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ENVIR. APPEALS BOARD

VIA FEDERAL EXPRESS

November 14, 2003

U.S. Environmental Protection Agency
Clerk of the Board, Environmental Appeals Board (MC 1103B)
Ariel Rios Building
1200 Pennsylvania Ave, N.W.
Washington, DC, 20460-0001

Re: Petition for Review of Construction Permit / PSD Approval for Indeck-Elwood
LLC (ID No. 197035AAJ)

Dear Clerk of the Board:

Please find enclosed one original and five copies of a Petition to Review (including exhibits) requesting the Board's review of the above-referenced PSD permit. This petition is filed on the behalf of the American Lung Association of Metropolitan Chicago, Citizens Against Ruining our Environment (Lockport), Clean Air Task Force, Lake County Conservation Alliance and the Sierra Club.

Please do not hesitate to contact me if there any questions about this filing.

Sincerely,

Bruce Nilles
312.251.1511

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

NOV 17 AM 9:34
ENVIR. APPEALS BOARD

IN THE MATTER OF:)
)
INDECK-ELWOOD LLC) PSD APPEAL NO. ____
PSD PERMIT NO. 197035AAJ)

PETITION FOR REVIEW

The American Lung Association of Metropolitan Chicago, Citizens Against Ruining the Environment (Lockport), the Clean Air Task Force, Lake County Conservation Alliance and the Sierra Club (Petitioners), respectfully petition the Environmental Appeals Board to review the above-referenced Indeck-Elwood LLC (Indeck) Prevention of Significant Deterioration (PSD) permit (attached as Ex. A). Indeck seeks permission to build a giant 660 megawatt coal-burning power plant in the Greater Chicago severe ozone nonattainment area. In addition to adding more air pollution to a region where 660,000 asthmatics already struggle to breathe, Indeck plans to construct its power plant immediately adjacent to the 19,000-acre Midewin National Tallgrass Prairie, the nation's first national prairie preserve and home to dozens of protected plants and animals.

Petitioners respectfully seek EAB's review because as described in detail below Indeck's PSD permit contains multiple substantive and procedural deficiencies that unlawfully place Chicago-area residents and the Midewin's sensitive soils and vegetation at risk from harmful and unnecessary levels of air pollution.

EAB review of Indeck's PSD permit would also be timely because Illinois has at least five new coal-burning power plant proposals in various stages of the PSD permitting process. These power plants are part of the "Illinois Coal Revival Program,"¹ a state-sponsored program designed to reinvigorate Illinois' ailing coal-mining industry. Indeck's PSD permit presents the EAB with its first opportunity to assess how Illinois regulators are balancing their obligations to enforce the Clean Air Act amidst the excitement of the Coal Revival Program. A 1500-megawatt coal-burning power plant proposed by the Peabody Corporation is expected to be unveiled within weeks. The others' draft permits are not far behind. EAB's review of Indeck's permit would be particularly timely to help remind State regulators about the importance of complying with PSD permitting protections, *before* issuing permits, and thereby help to avoid significant delay and unnecessary disputes over the other looming proposals.

¹ Highlights of Illinois Coal Revival Program available at the Office of Coal Development's website: www.commerce.state.il.us/coal/RevivalSummaries.html (visited 11/14/03).

INTRODUCTION

More than thirty years after passage of the Clean Air Act the Greater Chicago region – home to approximately eight million residents – still has not attained the federal one-hour ozone National Ambient Air Quality Standard (NAAQS). The region will soon be designated nonattainment for the 8-hour and small particulate matter (PM 2.5) NAAQS. Most troubling – beyond the failure to meet federal air quality standards after three decades – is the State’s lack of progress in fighting ozone pollution over the last ten years. According to the Illinois Environmental Protection Agency (IEPA), the highest ozone levels recorded each year since 1993 represents a “fairly flat 10-year trend,”² and the total number of days when air pollution levels violate the ozone standard is “generally flat.”³ Last year, a “flat trend” translated in 20 days when Chicago-area residents breathed harmful air pollution levels violating the 8-hour ozone NAAQS. Chicago is located in Cook County, the State’s most populous county. Cook County has exceeded the new soot standard (annual PM 2.5) every year since monitoring began in 2000.

Existing air pollution levels are exacting a high toll on the lives of Chicago-area residents. The Chicago Tribune has declared the Chicago region “No. 1 in a U.S. Epidemic” because more residents die from asthma than in any other place in the United States. *Asthma’s Grip Tightens*, Chicago Tribune Magazine at 10 (Apr. 27, 2003). The label fits for more reasons. In the six counties of northeastern Illinois, including Cook County, there are 660,000 asthmatics suffering more frequent and more severe asthma attacks whenever air pollution levels rise.⁴ At least 70,000 of these asthmatic residents end up in area hospitals struggling to breathe *each year*. Other problems caused by air pollution include emphysema, bronchitis, lung cancer and premature death. The healthcare costs of this pollution is staggering. Consider that an asthma-related hospitalization typically costs between \$3,500 and \$12,000.⁵

The Chicago region already hosts nine dirty coal-burning power plants – power plants that according to a 2002 Harvard School of Public Health study are responsible – based just on their SO₂ emissions – for 21,500 asthma attacks and 320 premature deaths annually.⁶ Indeck’s additional 9,600 tons of annual air pollution⁷ would add more asthma attacks and more premature deaths. In 2003 IEPA modeled the implications for ozone levels in Illinois should Indeck and the other four coal plant proposals proceed: “[T]he new coal fired power plants would increase the levels of ozone in the air.”⁸

² IEPA, *Illinois Annual Air Quality Report 2002*, 9, Sept. 2003. Rep. No. IEPA/BOA/03-015 (*IEPA 2002 Air Quality Report*) available at www.epa.state.il.us/air/air-quality-report/2002/index.html.

³ *Id.* at 10.

⁴ American Lung Association, *State of the Air: 2003* available at <http://lungaction.org/reports/stateoftheair2003.html> (*ALA 2003 Report*).

⁵ www.state.il.us/agency/hcccc/default.htm (last visited 11/13/03).

⁶ Levy, JI., et al., 2002, *Using CALPUFF to evaluate the impacts of power plant emissions in Illinois: model sensitivity and implications*. Atmospheric Environment 36(6) 1063-1075.

⁷ Ex. A, Final Permit, Table I.

⁸ IEPA, *Project Summary for a Construction Permit Application From Indeck-Elwood, LLC*, at 14, (emphasis added) (attached at Ex. C).

STATEMENT OF FACTS

On March 21, 2002 Indeck-Elwood LLC submitted a PSD permit application to IEPA seeking permission to build a 660 MW coal-burning power plant. Indeck proposes to site its power plant west of the City of Elwood in Will County, 55 miles directly south of the Chicago Loop. With a single 495-foot smoke stack and prevailing southerly winds during summer months Indeck's pollution will blow over Chicago and then points north along the shores of Lake Michigan.⁹

On April 4, 2003 Illinois Governor Rod Blagojevich announced the State would award Indeck \$50 million in state subsidies if it agreed to burn Illinois coal.¹⁰ IEPA Director, Renee Cipriano, joined in the excitement: "We are pleased to see utilization of this modern technology to allow Illinois coal resources to be used without compromising our environment."¹¹ IEPA's blessing of Indeck "modern technology" occurred two days *before* the agency released Indeck's draft PSD permit for public review on April 6, 2003.

On May 22, 2003 IEPA held its only public hearing on Indeck's PSD permit. Disregarding the significant public interest in Indeck's proposal and increasing questions about its impact on the adjacent Midewin National Tallgrass Prairie, IEPA elected to hold the hearing in a small hall in the City of Elwood. By 6:45 pm the scheduled 7 pm hearing was packed with a hundred residents, leaving approximately the same number standing outside. While some people waited until others had testified and freed up a seat, many simply left. IEPA rejected requests to host another hearing at a larger and more convenient location.¹²

Petitioners submitted timely comments on the draft PSD permit to IEPA by the close of the public comment period on June 28, 2003. On October 14, 2003 IEPA notified Petitioners by mail that it had issued the permit and included its Responsiveness Summary (attached as Ex. B).¹³

⁹ See e.g. 9/8/2002 ozone animation over the Midwest at

www.epa.gov/airnow/showmaps.html?http://www.epa.gov/airnow/2002/20020908:8p-nw.gif.

