ILLINOIS POLLUTION CONTROL BOARD
June 5, 2014

NATURAL RESOURCES DEFENSE COUNCIL, PRAIRIE RIVERS NETWORK and SIERRA CLUB,	)	
Petitioners,	)	
v.	)	PCB 13-17
	)	(Third-Party NPDES Permit Appeal)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY and DYNEGY MIDWEST GENERATION, INC.,	)	
Respondents.	)	

OPINION AND ORDER OF THE BOARD (by D. Glosser)[1]:

On December 18, 2013, the Natural Resources Defense Council, Prairie Rivers Network and Sierra Club (petitioners) filed a motion for summary judgment. On February 24, 2014, the Illinois Environmental Protection Agency (IEPA) and Dynegy Midwest Generation, Inc. (Dynegy) timely filed responses to the petitioners' motion and cross-motions for summary judgment.

For the reasons discussed below, the Board finds that summary judgment is appropriate. Specifically, the Board finds that the permit as issued would violate the provisions of the Illinois Environmental Protection Act (Act) (415 ILCS 5/1 *et seq.* (2012)) and the Board's regulations. The Board finds that summary judgment is appropriate and grants in part petitioners' motion and denies in part petitioners' motion. The Board also grants in part IEPA's and Dynegy's motions but denies the motions in part. Specifically, the Board finds that IEPA's decision to require monitoring for mercury is supported by the record; however, the Board finds that monthly monitoring is required to insure that the Act and Board regulations are not violated. Because the Board finds that monitoring is appropriate, the Board also finds that IEPA's decision not to perform a reasonable potential to exceed analysis and impose a water quality based effluent limit was appropriate. The Board also finds that IEPA's antidegradation assessment did not violate the Act or Board regulations and IEPA was not required to develop a site specific best available technology (BAT) technology-based effluent limit (TBEL). The Board declines to review IEPA's implementation of its own rules regarding the content of the Responsiveness Summary. Therefore, the Board finds that the permit as modified by this opinion, does not violate the Act or Board regulations.

[1] Chad Kruse, who worked for the Illinois Environmental Protection Agency prior to joining the Board as an attorney assistant on March 19, 2013, took no part in the Board's drafting or deliberation of any order or issue in this matter.

The Board will begin with the procedural history of this case, followed by a recitation of the facts. The Board next sets forth the statutory and regulatory background. The arguments for summary judgment are summarized followed by the Board's discussion of the issues.

PROCEDURAL HISTORY

On October 18, 2012, petitioners timely filed a petition asking the Board to review a September 14, 2012 determination of the IEPA. *See* 415 ILCS 5/40(e)(1) (2012); 35 Ill. Adm. Code 101.300(b), 105.204(b). IEPA granted a National Pollutant Discharge Elimination System (NPDES) permit to Dynegy for its Havana Power Station located at 15260 North State Rte. 78, Havana, Mason County. On November 1, 2012, the Board accepted the petition for hearing.

On May 15, 2013, petitioners filed a motion seeking to consolidate this case with a newly filed enforcement in Natural Resources Defense Council, Prairie Rivers Network and Sierra Club v. IEPA and Dynegy Midwest Generation, Inc., PCB 13-65. The Board reserved ruling on the motion to consolidate pending briefing on a motion to dismiss PCB 13-65. On September 5, 2013, the Board dismissed PCB 13-65 and deemed the motion to consolidate moot. *Id*.

On December 18, 2013, petitioners filed a motion for summary judgment and a memorandum of law in support (Memo.). On February 24, 2014, Dynegy filed a cross-motion for summary judgment, as well as a memorandum in opposition to petitioner's motion for summary judgment and in support of Dynegy's cross-motion for summary judgment (Dynegy Memo.). On February 24, 2014, IEPA filed a cross-motion for summary judgment, as well as a memorandum of law in support of its motion for summary judgment and in support of Dynegy's cross-motion for summary judgment (IEPA Memo.).

On March 24, 2014, petitioners filed with the Board a reply (Reply) in support of its motion for summary judgment. On April 21, 2014, Dynegy filed its reply (Dynegy Reply) and IEPA filed its reply (IEPA Reply).

FACTS

On October 31, 2006, Dynegy submitted to IEPA an application for renewal of the NPDES Permit for its Havana Station. R. at 5 - 404. The NPDES renewal application contains a variety of information including required forms, analytical results for all process wastewater and storm water outfalls at Havana Station, and a list of boiler feedwater and wastewater treatment chemicals currently being used at Havana Station. *Id*. The Havana Station is an oil and coal-fired six-unit steam electric generating facility capable of generating approximately 675 megawatts of power. R. at 12. The Havana Station is located on the east bank of the Illinois River approximately two miles south of Havana. R. at 428.

The Havana Station NPDES permit governs 11 designated outfalls with only Outfall 001 and 005 having consistent discharges to the "waters of the State". R. at 428. Based on an IEPA inspection in 2007, Outfalls 001 and 005 have recorded no excursions of the monitoring requirements. *Id*. Outfall 001 consists of condenser cooling water; water is pumped from the Illinois River and passed through the facility's condensers. R. at 429. Outfall 005 (East Ash

Pond) consists of four cells (1, 2, 3, and 4), placed into service from 1990 to 2003. *Id*. Cell 1 receives the facility's bottom ash, and Cell 2 receives the discharge from Cell 1. R. at 667, 429. The fly ash is conveyed to Cell 3 by a pneumatic system in dry powder form and mixed with treated wastewater in Cell 3. *Id*. Outfall 005 discharges to the Illinois River. R. at 14.

The Illinois River segment relevant to this proceeding has a 7Q10 flow[2] of 3195 cubic feet per second and is a General Use Water. R. at 544. On the Illinois Integrated Water Quality Report and Section 303(d) List for 2006, the river is listed as impaired for fish consumption uses, with the potential cause for impairment listed as mercury and PCBs. *Id*. On the proposed 2008 List, an impairment for primary contact use due to fecal coliform has been added. *Id*.

The permit renewal application included the expected construction of a dry scrubber (a/k/a, a spray dryer absorber or SDA) and an activated carbon mercury sorbent injection (ACI) system at the Havana Station. R. at 9. The scrubber is an air pollution control technology used to control sulfur dioxide pollution in the air. *Id*. The ACI system is also an air pollution control technology that controls mercury emissions into the air. *Id*. As part of its permit application, Dynegy sought inclusion of the scrubber and ACI residues in the contributory waste stream listing for Havana Station's East Ash Pond System (Outfall 005). *Id*. The combined waste stream was estimated to be 25,000 tons per year with an estimated 2.6 tons of spent activated carbon per day to be within the 25,000 tons. R. at 529. However, as the system was not yet constructed, no actual data regarding discharge from the ACI and SDA is in the record.

In response to inquiries, Dynegy explained that the mass loadings for Outfall 005 will be placed in dry areas of the ash pond system. R. at 654. The materials are not intended to be placed into water and initially SDA residue will be placed into the portions of Cell 1 that do not include water. *Id*. Any water in Cell 1 will be pumped into Cell 2, and when Cell 1 is filled with SDA residue, Cell 2 will be used. *Id*. Again any water in Cell 2 at that time will be pumped out. *Id*. The storage of residue in this manner could result in rainfall runoff that would be discharged in Outfall 005. As a result of this process, Dynegy expects no increase in solid loadings to Outfall 005. *Id*.

On April 27, 2010, Dynegy presented additional information to IEPA "to assist with the antidegradation assessment". R. at 506-9. Among other information, in reference to identifying proposed pollutant loading increases or impacts on uses, Dynegy indicated that field studies on ACI have been conducted. R. at 507. Dynegy specifically referenced the Electric Power Research Institute (EPRI) *Activated Carbon Injection: Effect on Simulated Fly Ash Sluice Water* (March 2007) (EPRI Study). *Id*., citing R. at 990-1019.

On July 29, 2010, Dynegy provided an antidegradation assessment. R. at 528-39. In that assessment, Dynegy addressed proposed load increases from Outfall 005. R. at 529. That assessment noted that the total mass of mercury to be discharged into the ash ponds was estimated to be 0.0 to 0.6 pounds per day and an estimated 25,000 tons of SDA residue will be generated annually. *Id*. However, based on the EPRI Study, Dynegy stated that "mercury captured from the flue gas by the carbon is generally stable and does not leach out during

[2] 7Q10 is the seven day low flow in a ten year period.

simulated sluicing process." R. at 532. Attached to the antidegradation assessment by Dynegy was a document and analysis of scrubber waste from the Baldwin Plant that includes SDA residue. R. at 531, 534-38.

Dynegy's antidegradation assessment also noted that the East Ash Pond is lined and disposal of SDA residue off site is impractical and expensive. R. at 532. Dynegy indicated that other treatment or disposal alternatives that would be technically feasible and economically reasonable do not exist. *Id*.

In a September 1, 2010 memorandum, IEPA employees stated that mercury would be removed from air emissions and is expected to stay in the sorbent in the settled ash pond. R. at 545. Specifically Outfall 005 will receive activated carbon mercury sorbent making up about 1% of the fly ash sluiced to the ash ponds. R. at 544. All new waste streams to Outfalls 002 and 005 will enter the East Ash Pond. R. at 545. Between 0-0.6 pounds per day of mercury will enter the pond, mercury that would have been deposited in the Illinois River or other water bodies by air deposition. *Id*. IEPA found that "whatever low levels that are discharged from the ash pond represent a decrease in loading to the environment." *Id*.

IEPA mentioned the EPRI Study and also the United States Environmental Protection Agency (USEPA) document *Characterization of Mercury-Enriched Coal Combustion Residues from Electric Utilities Using Enhanced Sorbents for Mercury Control*, EPA-600/r-06/008 (February 2006), cited in the EPRI Study. R. at 545, citing R. at Doc. 65. The USEPA document stated that "mercury is strongly retained by the coal combustion residues and unlikely to be leached at levels of environmental concern." R. at 545. IEPA indicates that Dynegy submitted these documents to "substantiate theories concerning the behavior of the mercury removed from the air emissions through carbon addition and deposited in the ash pond." *Id*.

On April 7, 2011, IEPA issued a notice to Dynegy and others allowing them to respond to the draft permit. R. at 561-587. On April 22, 2011, Dynegy offered suggestions on the draft permit. R. at 588-591. On May 11, 2011, IEPA issued the draft permit for public notice seeking public comment on the draft permit. R. at 595-617. In the public notice, IEPA states that it has "tentatively" found:

> that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technical and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that the activity will benefit the community at large by allowing for the continued operation of the power plant and reduction of mercury and other pollutants in the atmosphere. R. at 603.

The draft permit included no effluent limit for mercury, but did require quarterly monitoring until 12 samples had been collected. R. at 609, 611.

On June 10, 2010, Prairie Rivers Network (PRN) offered comments on the draft permit and requested a public hearing. R. at 625-633. PRN set forth three objections to the draft permit:

1) The IEPA has failed to fully identify and quantify proposed pollutant load increases and the potential impacts of those load increase on the affected waters as required by 35 Ill. Adm. Code 302.105(c)(2) and (f)(1)(B).

2) Appropriate permit limits and monitoring requirements have not been assigned to assure water quality standards in the receiving steams will be met.

3) Illinois Antidegradation rule, 35 Ill. Adm. Code 302.105(c)(B)(iii) [*sic*] has not been satisfactorily addressed in that alternatives for minimizing increases in pollutant loading have not been fully explored. R. at 626.

With regard to its first concern, PRN expressed concern with the impacts of increases and that the "cumulative, additive and synergistic impacts of potential pollutant load increase have not been fully identified and evaluated for potential impacts on water quality." R. at 626. PRN asked that IEPA provide evidence that IEPA evaluated the discharge for potential load increases, the ability to meet water quality standards, and the impact on the water quality and existing uses. R. at 626-27.

On the issue of permit limits, PRN seeks effluent limits or a reasonable potential analysis for several constituents. R. at 627-28. PRN argues that these limits are necessary to ensure water quality. *Id*.

As to the antidegradation analysis, PRN argues that IEPA should require Dynegy to evaluate additional treatment measures to address and minimize increased discharges from mercury, selenium and other heavy metals and salts. R. at 627.

The USEPA filed a comment on the draft permit, indicating that USEPA would not object to issuance of the NPDES permit as drafted. R. at 634-35. USEPA did recommend that mercury monitoring be accelerated to monthly and that a reopener clause be added to the permit. *Id*.

On November 8, 2011, IEPA held a public hearing where it received public comment on a draft NPDES permit for the Havana Station. R. at 719-812. In addition to the IEPA, members of PRN, the Illinois Chapter of the Sierra Club, and the general public spoke at the hearing. R. at 740, 752, 760. On December 8, 2011, petitioners filed a comment opposing issuance of the NPDES permit arguing that the IEPA failed to perform the necessary antidegradation analysis and that IEPA failed to use its best professional judgment to determine the BAT to control the discharge of mercury. R. at 891-920. PRN also submitted comments reiterating its concerns. R. at 955-970.

The comments provided by petitioners included citations to the 2006 USEPA study and USEPA's report *Steam Electric Power Generating Point Source Category: Final Detailed Study Report (*821-R-09-008) 169 (Oct. 2009) (USEPA 2009 Report). R. at 897. Petitioners cited these studies as indications that not only will mercury be a part of the increased loading but other contaminants including selenium and arsenic are also found in coal combustion wastewater. *Id*. Likewise petitioners offered the *National Pollutant Discharge Elimination System (NPDES) Permitting of Wastewater Discharges from Flue Gas Desulfurization (FGD) and Coal Combustion Residuals (CCR) Impoundments at Steam Electric Power Plants,* Memorandum from James A. Hanlon of EPA's Office of Water to EPA Water Division Directors, Regions 1-10, Jun. 7, 2010 (Hanlon Memo) as evidence that other contaminants will be included in the wastewater. R. at 897-98. Petitioners also rely on the Hanlon Memo as evidence that there are treatment methods available to remove mercury and other metals from the wastewater. R. at 903.

After the hearing, IEPA reviewed the comments and prepared a Responsiveness Summary. R. at 659, 671-91. IEPA staff recommended that the permit be issued and recommended only one change to mercury monitoring. R. at 659. The change recommended was to require mercury sampling throughout the life of the permit. *Id*. In the Responsiveness Summary IEPA stated that the air emissions controls are the primary reason for additional loading and will increase fly ash disposal by about five percent. R. at 677. IEPA further stated that the metal laden residue stays at the bottom of the lined ash pond, and "no significant amount of metals discharge to the Illinois River." *Id*. IEPA indicated that all water quality standards will be met in the Illinois River and the increased pollutant loading "will not result in detectable increases in river concentrations" of the parameters. R. at 678.

