO2 removal rate was rejected, and multiple enforceability defects. See Executive Summary, Hearing Officer’s Report and Recommended Secretary’s Order, at 1-6, August 8, 2005 (attached as Exhibit A).

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<sup>1</sup> <http://www.peabodyenergy.com/index-ie.html>

A reply brief is warranted in this case for the following reasons: First, the Illinois EPA and Peabody draw on the Board's June 21, 2005 decision, In re BP Cherry Point, PSD Appeal No. 05-01, in requesting the Board decline review of one of Petitioners' claims. See e.g. Illinois EPA Response to Petition at 90. The BP Cherry Point decision appears to be the first time that the Board has addressed the legality of using of PM as a surrogate for PM10 and PM10 as a surrogate for PM2.5. That decision admittedly was not favorable to one of Petitioners' claims. Because the decision was issued after Petitioners filed their petition on June 8, 2005, Petitioners have never had the opportunity to consider this Board decision. If granted leave to file a reply Petitioners would respond to that decision as it relates to Petitioners' claim(s).

Second, the subject of the instant Prairie State appeal and the Peabody Thoroughbred project in Kentucky are identical projects that Petitioners allege suffer from many of the same permitting defects. The Kentucky hearing examiner's findings do appear to offer important factual findings that are applicable to the Prairie State proceeding. Petitioners recognize that a decision by a Kentucky hearing examiner is not binding on the Board. However, after a record 73 days of administrative hearings involving witnesses from two states, the National Park Service and multiple engineers, the Kentucky hearing examiner did have the opportunity to delve into many of the identical issues before the Board in this proceeding. In a reply brief Petitioners would reference the findings from the Kentucky decision that are relevant to assist the Board in resolving the Prairie State matter.

Third, Illinois EPA and Prairie State allege in their responses that Petitioners failed to raise numerous issues during the comment period and therefore Board review

should be denied. In a reply brief Petitioners will address each of these allegations and, where appropriate, point to specific places in the record where the issue was preserved.

Turning to the issue of timing--Petitioners recognize that prompt resolution of PSD appeals is a priority for the Board. Since receiving the 549 pages of responses and three boxes of documents filed by Illinois EPA and Prairie State Petitioners have divided the work of reviewing this material among four lawyers and are coordinating a response. The volume of material filed by Illinois EPA and Prairie State is, however, making this process much slower than expected. Moreover, there are several unavoidable scheduling conflicts that are hampering our progress, including:

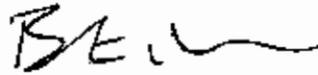
- Dr. Phyllis Fox our primary technical expert in this proceeding is already committed to two other projects in August. She is our sole expert reviewing the Peabody Thoroughbred decision and is helping to draft exceptions as provided under state law by August 23, 2005. She is also scheduled for an all-day deposition on August 26 in a matter relating to the proposed City of Springfield Utilities coal plant and is preparing for a contested case hearing in that proceeding in September.
- Attorney Bruce Nilles, lead counsel in this proceeding, is scheduled to be married on August 20, 2005 and be out of the office from August 17 through September 4, 2004. Sierra Club has brought in another lawyer, Sanjay Narayan, to help with reviewing the material and preparing a reply brief.

For these reasons, Petitioners request that they be granted leave to file a reply brief no later than September 16, 2005. This will allow Dr. Fox to provide her technical input and for the compilation of a succinct reply brief (without boxes of additional attachments).

Petitioners do not intend to ask for any additional extensions in this proceeding. As the Board is aware, several of the petitioners in this proceeding also have another petition pending with the Board relating to the Indeck-Energy, LLC, PSD permit, PSD Appeal 03-04. In neither the Indeck proceeding nor this current proceeding have the

Petitioners ever objected to Illinois EPA, or an Intervenor, or US EPA seeking and obtaining months of additional time for filing briefs. In neither proceeding has Petitioners ever requested an extension of time to file a pleading. Now Petitioners are simply asking for a total of six weeks to review and respond to the 549 pages of response and three boxes of attachments involving the largest new source of air pollution proposed in the Upper Midwest in decades.

Respectfully submitted,



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On behalf of Petitioners,  
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Dated this 12<sup>th</sup> day of August, 2005



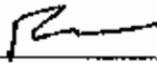
**CERTIFICATE OF SERVICE**

I hereby certify that on the 12<sup>th</sup> day of August, 2005, copies of the foregoing **MOTION FOR LEAVE TO FILE REPLY BRIEF** were served by first class mail, postage prepaid to:

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**COMMONWEALTH OF KENTUCKY  
ENVIRONMENTAL AND PUBLIC PROTECTION CABINET  
FILE NO. DAQ-26003-037 and DAQ-26048-037**

SIERRA CLUB, VALLEY WATCH, INC.,  
LESLIE BARRAS, HILARY LAMBERT, and  
ROGER BRUCKER,

PETITIONERS,

VS.