¹⁰ Ex. N, Press Release, *Blagojevich announces plans for "clean coal" power plant to create jobs and burn Illinois coal*, (Apr. 4, 2003), also available at www.illinois.gov/pressreleases/printpressrelease.cfm?SubjectID=1&RccNum=2056.

¹¹ *Id*

¹² Ex. O, see e.g. Letter from Mrs. Deanna Colbert to IEPA (June 18, 2003) ("The hearing was limited to 100 people because of the size of venue chosen. Unfortunately I was not among the first 100 to arrive, so I was told I could not attend and must stand outside."); see also, Ex. D, Comments of the Sierra Club and American Lung Association (June 26, 2003) (stating "we are aware of at least two dozen residents who were initially denied entry to the hearing hall * * * Other residents simply left. * * * [Another] hearing should be held at a location that can reasonably accommodate a large number of affected and interested residents.") at 4-5.

¹³ Ex. B, IEPA, *Responsiveness Summary for Public Questions and Comments on the Construction Permit Application for Indeck-Elwood LLC*, October 2003 (referred to as "RS ___" followed by a number indicating the comment number, not the page number).

JURISDICTION AND STANDING

In April 1980 US EPA Region 5 delegated full authority to the State of Illinois to implement and enforce the federal PSD program. *See Prevention of Significant Deterioration; Delegation of Authority to State Agencies*, 46 Fed. Reg. 9580 (Jan. 29, 1981) (setting forth the delegation agreement between the State of Illinois and US EPA). The Delegation Agreement expressly delegates to Illinois the “administrative, technical and enforcement elements of the source review provisions of 40 C.F.R. § 52.21 [Prevention of Significant Deterioration].” In turn, 40 C.F.R. § 52.21(q) obligates Illinois to “follow the applicable procedures of 40 C.F.R. part 124 in processing applications under this section.”

PSD permits issued pursuant to a delegation agreement are considered federally-issued permits for purposes of review by the EAB. 40 C.F.R. § 124.41. The EAB is authorized under part 124 regulations to review “any conditions of [a final PSD] permit decision.” 40 C.F.R. § 124.19(a). Indeck’s PSD permit is by its terms an “approval * * * issued pursuant to the * * * federal regulations promulgated * * * at 40 C.F.R. § 52.21 for Prevention of Significant Deterioration of Air Quality.” Ex A at 1.

Each of the Petitioners have standing as defined by 40 C.F.R. § 124.19(a) because they participated in the permit process by filing timely comments and testifying at the public hearing.¹⁴ Consequently, EAB has jurisdiction to hear Petitioners’ timely request for review of the Indeck PSD permit.

SUMMARY OF THE ARGUMENT

A. A BACT determination must be based on a case-by-case analysis, tailor-made for each pollutant, and based on detailed, accurate and site-specific information. Without considering the BACT implications and without any opportunity for public comment IEPA inserted into Indeck’s final permit Source-Wide Condition 9 which “allows the construction of a power plant that has less capacity than that addressed by the application.” This Condition is clearly erroneous and unlawful.

B. A PSD permit may not be issued until an analysis has been completed assessing the “impairment to * * * soils and vegetation that would occur as a result of the source.” 40 C.F.R. § 52.21(o). This analysis must begin with “an inventory of soils and vegetation types found in the impact area.” NSR Manual at D.4. Indeck has conducted no inventory and its “assessment” did not consider the Midewin’s sensitive soils and vegetation. Indeck’s final permit does include Source-Wide Condition 7a requiring it to “compile information on soil conditions” and “the condition of vegetation” during and after construction. Post-permit issuance BACT review, however, is erroneous and unlawful.

¹⁴ See e.g. Ex. D, Comments of Sierra Club and American Lung Association (June 26, 2003).

C. A BACT determination must consider “clean fuels” in establishing the “maximum reduction” possible for each regulated pollutant. 42 U.S.C. § 7479(3). Indeck’s SO₂ BACT analysis is based on the exclusive use of bituminous Illinois coal and does not credibly consider low-sulfur coal in its analysis, even though such coal is regularly burned in Illinois.¹⁵ Moreover, Indeck’s permit contains no meaningful restrictions on the sulfur content of the coal it may burn. This is erroneous and unlawful.

D. A BACT determination must be based on a case-by-case analysis, tailor-made for each pollutant and based on detailed, accurate and site-specific information. Indeck’s permit authorizes it to use “fuel from different suppliers in the boilers without prior notification to the Illinois EPA.” Ex. A, US Condition 1.14. Furthermore, Indeck is free to burn “any solid fuel” as long it notifies IEPA thirty days earlier. Ex. A, US Condition 1.12. Such loose BACT emission limits are erroneous and unlawful.

E. A BACT emission limit or condition “must be met on a continual basis at all levels of operation, * * * demonstrate protection of short term ambient standards, * * * and be enforceable as a practical matter.” NSR Manual at B.56. Furthermore, “any [SIP] provision that allows for an automatic exemption from excess emissions is prohibited.”¹⁶ Indeck unlawfully permit contains such a prohibited exemption. Ex. A, Table I, Fn. 2. (“Short-term emission rates do not apply during startup, shutdown or malfunction.”).

F. US EPA has ruled that “the definition of PM-10 includes CPM [condensable particulate matter].”¹⁷ Indeck’s PM permit limits “do not address condensable particulate matter.” Ex. A, Table I, Fn. 3. Without an enforceable CPM limit the permit is unlawful.

G. The NO_x BACT limit does not represent the “maximum degree of reduction” because it defers finalizing the limit until 2010. Ex. A, US Condition 1.2.b.iii. This is unlawful.

H. IEPA is required to “establish an enforceable emission limit for each subject emission unit * * * [and] for each pollutant subject to review that is emitted from the source.” NSR Manual at B.56 (emphasis added). Fluorides is a regulated pollutant. IEPA’s refusal to set a BACT emission rate for fluorides is clearly erroneous and unlawful.

I. Clean Air Act Section 165(a)(2) requires consideration of alternatives to the proposed source. IEPA erroneously concludes it has no obligation to consider alternate sites for Indeck’s proposed source even if the issue is squarely raised during the comment period.

¹⁵ Report of the Illinois Energy Cabinet (February 2002), available at <http://www.illinoisbiz.biz/coal/pdf/IllinoisEnergyPolicyReport-Feb02.pdf> (“Of the 38 million tons of coal burned in 1999 only 30 percent comes from Illinois mines.”) at 63.

¹⁶ Herman Memo, *State Implementation Plans (SIP): Policy Regarding Excess Emissions During Malfunctions, Startup and Shutdown* (Aug. 11, 1999) at 5.

¹⁷ Ex. L, Letter. from Thompson Pace, US EPA, to Sean Fitzsimmons, IA DNR (Mar. 31, 1994).

ARGUMENT

A. IEPA Unlawfully Inserted A New Condition Into Indeck's Final Permit Authorizing Indeck to Construct a Smaller Facility Without Public Notice Or A New BACT Analysis

Source-Wide Condition 9 states:

This permit allows the construction of a power plant that has less capacity than that addressed by the application *without obtaining prior approval* by the Illinois EPA, as follows. This condition does not affect the Permittee's obligation to comply with the applicable requirements for the various emission units at the plant:

- a. The reduction in the capacity of the plant shall *generally act* to reduce air quality impacts, as emissions from individual emission units are reduced, heights of structures are reduced, but heights of stacks are not *significantly* affected.
- b. The reduction in the capacity of the plant shall result in a pro-rata reduction in the emission limitations established by this permit for the CFB boilers that are based on the capacity of the boilers.
- c. The Permittee shall notify the Illinois EPA prior to proceeding with any *significant* reduction in the capacity of the plant. In this notification, the Permittee shall describe the proposed change and explain why the proposed change will act to reduce impacts, with detailed supporting documentation.
- d. Upon written request by the Illinois EPA, the Permittee shall promptly have dispersion modeling performed to demonstrate that the overall effect from the reduced capacity of the plant is to reduce air quality impacts, so that impacts from the plant *remain at or below* those predicted by the air quality analysis accompanying the application. (emphasis added).