IEPA examined the potential loading increases identified by examining the changes to the wastewater management system. R. at 679. IEPA noted that the addition of mercury containing sorbent was probably the most important change. *Id*. IEPA's antidegradation review "concluded that while more mercury will now enter the ash pond, almost all of it will remain there. What little increase in mercury (if any at all) that would occur in the discharge to the Illinois River would meet the water quality standard at end-of-pipe and is minimal." R. at 679

IEPA staff did express concern regarding mercury discharge in a series of emails from Marcia Willhite, IEPA Chief of the Bureau of Water and several staff members. R. at 692-94. Ms. Willhite asked about monitoring at the Havana Station and was informed that three outfalls have quarterly monitoring requirements in the permit. *Id*. Ms. Willhite then inquired as to whether or not a facility owned by Ameren at Newton (Newton) was the only ash pond where there have been mercury exceedances of the water quality standards. *Id*. It was acknowledged that Newton was the only one, and Ms. Willhite suggested that monitoring data from coal ash ponds should be reviewed outside the permit renewal process, and that she would not want to continue to assume there would be no or little mercury discharge if IEPA had data suggesting differently. *Id*

On September 14, 2012, IEPA issued an NPDES renewal permit for the Havana Station. R. at 697-716. Among other requirements, the permit was issued to include conditions requiring Dynegy to conduct quarterly monitoring of mercury at Outfalls 002, 003, and 005. *Id*. In

addition, Outfalls 002, 003 and 005 are subject to biannual monitoring for a variety of additional parameters including arsenic, and selenium. R. at 711-12. Special Condition 21 further specifies that "[t]he Permit may be modified with public notice to establish effluent limitations if appropriate, based on information obtained through sampling." *Id*. Additionally, the permit may be modified at any time based on new information, which Dynegy is required to provide to the Agency under Standard Condition 8. R. at 713.

STATUTORY AND REGULATORY BACKGROUND

Section 302.105 provides in pertinent part:

The purpose of this Section is to protect existing uses of all waters of the State of Illinois, maintain the quality of waters with quality that is better than water quality standards, and prevent unnecessary deterioration of waters of the State.

* * *

c) High Quality Waters

1) Except as otherwise provided in subsection (d) of this Section, waters of the State whose existing quality is better than any of the established standards of this Part must be maintained in their present high quality, unless the lowering of water quality is necessary to accommodate important economic or social development.

2) The Agency must assess any proposed increase in pollutant loading that necessitates a new, renewed or modified NPDES permit or any activity requiring a CWA Section 401 certification to determine compliance with this Section. The assessment to determine compliance with this Section must be made on a case-by-case basis. In making this assessment, the Agency must:

A) Consider the fate and effect of any parameters proposed for an increased pollutant loading.

B) Assure the following:

i) The applicable numeric or narrative water quality standard will not be exceeded as a result of the proposed activity;

ii) All existing uses will be fully protected;

iii) All technically and economically reasonable measures to avoid or minimize the extent of the

proposed increase in pollutant loading have been incorporated into the proposed activity; and

iv) The activity that results in an increased pollutant loading will benefit the community at large.

C) Utilize the following information sources, when available:

i) Information, data or reports available to the Agency from its own sources;

ii) Information, data or reports supplied by the applicant;

iii) Agency experience with factually similar permitting scenarios; and

iv) Any other valid information available to the Agency.

* * *

f) Antidegradation Assessments

In conducting an antidegradation assessment pursuant to this Section, the Agency must comply with the following procedures.

1) A permit application for any proposed increase in pollutant loading that necessitates the issuance of a new, renewed, or modified NPDES permit or a CWA Section 401 certification must include, to the extent necessary for the Agency to determine that the permit application meets the requirements of this Section, the following information:

A) Identification and characterization of the water body affected by the proposed load increase or proposed activity and the existing water body's uses. Characterization must address physical, biological and chemical conditions of the water body.

B) Identification and quantification of the proposed load increases for the applicable parameters and of the potential impacts of the proposed activity on the affected waters.

C) The purpose and anticipated benefits of the proposed activity. Such benefits may include:

i) Providing a centralized wastewater collection and treatment system for a previously unsewered community;

ii) Expansion to provide service for anticipated residential or industrial growth consistent with a community's long range urban planning;

iii) Addition of a new product line or production increase or modification at an industrial facility; or

iv) An increase or the retention of current employment levels at a facility.

D) Assessments of alternatives to proposed increases in pollutant loading or activities subject to Agency certification pursuant to Section 401 of the CWA that result in less of a load increase, no load increase or minimal environmental degradation. Such alternatives may include:

i) Additional treatment levels, including no discharge alternatives;

ii) Discharge of waste to alternate locations, including publicly-owned treatment works and streams with greater assimilative capacity; or

iii) Manufacturing practices that incorporate pollution prevention techniques.

E) Any additional information the Agency may request.

F) Proof that a copy of the application has been provided to the Illinois Department of Natural Resources.

2) The Agency must complete an antidegradation assessment in accordance with the provisions of this Section on a case-by-case basis.

A) The Agency must consider the criteria stated in Section 302.105(c)(2).

B) The Agency must consider the information provided by the applicant pursuant to subsection (f)(1).

C) After its assessment, the Agency must produce a written analysis addressing the requirements of this Section and provide a decision yielding one of the following results:

i) If the proposed activity meets the requirements of this Section, then the Agency must proceed with public notice of the NPDES permit or CWA Section 401 certification and include the written analysis as a part of the fact sheet accompanying the public notice;

ii) If the proposed activity does not meet the requirements of this Section, then the Agency must provide a written analysis to the applicant and must be available to discuss the deficiencies that led to the disapproval. The Agency may suggest methods to remedy the conflicts with the requirements of this Section;

iii) If the proposed activity does not meet the requirements of this Section, but some lowering of water quality is allowable, then the Agency will contact the applicant with the results of the review. If the reduced loading increase is acceptable to the applicant, upon the receipt of an amended application, the Agency will proceed to public notice; or if the reduced loading increase is not acceptable to the applicant, the Agency will transmit its written review to the applicant in the context of an NPDES permit denial or a CWA Section 401 certification denial.

3) The Agency will conduct public notice and public participation through the public notice procedures found in 35 Ill. Adm. Code 309.109 or CWA Section 401 certifications. The Agency must incorporate the following information into a fact sheet accompanying the public notice:

A) A description of the activity, including identification of water quality parameters for which there will be an increased pollutant loading;

B) Identification of the affected surface water body or water body segment, any downstream surface water body or

water body segment also expected to experience a lowering of water quality, characterization of the designated and current uses of the affected surface water body or water body segment and identification of which uses are most sensitive to the proposed load increase;

C) A summary of any review comments and recommendations provided by Illinois Department of Natural Resources, local or regional planning commissions, zoning boards and any other entities the Agency consults regarding the proposal;

D) An overview of alternatives considered by the applicant and identification of any provisions or alternatives imposed to lessen the load increase associated with the proposed activity; and

E) The name and telephone number of a contact person at the Agency who can provide additional information. 35 Ill. Adm. Code 302.105 (c) and (f).

Section 309.141 provides, in part:

In establishing the terms and conditions of each issued NPDES Permit, the Agency shall apply and ensure compliance with all of the following, whenever applicable:

a) Effluent limitations under Sections 301 and 302 of the CWA;

b) Standards of performance for new sources under Section 306 of the CWA;

c) Effluent standards, effluent prohibitions, and pretreatment standards under Section 307 of the CWA;

d) Any more stringent limitation, including those:

1) necessary to meet water quality standards, treatment standards, or schedules of compliance, established pursuant to any Illinois statute or regulation (under authority preserved by Section 510 of the CWA),

2) necessary to meet any other federal law or regulation, or

3) required to implement any applicable water quality standards, such limitations to include any legally applicable requirements necessary to implement total maximum daily loads established pursuant to Section 303(d) of the CWA and incorporated in the

> continuing planning process approved under Section 303(e) of the CWA and any regulations or guidelines issued pursuant thereto. 35 Ill. Adm. Code 309.141.
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> * * *
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> h) If the NPDES Permit is for the discharge of pollutants from other than wet weather point sources into the Lake Michigan Basin as defined at 35 Ill. Adm. Code 303.443:
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> * * *
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> 3) Reasonable potential to exceed.
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> A) The first step in determining if a reasonable potential to exceed the water quality standard exists for any particular pollutant parameter is the estimation of the maximum expected effluent concentration for that substance. * * * 35 Ill. Adm. Code 309.141(h)(3).

ARGUMENTS FOR SUMMARY JUDGMENT

The Board first summarizes petitioners' arguments for summary judgment followed by Dynegy's arguments and IEPA's arguments. The Board follows with a summary of the petitioners' reply and then Dynegy and IEPA's replies.

Petitioners' Motion for Summary Judgment

Petitioners first set forth the standard of review for third-party NPDES permit appeals and summary judgment. Petitioners then assert three main arguments in support of their motion for summary judgment. Memo. at 1. First, petitioners argue that IEPA failed to perform a reasonable potential analysis to determine whether the proposed discharge has potential to cause or contribute to an exceedance of water quality standards. Memo. at 15. Second, petitioners claim that IEPA failed to perform an adequate antidegradation analysis. Memo. at 20. Third, petitioners assert IEPA failed to comply with requirements to establish a TBEL based on best available technology (BAT, Memo at 33). The Board will summarize petitioners' arguments on these issues below.

Standard of Review

Petitioners acknowledge that the third party bears the burden of proof in a permit appeal; however, petitioners opine that IEPA's decision is not accorded any special deference. Memo. at 13, citing 415 ILCS 5/40(a)(1) (2012) and Des Plaines River Watershed Alliance *et al.* v. IEPA and Village of New Lenox, PCB 04-88 slip op. at 12 (Apr. 19, 2007 (*aff'd sub nom.* IEPA v. IPCB, 896 N.E.2d 479 (3rd Dist. 2008)). Petitioners note that summary judgment is appropriate when there is not any genuine issue of fact and the record demonstrates a clear right to judgment as a matter of law. Memo. at 13, citing 35 Ill. Adm. Code 101.516(b) and Clayton Chemical Acquisition L.L.C. v. IEPA, PCB 98-113, slip op. at 2 (Mar. 1, 2001). Petitioners argue that

there are no disputed facts as to what analysis IEPA performed in reaching its decision; rather the question is whether the analysis was sufficient as a matter of law. Memo. at 14.

Reasonable Potential to Cause or Contribute to Exceedances Analysis

Petitioners allege that state law, particularly the Clean Water Act (CWA) and NPDES permitting provisions of the Act, prohibit discharges that cause or contribute to an exceedance of water quality standards. Memo. at 15. Petitioners contend that the Board's rules contain many prohibitions against discharges that would cause or contribute to water quality standard exceedances. As such, petitioners note that the Board's rules require that IEPA perform a reasonable potential analysis on any new or existing discharge to identify discharges that may contribute to violations of water quality standards. Memo. at 15, citing 35 Ill. Adm. Code 309.141(d)(2).

Petitioners argue that in issuing the permit to Dynegy, IEPA failed to comply with the requirements to assure that the water quality standards would be met. Memo. at 16. Petitioners claim that this is especially concerning as the Illinois River is listed as potentially impaired for mercury and thus any additional discharge of mercury "would of necessity cause or contribute to that impairment." Memo. at 16-17. The petitioners opine this would be true unless the concentration of mercury in the effluent was lower than the concentration in the Illinois River. Memo. at 17.

Petitioners further argue that the record is clear that IEPA was aware that at least some level of increased mercury discharge would occur as a result of the discharges allowed by the permit. Memo. at 17, citing R. 677-79. Petitioners note that IEPA conceded that the increase would be at "minimal" level, but IEPA did not include levels in the permit. *Id*. Petitioners claim that the record demonstrates that IEPA staff "acknowledged . . . their awareness of the strong potential for mercury discharge" associated with the activated carbon injection (ACI) equipment. Memo. at 18, citing R. at 692-93. Petitioners point to a memorandum in the record where monitoring results from the Newton coal fired power plant are discussed. The petitioners assert that rather than investigate the issue more thoroughly in the permitting process, IEPA determined to explore the matter outside of Dynegy's permit renewal. *Id*.

Petitioners claim that nothing else in the record "can be construed" as complying with the requirement to perform a reasonable potential analysis for mercury and IEPA declined to make any effort to gather the data necessary for such an analysis. Memo. at 18, citing USEPA *Technical Support Document For Water Quality-Based Toxics Control* (March 1991) EPA/505/2-90-001 (1991 USEPA TSD). Petitioners opine that IEPA's reliance on the generalization that the discharge would be "minimal" is meaningless, especially with respect to a "potent toxin" like mercury. *Id*.

Petitioners argue that IEPA also "did not even acknowledge the existence of non-mercury pollutants associated with the [ACI] equipment, and certainly nothing in the record shows that IEPA did anything to assure that these pollutants would not cause an exceedance of applicable standards." *Id.* at 20.

Antidegradation Analysis

Petitioners argue that respondents failed to perform adequate antidegradation analysis as required by law and the analysis was at best "cursory". Memo. at 20. Petitioners note that the Illinois River's water quality is more pristine than the standards for many pollutant parameters in the Board's rules and thus, constitutes a "high quality" waterbody for those parameters. Petitioners argue that the antidegradation regulations require IEPA to perform a "parameter-by-parameter analysis" to assure that the four criteria set forth in the Board's rules in Section 302.105(c)(2)(B) are met with respect to that proposed activity. Memo. at 21, citing 35 Ill. Adm. Code 302.105(c)(2)(B). Petitioners concede that the removal of mercury from the air benefits the public and thus, the fourth criterion is met. Memo. at 20. However, petitioners argue that IEPA ignored the first two criteria, jumped to the third regarding alternatives to the discharge, and provided a deficient analysis regarding alternatives. Memo. at 21. Petitioners opine that the four requirements are framed conjunctively and each must be met before a new or increased discharge is allowed. *Id*. Petitioners contend that respondents' "touched" on the first two requirements and "inappropriately conflated them with" the fourth requirement. *Id*. Petitioners claim that this resulted in an assertion by IEPA that the "overall benefits of the air pollution control equipment obviated the need for further analysis of [the discharge's] impact" on the Illinois River. Memo. at 21-22.

Petitioners assert that the antidegradation analysis was meaningless and did not come close to meeting the standards set forth in the regulations. Memo. at 22. Petitioners maintain that the analysis failed to characterize the proposed load increases and failed to provide an assessment of alternatives to proposed increases in pollutant loading. *Id.* at 22.

Despite acknowledging that discharges associated with mercury had exceeded standards at another plant, petitioners allege that IEPA declined to identify and quantify the pollutant parameters in the discharge from the Havana Station. Memo. at 23. Petitioners concede that Dynegy did provide data identifying constituents in scrubber residue to be discharged; however the submission was insufficient for antidegradation purposes. *Id*., *see also* R at 529. Furthermore, respondents addressed only mercury and not other constituents in the discharge. *Id.*

Petitioners assert that the Board's rules do not allow a "*de minimis* exemption for any identified pollutant parameter" and the rules do not "excuse thorough antidegradation analysis requirements for discharges" that are "minimal". Memo. at 24. Petitioners take issue with respondents' reliance on the EPRI Study (R. at 990-1019) asserting it is an industry study, was preliminary, and inconclusive in its findings. *Id*. Petitioners state that they commented to IEPA during the permit process regarding issues with the EPRI study, noting that the EPRI study was based on laboratory research, not actual wet ash ponds. *Id*. Likewise, the USEPA characterization referenced in the EPRI study was also preliminary and did not address surface discharge from wet ash ponds. *Id*.