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET,  
and  
THOROUGHbred GENERATING COMPANY, LLC

RESPONDENTS.

\*\*\*\*\*

**HEARING OFFICER'S REPORT  
AND  
RECOMMENDED SECRETARY'S ORDER**  
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## **RECOMMENDED SECRETARY’S FINAL ORDER**

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## I. EXECUTIVE SUMMARY

### Nature of Case:

Challenges to TGC's Title V operating and PSD construction air quality permit V-02-001, and the permit's minor Revision #1, and Revision #2 for its coal burning electrical generating plant (TGS).

### Appearances<sup>1</sup>:

Petitioners were represented by the Hon. Elizabeth Natter and the Hon. Robert Ukeiley. The Cabinet was represented by the Hon. Jack Bates, the Hon. Rick Bertelson, and the Hon. Susan Green. TGC was represented by the Hon. Harry Johnson III, the Hon. Kevin Pinto, the Hon. Carolyn Brown, the Hon. Penny Shamblin, and the Hon. Eric Braun.

### Hearing Officer:

Hon. Janet C. Thompson

### Issues/Conclusions/Recommendations<sup>2</sup>:

As a result of the following conclusions, it is recommended that TGC's permit be **REMANDED to DAQ**.

#### Count 1 - Air Toxics, Risk

**Issue** - Whether DAQ failed to perform an adequate analysis under 401 KAR 63:020 to determine if TGS would emit hazardous substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants.

**Conclusion** - DAQ erred by relying on the Cumulative Assessment to satisfy the requirements of 401 KAR 63:020, Section 3.

**Recommendation** - DAQ should be directed to evaluate the impact of TGS's potentially hazardous or toxic substances on animals.

#### Count 2 - Public Participation

**Issue** - Whether DAQ failed to make available to the public relevant information on which the permit determinations were based as required

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<sup>1</sup> The Hon. Elizabeth Natter, co-counsel for Petitioners, and the Hon. Susan Green, co-counsel for the Cabinet, withdrew following the filing of post hearing briefs as a result of changes in their employment. The Hon. Jack Bates, another co-counsel for the Cabinet, withdrew on July 15, 2005, as a result of his retirement.

<sup>2</sup> The petition inadvertently did not list a Count 4, 5, 12 or 13. Count 15 was dismissed, and Count 16 simply challenges issuance of minor Revision #1, without presenting any claim as to the revision. My rulings on Counts 3, 6, and 7 are found in my Interim Report, Appendix 3 to this Report.

by 401 KAR 51:017<sup>3</sup>, 401 KAR 52:100 and 40 CFR Section 51.161.

**Conclusion** - Petitioners failed to carry their burden of proof on most of the arguments they advance in Count 2, with the following exceptions.

**Recommendations** - The SOB should have included an explanation of why the permit's SCR control efficiency is less than that shown in a table in the SOB for SCRs. Also, the SOB should explain DAQ's reason for concluding that a dry ESP is equivalent to a baghouse or what the "clear technical concerns" are that justify the use of ESP controls. In addition, the SOB should discuss DAQ's evaluation of TGS's potentially hazardous or toxic substances on animals.

#### **Count 3<sup>4</sup> - Increment/NAAQS**

**Issue** - Whether DAQ erred by concluding that TGS will not cause or contribute to a violation of NAAQS (National Ambient Air Quality Standard) or increment and by accepting existing ambient air quality data.

**Conclusion** - Petitioners failed to establish a prima facie case as to Count 3.

**Recommendation** - Petitioners' request for relief should be denied.

#### **Count 6 - Visibility - Mammoth Cave National Park**

**Issue** - Whether DAQ erred by concluding that TGC will not adversely impact air quality related values, including visibility at Mammoth Cave National Park in violation of 401 KAR 51:017, Section 1(2), and whether DAQ improperly evaded FLAG (Federal Land Managers' Air Quality Related Values Work Group) 2001 by prematurely deeming the application complete contrary to Section 1(13).

**Conclusion** - Petitioners failed to establish a prima facie case as to Count 6.

**Recommendation** - Petitioners' request for relief should be denied.

#### **Count 7 - Coordination with Army Corps**

**Issue** - Whether DAQ acted contrary to 401 KAR 51:017, Section 18, by failing to coordinate its review with the environmental review required of the Army Corps of Engineers by the National Environmental Policy Act (NEPA).