Ex. A, SW Condition 9 (emphasis added). Simply, this Condition allows Indeck to construct a different facility than the facility proposed in the application, reviewed by the IEPA, described in the draft permit, commented on by members of the public and authorized in the final PSD permit. Indeck is allowed to construct this yet-to-be-determined facility merely by providing notice to the IEPA, but without obtaining further IEPA approval, without modifying its existing permit and without any opportunity for public notice and comment. Decisions about the significance of changes and, in turn, the obligation to even notify the IEPA, are entirely vested in Indeck, without reference to any legal standard or definition. Perhaps most troubling, under Source-Wide Condition (9)(d), Indeck could reduce the capacity of the facility with no reduction whatsoever in air quality impacts.

Notably, this Condition was not part of the draft permit. Consequently, there was no opportunity for members of the public to comment on this specific Condition. On page 54 of the Responsiveness Summary, the IEPA lists this new provision as one of the several "significant changes" between the draft and final permits; however, the Responsiveness Summary contains no further discussion about the origins or justification for this Condition. For these reasons, the Petitioners request the EAB to subject Source-Wide Condition 9 to the most careful, stringent scrutiny.

There are several reasons why the EAB, members of the public, local officials and the U.S. EPA should oppose this Condition in any PSD permit, including the PSD permit issued to Indeck. The Petitioners request the EAB to consider the legal adequacy of Source-Wide Condition 9 in light of the following legal and policy considerations, all of which are fundamental to the execution of a credible PSD program.

1. This Condition allows Indeck to construct a different facility than the facility that was subject to public notice, a public hearing, public comment and subsequent review on appeal. Public participation is a fundamental component of the PSD program; allowing a permittee to bait-and-switch defeats this purpose. This is even more troubling when the permitting authority itself allows this to occur.
2. This Condition allows Indeck to avoid the legally mandated mechanism for changing the characteristics of a permitted facility. If Indeck seeks to alter the facility for which it received PSD approval, this should be done through a modification, not through a blanket permit authorization.
3. This Condition allows IEPA to abdicate its responsibility to conduct a credible review of any proposed changes in the facility. The Condition only requires Indeck to notify IEPA, it does not require IEPA approval or even allow for IEPA review of the measures the applicant will undertake to operate with reduced capacity.
4. It is impossible for IEPA to make a credible BACT determination without detailed facility information. The "anything smaller is OK" standard contained in the Condition is clearly inadequate for making any credible BACT determinations about the facility that will actually be constructed.
5. IEPA has assigned specific allowable emissions to this facility, and will incorporate these emissions into its PSD permitting decisions for other new and modified sources to ensure regional air quality is not degraded. It is inappropriate for an applicant to be approved for a facility with the highest potential emissions, coupled with unconditional approval to construct a smaller facility, because this is inherently unfair to other new and modified sources. This permitting practice also undercuts the IEPA's ability to develop credible models or projections of regional air quality.
6. The inclusion of this Condition in the final but not draft permit, without justification by IEPA, may be in the pecuniary interests of Indeck. It may demonstrate how far IEPA is willing to stretch its discretion to benefit this politically-favored project.

However, this Condition is not legally adequate, defeats the fundamental purposes of the PSD program, allows the IEPA to abdicate its responsibilities, while giving the permittee flexibility not authorized under federal or state law.

7. IEPA has previously argued to the EAB that size does matter in the BACT analysis and that a size discrepancy between a proposed source and a smaller source that a permittee may wish to construct is a basis for denying a PSD permit. *See In re West Suburban Recycling and Energy Center*, 6 E.A.D. 692 (Dec. 11, 1996). EAB responded “[w]e agree that a discrepancy between the source described in a federal PSD permit application and the source which the applicant actually intends to build may be relevant in determining compliance with federal PSD requirements.” *Id.*, see also, *In re CertainTeed Corp.*, 1 E.A.D. 743, 747-49, notes 11 & 12 (Adm’r 1982) (explaining that federal PSD permits and BACT determinations are “tailor-made for each pollutant emitting facility” and must be based on detailed, accurate, and site-specific information).

This provision is simply breathtaking. IEPA knows it is illegal – it is directly contrary to IEPA’s own “Standard Permit Condition No. 2” which plainly prohibits such behavior:

There shall be no deviations from the approved plans and specifications unless a written request for modification, along with plans and specifications as required, shall have been submitted to the [IEPA] and a supplemental written permit issued.

See IEPA, *Standard Conditions for Construction/Development Permits Issued By the Illinois Environmental Protection Agency*.¹⁸ This provision in particular (and there are others) “is uncomfortably reminiscent of one of the very reasons Congress granted EPA enforcement authority – to protect states from industry pressure to issue ill-advised permits.” *State of Alaska v. US EPA*, 298 F.3d 814, 823 (9th Cir. 2002).

B. The BACT Permit Limits Are Unlawful Because Indeck Failed To Assess How Its Emissions May Impair The Midewin’s Soils and Vegetation Or Identify Any Necessary Mitigation Measures

Hundreds of feet of the site where Indeck proposes to construct its power plant is the Nation’s first national prairie preserve – the 19,000-acre Midewin National Tallgrass Prairie. Congress established the Midewin in 1996 for the purposes of restoring a prairie ecosystem over the landscape of the former Joliet Army Ammunition Plant. P.L.104-106 (1996). As a unique management unit of the National Forest System its purposes include “(1) To * * * conserve and enhance the native populations and habitats of fish, wildlife, and plants; (2) to provide opportunities for scientific, environmental, and land use education and research [and] (4) [t]o provide a variety of recreational opportunities.” II. Land Cons. Act, P.L. 104-106, Sec. 2914(c). Midewin hosts 348 native species of plants, 108 species of breeding birds, 40 aquatic species and 27 different types of mammals.¹⁹

¹⁸ Available at <http://www.epa.state.il.us/air/stateforms/166-apc.pdf>. Indeck’s permit includes such standard a provision but is superseded by SW Condition 6 (“Standard conditions for issuance of construction permits attached hereto shall apply to this project unless superseded by provisions of other permit conditions.”).

¹⁹ http://www.fs.fed.us/rnnp/natural_features.htm.

Curiously, Indeck did not mention the Midewin anywhere in its application or other materials. Instead, it simply asserted that the surrounding landuse “[b]eyond the immediate vicinity of the project is rural.” PSD Appl’n, Vol. II at 2-5. IEPA perpetuated this silence and did not mention the Midewin in its public notice about the hearing,²⁰ the draft permit,²¹ its 17-page project summary (Ex. C), any other printed materials, or its oral presentation at the public hearing²² until prompted to do so by the public. The public’s frustration at IEPA’s unwilling to discuss the existence of the Midewin during this proceeding was raised in public comments. *See e.g.*, Ex. B, RS 51, 53, 56, 63 & 142.

Indeck’s modeling indicates that the zone of maximum impact from its air pollution ranges between 282-1,000 meters beyond the fence line. PSD Appl’n, Vol. II, Table 2-11 at 2-12. Right across Indeck’s fence line is the Midewin’s Drummond Dolomite Prairie, “the rarest and most unique natural community found at the Midewin.” US Department of Agriculture, *Midewin Land and Resource Management Plan, Final Environmental Impact Statement*, App. at B-4.²³ The dolomite prairie is also habitat for numerous rare species, including the leafy prairie clover (*Dalea foliosa*), a plant listed as endangered under the federal Endangered Species Act of 1973. *Id.*

The Clean Air Act requires IEPA to consider and protect natural resources like the Midewin. Among the purposes of the PSD program are to “preserve, protect and enhance the air quality in * * * areas of natural, recreational, scenic or historic value.” 42 U.S.C. § 7470 (emphasis added). To preserve and protect such areas the Act mandates that “[n]o major emitting facility * * * may be constructed * * * unless -- * * * (2) * * * the required analysis has been conducted in accordance with regulations promulgated by the Administrator.” 42 U.S.C. § 7475(a). One such PSD regulation requires that the applicant “shall provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source.” 40 C.F.R. § 52.21(o). US EPA has further explained that such an analysis “should be based on an inventory of soils and vegetation types found in the impact area [and] [t]his inventory should include all vegetation with any commercial or recreational value, and may be available from conservation groups, State agencies, and universities.” NSR Manual at D.4 (emphasis added).