Petitioners claim that IEPA's response summary did not respond to petitioners' comments regarding the research or the documentation of the presence of contaminants other than mercury. Memo. at 25. Petitioners argue that while removal of mercury from the air is a

benefit, that benefit does not exempt IEPA from requirements to characterize the increased loading. Memo. at 26.

Petitioners maintain that IEPA failed to consider alternatives to the proposed increased loading, and that failure is contrary to Board regulations. Memo. at 26, citing 35 Ill. Adm. Code 302.105(c)(2)(B)(iii) and 302.105(f)(1)(D) and (f)(2). Petitioners argue that the regulations require consideration of alternative treatment technologies to determine if the technologies are technically feasible and economically reasonable. Memo. at 26-27. Petitioners rely on the Board's decision in New Lenox, PCB 04-88, for the proposition that the evaluation of treatment technology alternatives must be "broad and thorough". Memo. at 27. Further, petitioners argue that in New Lenox the Board made clear that to the "extent available pollution controls do not interfere with the proposed project, then the antidegradation inquiry is over, since the lowering of water quality is not 'necessary' in that instance." *Id*., citing New Lenox, slip op. at 33, PCB 04-88.

Petitioners contend that "[i]t is clear from the record that [IEPA] essentially adopted Dynegy's cursory analysis wholesale, and none of the required steps were taken to assess alternatives so as to determine" whether the proposed discharge was "necessary to accommodate important economic or social development," as required by Board regulations. Memo. at 29, citing 35 Ill. Adm. Code 302.105(c)(1). Petitioners opine that both Dynegy and IEPA's analysis are lacking the substantive analysis of costs to meet alternatives, dismissing dry ash landfilling without considering economics or technical feasibility. Memo. at 30. Further, petitioners claim that respondents do not address USEPA's conclusions that wet ash pond systems are not an effective means of preventing discharges from fly ash and that many better means exist. Memo. at 31, citing Hanlon Memo.

Technology-Based Effluent Limits Based on Best Available Technology

Petitioners explain that the CWA contains a clear requirement that NPDES permits include TBEL based on BAT for toxic pollutants. Memo. at 33. Petitioners argue that IEPA failed to comply with these requirements and that no TBEL was included in the permit for mercury or any other toxic pollutants. *Id.* Petitioners contend that the pendency of the draft [effluent limitation guidelines (ELG)] for the electric generating units does not "diminish the requirement" for IEPA to do a "case-by-case analysis". *Id*. Petitioners assert that because IEPA did not consider alternative technologies, as a matter of law, respondents have failed to comply with the CWA TBEL. Memo. at 33-34.

Petitioners argue that Sections 301 and 402 of the CWA (33 U.S.C. §1311 and §1342) require establishment of TBELs for any "anticipated toxic contaminant discharges" before an NPDES permit is issued. Memo. at 34. Petitioners opine that federal regulations require that TBELs represent the minimum level of control to be imposed in an NPDES permit. *Id*. at 34-35. Further, petitioners opine that BAT represents a commitment of maximum resources economically possible to the ultimate goal of eliminating pollutant discharges. *Id*. at 35, citing EPA v. Nat'l Crushed Stone Ass'n., 449 U.S. 64, 74 (1980).

Petitioners offer that USEPA set TBELs for many industries. Where USEPA has not done so, petitioners contend IEPA is required to use best professional judgment and BAT limits. Memo. at 36. Petitioners argue that there are no ELGs for wastewater from pollution equipment such as scrubbers and ACIs. *Id*. Petitioners claim that there are ELGs that include standards for pH, total suspended solid, oil and grease, but expressly exclude mercury, selenium and arsenic. *Id*. Mercury, selenium and arsenic are three primary toxic pollutants associated with scrubber and ACI waste. *Id*.

Petitioners assert the existence of the draft ELG is not a sufficient basis to delay establishment of a TBEL based on BAT. Memo. at 37. Further petitioners claim that IEPA should have reviewed the factual research performed by USEPA that is reflected in the draft ELG rather than rely on the existence of the draft ELG. *Id*. Petitioners maintain that the factual analysis results in a recommendation that the preferred alternative is zero discharge from the Havana Station. *Id*.

Petitioners maintain that neither Dynegy nor IEPA made reference to BAT or effort to establish TBEL for the toxic metals in the discharge associated with the scrubber and ACI. Memo. at 38. Petitioners reiterate that because the antidegradation analysis performed was inadequate, USEPA regulations require specific considerations be examined in performing a best professional judgment BAT. Petitioners maintain that those considerations were not examined in this instance. *Id*. Furthermore, petitioners argue that alternatives were not examined, even those considered technically feasible. *Id*. at 39.

Petitioners argue that the application contained none of the information required for best professional judgment analysis and therefore the application should have been rejected. Memo. at 39. The fact that the pollution control equipment was not set up and running at the time the permit was issued does not excuse the establishment of a technology-based effluent limit. Memo. at 40. Petitioners argue that IEPA must use "'all available information' including USEPA guidance, as well as permits and data for other facilities, in order to 'carry out the provisions of the [CWA]' by establishing numeric effluent limitations based on BAT to control discharges of pollutants from the Facility's east ash pond." Memo. at 41, citing 40 C.F.R.§ 125 3(c)(2)(i), (c)(3).

IEPA Failed to Respond

Petitioners claim that IEPA failed to respond to comments made by petitioners during the permitting process. Memo. at 42. Petitioners claim that the failure to respond to the comments violates IEPA's regulations regarding permits. *Id*.

Conclusion

Ultimately, petitioners argue that while the analysis that should have been conducted by IEPA is fact-intensive, there is no genuine issue of material fact as to IEPA's failure to conduct it. *Id.* at 43. Therefore, petitioners argue that summary judgment is appropriate and that the permit should be remanded to IEPA to cure the deficiencies in the analysis performed. *Id.*

Dynegy's Response and Cross-Motion for Summary Judgment

Dynegy begins its arguments by addressing the standard of review in this proceeding. Dynegy then claims that petitioners' three main arguments fail as a matter of law and that the administrative record underlying IEPA's issuance of the permit supports its decision to issue the permit. Dynegy Memo. at 1. Specifically, Dynegy first argues that IEPA was not required to calculate a reasonable potential in the absence of facility-specific effluent data. *Id*. Second, Dynegy argues that the record supports that IEPA conducted a sufficient antidegradation analysis. *Id*. Third, Dynegy argues that IEPA was not required to impose best available technology-based effluent limits using its best professional judgment. *Id*. at 1-2. Finally Dynegy asserts that no public participation requirements were violated. *Id*. at 2. Each argument will be summarized below.

Standard of Review

Dynegy argues that in third party NPDES permit appeals, the Board reviews the entire record relied upon by IEPA to determine if the third party demonstrates that IEPA failed "to comply with criteria set forth in the applicable statutes and regulations before issuing or denying the NPDES permit." Dynegy Memo. at 2, quoting IEPA and New Lenox v. IPCB *et al*, 896 N.E.2d 479, 487 (3rd Dist. 2008) (citing 40 ILCS § 5/40 (a)(l), (d) and Prairie Rivers Network v. IPCB, 781 N.E.2d 372 (4th Dist 2002)). Dynegy goes on to note that IEPA's decision must be supported by substantial evidence. *Id*. at 3, citing Prairie Rivers Network v. IEPA, PCB 01-112, slip op. at 7 (Aug. 9, 2001). Dynegy points out that the Board has stated that the main inquiry is whether based on the record, IEPA could reasonably make the finding. *Id*., citing Waste Management, PCB 84-45, 61, 68 (consol.), slip op. at 9.

In ruling on a motion for summary judgment, Dynegy argues that the Board must consider the pleadings, depositions, and affidavits strictly against the movant and in favor of the moving party. Dynegy Memo. at 3, citing New Lenox, PCB 04-88, slip op. at 6. Dynegy claims that a party opposing a motion for summary judgment must "present a factual basis which would arguably entitle [it] to a judgment". *Id.*

Reasonable Potential Calculation

Dynegy contends that IEPA does not have a duty under the Act or Board regulations to conduct a reasonable potential analysis without any relevant effluent monitoring data from the facility. Dynegy Memo. at 7. Consistent with applicable law, IEPA uses historical effluent data to calculate a reasonable potential for a given chemical parameter. *Id.* at 8. Dynegy claims that to its knowledge, IEPA has never before calculated a reasonable potential in the absence of source-specific effluent data. *Id.* Dynegy contends that IEPA acted consistently with applicable law by conditioning the permit to require monitoring and allow for reopening based on that data. *Id.*

Dynegy further argues that the 1991 USEPA TSD, used by petitioners as legal authority, was written in permissive language, rather than obligatory. More specifically, the USEPA guidance allows that permitting authorities are to have considerable discretion in deciding which

information to consider in the absence of site-specific effluent monitoring data. Dynegy Memo. at 9, citing 1991 USEPA TSD. Dynegy states that the USEPA guidance goes on to endorse the practice of imposing a monitoring requirement when site-specific data are not available, which is exactly what IEPA did here. *Id*.

Dynegy argues that IEPA did review significant information regarding ACI waste, including the EPRI Study. Dynegy Memo. at 10. Dynegy offers that the primary objective of the EPRI Study was to investigate the effect of ACI for mercury flue gas control on fly ash sluice water and ash pond settleability. *Id*. Dynegy explains that the study involved laboratory experiments on fly ash sluicing followed by settling studies. *Id*. at 10-11. Dynegy states that the EPRI Study concluded:

> the addition of spent ACI sorbent did not increase ash pond concentrations of mercury and other studied volatile metals ("concentrations of volatile metals (mercury, selenium, and boron) in the sluice water did not appear to be affected by the carbon additions."). *Id*. at 11.

Dynegy claims that IEPA also relied on the 2006 USEPA Study cited in the EPRI study, that found mercury is retained in coal combustion residues and is unlikely to be leached at levels of environmental concern. Dynegy Memo. at 11.

Dynegy argues that both these studies are technically sound and represent the best scientific knowledge available to IEPA at the time the NPDES permit was issued. Dynegy Memo. at 11. Dynegy further argues that petitioner's public comments offered no contrary scientific studies. *Id*.

Dynegy takes issue with petitioners' attempts to discredit the 2006 USEPA Study, arguing that the proposed ELGs do not implicitly or expressly discredit that study. Dynegy Memo. at 12. Further, Dynegy asserts that ELGs were not available to IEPA when the NPDES permit was issued. *Id*. Therefore, Dynegy argues that IEPA "did exactly what was posited by" USEPA guidance, IEPA "reviewed the available information and concluded that effluent limits for the parameters at issue were not justified at this time." *Id*. at 12-13.

Dynegy asserts that neither the USEPA guidance nor any other authority requires IEPA to evaluate effluent data from third party power plants. Dynegy Memo. at 13-14. Rather, Dynegy claims that USEPA guidance provides that a permitting authority "can", not "must" use a variety of factors when facility specific effluent data are not available. *Id*. at 14. Dynegy further claims that IEPA need not rely on third-party data, but can choose to gather and rely on more representative monitoring data from the permitted source. *Id*. Dynegy points to differences between the Newton plant (which the petitioners reference in their arguments) and this facility. *Id*. Specifically, Dynegy notes that the ash pond systems for the two facilities are very different and receive varied types of waste streams. *Id*. at 15.

Antidegradation Analysis was Sufficient

Dynegy argues that the record supports that IEPA conducted a sufficient antidegradation analysis and that petitioners' memorandum fails to demonstrate that the actions taken pursuant to the permit will adversely impact existing uses. Dynegy Memo. at 15. Dynegy contends that contrary to petitioners' claims, the record does support the fact that IEPA's antidegradation assessment complied with 35 Ill. Adm. Code 302.105(f)(1)(B), by identifying and quantifying the proposed increased load and impacts of the increased load. *Id.* at 16. Specifically, Dynegy asserts that the record establishes that IEPA contemplated specific increased loadings of scrubber residue, including ACI sorbent. *Id*. The record indicates that the ACI sorbent would increase loading of up to 2.6 tons of spent ACI sorbent per day to the East Ash Pond system. *Id*. at 16-17; R. at 529, 545, 568. Dynegy explains that IEPA considered the addition of mercury-containing sorbent as the most important change in the effluent and gave attention to mercury in each of the new waste streams. *Id*. at 17; R. at 680. IEPA then considered the EPRI Study and the 2006 USEPA Study to conclude that no detectable loading increase to the Illinois River was anticipated. *Id*.

Dynegy opines that IEPA's conclusion is consistent with testimony offered in the Board's rulemaking Proposed New 35 Ill. Adm. Code 225 Control of Emissions from Large Combustion Sources, R06-25 (Mercury Rule). Dynegy Memo. at 17. Dynegy contends that the testimony indicated that any mercury sequestered in the activated carbon would not leach in any observable concentrations. *Id*. Furthermore, Dynegy contends that only rainfall directly to pond 1 and coming in contact with deposited ACI waste could be expected to afford even a slight opportunity for impact to the East Ash Pond System. *Id*. at 18.

In addition to the spent ACI sorbent, Dynegy contends that IEPA considered all other aspects of the ACI waste stream and determined that there would be no detectible increased loading to the Illinois River to result from the proposed new discharge. Dynegy Memo. at 18-19. Dynegy argues that the statements that petitioners rely on from the record are an attempt to establish that IEPA somehow concluded that there would be an increased loading to the Illinois River. *Id.*

Dynegy asserts that IEPA satisfied all four antidegradation criteria required by Section 302.105(c)(2)(B). Dynegy Memo. at 21, citing 35 Ill. Adm. Code 302.105(c)(2)(B). Regarding the first two criterion, Dynegy contends that there is substantial evidence in the record supporting IEPA's conclusion that the proposed discharge would not have an adverse impact on water quality, non-compliance with water quality standards, or non-attainment with existing uses. *Id.* at 22. Dynegy argues that petitioners' criticisms are limited to inaccurate claims, and no evidence in the record demonstrates that criteria 1 and 2 were not met. *Id*.

Dynegy also argues that IEPA's analysis satisfied criterion 3 by concluding that "no economically reasonable alternatives other than treatment in the East ash pond existed due to the considerable useful life remaining in that pond system for ash storage." Dynegy Memo. at 22. Dynegy argues that this conclusion was reasonable and sufficient given the conclusion that there would be no detectable increase in loading. *Id.* at 23. In addition, Dynegy argues that petitioners' reliance on the Hanlon Memo is misplaced as that document is inapplicable to the antidegradation analysis. *Id*.

Dynegy opines that Illinois does not require the same extensive assessment in all instances, but instead the degree of review depends on the circumstances. Dynegy Memo. at 24. Dynegy concedes that any increase in pollutant loading does trigger antidegradation review; however, in this case Dynegy argues the new scrubber ACI waste stream warranted the less rigorous antidegradation assessment. *Id*. at 26. Dynegy asserts that the evidence establishes that the new waste stream would result in no detectable parameter increase in the Illinois River. *Id*. Moreover, Dynegy argues that "it was well-established" that the installation of air pollution control equipment at coal-fired electric generating units in Illinois would result in an overall decrease in mercury loading to the Illinois River and other water bodies in Illinois. *Id*. Dynegy offers that this well-established principal was presented in the Mercury Rule and offers testimony from that rulemaking to support Dynegy's proposition. *Id*. at 26-27.