**Conclusion** - Petitioners failed to establish a prima facie case as to Count 7.

**Recommendation** - Petitioners' request for relief should be denied.

#### **Count 8 - Additional Impact Analysis, Soils, Vegetation**

**Issue** - Whether DAQ failed to require an adequate analysis of impairment to visibility, soils and vegetation as a result of emissions from TGS and associated growth in violation of 401 KAR 51:017, Section 14.

**Conclusion** - DAQ erred by determining that the Additional Impacts Analysis performed by TGC complies with 401 KAR 51:017, Section 14.

<sup>3</sup> Effective July 14, 2004, 401 KAR 51:017 was amended. In this Report, I will cite to the version in effect at the time the permit was issued, 401 KAR 51:017 (2002).

<sup>4</sup> In an Interim Report (Docket #273, issued April 12, 2004), I granted TGC's motions for directed recommendation as to Counts 3, 6, and 7 on the basis that Petitioners failed to establish a prima facie case as to these counts. These counts are not further addressed in this Report, but are addressed in the Interim Report, which is Appendix 3.

**Recommendation** - TGC should be required to perform and submit an Additional Impacts Analysis in accord with the conclusions in the Hearing Officer's Report.

**Count 9 - Best Available Control Technology**

**Issue** - Whether DAQ's BACT determinations were arbitrary and capricious.

**IGCC and CFB Determinations**

**Conclusion** - DAQ erred as a matter of law by concluding that it lacked authority to require TGC to include IGCC and CFB in its BACT analysis.

**Recommendation** - DAQ should require TGC to do a BACT analysis on both IGCC and CFB.

**Coal Washing Determinations**

**Conclusion** - DAQ's rejection of coal washing is arbitrary and capricious because it is partly based on TGC's cost-effectiveness analysis, which is not supportable and understandable.

**Recommendation** - On remand, DAQ should direct TGC to provide a cost-effectiveness analysis for coal washing that includes consideration of both average and incremental cost effectiveness.

**Clean Coals Determinations**- Using a blend of lower sulfur coal as BACT

**Conclusion** - DAQ erred by failing to require TGC's SO<sub>2</sub> BACT analysis to include an evaluation of whether there are any economic, environmental or energy reasons why a lower BACT limit cannot be achieved by a blend of cleaner coals using the coal which TGS has available.

**Recommendation** - On remand, DAQ should direct that TGC's SO<sub>2</sub> BACT analysis include this evaluation.

**BACT for NO<sub>x</sub> Determinations**

**Conclusion** - DAQ's determination to issue the permit with a NO<sub>x</sub> limit of 0.08 lb/MMBtu was contrary to fact and law.

**Recommendation** - On remand, DAQ should make a new NO<sub>x</sub> BACT determination.

**BACT for PM or PM<sub>10</sub>**

**Conclusion and Recommendation** - This issue is moot because Revision #2 provides that the regulated particulate matter pollutant is "PM/PM<sub>10</sub> (filterable and condensable)".

**BACT for SO<sub>2</sub>**

**Conclusion** - DAQ's SO<sub>2</sub> BACT determination was erroneous because it was based on an inadequate analysis by TGC of the technical feasibility of meeting a limit of 99% reduction.

**Recommendation** - On remand, DAQ should make a new SO<sub>2</sub> BACT determination.

**BACT for Mercury and Beryllium**

**Conclusion** - It was erroneous for DAQ to make a BACT determination based on TGC's elimination of carbon injection and fabric filters without the required technical feasibility analysis.

**Recommendation** - On remand, DAQ should make a new BACT determination on mercury and beryllium.

**Count 10 - Maximum Achievable Control Technology**

**Issue** - Whether DAQ failed to perform proper case-by-case MACT analyses as to mercury and non-mercury hazardous air pollutants (HAPs).

**Conclusion** - Petitioners failed to carry their burden of proof to establish that DAQ's mercury MACT and non-mercury MACT determinations are erroneous or arbitrary.

**Recommendation** - Petitioners' request for relief should be denied.

**Count 11 - Single Source**

**Issue** - Whether DAQ erred by determining that the power plant and mine are separate sources, not a single source.

**Conclusion** - This issue is moot because of TGC's agreement that BACT will apply to both the emissions from the mine and the power plant.

**Recommendation** - TGC's agreement that BACT applies to both the emissions from the mine and the power plant should be incorporated in the permit.

**Count 14 - Enforceability**

**Issue** - Whether the permit conditions as written are enforceable as a practical matter, as required by 401 KAR 52:020.