An air quality impact analysis is critical because “[i]njury to vegetation is one of the earliest manifestations of photochemical air pollution, and sensitive plants are useful biological indicators of this type of pollution.” *2002 IEPA Air Quality Report* at 1. In 1997 US EPA revised the secondary NAAQS for ozone precisely because the 1-hour standard “does not provide adequate protection to vegetation from the adverse effects of O₃.” 62 Fed. Reg. 28855, 38875 (July 18, 1997). Moreover, ozone “concentrations within the range of 0.05 to 0.10 ppm have the potential over a longer duration of creating chronic stress on vegetation that can result in reduced plant growth and yield * * * and injury from other environmental stresses.” *Id.*

²⁰ Available at: <http://www.epa.state.il.us/public-notice/2003/indeck-elwood/index.html>.

²¹ *Id.*

²² See transcript, available at www.epa.gov/region5/air/permits/ilonline.htm (search on “Indeck”).

²³ http://www.fs.fed.us/mntp/plan/FEIS_V2-B.pdf.

Even more alarming, “[a]dverse effects on sensitive vegetation have been observed from exposure to photochemical oxidant concentrations of about 100 ug/m³ (0.05 ppm) for 4 hours. 2002 IEPA Annual Air Quality Report at 1.

Ozone is not the only pollutant that harms vegetation. There “are sensitive vegetation species ... which may be harmed by long-term exposure to low ambient air concentrations of regulated pollutants for which there are no NAAQS.” NSR Manual at D-4. US EPA gives the appropriate example of “exposure of sensitive plant species to 0.5 micrograms per cubic meter of fluorides (a regulated, non-criteria pollutant) for 30 days has resulted in significant foliar necrosis.” *Id.* This example is appropriate because Indeck seeks to emit 50.2 tons of fluorides without a BACT limit. Ex. A, Table I.

1. Indeck did not conduct an inventory of the Midewin’s soils and vegetation within the impact area before IEPA issued its PSD permit.

There is no dispute on this issue. Neither Indeck nor IEPA conduct an inventory of the Midewin’s soils and vegetation. Moreover, Indeck’s “analysis” did not consider any-site specific information about the landuses around its proposed facility. PSD Appl’n, Vol II at 2-20. In short, neither party considered this national resource before the permit issued.

IEPA effectively concedes as much. The final permit includes a previously-unseen provision requiring Indeck to “compile information on soils conditions (pH, nutrient levels, trace element content, buffering capacity, etc.) and the condition of vegetation * * * in the Midewin Tallgrass Prairic.” Ex. A, SW Condition 7. Furthermore, the initial report “shall be submitted prior to the start up of the plant.” This approach turns the PSD permitting process on its head: It authorizes Indeck to proceed with construction and then complete the necessary BACT analysis. This is patently unlawful because “no major emitting facility * * * may be constructed * * * unless * * * the required analysis has been conducted.” 42 U.S.C. § 7475(a) (emphasis added).

Moreover, because the Midewin was not mentioned in any of Indeck’s application materials, the draft permit, or any IEPA documents Petitioners could locate, the new provision is also not a “logical outgrowth” of the draft permit. *In re Orange Recycling and Ethanol Production Facility*, 2001 EPA CAA Title V LEXIS 4, 2001 (May 2, 2001) (there are “well-recognized limits to the concept of ‘logical outgrowth’”); *Shell Oil Company v. EPA*, 950 F.2d 741, 751 (D.C. Cir. 1991) (remanding final RCRA rule because “interested parties could not be expected to divine the EPA’s unspoken thoughts.”).

2. It was clear error for IEPA to not require a soils and vegetation analysis because there is overwhelming evidence that Indeck’s emissions threaten the Midewin

There are at least three types of likely impacts that neither Indeck nor IEPA have addressed: a) regulated pollutants that do not have ambient air quality standards; b) Indeck’s contribution to ozone exceedences or at least delaying timely attainment; and c) existing ambient air quality standards are not protective of sensitive vegetation and soils.

a. Regulated pollutants lacking ambient air quality standards

Indeck's permit authorizes 50.2 tons of annual fluoride emissions. Ex. A., Table I. US EPA has concluded that "exposure of sensitive plant species to 0.5 micrograms per cubic meter of fluorides (a regulated, non-criteria pollutant) for 30 days has resulted in significant foliar necrosis." NSR Manual at D-4. Nevertheless, IEPA refused to establish a BACT limit for fluorides without any consideration about the Midewin.

Midewin's soils and vegetation are also threatened by the plant-growth killing chemicals Indeck proposes to use in its cooling towers. Indeck is permitted to emit 8.4 tons of annual particulate emissions from its cooling towers. Ex. A, US Condition 3.7. PM is emitted as mineral deposits present in the mist that escapes from the cooling towers. Ex. A, US Condition 3.1. In addition to water droplets and minerals this mist will contain various plant-growth killing and corrosion-inhibiting chemicals because "[a]s these materials are added to the water in the cooling towers, they would be present in the particulate matter emissions emitted from the cooling towers." Ex. B, RS 10. IEPA rejected requests to compel Indeck to disclose the type and amount of chemicals it proposes to use and consider alternatives. It is sufficient, says IEPA, that "Indeck has provided general information on the types of water treatment chemicals that it expects to use in the cooling towers." Ex. B, RS 10.

b. Indeck's contribution to ozone exceedences or at least delaying timely attainment

Ozone levels in Will County – the county where Indeck seeks to locate – regularly exceed the 8-hour ozone NAAQS, without Indeck's additional pollution. In 2002 Will County's two ozone monitors recorded six days when ozone levels exceeded the 8-hour ozone NAAQS of 0.08 ppm. *IEPA 2002 Air Quality Report* at Table B1. The highest 8-hour reading recorded in Will County (Braidwood) occurred on July 14, 2002 at a level of 0.095ppm (*id.*), or nearly twice the level and for twice the duration at which "[a]dverse effects on sensitive vegetation have been observed." *Id.* at 1.

Earlier this year IEPA modeled the ozone implications of building five additional giant coal-burning power plants in Illinois, including Indeck's proposal. No surprise, "[t]he additional modeling that has been conducted shows that the new coal fired power plants would increase the levels of ozone in the air." Ex. C at 14 (emphasis added).

Indeck's soils and vegetation "analysis" did not consider how its contribution to existing ozone levels threatens the Midewin's soils and vegetation. Ex. M at 2-20 – 2-23. In fact, Indeck's assessment does not consider the Midewin whatsoever.

c. Ambient air quality standards are not necessarily protective of the Midewin

Indeck asserts its analysis shows its pollution will not exceed applicable ambient air quality standards. Whether or not this is true, ambient air quality standards are not necessarily protective of the Midewin's sensitive soils and vegetation.

This is one of the many concerns that the Illinois Department of Natural Resources raised about Indeck's proposal: "Although the predicted impacts from this facility do not violate PSD increments or exceed sensitive vegetation levels, the Department is concerned that the Midewin, and the protected species it protects, may be adversely impacted." Letter from Stephen Davis, IDNR to David Kolaz, IEPA (Sept. 30, 2003) (attached as Ex. E) (September IDNR Letter).

3. The three expert state and federal resource agencies that have assessed Indeck's proposed power plant have raised substantial concerns about its impacts on the Midewin.

The US Forest Service's Midewin Prairie Supervisor informed IEPA:

With the limited information available, I must conclude that the release of [various air pollutants] will adversely affect the resources at the Midewin. * * * The potential source of acid, or precursors of acidic deposition are a direct threat to sensitive habitat on Midewin. * * * Restoration sites in the vicinity of the proposed power plant have sensitive flora that require high-quality conditions of soil and water. * * * Some of affected habitats are occupied by Federal threatened, endangered, or sensitive species. * * * In conclusion, I ask that you fully consider the environmental impacts on the Midewin National Tallgrass Prairie.