Dynegy claims that New Lenox, relied upon by petitioners for support of petitioners' antidegradation argument, is factually distinguishable. Dynegy Memo. at 28. Dynegy argues that in New Lenox, the evidence established that there would be an increased loading of a pollutant, an actual or likely reasonable potential for another pollutant (based on facility specific data), and that IEPA had relied on an environmental report IEPA had criticized. *Id*. Dynegy asserts none of those circumstances are present in this case. *Id*. The fact that the technical studies relied upon by IEPA are not contradicted, and the lack of facility specific data make the present case easily distinguishable from New Lenox. *Id*.

Dynegy also claims that the permit decision made by IEPA in this case is distinguishable from Phillips 66 Company v. IEPA, PCB 12-101 (Mar. 21, 2012). Dynegy Memo. at 29. Dynegy notes that in Phillips 66, IEPA imposed a mercury effluent limit on the permit, which the Board affirmed on appeal. *Id*. Dynegy further notes that it was confirmed that there would be a loading of mercury to the water body and by contrast no confirmed increase in mercury loading will result from the Havana Station discharge to the Illinois River. *Id*.

IEPA Was Not Required to Impose BAT Based TBELs Using Best Professional Judgment

Dynegy argues that IEPA was not required to impose BAT TBELs using its best professional judgment. Dynegy Memo. at 29. Instead, Dynegy contends, that IEPA has the discretion to determine whether and how to apply its best professional judgment and whether to apply TBELs. *Id.* Dynegy argues that, under the guidelines that the Havana Station is governed by, IEPA has no obligation to establish TBELs based on the BAT. *Id.* at 29-30, citing 40 C.F.R. Part 423 ("1982 ELGs"). Dynegy maintains that it was reasonable and consistent with USEPA guidance for IEPA to use discretion in determining not to establish BAT TBELs. *Id*. at 30. Therefore, Dynegy asserts the Board should reject petitioners' argument that IEPA was required to impose case-by-case best professional judgment BAT TBELs. *Id*.

Public Participation

Further, Dynegy contends that IEPA was not required to impose TBELs because the 1982 national effluent limitation guidelines imposed by the USEPA apply to the Havana Station. Dynegy Memo. at 33. Dynegy explains that "it wasn't necessary to establish effluent limitations for mercury, selenium and arsenic because such were present in concentrations too low to be

effectively reduced by then known technologies." *Id.* at 34. Lastly, Dynegy argues that, consistent with applicable law, IEPA used its best professional judgment to impose monitoring requirements in the absence of actual data. *Id.* at 39.

Finally, Dynegy argues that IEPA's issuance of the permit met all applicable public participation requirements as required by law. Dynegy Memo. at 40. Dynegy contends that IEPA produced a Responsiveness Summary in accordance with public notice and participation requirements. *Id.* Specifically, IEPA held a public hearing and issued a written response to comments, questions, and concerns. *Id.* Dynegy explains that the Illinois regulations do not require a permit issue to respond to comments in an individualized manner, but must respond to all "significant comments." *Id.* at 41, citing 35 Ill. Adm. Code 166.192(a)(5). Dynegy contends that the petitioners "cannot accurately claim they were harmed or prejudiced in any way by a permitting process deficiency" because their appeal rights were clearly not impaired. Dynegy Memo. at 41. Ultimately, Dynegy argues that IEPA issued the permit in full compliance with the CWA, the Act, and state and federal regulations, as well as relevant guidance. *Id.* at 42.

IEPA's Response and Cross-Motion for Summary Judgment

IEPA begins by discussing the regulatory framework and burden of proof in a third-party NPDES permit appeal. Then, IEPA asserts three main arguments in support of its cross-motion for summary judgment. IEPA Memo. at 8. First, IEPA argues that it was not obligated to conduct a reasonable potential analysis. *Id.* Second, IEPA argues that its antidegradation analysis was adequately performed. IEPA Memo. at 9. Third, IEPA argues that it exercised its best professional judgment when determining whether to issue the permit. IEPA Memo. at 12. Each argument will be summarized below.

Regulatory Framework and Burden of Proof

IEPA notes that petitioners' appeal is brought pursuant to Section 40(e) of the Act (415 ILCS 5/40(e) (2012)) and Section 40(e)(3) of the Act places the burden of proof on the petitioner. IEPA Memo. at 2-3. IEPA notes that the Board has applied that statutory burden of proof consistently. *Id*. at 3, citing Prairie Rivers Network, PCB 01-112. Thus, IEPA opines that the Board must determine that as a matter of law the application, as submitted to IEPA, demonstrates that no violation of the Act or Board regulations will occur as a result of the permit being issued. *Id.*, citing Jersey Sanitation v. IEPA, PCB 00-82 (June 21, 2002) *aff'd* IEPA v. Jersey Sanitation and IPCB, 336 Ill. App. 3d 582, 784 N.E.2d 867 (4th Dist. 2003). IEPA argues that the Board looks to the entire record and the language of the permit to determine if the permit issuance was valid. *Id*.

IEPA recites the law regarding summary judgment and when summary judgment is appropriate in arguing that the record establishes that there are no genuine issues of fact. IEPA Memo. at 4. IEPA maintains that the record supports its issuance of the permit to Dynegy and therefore summary judgment in favor of IEPA and Dynegy is appropriate. *Id*. at 4-5.

Reasonable Potential to Exceed

IEPA states that it "was fully cognizant of the prohibition against discharges that cause or contribute to water quality standard exceedances." IEPA Memo. at 7. IEPA is also aware that it must determine that discharges do not cause or contribute to water quality standards violations. *Id*. IEPA points to petitioners' statements:

> "In establishing the terms and conditions of each issued NPDES Permit, the Agency shall apply and ensure compliance with . . . [a]ny more stringent limitation . . . necessary to meet water quality standards." 35 Ill. Adm. Code 309.141(d)(l). Similarly, 35 Ill. Adm. Code §304.105 provides that "no effluent shall, alone or in combination with other sources, cause a violation of any applicable water quality standard." *Id*., citing Memo. at 15.

IEPA asserts that petitioners left out "two important parts" from petitioners' statement of the Board regulations and those are first,

> "In establishing the terms and conditions of each issued NPDES Permit, the Agency shall apply and ensure compliance with all of the following, whenever applicable" 35 Ill. Adm. Code §309.141 and two, a reasonable potential to exceed analysis contemplates the existence of data. 35 Ill. Adm. Code 309.141(h)(3). *Id*. at 8.

IEPA argues that in order to perform a potential to exceed analysis, actual data from the discharge is needed. *Id.* IEPA contends that this specific information did not exist at the time of permitting. *Id.* IEPA also argues that the analysis was not necessary because all water quality standards will continue to be met in the Illinois River. *Id.* IEPA contends that it imposed a monthly monitoring condition to the permit, and IEPA will use that data to conduct a reasonable potential analysis when the permit is renewed. *Id.*

IEPA takes issue with the petitioners' reliance on an email exchange to assert that IEPA was aware that there is a strong potential for mercury discharge. IEPA Memo. at 9, citing Memo. at 19 and R. 692-93. IEPA maintains that, while the email exchange references one known situation for a mercury water quality exceedance, the email also makes the case for monitoring data to be collected. *Id*. IEPA asserts that without data, it is not possible to do the "potential to exceed" analysis. *Id*.

Antidegradation Analysis was Adequate

IEPA argues that in order for it to perform an antidegradation analysis, there needs to be an increased loading of pollutants, which is not the case here. IEPA Memo. at 9. IEPA argues that the assessment must be made on a case-by-case basis using the criterion found in Section 302.105(c)(2) of the Board's rules (35 Ill. Adm. Code 302.105(c)(2)). *Id*. IEPA argues that Section 302.105(c)(2) includes a "qualifier on the information, 'when available'". *Id*. at 10. IEPA reiterates that the record lacks information and actual data, so a monitoring condition was included in the permit. *Id*. IEPA opines that without independent data, IEPA could appropriately rely on data provided by Dynegy. *Id*.

IEPA argues that the petitioners' reliance on New Lenox is misplaced. IEPA notes that in New Lenox the Board found that due to the nature of the pollutant loading, IEPA needed to conduct a "robust antidegradation analysis". IEPA Memo. at 10. However, there is no increase in loading of pollutants here and IEPA contends New Lenox is inapplicable. *Id.* IEPA offers that the Board recognized that antidegradation would be "implemented on a sliding scale". *Id*. Here, IEPA found that the low levels of mercury discharged from the ash ponds would represent a decreased loading to the environment. *Id*.

IEPA notes that Dynegy provided the EPRI Study as a part of its permit application because Dynegy would be making changes to its facility that would result in mercury sorbent material being discharged to the East Ash Pond. IEPA Memo. at 11. The mercury discharge to the Ash Pond is estimated to be 0.0 to 0.6 pounds per day. *Id*., citing R. at 529. After reviewing the information available to it at the time of permitting, IEPA concluded that mercury removed from the air emissions is mercury that otherwise would have been deposited in the Illinois River. *Id*. IEPA determined that there is an "anticipated benefit" in the removal of mercury from air, and it will remove deposition of mercury from downwind bodies of water. *Id*., citing R. at 545-46.

IEPA Exercised Best Professional Judgment

IEPA first contends that any reference that petitioners make to the USEPA's draft ELGs should be disregarded as the guidelines were published nine months after IEPA issued Dynegy its permit. IEPA Memo. at 12-13. Thus, IEPA insists any reference to the draft ELGs is an attempt to introduce matters that are not in the record. *Id.* at 13. Further, IEPA argues that a case petitioners referenced for the proposition that IEPA was obligated to engage in best professional judgment analysis to establish technology-based effluent limits is not controlling. *Id.* at 13. That case, Kentucky Waterways Alliance, *et al.* v. Energy and Environment Cabinet, *et al*, No. 11-C1-1613 (Franklin County Circuit Court, Sept. 10, 2013), IEPA argues, is not persuasive while another case is more on point. *Id.* at 14, citing Tennessee Clean Water Network, *et al.* v. Tennessee Department of Environment and Conservation, WPC 10-0116, slip op. at 6 (Dec. 4, 2013). Tennessee Clean Water Network holds that federal and state regulations give permit writers "discretion to determine whether and when to develop additional limits for pollutants that are not covered" by applicable ELGs. *Id*. at 13-14.

In addition, IEPA states that BAT TBELs exist in the Board's regulations on effluent limitations and the mercury limit is set at 0.5 µg/L. IEPA Memo. at 14, citing 35 Ill. Adm. Code 304. Based on the information in the record, IEPA contends that it concluded that mercury is not anticipated to increase in concentration in the discharged effluent. *Id.* IEPA argues that it used its best professional judgment to include a monitoring requirement in the permit to determine if the discharge violates TBELs and water quality standards. *Id.*

Responsiveness Summary

IEPA maintains that it did address petitioners' specific comments in its Responsiveness Summary, though it did not use specific words such as "best professional judgment" and "best available technology". IEPA Memo. at 15. IEPA notes that the contents of the Responsiveness

Summary are set forth in IEPA's rules at 35 Ill. Adm. Code 166.192. IEPA asserts that petitioners did not cite to any authority that would allow the Board to review how IEPA implements its own regulations. *Id*. at 16. Furthermore, IEPA argues that the Responsiveness Summary is part of an information hearing process and "by definition is not required by law." *Id*., citing 35 Ill. Adm. Code 166.120(b).

Conclusion

IEPA argues that petitioners have failed to meet their burden of showing that granting the permit would result in violation of the Act or the Board's regulations. IEPA Memo. at 16. As such, IEPA argues that denial of petitioners' motion for summary judgment is appropriate and that the Board should grant IEPA's cross-motion. *Id.*

Petitioners' Reply

Petitioners argue that their motion for summary judgment demonstrates that the permit issued to the Havana Station was based on insufficient information and an unreasonable and unlawful interpretation of that information. Reply at 1. Petitioners argue that respondents do not demonstrate in their motions that IEPA had sufficient technical and factual support for its conclusions. *Id.* Petitioners contend that the antidegradation review was not even minimally sufficient. *Id.* at 2. Petitioners further suggest that Dynegy's arguments are based on two legal conclusions that are wrong: "that the existing 1982 ELG already covers ACI waste, and that case-by-case BPJ TBELs are discretionary rather than mandatory." *Id.* Petitioners then assert four main arguments in support of their motion for summary judgment. *Id.* at 3. Each argument will be summarized below.

Available Evidence of Reasonable Potential to Cause or Contribute to Exceedances

Petitioners argue that the Agency "unlawfully turned a blind eye" to available evidence that the discharge from the facility may have reasonable potential to cause or contribute to mercury impairment of the Illinois River. Reply at 3. Petitioners contend that respondents do not deny that a water quality based effluent limit (WQBEL) should have been imposed and have not meaningfully disputed that IEPA failed to perform a sufficient analysis. *Id.* Instead, respondents argue that when there is no specific data available, agencies may refuse to perform such analysis. *Id.* Petitioners argue that there is no support for such a blanket refusal and that "it violates the law and common sense to ignore relevant data just because it does not come from the specific facility under consideration." *Id.*

Petitioners maintain that IEPA had an obligation to consider available data concerning the effluent proposed to be discharged. Reply at 4. Petitioners suggest that the language of the Act and federal law creates mandatory requirements that IEPA ensure that the issued permit will not cause or contribute to an exceedance of water quality standards. *Id.* Instead of following this mandatory language, petitioners contend that IEPA quotes itself, without any further support, making a broad conclusion that reasonable potential analysis can only be conducted based upon facility-specific data. *Id.* at 5, citing IEPA Memo. at 8. Similarly, petitioners contend that Dynegy makes broad arguments based on a misreading of USEPA guidance. Reply at 5, citing

Dynegy Memo. at 13-15. Petitioners assert that any unwritten discretion IEPA may have to conclude that a reasonable potential analysis requires facility-specific data is "necessarily bounded by the basic requirement of rationality and consideration of available facts inherent in the requirement that permit issuance be supported by 'substantial evidence' . . . ." Reply at 5 (internal citations omitted).

Petitioners assert that the 1991 USEPA TSD relied upon by Dynegy "plainly implies that there are some instances where a WQBEL based upon data" other than facility specific data is necessary. Reply at 6. Petitioners argue that the issue is not whether IEPA had the option to consider available data concerning ACI sorbent effluent from outside the facility to develop effluent limits. Rather the issue is that IEPA had data from Newton, but declined to consider the data. *Id*. IEPA relied instead on the EPRI study, which was an industry-sponsored laboratory-scale study. Petitioners maintain that IEPA's posture is an across the board refusal to predict an undesirable event, before it actually happens. Petitioners maintain that such an assumption is fundamentally irrational and highly risky. *Id.* at 7.

Petitioners then argue that IEPA categorically rejected available data in favor of insufficient information. Reply at 8. Petitioners assert that IEPA was aware of available data, including that the Newton facility had installed ACI equipment and after installment, the facility's mercury discharged subsequently increased. *Id.* Petitioners maintain that IEPA repeatedly dismissed the data, describing the discharge as minimal and discounting its significance. *Id.* In the Newton case, IEPA imposed WQBEL despite incomplete information; petitioners assert that it makes no sense for IEPA to refuse to do the same here. *Id.* at 9. Petitioners note that Dynegy suggests that the Newton facility is distinguishable from the Havana facility and thus comparison of the two is not useful. *Id.*, citing Dynegy Memo. at 14-15. However, petitioners maintain that the applicability of the Newton data should be assessed on remand. Reply at 10.