**Conclusion** - The HAPs, VOC and PM limits are not enforceable.

**Recommendations** - On remand, DAQ should make a number of revisions, including the following:

**For HAPs -**

- \* The permit should indicate the primary method of determining compliance with HAPs limits.
- \* A HAPs coal test method, sampling procedure, and analysis procedure should be identified in the permit.
- \* The test method should be capable of measuring HAPs at levels below the permit limits.
- \* More than four analyses of coal samples should be required and should be recorded more frequently than quarterly.
- \* All control system operating parameters should be identified.

\* The permit should state how monitoring provisions are to be used and whether exceedance of the operating parameter amounts to an exceedance of the HAPs limits.

**For Monitoring --**

In light of TGC's acknowledgement that Revision #2 addresses all of the issues Petitioners raise with regard to compliance provisions which appear only in the SOB, I conclude that the permit should be so revised to the extent any of the above compliance provisions appear only in the SOB and not in the permit.

**For VOCs -**

More frequent stack testing (not just an initial stack test) should be required to confirm the relationship between CO and VOCs and should be in the permit. The permit should also specify the test method. These requirements should also apply to the auxiliary boiler.

**For PM -**

1) The regulated pollutant should be corrected for the auxiliary boiler, as Revision #2, item #7, did for the PC boilers.

2) The permit should list test methods for PM/PM<sub>10</sub> for the PC boilers and the auxiliary boiler. The test methods in the SOB need to be clarified so that the regulated pollutant is consistently identified.

3) Annual testing for the PC boilers is not adequate.

4) On remand, TGC should be required to present a test plan to develop the relationship between opacity and PM; to revisit the relationship if the fuel changes, equipment is updated or operating modes change; the 5% opacity fudge factor should be eliminated unless the maximum PM emission rate is substantially lower than the upper end of the opacity range; TGS should not be allowed to operate for extended periods of time at opacity levels that represent exceedance of the underlying PM limits; and periods of startup and shut down should not be exempted.

5) On remand, the location of the COMS should be changed as a result of testimony showing that COMS now allow accurate opacity measurements in wet stacks. 2-10-04 TE at 207:18-21; 2-11-04 TE at 117:2-5 (Fox).

6) PM control equipment operating parameters are inadequate for reasons cited by Petitioners. On remand, DAQ should reassess the parameters, and the permit should provide that an exceedance of the indicator range constitutes a PM violation.

**For material handling units (units 4-9) --**

Compliance with the monitoring and recordkeeping requirements of Title V Manual at pg. 6, Sec. 1b III and IV should be required.

**Count 17 - Errors and Omissions**

**Issue** -- Whether there are errors and omissions in the permit and other documents which render the permit determinations arbitrary and capricious.

**Conclusion** - The permit contains numerous errors and omissions.

**Recommendations –**

Claims A, D, L, P, and W (second part) – DAQ should review.

Claim K – DAQ should clarify the inconsistency between the permit and the SOB.

Claim Q – DAQ should state in the SOB where it obtained Table 5.2.

Claim R – DAQ should state that the 24-hr increment is  $4.98 \mu\text{g}/\text{m}^3$ .

Claim S – DAQ should correct typos in the SOB.

**Count 18 - HAPs Emissions Estimates**

**Issue** - Whether DAQ violated 401 KAR 52:020 by failing to provide a basis for the HAP emissions.

**Conclusion** - Petitioners failed to carry their burden of proof on Count 18.

**Recommendation** – Petitioners' request for relief should be denied.

**Revisions #1 and #2**

**Issue** – Whether DAQ erred by issuing Revisions #1 and #2.

**Conclusion** – Petitioners failed to carry their burden of proof on Revisions #1 and #2.

**Recommendations** – Revisions #1 and #2 should be affirmed, except for the changes which are necessary under the above Counts as a result of the remand of Title V/PSD Permit V-02-001.

**II. STATEMENT OF THE CASE**

In these consolidated cases, Petitioners<sup>5</sup> (the Sierra Club, Valley Watch, Inc., Leslie Barras, Hilary Lambert and Roger Brucker) challenge a Title V operating and PSD (Prevention of Significant Deterioration) construction air quality permit V-02-001, minor permit Revision #1, and Revision #2 issued by the Cabinet's Division for Air Quality (DAQ) to Thoroughbred Generating Company (TGC) for the construction and operation of a 1,500 megawatt (MW) pulverized coal-fired electric generating facility in Muhlenberg County, near Central City,

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<sup>5</sup> In their post hearing brief, Petitioners include an appendix on the issue of standing and cite to evidence which satisfies the standing requirement for each individual petitioner. Petitioners note that Respondents did not challenge Petitioners' standing to contest the TGC permit and Revisions #1 and #2. Although this issue was not raised prior to the post hearing brief, I conclude that Petitioners amply demonstrated their standing.