Letter from Midewin Prairie Supervisor to IEPA (June 19, 2003) (emphasis added) (attached as Ex. F). The Illinois Department of Natural Resource agrees:

Restoration sites in the vicinity of the proposed power plant have sensitive flora that require high-quality soil and water conditions. * * * Indeck-Elwood's proposed emissions of hydrogen chloride, NOx, and SO2 emissions would appear to be acidic or precursors for acidic deposition and could cause direct effects to sensitive habitat types at the Midewin.

Ex. E, September IDNR Letter. The US Fish and Wildlife Service has also weighed in with concerns. It urged US EPA Region 5 to commence consultation under Section 7 of the Endangered Species Act of 1973 to ensure that the issuance of Indeck's PSD permit does "not jeopardize the continued existence of [two] federally listed species" at the Midewin. Letter from John Rogner, USFWS, to Thomas Skinner, EPA Region 5 Adm'r (Sep. 30, 2003) (attached as Ex. G). The US Fish and Wildlife Service's concerns revolve around two federally-listed plant species in the Midewin, the eastern prairie fringed orchid (*Platanthera leucophaea*) and leafy prairie clover (*Dalea foliosa*). *Id.* The Service went so far as urging US EPA Region 5 to "ensure that Illinois Environmental Protection Agency does not issue permits until this consultation is completed." *Id.*²⁴

²⁴ In one of the most bizarre twists in this permitting process US EPA's Region 5 air program responded to the USFWS that it would not consult about the endangered species at issue because it lacked any "discretionary authority" to oversee a state-delegated PSD program. See Letter from Cheryl Newton, US EPA to John Rogner, USFWS (Oct. 10, 2003). But that issue is for another forum.

Petitioners are not aware that any of these expert resource agencies have changed their opinion or otherwise is satisfied that Indeck's permit is protective of the Midewin's soils and vegetation, including its rare and endangered species. In fact, on the same day IEPA issued Indeck its PSD permit, IDNR sent a letter to IEPA concluding:

it is the Biological Opinion of the Department that the proposed action may, in conjunction with other cumulative impacts, jeopardize one or more listed species, may adversely affect a listed species' essential habitat and may degrade or adversely modify the Natural Areas."

Ltr. from Tom Flattery, IDNR to David Kolaz, IEPA (Oct. 10, 2003) (attached at Ex. H).

C. The SO₂ Limits Do Not Reflect BACT Because Indeck Did Not Credibly Consider The Use of Low-Sulfur Coal

BACT requires "the maximum degree of reduction [of each regulated pollutant] * * * through * * * available methods, systems, and techniques, including * * * clean fuels." 42 U.S.C. § 7479(3) (emphasis added). BACT, moreover, is an emission limitation rather than a particular pollution control technology. Clean fuels are a recognized method of pollution prevention and "[t]he Manual states that it is legitimate to look at inherently lower-polluting processes in the BACT analysis." *In re Knauf Fiber Glass, GmbH*, 8 E.A.D. 121, 136 (EAB 1999). A perfect example is IEPA's inclusion in Indeck's final permit requiring that the fuel oil used in ancillary engines be very low-sulfur oil. Ex. A, SW Condition 5.b.iii.

In sharp contrast, Indeck did not credibly consider as part of its BACT analysis the emission reductions that could result from restricting its fuel choice to low-sulfur coal. Instead, Indeck simply stated that it proposes to burn Illinois Washed No. 6 bituminous coal with "a typical sulfur content of 2.74 percent." PSD Appl'n, Vol. I at 5-12 (attached as Ex. I). Indeck also expects to burn "[o]ther Illinois coals * * * with expected sulfur contents ranging from 1.35 to 3.5" and "supplemental fuel, such as petcoke and waste coal." *Id.* Petcoke has "a typical sulfur content of approximately 6 percent." *Id.* Nothing in Indeck's permit prohibits the burning of such wide-ranging levels of sulfur-bearing coal. IEPA did not respond to comments on this issue.²⁵

²⁵ Ex. O, *see e.g.* Comments of CARE (June 17, 2003) (stating "Illinois coal is notoriously known as being the worst coal in the nation. This facility is not using the most stringent technology available."); Comments of Mr. & Mrs. Huckins (June 20, 2003) (stating "[a]t the May 22nd meeting, we were informed that Indeck Energy has now proposed to burn ILLINOIS HIGH SULFUR COAL which is very bad for everyone. (Health Risks) Previously the IEPA had ruled back in the late 60's early 70's that all Illinois power plants had to change to a LOW sulfur coal due to the Health concerns and the Environment. So all of the Illinois power plan that were burning coal had to go West to Montana & Wyoming to receive coal that was burning at much higher cost. It amazes us that all of a sudden that all of a sudden this ban on using this High Sulfur Coal from Illinois has been lifted, and now all is OK? How can this be? Has something changed as to our breathing clean fresh air?" (emphasis in original); Comments of Ms. Colbert (June 18, 2003) (stating "Illinois has already deemed the local coal unsafe to burn and force existing power plants to burn western coal."); Petition Against Indeck's Proposed Power Plant signed by City of Elwood Residents (undated) ("Reasons Against: Air Pollution * * * Burning Illinois Coal Will Not Meet IL Pollution Standards.").

Without credible consideration of low-sulfur coal as a readily available “clean fuel,” the BACT limit does not reflect the “maximum degree” of sulfur reduction. 42 U.S.C. § 7479(3). The lack of a reasoned SO₂ BACT analysis considering low-sulfur fuel explains why Indeck’s SO₂ limit is significantly higher than other coal-burning power plants that are using a variety of add-on controls and cleaner coals. For example, the following table from the draft PSD permit for the proposed Elm Road Generating Station in Wisconsin provides examples of SO₂ emission rates significantly lower than Indeck’s proposed limit of 0.15 lbs/mmBtu (30-days).

Source	State Agency	Emission Limitation (pound per million Btu)	% SO ₂ Reduction
Deseret Generating Station	Utah	0.0976 (annual)	90%
SEI Birchwood, Inc.	Virginia	0.10 (30 - day)	94%
Hawthorne Generating Station	Missouri	0.12 (30 - day)	92%
Great Plains Power – Weston Bend	Missouri	0.126 (30-day)	92%
Thoroughbred Generating Company	Kentucky	0.167 (30-day)	90%+
ERGS (proposed)	Wisconsin	0.150 (30-day)	96%+

It is not secret that Illinois and especially its Chief Executive are engaged in “an aggressive effort to revive the state’s sluggish coal industry.”²⁶ This includes spending up to \$500 million to persuade companies to burn the state’s high sulfur coal. Petitioners are not asking EAB to second-guess the wisdom of Illinois spending its scarce tax resources on such questionable projects. Instead, all we ask is that EAB ensure that in the State’s haste to promote Illinois coal, Illinois not forget that concern for Illinois’ coal mining industry “is not an accepted justification in the top-down [BACT] approach.” *State of Alaska v. US EPA*, 298 F.3d 814, 823 (9th Cir. 2002).

Should cleaner coals be more expensive than burning dirtier coals the adverse cost impact, if any, of not burning the dirtier fuels should be addressed in the BACT cost impact analysis. Moreover, any subsidies the State provides, such as the \$50 million Indeck is promised by the State, must be factored into the BACT analysis. For example, Indeck rejected various pollution controls, including additional SO₂ controls, because it concluded such controls were too expensive. Ex. I at 5-14. This calculation would have, and should have, come out different if Indeck had included the state’s subsidies in its cost analysis. This issue was raised by the public and IEPA ducked. Ex. B, RS 94 (“any State subsidy or incentive for the proposed plant should not be a significant factor in the control technology determination for the plant.”).

²⁶ See n. 10.

The lack of a well-designed SO₂ BACT limit also presents problems for IEPA to carefully protect ambient air quality and manage PSD increments. This is of special concern because as described above, the ambient SO₂ levels with Indeck's expected emissions are approaching the short-term SO₂ NAAQS.

Finally, IEPA failed to respond to commentators who were concerned about Indeck's proposal to burn high-sulfur Illinois coal when other less-polluting coals were readily available.²⁷ In a PSD permit proceeding IEPA is required to "briefly describe and respond to all significant comments." 40 C.F.R. § 124.17(a)(2). It has failed to do so. The failure to respond to this comment, a significant issue through the entire proceeding, is clearly erroneous and unlawful.