Petitioners also contend that IEPA focused on unreliable and inapplicable information, including a laboratory-scale, industry sponsored study (EPRI Study) supplied by Dynegy and a 2006 USEPA Study cited in the EPRI study. Reply at 10. Petitioners concede that the EPRI study was properly performed. Id. However, petitioners argue that the study was too preliminary to form a basis for any conclusions regarding mercury and other toxic pollutants in ACI-contaminated waste (EPRI researchers even characterized the study as "a preliminary review") *Id*. Further, petitioners contend that the researchers actually warned against applying the study's results to real-world ash ponds. *Id.* at 11. Thus, petitioners argue that "[i]n view of these self-defined limitations to the study, [IEPA] had no basis to use it to draw a general conclusion that levels of toxic mercury would be 'minimal' and not sufficient to contribute to an exceedance of water quality standards in the Illinois River." *Id.* at 11-12.

Furthermore, petitioners maintain that IEPA's reliance upon the 2006 USEPA Study cited in the EPRI study was unfounded given that it addressed underground leaching rather than surface water discharge. *Id.* at 12. Petitioners argue that the USEPA Study ultimately concluded that it did not support allowing continued use of ash ponds to control ACI-contaminated waste. *Id.* Petitioners suggest that IEPA should have relied on more recent USEPA available data concerning this investigation (such as the Hanlon Memo concluding that technologies that are

more advanced than settling ponds are available and more effective at removing metals). *Id*. Petitioners maintain that the Hanlon Memo is relevant and applicable because USEPA has identified the presence of the dissolved form of pollutants in ACI-contaminated wastewater as a basis for the conclusion that wet ash ponds are an insufficient form of control. *Id.* at 13.

Additionally, petitioners argue that IEPA based its determination on assumptions that were "demonstrably wrong." Reply at 14. Petitioners explain that IEPA relied upon "strange" and "obviously wrong" statements in the responsiveness summary to support its decision. *Id.* Petitioners argue that it appears from certain statements, outlined in their initial memorandum, that the IEPA permit writer misunderstood basic facts concerning the evaluation of the potential impact of mercury discharge on compliance with the applicable health-based water quality standard. *Id.* at 15. Further, petitioners suggest that the conflicting statements given by IEPA are merely evidence that IEPA did not think its conclusions through sufficiently. *Id.*

Antidegradation Analysis

Petitioners argue that IEPA's antidegradation analysis did not meet minimum regulatory requirements. Reply at 15. Petitioners contend that respondents defend IEPA's limited antidegradation analysis by stating that the few sentences were all that was necessary of the required level of review. *Id.* at 15-16. Petitioners concede that every discharge does not call for the same level of scrutiny; however, this does not mean that IEPA can ignore the minimal requirements applicable to any antidegradation analysis. *Id.* at 16. Petitioners reiterate the alleged deficiencies in IEPA's antidegradation analysis, which include failure to characterize the waste stream; failure to meaningfully evaluate alternatives; reliance on a non-existent exemption; and conflation of unrelated benefits. *Id.* at 16-17.

Petitioners contend that IEPA's antidegradation analysis did not meet the basic requirements of the law as interpreted by USEPA and the Board. Reply at 17. Petitioners argue that 35 Ill. Adm. Code 302.105(c)(2)(C) does not support IEPA's argument for doing nothing in terms of the antidegradation analysis. *Id.* at 17-18. Instead, the regulation lists the categories of information to be relied upon when it is available. *Id.* at 18. Petitioners maintain that the requirement that IEPA rely on information supplied by the applicant does not mean that the applicant can fail to supply the information, and that IEPA can then claim it had nothing to rely upon. *Id.* Petitioners argue that "[w]here an application fails to supply the necessary data, [IEPA] must declare the application incomplete, not simply throw up its hands and make a poorly-informed determination based on the inadequate data supplied." *Id.*

Petitioners contend that because Section 302.105 requires IEPA to rely upon IEPA experience with similar permitting scenarios, IEPA was obligated to look at the Newton waste stream data and information available from USEPA. *Id.* Furthermore, petitioners argue that the law requires specific identification and quantification of pollutants that was not done here. *Id*. at 19. Petitioners additionally argue that IEPA's "shifting terminology signals confusion borne of failure to actually perform the required effluent characterization." *Id.* (highlighting the difference between "minimal" or "not significant" pollution and "nonexistent" or no pollution).

Petitioners then argue that the varying levels of antidegradation review do not justify IEPA's failure to comply with antidegradation requirements, specifically where bioaccumulative pollutants are at issue. Reply at 21. Petitioners contend that the Board's allowance of a case-by-case determination of the appropriate level of analysis does not assist IEPA because it was clear that new and increased discharges of toxic bioaccumulative pollutants should not qualify for diminished antidegradation scrutiny. *Id.* Petitioners maintain that IEPA's own position was that while levels of review may vary, "even small amounts of increased loading of certain pollutants warrant scrutiny of alternatives." *Id.* at 21-22 (omitting internal quotations). Petitioners suggest that the Board never voiced the view that a pollutant, such as mercury, which is harmful even in nanograms per liter, should receive the minimal level of scrutiny that IEPA gave here. *Id.* at 22. Petitioners contend that the Board indicated in the Antidegradation Rulemaking that the evaluation of alternatives is central to the process. *Id.* at 23. Petitioners additionally contend that nothing in New Lenox opines that the minimum alternatives analysis requirements could be quickly dispensed at IEPA's discretion. *Id.* at 23-24. Petitioners argue that IEPA has not performed the necessary alternatives analysis to determine whether requiring disposal of ACI waste somewhere other than a wet ash pond would interfere with its ability to continue to use the ACI equipment. *Id.* at 24. Thus, because the alternatives analysis was inadequate under the most minimal standard for antidegradation review, petitioners argue the permit should be remanded. *Id.*

Technology-Based Effluent Limits Based on Best Available Technology

Petitioners argue that the CWA requires all permits contain TBELs based on BAT, and USEPA establishes TBELs through industry specific ELGs. Reply at 25. If USEPA has not established a TBEL through an ELG, petitioners maintain that TBELs must be established by IEPA on a case-by case basis. Therefore, petitioners assert that since the ACI waste stream was excluded from the USEPA's existing ELG, IEPA was required to establish case-by-case TBELs. *Id*. Petitioners note that respondents have taken a different approach to the failure to establish TBELs in Dynegy's permit, Dynegy maintaining IEPA was not required to establish TBELs and IEPA asserting it did so. Reply at 25. Petitioners opine that both approaches are incorrect.

1982 ELGs Exclude Air Pollution Control Waste. Petitioners maintain that Dynegy's argument "ignores the fact that the 1982 ELG *expressly excluded* air pollution control waste from its scope" (emphasis in the original). *Id*. Petitioners take issue with Dynegy's reading of the regulations and argue that words are taken out of context to "distort well-established" requirements to develop TBELs on a case-by-case basis. *Id*.

Petitioners disagree with Dynegy's claim that the 1982 ELG intended to address mercury and other contaminants from FGD waste as "low volume waste". Reply at 26, citing Dynegy Memo. at 33-34. Petitioners argue that Dynegy "ignores" express statements by USEPA that scrubber waste was intentionally excluded from the 1982 ELG and left for a future rulemaking. *Id*. Petitioners note that USEPA stated it was "reserving effluent limitations from four types of waste waters for future rulemaking" and flue gas desulfurization wastewater was specifically listed as one of the four types. *Id*., citing 47 Fed. Reg. 52290, 52291 (Nov. 19, 1982). Petitioners concede that the 1982 ELG listed ash transport wastewater as a part of the category of low-volume waste sources; however, USEPA did not set limits on various toxic metals

associated with FGD due to lack of sufficient information. *Id*. Thus, USEPA's decision not to set limits was based on a lack of information and an intention to revisit ash transport wastewater in later rulemakings. *Id*. at 26-27.

Petitioners argue that USEPA has repeatedly acknowledged that the 1982 ELGs excluded air pollution control-related wastewater from regulation and reiterated that the:

> 1982 rulemaking did not establish best available control technology economically achievable (BAT) limits for FGD wastewaters because EPA lacked the data necessary to characterize pollutant loadings from these systems. Reply at 27 quoting Hanlon Memo Attach A at 3.

Petitioners maintain that the Hanlon Memo reiterates and explains USEPA's position on the 1982 ELGs, and that position is that USEPA excluded pollutants associated with coal plant air pollution control equipment from the 1982 ELGs. Reply at 28.

Petitioners argue that the Hanlon Memo's interpretation of the 1982 ELGs is supported by Kentucky Waterways Alliance, which recognized that "it makes no basic sense to interpret a 1982 regulation as a free pass to ignore toxic waste streams about which little or nothing was known at the time." Reply at 29. Petitioners discount respondents' reliance on Tennessee Clean Water Network, noting that case is on appeal, and that case disregards the exclusion of air pollution control-related pollutants from the 1982 ELGs and the Hanlon Memo. *Id*. at 30.

Case-by-Case TBELs Are Mandatory. Petitioners maintain that development of TBELs is mandatory under the CWA, and multiple courts have affirmed that mandatory nature of the requirement. Reply at 30-31 (citations omitted). Petitioners claim that Dynegy's attempt to read discretion into the mandatory requirement distorts the actual language of the rules. Reply at 31-32. Petitioners opine that the Dynegy's interpretation of the use of the word "may" in 40 C.F.R. §125.3(c) is an absurd interpretation as such an interpretation would contradict the CWA mandate that TBELs be established. Reply at 32.

Petitioners also rely on the requirements of 40 C.F.R. §122.44 to support their argument that TBELs are mandatory in NPDES permitting. Reply at 32. Petitioners discount respondents' reliance on the NPDES permit writer handbook and argue that nothing in that handbook supports a position that TBELs are not mandatory. Reply at 33.

IEPA Did Not Comply With Case-by-Case TBELs. As to IEPA's claim that it has established TBELs, petitioners argue that IEPA merely references a "30 year old Illinois mercury limit that was not developed in accordance with legal requirements for BPJ TBEL determination." Reply at 25. Petitioners maintain that IEPA failed to consider any of the factors required to be considered when developing TBELs. Reply at 34-35. Petitioners find IEPA's contention that TBELs exist as effluent limits in Part 304 (35 Ill. Adm. Code 304) puzzling as those limits were not included in the permit. Reply at 35. However, even if included in the permit, petitioners maintain that the effluent limits in Part 304 do not constitute BAT for purposes of 40 C.F.R. §125.3. *Id*. This is so, according to petitioners, because the rulemaking

adopting the Part 304 effluent limits "makes no reference to and cannot substitute for the requirements of 40 C.F.R. §125.3 concerning the identification of TBELs." *Id.*

Petitioners argue that monitoring requirements are not a substitute for TBEL and nothing in the regulations excuses the obligation to establish TBELs based on the lack of facility specific information or the belief that the discharge will not be significant. Reply at 35. In fact petitioners assert that USEPA has "repeatedly stated that a case-by-case TBEL *must* be established" pursuant to 40 C.F.R. §125.3 even absent facility specific data. Reply at 36.

Violation of Public Participation Requirements

Petitioners argue that IEPA's failure to respond to petitioners' comments concerning the requirements to establish a case-by-case TBELs violated public participation requirements. Reply at 37. Petitioners argue that because Section 166.192 is an IEPA rule rather than a Board rule is of no significance. *Id*. Petitioners argue that the Board has the authority to conduct proceedings charging violations of rules promulgated under the Act and third-party permit appeals are conducted under Sections 32 through 33 of the Act (415 ILCS 5/32-33 (2012)). Reply at 37-38, citing 415 ILCS 5/5(d) (2012). Based on these provisions, petitioners maintain that courts "have held that the Board has authority to apply and enforce all law applicable to the permitting process." Reply at 38.

Dynegy's Reply

Dynegy maintains that petitioners' position is without merit, and IEPA's decision is supported by applicable law and substantial evidence. Specifically, Dynegy argues that IEPA was not required to use best professional judgment to develop WQBELs absent site-specific data. Dynegy also argues that IEPA's antidegradation analysis was sufficient, and IEPA was not required to impose a case-by-case TBEL. Dynegy maintains that IEPA met all the public participation requirements in IEPA's rules. Each argument will be summarized below.

IEPA Not Required to Develop WQBEL Absent Facility Specific Data

Dynegy maintains that none of the regulatory and statutory provisions relied upon by petitioners require IEPA to conduct a reasonable potential analysis and set a WQBEL when there is no site-specific data. Dynegy Reply at 2. Dynegy claims that the only mandatory provision of the regulations and statutes cited by petitioners is a requirement that the water quality standard not be violated. *Id*. Dynegy relies on Section 309.143 for the proposition that a WQBEL is only required if IEPA determines that a discharge "will cause or have the reasonable potential to cause, or contribute to an excursion above any State water quality standard." *Id*., quoting 35 Ill. Adm. Code 309.143. Dynegy asserts that State and federal laws are silent on how IEPA must make this determination. *Id*. However, Dynegy argues that the 1991 USEPA TSD provides that a reasonable potential analysis is "best made" when site-specific data are available, and if the data are not available, a WQBEL need not be developed. *Id*. at 3.

Dynegy maintains that petitioners "contort the plainly discretionary" language of the 1991 USEPA TSD and ignore similar language in the USEPA NPDES Permit Writers' Manual.

Dynegy Reply at 3. Dynegy points to phrases from the 1991 USEPA TSD that provide an "authority may decide" to develop and impose limits and an authority "can" use a variety of factors and information if there is no site-specific data. *Id*. Dynegy asserts that petitioners ignore these phrases and petitioners interpret some permissive language as mandatory. *Id*. at 4. Specifically, Dynegy takes issue with petitioners' argument that there is an affirmative duty on IEPA to consider third-party information. Rather, Dynegy argues the guidance "merely suggests" that IEPA should look at information relevant to the effluent. *Id*.

Dynegy argues that the NPDES Permit Writers' Manual (2010) supports its argument that a reasonable potential analysis is discretionary absent site-specific data. Dynegy Reply at 4, citing NPDES Permit Writers' Manual (2010) at 6-30. Dynegy claims that statements in the manual "demonstrate" that USEPA believes the IEPA has discretion to perform a reasonable potential analysis if no site-specific data are available. *Id*. at 4-5. Further, Dynegy opines that federal law does not require such a reasonable potential analysis. *Id*. at 5.

Dynegy offers that even though not required to do so IEPA did look at outside information absent relevant monitoring data from the Havana Station. Dynegy Reply at 5. Dynegy argues that IEPA's consideration of the EPRI Study and the 2006 USEPA Study are examples of other information IEPA considered. *Id*. Dynegy notes that IEPA also considered the information regarding the operational design and flow of wastewater at Havana. *Id*. Dynegy argues that the cumulative nature of the materials considered by IEPA is substantial evidence supporting IEPA's decision. Dynegy reminds the Board of the standard of review and argues that "the evidence IEPA considers when making a permitting decision need not be 100% dispositive; it simply needs to be reasonable evidence for IEPA to rely upon." *Id*. at 6. Dynegy asserts that it was reasonable for IEPA to rely upon the EPRI Study and the 2006 USEPA Study as a basis for determining that the effluent discharge would not be adversely affected. *Id*. at 6-7.