D. The Permit Unlawfully Allows Indeck To Burn Any Solid Fuel Without Defining Such Term Or Considering Alternate Fuels In Its BACT Analysis

Indeck's permit does not restrict the types of fuels it may burn. In fact, as long it provides IEPA with 30 days notice Indeck is free to burn "any solid fuel." Ex. A, US Condition 1.12.b. The term "any solid fuel" is not defined. Furthermore, Indeck is authorized "to use fuel from different suppliers in the boilers without prior notification to the Illinois EPA or modification of this permit." Ex. A, US Condition 1.14.a. Indeck requested this provision because it would like the "flexibility" to burn other solid fuels, such as petcoke and waste coal. The final permit does not, however, limit Indeck to just petcoke and waste coal. This issue was raised during the comment period. Ex. B, RS 137. IEPA dismissed the comment: "Provisions allowing the use of supplemental fuels is appropriate for a solid fuel fired boiler. This is demonstrated by other new coal-fired boilers that use fuels such as petrolcum coke." *Id.*

IEPA's conclusion is directly counter to its obligation to establish case-by-case and carefully-tailored BACT limits. 42 U.S.C. § 7479(3). Its analysis must be tailor-made for each pollutant and each PSD permit decision must be based on detailed, accurate and site-specific information. The "alternate fuel" provisions in Conditions 1.12 and 1.4 are neither tailor-made nor detailed. Tailor-made would establish the air maximum air pollution reductions possible using different types and combinations of fuels and establish that as BACT. Detailed would establish meaningful restrictions on fuel choice. Without such reasonable safeguards the BACT determination is erroneous and unlawful.

E. Indeck's Permit Provision Exempting All Shutdown, Startup and Malfunction Events From Short Term Emission Limits Is Unlawful

A PSD permit must include stringent requirements to ensure compliance with the CAA during startup, shutdown and malfunction (SSM) and must be consistent with US EPA's guidance. Memo from Kathleen Bennett, *Policy on Excess Emissions During Startup, Shutdown, Maintenance, and Malfunctions*, Sept. 28, 1982 ("Bennett Mem."); Memo from Steven Herman, *State Implementation Plans: Policy Regarding Excess Emissions During Malfunctions, Startup, and Shutdown*, Sept. 20, 1999 ("Herman Mem.").

²⁷ See n.25.

Automatic *exemptions* for excess emissions during startup, shutdown and malfunction are prohibited. Bennett Mem. at 1. The U.S. EPA is particularly intolerant of excess emissions during start-up and shutdown. "Start-up and shutdown of process equipment are part of the normal operation of a source and should be accounted for in the design and implementation or the operating procedure for the process and control equipment. Accordingly, it is reasonable to expect that careful planning will eliminate violations of emission limitations during such periods." *Id.* at 3.

Instead of requiring Indeck to carefully plan to minimize violations of short term emission limits IEPA simply exempts Indeck from complying with short-term emission limits during SSM events altogether. Ex. A, Table I, Fn 2. ("Short-term emission rates do not apply during startup, shutdown or malfunction."). This is directly contrary to the purpose and requirements of BACT.

BACT emission limits must meet at least three criteria: a) be met on a continual basis at all levels of operation; b) demonstrate protection of short term ambient standards; and c) be enforceable as a practical matter." NSR Manual B.56. Indeck's emission limits, as eviscerated by the SSM provision, do not meet any of these requirements. Indeck's emission limits are not required to be met on a continual basis because all short-term limits are suspended whenever Indeck declares it is having a SSM event. Ex. A, Table I, Fn. 2. There are multiple consequences of having no short-term permit limits, such as the absence of authority to bring an enforcement case seeking injunctive relief to address the underlying reason for the SSM event, as appropriate.

The SSM provision that allegedly establishes some safeguards during SSM events is unenforceable. Ex A, US Condition 1.6. For example, during an SSM event, this provision requires Indeck to "shutdown the boiler within 90 minutes" but fails to specify when the 90 minute-period begins. Ninety minutes after Indeck has violated its emission limit? Similarly, the phrase "unless the malfunction is expected to be repaired within 120 minutes" begs the question, expected by whom? The requirement to shutdown "when it is apparent that repair will not be accomplished within 120 minutes" raises two more concerns: When is something "apparent"? And, there is no trigger for the 120 minutes – when does such a time period begin? 120 minutes after there has been a violation? 120 minutes after the neighbors complain?

The wholesale elimination of short-term emission limits during Indeck's SSM events also violates BACT because Indeck has not demonstrated that it can protect short-term ambient air quality standards without such limits. *See e.g.* Memo from Gerald Emison, OAQPS to David Kee, Region 5 (Oct. 24, 1986). In this memo Mr. Emison responds to a Region 5 statement that PSD permits must contain short-term emission limits to ensure protection of ambient air quality standards: "I concur with your position and emphasize to you that this position reflects our national policy."²⁸

²⁸ Available at <http://www.epa.gov/Region7/programs/artd/air/nst/nsrmemos/shrterm.pdf>.

Moreover, Indeck's analysis contradicts any alleged need for such a broad waiver. For example, Indeck expects that "PM/PM10 emissions during all phases of start up will be less than or equal to the proposed BACT emission rate due to the firing of natural gas and the presence of the baghouse." PSD Appl'n, Vol. 1 at 4-3. Indeck also states that startup takes twelve hours. Furthermore, Indeck expects that by the ninth hour of its 12-hour startup process "the SO2 emission rate will reach the proposed BACT emission rate." Without agreeing these limits represent BACT, IEPA could fashion a BACT startup provision that provides: 1) no waiver of the PM BACT limits, 2) the SO2 short-term BACT limit is waived only for the first nine hours immediately proceeding commencement of start up, and 3) the maximum duration of any short-term BACT waiver shall not exceed twelve hours.

There are other reasonable "work practice" options to reasonably constrain SSM events without throwing out all short-term limits. Indeck states an important way to minimize startup emissions is to use natural gas for the first seven hours until the boiler temperature exceeds 900 degree Fahrenheit and at that point begin firing coal. Ex. I at 4-3. IEPA received a comment suggesting that such a requirement be put into the permit, *i.e.*, no firing coal until the boiler temperature exceeds 900 degrees. Ex. D, SC/ALA Comments at X.vi. IEPA neither adopted nor responded to this comment. *See* Ex. A, US Condition 1.2.e. ("The Permittee shall use reasonable practices to minimize emissions * * * including * * * (i) Use of natural gas, during startup to heat the boiler prior to initiating firing of solid fuel.").

Based on the vague SSM provision it is wholly conceivable that Indeck could operate completely uncontrolled for extended periods of time during SSM events. Petitioners did not locate any analysis in Indeck's application in which it concluded that uncontrolled emissions for a significant period of time would not violate short-term ambient air quality standards, including PSD increments and NAAQS.

There are better, more protective ways to address Indeck's need for flexibility during SSM events than eliminating all short-term BACT limits. A PSD permit must ensure continuous, enforceable limits in place at all times. IEPA's meat-cleaver approach violates BACT and is unnecessary to provide Indeck some limited flexibility.

Finally, the permit requires Indeck to develop a plan to "address start up, normal operation, and shutdown and malfunction events" (Ex. A, US Condition 1.6) without subjecting such plan to public scrutiny as mandated by 40 C.F.R. §§ 52.21, 124. In the absence of a formal permit modification proceeding, such a SSM plan is not federally enforceable and is therefore unlawful.

F. Indeck's Proposed PM Emission Limits Do Not Reflect BACT

There are at least two errors in Indeck's PM BACT determination. First, the permit limit does not represent BACT. Second, Indeck's PM BACT analysis neither considered nor established an emission limit for CPM. Both issues were raised in comments. Ex. B, RS 18 & 19.

1. The proposed PM limit does not represent BACT.

The CAA and implementing regulations both define BACT as an emission limit, not a control technology. *See* 42 U.S.C. § 7479(3); 40 C.F.R. § 52.21(b)(12). The *NSR Manual* sets forth a “top-down” five-step process for determining the BACT emission limit. The first step is to identify all available control options for a targeted pollutant. Indeck appropriately identifies fabric filters and electrostatic precipitators as two commonly-available PM control options. Ex. I, PSD Appl’n at 5-16. Step two is to analyze the option’s technical feasibility. Indeck lists various permitted CFB projects to demonstrate that such controls are technically feasible. Ex. I, PSD Appl’n, at Table 5-1.

It is in the remaining three “top-down” steps where Indeck’s BACT analysis falls apart. Step three of BACT requires the ranking of all technically feasible options in order of effectiveness, *i.e.* starting with the most stringent emission rate first. Indeck does not rank the eleven power plants. However, it is simple enough to do so from Indeck’s own chart listing the PM emission rates for eleven CFB facilities. The four lowest emission rates for sources using fabric filters are as follows:

Northampton Generating Station, PA – PM emission rate = 0.0088 lbs/mmBTU
Reliant Energy Seward, PA – PM emission rate = 0.010 lbs/mmBTU
York Energy, PA – PM emission rate = 0.011 lbs/mmBTU
JEA Northside, FL – PM emission rate = 0.011 lbs/mmBTU (3-hour)

Ex. I, PSD Appl’n at Table 5-1. Step four is to evaluate the energy, environmental, and economic impacts. Petitioners were unable to identify any records indicating that Indeck conducted an assessment of the energy, environmental and economic impacts of selecting a fabric filter versus ESP, and whether there are any impacts associated with achieving the lower emission rates for the best-performing source. At step five the permit applicant is required to select BACT as the most effective pollution control option not eliminated in a preceding step.

Despite the straightforward nature of the BACT process, Indeck did not select, and IEPA did not compel, adoption of the best-performing PM emission rate, *i.e.* that achieved by the Northampton Generating Station in Pennsylvania. This discrepancy was raised during the public comment period. Ex. B, RS 18. IEPA rejected the comment, without any analysis:

The [Indeck] BACT limit is consistent with limits set for other new coal-fired utility boilers, including those at the proposed Thoroughbred Generating Station in Kentucky and proposed Boiler 4 at the Council Bluffs Energy Center in Iowa. The emission limit set for PM, 0.015 lb/mmbtu, is appropriate.

IEPA’s response is problematic on two counts. First, the agency rejects more stringent PM limits by reference to two proposed power plants that were not part of Indeck’s BACT analysis. *See* PSD Application, Vol. 1, Tbl. 5-1.

The public was not on notice that IEPA was considering two other power plant proposals in its analysis. Second, IEPA's non-responsive response does nothing to correct, or explain, Indeck's faulty BACT analysis. Apparently IEPA did not even consider requiring Indeck to achieve, at a minimum, the PM emission limits achieved at the Northampton power plant, absent other compelling considerations. Failure to do so is clearly erroneous and unlawful.²⁹ IEPA's unwillingness to revisit the PM BACT determination is all the more shocking because Indeck informed IEPA over a year ago that its CFB boiler vendor guarantees a PM emission rate that is almost 30 percent more protective – a PM emission limit of 0.011 lbs/mmBtu³⁰ -- than the limit of 0.015 lbs/mmBtu IEPA is requiring. Ex. A, Table I.

There are other substantial co-benefits were Indeck to meet a more stringent PM BACT limit. As Indeck described in its October 25, 2002 submission "the proposed fabric filters will not only control PM/PM10 emissions but will also provide a degree of control of acid mist and mercury." Ex. K at 6. The fabric filter is the primary method Indeck is relying on to meet its Section 112(g) case-by-case MACT obligations for mercury, but still it proposes to emit a hundred pounds of mercury annually. *Id.* at 5. Consequently, if Indeck were to conduct a BACT analysis as described in the NSR manual, one factor weighing heavily in favor of adopting the more stringent Northampton PM BACT limits is the co-benefits involved in reducing mercury and other hazardous air pollutants. Mercury pollution is a significant issue considering that Illinois has issued a mercury fish consumption advisory for every waterbody in the state and coal-burning power plants contribute over 80 percent of the state's annual mercury emissions.

2. Indeck's BACT analysis did not consider possible controls for condensable particulate matter and the permit fails to include a limit on CPM emissions.

Indeck's vendor informed Indeck that it could expect the following CPM emissions from its boilers:

[T]he total PM/PM10 emission rate, including both filterable and condensable matter, is estimated at 0.050 lb/mmBtu. Accounting for condensable particulate matter, the total PM/PM10 potential emissions is 1,280 tons per year. Of this total PM/PM10 emission rate, 896 tpy is attributable to condensable particulate matter.

²⁹ Ex. J, Letter from David Campbell, US EPA to Edward Andrews, WV DEP (undated). The letter provides comments to the West Virginia DEP regarding the proposed Longview PSD permit. USEPA urges more stringent PM BACT limits based on recent performance testing at Northampton which indicate an even lower PM rate should be considered. Based on recent performance testing (for both filterable and condensable) Northampton is achieving a PM limit of 0.0045 lbs/mmBTU (*i.e.* three times better than Indeck's proposed limit). Should the EAB remand Indeck's permit for further analysis such information should be incorporated in a revised BACT PM determination.

³⁰ Ex. K, Letter from Indeck (Oct. 25, 2002), *Supplemental Information PSD Permit Application Indeck-Elwood Energy Center*, Attach. B, *Platts POWER Magazine, Northside CFB repowering halves power cost, reduces emissions*, (Sept. 2002), Pg 5 of the article provides Table 1 with guaranteed emission rates on new CFB boilers supplied by Foster Wheeler Energy Corp.

Ex. K. US EPA has taken the position, for at least nine years, that CPM is part of a source's PM emissions and must be considered in a BACT analysis. In a March 31, 1994 letter to the Iowa Department of Natural Resources US EPA responds to a series of questions, the first two relevant here:

- Iowa DNR: Does the Environmental Protection Agency (EPA) definition for PM-10 include condensable particulate matter (CPM)?
- US EPA: Yes, the definition of PM-10 includes CPM.
- Iowa DNR: Are the States required to compute PM-10 as the sum of in stack and condensable PM-10?
- US EPA: Since CPM is considered PM-10 and, when emitted, can contribute to ambient PM-10 levels, applicants for PSD permits must address CPM if the proposed emission unit is a potential CPM emitter.

Letter from Thompson Pace, OAQPS, US EPA to Sean Fitzsimmons, Iowa DNR (Mar. 31, 1994) (attached as Ex. L).

Despite this seemingly clear requirement and the fact that CPM makes up 70 percent of Indeck's expected CPM emissions, IEPA issued Indeck a permit with BACT limits that "do[es] not address condensable particulate matter." Ex. A, Table I.

IEPA offers three unpersuasive arguments in refusing to establish CPM permit limits: 1) CPM "will be effectively controlled by the combination of a fluidized bed boiler and a baghouse;" 2) "there is limited information available upon which to base a numerical BACT limit for the condensable fraction;" and 3) Indeck's modeling included CPM and did not indicate violations of increments or NAAQS. Ex. B, RS 19.

1. If CPM can be "effectively controlled" IEPA must establish a permit limit for this pollutant. NSR Manual B.56. ("To complete the BACT process, the reviewing agency must establish an enforceable emission limit for each subject emission unit at the source and for each pollutant subject to review that is emitted from the source.") (emphasis added). The only exception to establishing an emission limit is if "technological or economic limitations in the application of a measurement methodology to a particular emission unit would make an emission limit infeasible." *Id.* EPA has established a method for CPM measurement. Ex. L ("States must use Method 202 [to measure CPM]"). Consequently, IEPA position that CPM can be controlled undermines its position and at the same time underscores its obligation to issue Indeck a PM limit that includes CPM.

2. IEPA's position that there is "limited information" on which to base a CPM limit is contradicted by IEPA's decision to require Indeck conduct CPM emission testing (Ex. A, US Condition 1.8.b) and the fact that other power plants have CPM limits.

The first power plant Indeck lists in its BACT table, (Ex. I, Table 5-1 *Summary of PSD Permitted CFB Boiler Projects Since 1995*), is the Northampton Generating Station in Pennsylvania. According to US EPA Region III, this facility has a permit limit of 0.0088 lbs/mmBtu and “[c]ompliance testing in February 2001 accounting for both filterable and [sic] condensable PM reports 5.75 lbs PM/hr equivalent to 0.0045 lbs/MMBTU.” Ex. J, Enc. 1 at 13. US EPA Region III is making this point because it is concerned that the proposed PM BACT limit (including CPM) for the proposed Longview power plant in West Virginia is inadequate. Ex. J, Enc. 1 at 12 (“WVDEP has chosen a draft BACT limit for total PM/PM10, filterable and [sic] condensible PM, of 0.018/MMBTU.”).