Dynegy claims that petitioners are "actually wrong to assert that IEPA did not consider Newton data". Dynegy Reply at 7. Dynegy refers to IEPA's internal emails demonstrating that IEPA looked at the Newton data; however, Dynegy argues that petitioners misconstrue the Newton data. *Id*. at 8. Dynegy again argues that IEPA was not required to use the Newton data; but in any event the data are misconstrued by petitioners. Specifically, Dynegy notes that Newton's mercury discharge before installation of the ACI was above 12 µ/l and rather than "increasing steadily" after ACI installation, concentrations varied by quarter. *Id* at 8-9. Dynegy claims that the effluent data "serves as evidence" that the mercury in the effluent may not be a result of the ACI installation and therefore establishes no relationship between ACI waste and increased mercury in the discharge. *Id*. at 9.

Dynegy argues that the email exchange relied upon by petitioners supports a conclusion that IEPA had little data regarding mercury in the effluent. Dynegy Reply at 10. The email exchange further supports the inclusion of a monitoring requirement in Dynegy's permit along with a clause to allow the permit to be reopened in the event that the monitoring indicated the potential to cause or contribute to a violation of the water quality standards. *Id*.

Dynegy argues that petitioners misinterpret IEPA's language in the responsiveness summary regarding IEPA's decision on WQBEL, such that petitioners claim IEPA's decision is

"irrational". Dynegy Reply at 12. Dynegy asserts that IEPA consistently points out that the ACI waste from the Havana Station is not expected to discharge to the Illinois River as the sorbent is expected to settle in the ash pond. *Id*.; R. at 684. Dynegy notes that at public hearing IEPA stated that sorbent is not expected to discharge to the Illinois River and that position was communicated in other parts of the record as well. *Id*.; R. at 677-80, 748, 749, 753, 754-55.

Antidegradation

Dynegy argues that petitioners failed to establish that IEPA's antidegradation analysis was factually unsupported by the record. Dynegy Reply at 15. Dynegy claims that the record and its arguments demonstrate that IEPA properly characterized Havana Station's ACI waste stream and found that the addition of the waste stream to "dry and hydrologically distant areas" of the ash pond system would not result in an increased loading to the Illinois River. *Id*.

No Increased Loading to Illinois River. Dynegy maintains that it provided IEPA with information that identifies and quantifies the proposed loading increases as well as characterizing the water body. *Id*. at 16. Dynegy did this pursuant to Section 302.105(f)(1)(A) of the Board's rules. *Id*. In providing this information, Dynegy argues it included data identifying and quantifying selenium and arsenic. *Id*.; R. at 536. The data was consistent with the EPRI Study and the 2006 USEPA Study both of which concluded that spent ACI sorbent was not expected to leach mercury, selenium, and arsenic. *Id*. at 16-17. Further, Dynegy notes that the information was also included in the record in a document labeled as IEPA's antidegradation assessment. Thus, Dynegy maintains the antidegradation assessment cannot fail on this point. *Id*. at 16-17.

Dynegy also discounts petitioners' arguments that an alternatives assessment in the antidegradation analysis somehow establishes that an increased loading will occur. Dynegy Reply at 17. Dynegy claims this argument is illogical and IEPA "prudently" performed the antidegradation analysis. *Id*. at 17-18. Dynegy notes that the antidegradation assessment concluded there would be no detectable increased loading to the Illinois River; however, before issuance of a draft permit and before public hearing, IEPA and Dynegy provided alternative information in the antidegradation documents. *Id*. at 18. The inclusion of alternatives information does not prove an increased loading; but rather is good policy. *Id*.

Dynegy argues that petitioners have taken language from the responsiveness summary characterizing the loading of pollutants and attempted to argue confusion exists. Dynegy Reply at 18. Dynegy opines that this argument fails as the differing text consistently reflects the same conclusion that no increased loading will occur. *Id*. Similarly, Dynegy challenges petitioners' attempt to "discount" testimony from the Mercury Rule, the EPRI Study and the 2006 USEPA Study. *Id*. Dynegy argues that petitioners provide no support for its contentions that the information was "proffered by industries"; and in fact one witness in the Mercury Rule was an IEPA witness and all three are acknowledged experts in their fields. *Id*. at 18-19.

Antidegradation Criteria Satisfied. Dynegy argues that IEPA satisfied all four requirements of the Board's rules at Section 302.105(c)(2)(B) (35 Ill. Adm. Code 302.105(c)(2)(B)). Dynegy Reply at 19. Dynegy asserts that petitioners' arguments consist of

inaccurate assertions regarding the Newton data, the Hanlon Memo and draft ELGs, alternatives evaluation, and consideration of cross-media benefits. *Id*.

Newton. Dynegy notes that petitioners' claim IEPA was required to consider the data from the Newton plant because it is a "factually similar permitting scenario." Dynegy Reply at 19. However, Dynegy argues that petitioners offer no factual similarities except that both facilities will be using ACI technology and petitioners point to no authority that would require the Newton data to be considered in the Havana Station antidegradation analysis. *Id*. at 19-20. Dynegy offers that petitioners concede the two facilities may be dissimilar and argues that no authority imposes a duty on IEPA to prove that the Havana Station is not factually similar to Newton. *Id*. at 20.

Hanlon Memo and Draft ELGs. Dynegy argues that petitioners' reliance on the Hanlon Memo is misplaced as the Hanlon Memo does not address antidegradation requirements; but rather the Hanlon Memo addresses the issue of TBELs for FGD wastewaters. Dynegy Reply at 20. Dynegy asserts that therefore, the Hanlon Memo should be totally disregarded in the context of assessing technical feasibility or economic reasonableness of measures to minimize or avoid increased loading. *Id*.

Dynegy further argues that both the Hanlon Memo and the draft ELGs indicate that ash ponds may be effective in mercury control. Dynegy Reply at 21. Dynegy claims that both suggest that metals in particulate form can be removed in the settling process. *Id*.

Alternatives Evaluation. Dynegy argues that no authority requires a heightened review for a bioaccumulative pollutant when there will be no increased loading of that pollutant. Dynegy Reply at 22. Dynegy acknowledges that petitioners cite to several authorities for the proposition that a thorough alternatives analysis must be performed as a part of the antidegradation analysis. However, Dynegy claims that those authorities all involved an increased loading. *Id*. As this case does not involve an increased loading, Dynegy maintains that IEPA's antidegradation analysis was sufficient. *Id*. at 22-23.

Cross-Media Benefits. Dynegy argues that petitioners' argument that the benefits derived from the Mercury Rule do not warrant "a lesser level of antidegradation review" must fail as the argument is predicated on an assumption that the discharge involves an increased loading. Dynegy Reply at 23. In this case, Dynegy reiterates its contention that there is no increased loading. *Id*. Dynegy also points to federal guidance that recommends that states consider environmental impacts cross media and asserts that IEPA's antidegradation analysis was consistent with this guidance. *Id*.

IEPA Not Required to Develop Case-by Case TBEL

Dynegy argues that a central issue in the arguments regarding TBEL and WQBEL is whether or not the 1982 ELGs apply to the scrubber/ACI waste stream. Dynegy Reply at 24. Dynegy argues that the Havana Station's scrubber/ACI waste stream is plainly captured by the 1982 ELG's definition of "low volume waste sources". *Id*. Dynegy asserts that simply examining the definition of "low volume waste sources" makes clear that the scrubber/ACI

waste stream is included. *Id*. Dynegy claims that petitioners "confuse" the straightforward analysis by arguing that the ACI technology did not exist in 1982. However, Dynegy opines that fact is irrelevant, and USEPA acknowledged that fact in the draft ELG wherein USEPA indicated that "FGMC wastewater is currently included under the definition of low volume wastes" (FGMC waste is defined to include ACI waste). *Id*., citing Dynegy Memo. at 33.

Dynegy argues that USEPA elected to omit effluent limits for mercury, selenium, and arsenic from the 1982 ELG. However, the ELG makes clear that USEPA considered the parameters when determining the appropriate effluent limitations on low volume waste sources. Dynegy Reply at 24-25.

Dynegy notes that both the Tennessee Clean Water and Kentucky Waterway Alliance decisions acknowledge that the USEPA NPDES Permit Writers Manual is helpful in reviewing parameters for which a TBEL needs to be established. Dynegy Reply at 25. Dynegy concedes that the opinions vary as to whether or not mercury, selenium, and arsenic were considered by USEPA when it developed the 1982 ELGs. *Id*. Dynegy argues that the Tennessee Clean Water relied upon the 2010 version of the NPDES Permit Writers Manual, issued after the Hanlon Memo, which states:

> When effluent guidelines are available for the industry category, but no effluent guidelines requirements are available for the pollutant of concern (*e.g.*, a facility is regulated by the effluent guidelines for Pesticide Chemicals [Part 455] but discharges a pesticide that is not regulated by these effluent guidelines). The permit writer should make sure that the pollutant of concern is not already controlled by the effluent guidelines and was not considered by [US]EPA when the Agency developed the effluent guidelines. *Id*. at 25-27, quoting *NPDES Permit Writers, Manual (2010)* at 5-45 to -46 (emphasis in original).

Thus, Dynegy argues that under the updated guidance, the question is whether USEPA considered the pollutant when developing the ELG. *Id*. at 27.

IEPA Satisfied Public Participation Requirements

Dynegy asserts that petitioners' claim fails for lack of jurisdiction. Dynegy Reply at 33. Dynegy claims that petitioners have not asserted that they were prejudiced or have suffered injury due to the alleged deficiencies in the Responsiveness Summary. *Id*. at 33-34. Therefore, Dynegy argues that petitioners have no standing to bring a claim for violation of Section 166.192(a)(4) and (5) (35 Ill. Adm. Code 166.192(a)(4) and (5)). Dynegy also questions whether or not petitioners can bring a claim such as this to the Board. *Id*.

IEPA's Reply

Before beginning its reply, IEPA reiterates the standard of review and burden of proof in a third-party NPDES permit appeal review by the Board. IEPA then notes that petitioners ignore what is in the record, while focusing on what is not in the record. IEPA Reply at 2. IEPA asserts that the record as a whole demonstrates that the permit, as issued, does not violate the Act or

Board regulations and petitioners have therefore failed to meet its burden of proof. *Id*. IEPA then replies to the arguments regarding the reasonable potential to exceed analysis, antidegradation, best professional judgment and the responsiveness summary. Each argument will be summarized below.

Reasonable Potential to Exceed Analysis

IEPA argues it followed the regulations in reviewing the reasonable potential to exceed, and IEPA is not relying on unwritten discretion as alleged by petitioners. IEPA Reply at 3. IEPA points to language in Section 309.141(h)(3)(A) that provides:

> In establishing the terms and conditions of each issued NPDES Permit, the Agency shall apply and ensure compliance with all of the following, whenever applicable:
>
> * * *
>
> h) If the NPDES Permit is for the discharge of pollutants from other than wet weather point sources into the Lake Michigan Basin as defined at 35 Ill. Adm. Code 303.443:
>
> * * *
>
> 3) Reasonable potential to exceed.
>
> A) The first step in determining if a reasonable potential to exceed the water quality standard exists for any particular pollutant parameter is the estimation of the maximum expected effluent concentration for that substance. That estimation will be completed for both acute and chronic exposure periods and is termed the PEQ. The PEQ shall be derived from representative facility-specific data to reflect a 95 percent confidence level for the 95th percentile value. . . .. Reply at 3 quoting 35 Ill. Adm. Code 309.141(h)(3)(A).

IEPA asserts that the regulation requires that any potential to exceed analysis be based on facility specific data. *Id*. IEPA opines that in the face of this rule language, a permit condition requiring monitoring is a reasonable permit condition. *Id*. More importantly, IEPA argues that as indicated in the responsiveness summary, it has made clear that "all water quality standards will continue to be met in the Illinois River." *Id*., citing R at 678.

IEPA also addresses petitioners' arguments regarding IEPA's reference to and inclusion of the Met-South Responsive Summary in IEPA's brief. IEPA Reply at 3. IEPA notes that the Met-South Responsive Summary is merely an example of how the IEPA looks to site-specific data. *Id*. By contrast, IEPA notes that the draft ELG, relied upon by petitioners, did not exist at the time of the permitting and cannot be a part of IEPA's record. *Id*. at 3-4.

IEPA maintains that the decision to require monitoring is not arbitrary as there are no available data for the Havana facility. IEPA Reply at 4. The data from the Newton facility, that petitioners would have IEPA rely on, were unclear, according to the IEPA. *Id*. IEPA is seeking site-specific data by requiring monitoring, and that condition is a rational requirement. *Id*.

Antidegradation

IEPA disagrees with petitioners contentions that IEPA "flouted and glossed over" antidegradation requirements. IEPA Reply at 4. IEPA notes that the Board's rules require IEPA to utilize information from four sources, if available. *Id*. IEPA asserts that the rule does not require it to obtain information from each of the four areas. *Id*. at 5. IEPA maintains that the Board's rules allow it to decide what level of review is appropriate on a case-by-case basis. *Id*., citing Revisions to the Antidegradation Rules, PCB 01-13, slip op. at 3 (Feb. 21, 2002)). IEPA opines that this means IEPA can review some cases at a more "robust" level than others. *Id*. In this case, IEPA argues that it found that whatever increase in loading that may result from the effluent, there would be an overall decrease in loading to the environment. *Id*.

Best Professional Judgment

IEPA argues that petitioners cite no legal authority for petitioners' proposition that the Board's effluent limits do not constitute BAT. IEPA Reply at 6. IEPA argues that imposing the monitoring requirement on the permit in order to collect data on Dynegy's discharge to determine if that discharge violates water quality standards or effluent limits is BAT. *Id*. IEPA does not anticipate an increase in the concentration of mercury in the discharged effluent and with the monitoring requirements, if the discharge does increase, IEPA will be alerted. *Id*. IEPA asserts that TBEL is the effluent limits and water quality standards in the Board's rules. *Id*.

Responsiveness Summary

IEPA argues that it followed its own rules and provided responses to petitioners' comments. IEPA Reply at 7. IEPA opines that the petitioners may be confusing the Board's role in enforcement with permit appeals. In a permit appeal, IEPA offers, the Board must determine that the application for permit as submitted to IEPA demonstrates that no violation of the Act or Board regulations will occur if the permit is issued. *Id*. IEPA maintains that it did follow its rules and did respond to petitioners comments. *Id*.

DISCUSSION

The Board will first set forth the legal background for review of NPDES permits by the Board and for summary judgment. The Board then makes its finding on whether or not summary judgment is appropriate. The Board will then set forth the issues in the case and discuss the findings on each issue.

Legal Background

NPDES Permit Appeal

The Act prohibits any contaminant discharge to surface waters in Illinois without an NPDES permit or in violation of the terms and conditions of such permit. 415 ILCS 5/12(f) (2012). Section 402 of the Federal Water Pollution Control Act (33 U.S.C. §1342) established the NPDES permit program as the national framework for permitting wastewater discharges. With its 1977 amendments, the Federal Water Pollution Control Act became commonly known as the "Clean Water Act" (CWA).[3] Under the NPDES regulations, a facility that discharges from a point source directly to surface waters is required to obtain a permit.[4] Generally, in the NPDES permit, levels of control are imposed on the effluent, including both technology-based and water quality-based requirements.

In Illinois, IEPA is the permitting authority, responsible for administering regulatory programs to protect the environment, including NPDES permits. If IEPA denies a permit or grants one with conditions, the permit applicant may appeal IEPA's determination to the Board. 415 ILCS 5/4, 5, 39, 40(a)(1) (2012); 35 Ill. Adm. Code 105. Also, if IEPA grants or denies a permit, a third party, other than the permit applicant or IEPA, may appeal IEPA's decision. 415 ILCS 5/40(e)(1) (2012). The Board's scope of review and standard of review are the same whether a permit applicant or a third party brings a petition for review of an NPDES permit. New Lenox, PCB 04-88 slip op. at 12 (Apr. 19, 2007 (*aff'd sub nom.* IEPA v. IPCB, 896 N.E.2d 479 (3rd Dist. 2008)), citing Prairie Rivers Network, 335 Ill. App. 3d 391, 401; 781 N.E.2d 372, 380 (4th Dist. 2002) and Joliet Sand & Gravel Co. v. PCB, 163 Ill. App. 3d 830, 833, 516 N.E.2d 955, 958 (3rd Dist. 1987), citing IEPA v. PCB, 118 Ill. App. 3d 772, 455 N.E. 2d 189 (1st Dist. 1983). The distinction between the two types of NPDES permit appeals is which party bears the burden of proof. Under Section 40(e)(3) of the Act, in a third party NPDES permit appeal, the burden of proof is on the third party. 415 ILCS 5/40(e)(3) (2012); Prairie Rivers Network, 335 Ill. App. 3d 391, 401; 781 N.E.2d 372, 380. Under Section 40(a)(1) of the Act, if the permit applicant appeals the permit, the burden of proof is on the permit applicant. 415 ILCS 5/40(a)(1) (2012).

The question before the Board in permit appeal proceedings is: (1) whether the applicant proves that the application, as submitted to IEPA, demonstrated that no violation of the Act would have occurred if the requested permit had been issued; or (2) whether the third party proves that the permit as issued will violate the Act or Board regulations. Joliet Sand & Gravel, 163 Ill. App. 3d 830, 833, 516 N.E.2d 955, 958; Prairie Rivers Network, 335 Ill. App. 3d at 401; 781 N.E.2d at 380. IEPA's denial letter frames the issues on appeal. ESG Watts, Inc. v. PCB, 286 Ill. App. 3d 325, 676 N.E.2d 299 (3rd Dist. 1997).

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[3] "CWA" means the Federal Water Pollution Control Act, as amended by the "Clean Water Act." 35 Ill. Adm. Code 301.240.

[4] "Point source" is defined as "any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged." 40 C.F.R. §122.2.

The Board's review of permit appeals is limited to information before IEPA during IEPA's statutory review period, and is not based on information developed by the permit applicant, or IEPA, after IEPA's decision. Prairie Rivers Network, PCB 01-112 *aff'd* at 335 Ill. App. 3d 391, 401; 781 N.E.2d 372, 380 (4th Dist. 2002); Alton Packaging Corp. v. PCB, 162 Ill. App. 3d 731, 738, 516 N.E.2d 275, 280 (5th Dist. 1987). The record must contain evidence to support the issuance of the permit and the conditions attached to that permit. The Board reviews the entirety of the record to determine 1) if the record supports IEPA's decision, and 2) that the procedures used by IEPA are consistent with the Act and Board regulations. The Board does not affirm IEPA's decision on the permit unless the record supports the decision. IEPA's decision is not awarded any special deference by the Board. *See* IEPA v. PCB, 115 Ill. 2d 65, 70; 503 N.E.2d 343, 345 (1986). Therefore, the standard the Board employs in reviewing IEPA's decision is whether the record demonstrates that the issuance of the permit violates the Act or Board regulations. New Lenox, PCB 04-88, slip op. at 12.

Standard For Summary Judgment

Summary judgment is appropriate when the pleadings, depositions, admissions on file, and affidavits disclose that there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Dowd & Dowd, Ltd. v. Gleason, 181 Ill. 2d 460, 483, 693 N.E.2d 358, 370 (1998). In ruling on a motion for summary judgment, the Board "must consider the pleadings, depositions, and affidavits strictly against the movant and in favor of the opposing party." *Id*. Summary judgment "is a drastic means of disposing of litigation," and therefore it should be granted only when the movant's right to the relief "is clear and free from doubt." *Id*., *citing* Purtill v. Hess, 111 Ill. 2d 299, 240, 489 N.E.2d 867, 871 (1986). However, a party opposing a motion for summary judgment may not rest on its pleadings, but must "present a factual basis which would arguably entitle [it] to a judgment." Gauthier v. Westfall, 266 Ill. App. 3d 213, 219, 639 N.E.2d 994, 999 (2d Dist. 1994).

Finding on Summary Judgment

The Board has received cross-motions for summary judgment from the parties. All the parties agree there are no genuine issues of material fact and only questions of law to be resolved. The Board agrees with the parties. A careful review of the record establishes that the facts are undisputed. It is only the application of the law to the facts that is disputed. Therefore, the Board finds that summary judgment is appropriate and the Board will rule on the motions.

Issues

The petitioners set forth four main arguments to support their contention that the IEPA's issuance of the permit violates the Act and Board regulations. First, petitioners argue that IEPA failed to perform a reasonable potential to cause or contribute to exceedances of the water quality standards. Next, petitioners assert that IEPA's antidegradation analysis failed to meet the requirements of the Board's rules. Third, petitioners maintain that IEPA failed to exercise best professional judgment and establish BAT TBELs for the effluent. Finally, petitioners argue that IEPA's responses to comments by petitioners were inadequate.

The key to discussion on these issues is whether or not there will be an increased loading of pollutants to the Illinois River. The Board will begin with that key issue and then discuss each issue in turn.

Increased Loading

If, as Dynegy and IEPA claim, there is no increased loading of pollutants, then IEPA's assessment of the potential to cause or contribute to exceedances and IEPA's antidegradation assessment are sufficient. If, however, petitioners pointed to evidence in the record that there would be an increase in loading, then additional assessment was required.

In the record, Dynegy indicates that when completed, the addition of spray dryer absorber (SDA) and ACI is estimated to generate an additional 25,000 tons per year of SDA residue along with an estimated 0 to 2.6 tons of spent activated carbon per day. R. at 529. This waste stream will be added to the East Ash Pond system, and any discharge will be from Outfall 005. R. at 9. The increased loading to the East Ash Pond results in a daily mercury loading to the pond of approximately 0.0 to 0.6 pounds per day, which amounts to op to 211.2 pounds per year. R. at 531.

Dynegy referenced the EPRI study to support its statements that the mercury would not be discharged from Outfall 005. R. at 532. IEPA accepted the findings of the EPRI study and referenced a 2006 USEPA study. R. at 545. The 2006 USEPA study indicated that mercury is retained by CCR and unlikely to be leached into the groundwater at levels of environmental concern. *Id*.

The Board notes that the record does not and cannot contain actual data regarding the effluent from the Havana Station, with the inclusion of the scrubber and ACI residues as these phases of the Havana Station were not completed at the time of the permit renewal. As a result, IEPA's decision regarding whether or not there is an increase in loading was made based on the information available from the USEPA and the EPRI studies. The Board has carefully reviewed the material in the record. The EPRI study is a laboratory study that involved a "preliminary review of a small number of samples intended to identify potential issues and guide future research." R at 994. The EPRI study clearly notes that the study's preliminary results were based on a very small number of samples, and that the results need to be confirmed with additional sampling data due to the variable nature of fly ash. R. at 1013. This is of particular concern with the analysis of mercury in that the observations were based on "just one sample pair". R. at 1007. As such, the conclusions of the EPRI study that mercury captured by flue gas carbon is generally stable and does not leach were preliminary. R. at 995 and 1007.

The EPRI study also raises concerns that "under anaerobic conditions, mercury may be released from ash", whereas, it is not likely to be released in aerobic water. R. at 1013. The EPRI study suggests further study is needed to evaluate the possibility of the "decay of an algal bloom, due to ammonia levels, settled on the bottom of the pond could create an anaerobic condition", and thus releasing mercury from the ash. *Id.*

While the 2006 USEPA study noted that ACI will substantially increase the total mercury content in the coal combustion residue, the study also found that mercury "is strongly retained by the [coal combustion residue] and unlikely to be leached into the groundwater at levels of environmental concern." R. at Document 65, xiii. Further, the USEPA study noted that the leachate concentrations and potential release of mercury did not correlate with the total mercury content in the CCR, leaching pH, or liquid to solid ratio. *Id.* While one of the 2006 USEPA study's objectives was to provide information on leaching of mercury from CCRs during life cycle management, including storage, beneficial use and disposal, the study does not specifically address the impact of ACI waste stream on the effluent quality of an ash pond receiving the ACI waste stream. *Id*. at xii. In this regard, the USEPA study notes that the results provide an understanding of the "variations in the anticipated leaching behavior under anticipated field landfill disposal conditions, including expected ranges of constituent concentrations in leachate and cumulative release over a defined time interval." *Id.* at xiv.

Petitioners take issue with IEPA's reliance on the EPRI study and the 2006 USEPA study, but can only point to IEPA's concerns about the Ameren Newton discharge as evidence that there will be an increased loading to the Illinois River. The record contains a series of emails between IEPA's staff regarding mercury discharges. R. at 692-94. Those emails noted that Ameren Newton was the only facility with mercury exceedances in the discharge and it was suggested that further study occur outside the permit process. *Id*. The Ameren Newton data is of little import in this proceeding, given that Ameren Newton experienced exceedances of the mercury water quality standard before the installation and operation of ACI. *See* Dynegy Reply at 9, citing USEPA ICIS database.

Thus, a review of the record indicates that there will be increased loading of mercury to the ash pond. Whether that increased loading will then be discharged through Outfall 005 is the question. Both the EPRI study and the 2006 USEPA study support IEPA's conclusion that it is unlikely that there will be an increased loading of mercury on the receiving stream. While the EPRI study results suggest that concentrations of arsenic and selenium in the ash pond discharges did not appear to be affected by carbon addition, the USEPA study indicates that arsenic and selenium may be leached at levels of potential environmental concern at facilities with and without enhanced mercury control technologies. However, as discussed above, the results of these studies have certain limitations when it comes to evaluating the impact of ACI waste stream on the receiving ash pond effluent quality. While it is reasonable to rely on laboratory study results to evaluate the impact of additional waste stream on a receiving unit's effluent quality where there is no monitoring data, the Board believes that it is imperative that actual monitoring data be used to evaluate the impact of a new waste stream on the receiving unit's effluent quality and the subsequent impact on the receiving stream.

In this regard, the Board agrees that IEPA's approach to require monitoring effluent for mercury, arsenic and selenium in order to develop data regarding the potential discharge along with the ability to reopen the permit if monitoring indicates water quality concerns. *See* R. at 706, 711. Further, the Board finds that the IEPA's approach is consistent with the Act and Board's regulations. This approach is the only way to have specific data on the effluent mercury concentrations. However, given the potential bioaccumulative impact of mercury on Illinois River, a stream already impaired for mercury, the Board finds that quarterly monitoring would

take a longer time period to determine if a permit limit is necessary to insure that the water quality or effluent standards will not be violated. As USEPA recommended, the Board finds that monthly monitoring is more appropriate for characterizing the effluent mercury concentration and evaluating the need for a permit limit. *See* R. at 634-35. Therefore, the Board will remand the permit for inclusion in Special Condition 8 a requirement for monthly monitoring of mercury.

Reasonable Potential to Cause or Contribute to Exceedances

Section 309.141 of the Board rules sets forth, when establishing the "Terms and Conditions" of NPDES permits, IEPA must "apply and ensure compliance" with several provisions delineated "whenever applicable". One of the delineated items requires compliance with effluent limitations under Sections 301 and 302 of the CWA (35 Ill. Adm. Code 309.141(a)). Another requires more stringent limitations necessary to meet water quality standards (35 Ill. Adm. Code 309.141(d)(1)). Under Section 309.141(h), where the requirement for a reasonable potential to cause or contribute to exceedances is found, are requirements for total maximum daily loads and waste load allocations (35 Ill. Adm. Code 309.141(h)(1)). Thus, Section 309.141 includes many items for consideration by IEPA, and not all items are applicable in each case.

IEPA argues that without data it cannot perform a reasonable potential analysis and there is no data on the discharge to allow it to make such a decision. As discussed above, the Board finds that IEPA's decision to require monitoring of the effluent is supported by the record. "The first step in determining if a reasonable potential to exceed the water quality standard exists for any particular pollutant parameter is the estimation of the maximum expected effluent concentration for that substance. That estimation will be completed for both acute and chronic exposure periods and is termed the PEQ. The PEQ shall be derived from representative facility-specific data to reflect a 95 percent confidence level for the 95th percentile value." 35 Ill. Adm. Code 309.141(h)(3)(A). Thus, it is evident from regulations that representative facility-specific data are necessary to conduct a reasonable potential analysis. Because the increased loading, if any, is not quantifiable due to the lack of data on the effluent mercury concentrations, the Board finds that IEPA's decision not to perform a reasonable potential analysis is supported by the record. However, once monitoring data for mercury and other constituents become available through the effluent monitoring required by the permit, the Board anticipates that IEPA will evaluate such data and perform the reasonable potential analysis if necessary.

The petitioners bear the burden of proving that based on the record of this permit proceeding, the permit as issued would violate the Act or Board regulations. Petitioners argue that IEPA should have performed this analysis and point to the Newton facility as evidence that there would be an increased mercury discharge. As discussed above, the Board is unconvinced by this evidence. Furthermore, the Board notes that the law is well settled in that "The grant of a permit does not insulate violators of the Act or give them a license to pollute." Landfill, Inc. v. PCB, 74 Ill.2d 541, 559, 387 N.E.2d 258, 265 (1978); *see also* Mahomet Valley Water Authority *et. al.* v. Clinton Landfill, Inc., PCB 13-22, slip op. at 27 (Sept. 19, 2013) (if there is violation of the Act or regulations enforcement actions are available); David Mulvain v. Village of Durand *et. al.*, PCB 98-114, slip op. at 4 (May 21, 1998). The Board's rules contain both effluent

standards for mercury (35 Ill. Adm. Code 304.126) and water quality standards (35 Ill. Adm. Code 302.208(e) and (f)). Therefore, if the monitoring required by the permit demonstrates that a violation of the Act or Board regulations does in fact occur, Dynegy would be subject to a potential enforcement action. Alternatively, IEPA may reopen the permit to include permit limits for specific constituents including mercury if monitoring results indicate that there is a reasonable potential to exceed the applicable water quality standards.

Because petitioners have failed to establish that the evidence in the record required IEPA to perform a reasonable potential to exceed analysis, petitioners' challenge must fail. The Board finds that the record supports IEPA's decision not to perform a reasonable potential to exceed analysis and therefore grants IEPA's and Dynegy's motions for summary judgment on this point.