3. Whether or not air quality modeling demonstrates violations of PSD increments or NAAQS is irrelevant in determining whether or not Indeck must have a PM BACT limit that includes CPM. The obligation to protect ambient air quality standards is a separate and distinct requirement from the obligation to install BACT. Compare 42 U.S.C. § 7475(a)(3)(ambient air quality standards) and 42 U.S.C. § 7475(a)(3)(requirement for BACT). These two provisions also serve two different purposes. Section 165(a)(3) protects ambient air quality and ensures new sources do not interfere with attainment plans. Section 165(a)(4) is a technology-forcing provision designed to continually reduce emission rates for new and modified sources.

G. The NOx Limit Does Not Reflect BACT

Indeck’s NOx limit provides a limit of “0.10 lb/million BTU, or such lower limit as set by the Illinois EPA following the Permittee’s evaluation of NOx emissions and the SNCR system in accordance with Conditions 1.15.” Ex. A, US Condition 1.2.b.iii. The permit initially provides that the “demonstration period for the boiler shall be the first two years of operation.” *Id.* Following the evaluation of various operating parameters “[t]his permit will be revised to set lower emission limit(s) for NOx emission * * * if as a result of this evaluation” IEPA “finds that the boilers can consistently comply with such limit(s).” Ex. A, US Condition 1.15.a.ii. However, the permit goes on to provide that this deadline for Indeck to complete its evaluation of a lower NOx emission limit “may be extended for an additional year,” *i.e.* for a total of three years after operation commences. Ex. A, US Condition 1.15.e.ii. One of the reasons the permit states Indeck may seek the extra year is if it is necessary to “coordinate this evaluation with the ambient assessment required Source-Wide Condition 7,” the illegal provision requiring after-the-fact analysis of Indeck’s pollution on the Midewin’s soils and vegetation.

This provision effectively defers Indeck’s BACT determination until seven years after the PSD permit is issued, instead of before permit issuance, as the law requires. 42 U.S.C. § 7475(a) (“No major emitting facility * * * may be constructed in any area * * * unless * * * the proposed facility is subject to the best available control technology.”) (emphasis added). With this schedule and assuming Indeck completes construction as it predicts by 2007, plus the three years afforded to evaluate the NOx emissions would mean no BACT determination is completed until 2010. This is plainly illegal. Indeck cannot be issued a permit without first completing and being subject to a valid BACT determination. If Indeck wishes to meet BACT today and then re-open BACT in 7 years it is free to do so.

It cannot, however, not be subject to BACT while it takes four years to build a power plant and then study its emissions for another three years.

Indeck's interim NOx permit limit of 0.10 lbs/mmBtu does not represent BACT either. Indeck's vendor, Foster Wheeler Energy Corporation, "guarantees" a NOx limits of 0.09 lbs/mmBTU. Ex. K. In the same submission, Indeck includes the PSD permit and BACT determination prepared by the Florida DEP for a CFB power plant with boilers constructed by Indeck's vendor. In that permit Florida established a NOx limit of 0.09 lbs/mmBtu on the basis that "JEA has obtained guarantees from Foster Wheeler US to meet the Department's BACT NOx * * * limits on the CFB boilers. *Id.*

H. IEPA Unlawfully Failed To Conduct A BACT Determination For Fluorides And Set A Fluorides Emission Limit

Section 165(a)(4) provides that "[n]o major emitting facility * * * may be constructed" in a clean air area "unless * * * the proposed facility is subject to the best available control technology." 42 U.S.C. § 7475(a)(4). A PSD permit satisfies the BACT requirement if it provides the "maximum degree of reduction of each pollutant" that "is achievable for [the] facility" through specific measures "for control of each such pollutant." 42 U.S.C. § 7479(3). That determination must "tak[e] into account energy, environmental and economic impacts and other costs." *Id.* At the conclusion of a BACT analysis a permitting agency "must establish an enforceable emission limit for each subject emission unit * * * and for each pollutant subject to review that is emitted from the source." NSR Manual at B.56.

Fluoride is a PSD-regulated pollutant. Indeck's estimated annual emissions of fluorides is 50.2 TPY. Ex. A, Table I. IEPA did not establish a BACT limit for fluorides. This failure was raised in the comment period. Ex. B, RS 17. IEPA's failure to establish a BACT limit for fluorides is clearly unlawful. Given the vicinity of the Midwin IEPA's refusal is particularly arbitrary because, as USEPA has explained, "exposure of sensitive plant species to 0.5 micrograms per cubic meter of fluorides * * * for 30 days has resulted in significant foliar necrosis." NSR Manual at D-4.

I. IEPA Erroneously Concluded That It Has No Obligation To Consider Alternate Locations For Indeck's Proposed Power Plant

The Clean Air Act establishes the obligation on a permitting agency to consider, and an opportunity for the public to comment on, alternative locations to site major new sources of air pollution. For attainment areas, section 165(a)(2) prohibits construction of a new major emitting facility unless "a public hearing has been held with opportunity for interested persons * * * to appear and submit written or oral presentations on the air quality impact of such source, alternatives thereto, control technology requirements, and other appropriate considerations." 42 U.S.C. § 7475(a) (emphasis added).

On the basis of this authority, Petitioners requested IEPA consider the benefits of Indeck constructing its proposed power plant at a site not immediately adjacent to the Midewin National Tallgrass Prairie. IEPA reject this request on the basis that CAA section 165(a)(2) only addresses "information on the existing air quality at the site of the proposed plant" and "there is no legal requirement that a draft PSD permit must address alternatives to the proposed project. * * * [N]or would it be appropriate for a permit to address an alternative project that was not actually the subject of the project." Ex. B, RS 121. IEPA also asserted that "it was not under any legal obligation nor did it act improperly by not thoroughly describing the site of the proposed plant and surrounding areas and land uses." Ex B, RS 140.

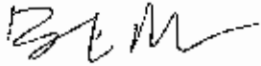
Petitioners respectfully disagree. Section 165(a) requires the public be given a reasonable opportunity to comment on four issues: (1) the air quality impact of such source"; (2) "alternatives" to "such source"; (3) "control technology requirements"; and (4) other appropriate considerations." 42 U.S.C. § 7475(a)(2). In combination with the permitting authority's obligation to respond to all reasonable comments, the permitting agency must consider alternatives "to such source," including alternate sites, when the issue is appropriately raised by the public.

Without more information Petitioners do not assert that section 165(a) compels IEPA to require Indeck to locate elsewhere, only that this provision requires that the decision maker and interested public are informed about reasonable alternate sites before a PSD permit is granted. Why else would Congress require a public hearing to consider "alternatives" to the proposed source? 42 U.S.C. § 7475(a)(2).

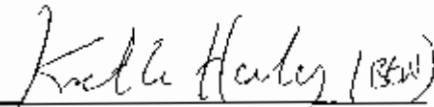
CONCLUSION

We respectfully urge EAB to review and remand this defective permit. Indeck should not be prejudiced with a short delay to fix its permit because IEPA has not yet issued or scheduled a public hearing for Indeck's draft water discharge permit. Without a final water permit, which includes storm water provisions, Indeck is prohibited from engaging in site preparation or clearing activities. It is hard to imagine how Illinois residents will be prejudiced by a modest delay as IEPA repairs a plainly unlawful and unprotective permit. There is no shortage of power in Illinois. Ex. B, RS 3 (IEPA states "Illinois does have adequate generating capacity to meet the demand for power.").

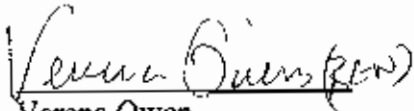
Respectfully submitted, this 14th day of November, 2003



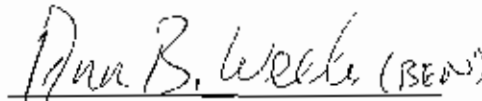
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