WQBEL

Petitioners argue that as a part of the reasonable potential analysis, IEPA should have developed a WQBEL. Because the Board finds that IEPA was not required to perform a reasonable potential to exceed analysis, the Board likewise finds that establishment of a WQBEL is not required. As discussed above, because Dynegy has a permit that allows for an effluent discharge, it does not mean that Dynegy can exceed water quality standards or contribute to exceedances of water quality standards. *See* Landfill, Inc., 74 Ill.2d at 559. Therefore, even absent a WQBEL, Dynegy is limited by the provisions of the Board's rules that prohibit violations of the water quality standards. Failure to abide by these rules may subject Dynegy to enforcement actions.

Antidegradation

The purpose of the Board's antidegradation provisions is to "protect existing uses of all waters" of the State and "maintain the quality of waters with quality that is better than water quality standards". 35 Ill. Adm. Code 302.105. Petitioners argue that the Illinois River is a "High Quality Water" as described in Section 302.105(c) (35 Ill. Adm. Code 302.105(c)) and IEPA should have proceeded with an antidegradation assessment under that subsection. Section 302.105(c)(1) requires protection of existing quality, and under (c)(2) IEPA must assess "any proposed increase in pollutant loading that necessitates a new, renewed or modified NPDES permit . . . to determine compliance with this Section" (35 Ill. Adm. Code 302.105(c)(2)). IEPA must consider the effect of any parameters proposed for an increased loading. 35 Ill. Adm. Code 302.105(c)(2)(A). Under Section 302.105(c)(2)(B) the four criteria require IEPA to assure that: 1) the water quality standard will not be exceeded, 2) existing uses will be fully protected, 3) all technically and economically reasonable measures to avoid or minimize the increased loading have been incorporated, and 4) the activity that results in an increased loading will benefit the community at large. 35 Ill. Adm. Code 302.105(c)(2)(B)(i) through (iv). Section 302.105(c)(2)(C) requires IEPA to utilize information from various sources where available.

Performance of an antidegradation analysis requires IEPA to look at the increased loading to the receiving stream to protect the existing uses and maintain the quality of high quality waters. In this regard, IEPA relied on information in the record, including the USEPA and EPRI studies to conclude that the addition of ACI waste stream to the east ash pond does not

lead to an increased loading of mercury to the Illinois River. Ag. Mot. at 11. As noted above, the petitioners have raised concerns regarding IEPA's reliance on the EPRI and USEPA studies, and the Board shares the petitioner's concerns. However, in addition to the studies concerning leachability of ACI waste, IEPA also took into account the reduction of mercury loading to the Illinois River through air deposition as a result of mercury removal from Dynegy's air emissions. Further, IEPA asserts, "the removal of mercury from the air emissions will remove an existing source of mercury from downwind water bodies and local and regional airshed will benefit from reduction in pollutants." Ag. Mot. at 11 citing R. 545-546. In sum, IEPA argues that "whatever low levels [of mercury] that are discharged from the ash pond represent a decrease in loading to the environment." R. at 545.

The Board finds that based on this record, IEPA's antidegradation analysis was sufficient. Thus, the Board finds that IEPA's antidegradation assessment did not violate the Act or Board regulations. However, in making this finding, the Board recognizes that the impact of ACI waste stream on the Illinois River can be verified only when mercury monitoring data become available through the proposed effluent mercury monitoring. If the effluent monitoring indicates increased loading to the Illinois River, the Board anticipates that IEPA will reopen the permit and perform a more comprehensive antidegradation assessment in accordance with Section 302.105.

The Board disagrees with petitioners' reliance on New Lenox (PCB 04-88). In New Lenox, representative effluent monitoring data from the treatment plant were available for quantifying the potential impact of the increased loading on the stream. Here, there is no representative mercury monitoring data to quantify the potential impact of the east ash pond effluent on the Illinois River. Further, the record is conspicuously silent on the water quality conditions of the Illinois River at the Havana Station other than statements noting that the Illinois River is impaired for mercury and primary contact (R. at 544). The record also indicates that the current Outfalls have not had excursions (R. at 428).

The Board does agree with petitioners that there is no *de minimis* exemption for any increased loading of a pollutant. However, IEPA has not completely discounted a potential for increased loading of mercury. Rather, IEPA considered that the removal of mercury from the air would reduce the amount of mercury in the Illinois River as a result of deposition of mercury. Based on this record, the Board finds that IEPA's antidegradation analysis did not violate the Act or Board rules and therefore grants IEPA's and Dynegy's motions for summary judgment on this point.

TBEL

As a preliminary matter, the Board appreciates the petitioners' arguments regarding the draft ELGs proposed by USEPA to address scrubber and ACI waste. However, as those proposed rules had not yet been published when IEPA made its decision, the Board will not consider the draft ELGs in this discussion. *See* Prairie Rivers Network, PCB 01-112 *aff'd* at 335 Ill. App. 3d 391, 401; 781 N.E.2d 372, 380 (4th Dist. 2002); Alton Packaging Corp. v. PCB, 162 Ill. App. 3d 731, 738, 516 N.E.2d 275, 280 (5th Dist. 1987).

Generally, petitioners argue that IEPA was required by the CWA to develop site-specific TBELs for the Havana Station and particularly argue that TBELs for mercury, arsenic, and selenium should have been developed by IEPA. Petitioners argue that USEPA has not developed TBELs for ELGs and therefore IEPA must perform a best professional judgment analysis on a case by case basis to establish TBELs for Dynegy's discharge based on BAT. In contrast, Dynegy argues that the 1982 ELGs included waste streams from Havana Station's scrubbers and ACI and therefore, IEPA was not required to adopt TBELs.

IEPA's argument is that technology based limits exist in Illinois for mercury. IEPA argues that the Board's effluent standard for mercury of 0.5 µg/L at Section 304.126 is the BAT TBEL applicable to Dynegy's discharge. IEPA maintains that it used its best professional judgment to determine that monitoring of the effluent is appropriate to insure that the effluent does not violate TBEL or the water quality standards.

The Board first notes that IEPA's argument must fail. In adopting the effluent standards for mercury, the Board's opinion and order noted that the mercury effluent standard was based on the mercury water quality standard of 0.5 µg/L, which was in turn based on the lower limit of reliable measurement of mercury and accommodates background levels measured in Lake Michigan and other Illinois waters. Mercury Standards, R70-5 slip op at 1-413 – 1-415 (Mar. 31, 1971). In adopting the mercury effluent standard, the Board stated:

> Because mercury is so highly toxic; because it is not degradable; because it is biologically concentrated in fish; and because it readily converted to its most toxic form, we believe that mercury discharges everywhere should be kept as low as is reasonably feasible. The principle underlying the regulation we adopt today is that no discharge of mercury shall be allowed unless it is essentially unavoidable. To the extent that one half part per billion represents both natural background concentrations and the lower limit of reliable detection this effluent standard means that no mercury shall be added to the water. *Id.* 1-415

While the Board considered the impact of the effluent standard on various mercury dischargers, it did not specifically find that achieving the effluent standard was technically feasible. *Id*. at 1-415-20. Actually, the Board stated, "[t]reatment for the removal of mercury from effluents has been tried and found highly successful, yet so far incapable of meeting the standard of one half part per billion in paint washwater." *Id.* at 1-418. Therefore, the Board finds that the mercury effluent standard adopted over 30 years ago may not be considered as BAT TBEL.

As to petitioners' claim that IEPA was required to develop TBELs for the Havana Station, the Board is unconvinced by petitioners' arguments. The parties agree that if USEPA has established TBELs, then the IEPA is not required to develop TBELs on a case-by-case basis. Petitioners argue that USEPA specifically excluded "flue gas desulfurization wastewaters" from the 1982 ELGs and reserved that for a future rulemaking, and that ACI technology did not exist when the 1982 ELGs were adopted.

In adopting the 1982 ELGs, USEPA defined the term "Low Volume Waste" to mean:

> taken collectively as if from one source, wastewater from all sources except those for which specific limitations are otherwise established in this part. Low volume wastes sources include, but are not limited to: *wastewaters from wet scrubber air pollution control systems . . ..*" (emphasis added) 40 C.F.R.§ 423.11(b).

Interpretation of rule language is similar to interpretation of statutory language. When dealing with an issue of statutory interpretation, the Illinois Supreme Court has stated:

> The fundamental principle of statutory construction is to ascertain and give effect to the legislature's intent. The language of the statute is the most reliable indicator of the legislature's objectives in enacting a particular law. We give statutory language its plain and ordinary meaning, and, where the language is clear and unambiguous, we must apply the statute without resort to further aids of statutory construction. We must not depart from the plain language of the Act by reading into it exceptions, limitations, or conditions that conflict with the express legislative intent. Moreover, words and phrases should not be construed in isolation, but must be interpreted in light of other relevant provisions of the statute. Town & Country Utilities, Inc. v. IPCB, 225 Ill.2d 103, 866 N.E.2d 227 (March 22, 2007) (internal citations omitted).

The Board will not depart from the plain language of the federal rule. Clearly wastewater from wet scrubber air pollution control systems is included in the 1982 ELGs. Therefore, the Board finds that IEPA was not required to adopt TBELs on a case-by-case basis for the Havana Station.

As to petitioners' argument that the mercury effluent standard was not included in the permit, the Board is unpersuaded. Even if the effluent limit is not articulated in the permit, the rules apply to dischargers throughout the State.

Responsiveness Summary

Petitioners take issue with IEPA's responses to comments in the Responsiveness Summary. IEPA argues that petitioners did not cite to any authority that would allow the Board to review IEPA's implementation of its own rules.

The Board has examined IEPA's Responsiveness Summary in prior cases. In New Lenox, the petitioners maintained that the responsiveness summary must contain the theories and rationales for the IEPA's decision and only those theories and rationales may be used to support the IEPA's decision. New Lenox, PCB 04-88 slip op. at 12. The Board found that the Board's review of the IEPA's decision in a third party NPDES permit appeal is not limited by the reasoning or facts discussed by the IEPA in the responsiveness summary. *Id*. slip op. at 15.

In this instance however, petitioners are not asking the Board to review the Responsiveness Summary for content regarding IEPA's decision, but rather to review the completeness of IEPA's response. The Board declines to do so. IEPA adopted its own rules on the content requirements for a Responsiveness Summary. How IEPA implements those rules is IEPA's discretion. Obviously the Responsiveness Summary is a part of the permit appeal record, and as such, the Board would expect that IEPA would provide as complete a document as

possible. However, the Board declines to review the Responsiveness Summary for consistency with IEPA's rules.

Summary of Board Decision

The Board finds that there are no genuine issues of material fact, and that summary judgment is appropriate. Based on this record, the Board finds that petitioners met their burden of proof by establishing that IEPA and Dynegy relied too heavily on the EPRI study and the 2006 USEPA study. While it is reasonable for IEPA and Dynegy to rely on scientifically sound laboratory study results to evaluate the impact of additional waste streams on a receiving unit's effluent quality where there is no monitoring data, the Board believes that it is imperative that actual monitoring data be used to evaluate the impact of a new waste stream on the receiving unit's effluent quality and the subsequent impact on the receiving stream. Therefore, the IEPA's approach of requiring monitoring of the effluent coupled with a permit reopener clause is acceptable. Because of the bioaccumulative impact of mercury on the Illinois River; however, the Board finds that monthly monitoring is more appropriate for characterizing the effluent mercury concentration and evaluating the need for a permit limit. Along with the ability to reopen the permit, if the actual monitoring data provide evidence that the mercury in the effluent could cause or contribute to an exceedance of the water quality standard, the Board finds that the permit with monthly monitoring will not violate the Act or Board regulations.

Because the Board finds that IEPA's decision to allow monitoring to quantify the effluent is supported by the record, the Board finds that IEPA's decision not to perform a reasonable potential to exceed analysis was acceptable. The Board agrees with IEPA that there is a lack of data concerning this effluent and therefore, IEPA could not perform a reasonable potential analysis. As stated above, with a monthly monitoring requirement and the ability to reopen the permit if the monitoring data establish that IEPA misjudged the impact of the effluent on the stream, the Board finds that the permit as modified by this opinion will not violate the Act or Board regulations.

Similarly, the Board finds that the IEPA's antidegradation assessment did not violate the Act or Board regulations. The Board finds that the quantification of the effluent cannot be done at this time. Therefore, a more comprehensive antidegradation analysis cannot be performed. IEPA's inclusion of a special condition to require monitoring, as modified by this opinion, assures that the permit as issued does not violate the Act or Board regulations.

With regard to petitioners' argument that IEPA was required to develop TBELs, the Board is unconvinced by petitioners' arguments. The Board reviewed the USEPA 1982 ELGs and finds that the plain language of the USEPA definition of "low level wastes" includes the waste stream from Havana Station's scrubbers and ACI. Therefore, the Board finds that IEPA was not required to adopt TBELs on a case-by-case basis for the Havana Station.

CONCLUSION

The Board finds that summary judgment is appropriate and grants in part petitioners' motion and denies in part petitioners' motion. The Board also grants in part IEPA's and

Dynegy's motions but denies the motions in part. Specifically, the Board finds that IEPA's decision to require monitoring for mercury is supported by the record; however, the Board finds that monthly monitoring is required to insure that the Act and Board regulations are not violated. Because the Board finds that monitoring is appropriate, the Board also finds that IEPA's decision not to perform a reasonable potential to exceed analysis and not impose a WQBEL was appropriate. The Board also finds that IEPA's antidegradation assessment did not violate the Act or Board regulations, and IEPA was not required to develop site specific BAT TBELs. The Board declines to review IEPA's implementation of its own rules regarding the content of the Responsiveness Summary. Therefore, the Board finds that the permit as modified by this opinion does not violate the Act or Board regulations.

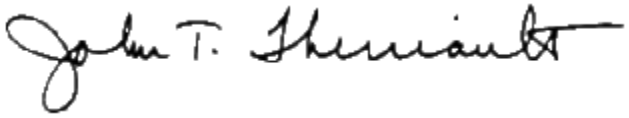
ORDER

The Board remands Dynegy Midwest Generation, Inc.'s NPDES permit to the Illinois Environmental Protection Agency (IEPA) to amend Special Condition 8 to require monthly monitoring for mercury and closes the docket.

IT IS SO ORDERED.

Section 41(a) of the Environmental Protection Act provides that final Board orders may be appealed directly to the Illinois Appellate Court within 35 days after the Board serves the order. 415 ILCS 5/41(a) (2012); *see also* 35 Ill. Adm. Code 101.300(d)(2), 101.906, 102.706. Illinois Supreme Court Rule 335 establishes filing requirements that apply when the Illinois Appellate Court, by statute, directly reviews administrative orders. 172 Ill. 2d R. 335. The Board's procedural rules provide that motions for the Board to reconsider or modify its final orders may be filed with the Board within 35 days after the order is received. 35 Ill. Adm. Code 101.520; *see also* 35 Ill. Adm. Code 101.902, 102.700, 102.702.

I, John T. Therriault, Assistant Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above order on June 5, 2014, by a vote of 4-0.



John T. Therriault, Clerk
Illinois Pollution Control Board