OBJECTION TO THE ISSUANCE OF CLOSURE/POST CLOSURE PLAN RE TANNERS CREEK FLY ASH POND TANNERS CREEK DEVELOPMENT LLC

2023 OEA 027, OEA CAUSE NO.: 20-S-J-5107

Official Short Cite Name:	TANNERS CREEK DEVELOPMENT, 2023 OEA 027
OEA Cause No.:	20-S-J-5107
Topics/Keywords:	Coal Combustion Residuals (CCR)
	Fly Ash Pond
	Legacy pond
	Clear water pond
	Closure in place
	Excavation
	Removal
	Power generation
	Protective of human health and the environment
	Associational Standing
	Articles of incorporation
	Bylaws
	Nonprofit Corporation Act
	Member
	Non-Voting member
	Donating member
	Motion for Summary Judgment
	Motion to Reconsider
	Waiver
	Floodway
	100-year flood
	500-year flood
	Bottom Liner
	Cover system
	Stabilization
	Municipal drinking water well
	groundwater
	background monitoring well
	well spacing
	Surface water
	Ohio River
	Berm
	Environmental restrictive covenant (ERC)
	Boron

OBJECTION TO THE ISSUANCE OF CLOSURE/POST CLOSURE PLAN RE TANNERS CREEK FLY ASH POND TANNERS CREEK DEVELOPMENT LLC

2023 OEA 027, OEA CAUSE NO.: 20-S-J-5107

Topics/Keywords, cont.:	Lead
	Sulfate
	I.C. § 4-21.5 et seq.
	I.C. § 4-21.5-3-7(a)
	I.C. § 4-21.5-3-14
	I.C. § 4-21.5-3-23(b)
	I.C. § 4-21.5-3-27(d)
	I.C. § 4-21.5-7, et seq.
	I.C. § 4-21.5-7-3
	I.C. § 13-13 et seq.
	I.C. § 13-14-1-11.5.
	I.C. § 13-30-2-1 (I)
	I.C. § 23-17-2-17 (1991)
	I.C. § 23-17-7-4
	I.C. § 23-17-11-3(a)
	40 CFR 257
	40 CFR 257 Subpart D
	40 CFR 257.50
	40 CFR 257.9
	40 CFR 257.91 (c)
	40 CFR 257.102
	40 CFR 257.105
	40 CFR 257.107
	329 IAC 10-9-1
	329 IAC 10-9-1(c)
	329 IAC 10-31-5
	329 IAC 10-31-6
	329 IAC 10-31-7
Presiding ELJ:	MARY DAVIDSEN, ESQ.
Party Representatives:	PETITIONER: KIM E. FERRARO, ESQ.
	PETITIONER: MANDY DEROCHE, ESQ.
	PETITIONER: SAMEER DOSHI, ESQ.
	PERMITTEE/RESPONDENT: SEAN GRIGGS, ESQ.
	PERMITTEE/RESPONDENT: JESSICA REISS, ESQ.
	IDEM/RESPONDENT: KYLE BURNS, ESQ.

OBJECTION TO THE ISSUANCE OF CLOSURE/POST CLOSURE PLAN RE TANNERS CREEK FLY ASH POND TANNERS CREEK DEVELOPMENT LLC

2023 OEA 027, OEA CAUSE NO.: 20-S-J-5107

Date of Order:	JANUARY 31, 2023
Index Category:	SOLID WASTE



INDIANA OFFICE OF ENVIRONMENTAL ADJUDICATION NO

Mary L. Davidsen, *Chief Environmental Law Judge*Lori Kyle Endris, *Environmental Law Judge*Sara C. Blainbridge, *Legal Administrator*

INDIANA GOVERNMENT CENTER NORTH 100 NORTH SENATE AVENUE, SUITE N103 INDIANAPOLIS, INDIANA 46204-2273 FRONTDESK@OEA.IN.GOV (317) 233-0850

STATE OF INDIANA))	BEFORE THE INDIANA OFFICE OF OF ENVIRONMENTAL AJUDICATION
COUNTY OF MARION)	
) IN THE MATTER OF:)	CAUSE NO. 20-S-J-5107
OBJECTION TO THE ISSUANCE OF OF CLOSURE/POST CLOSURE PLAN TANNERS CREEK FLY ASH POND TANNERS CREEK DEVELOPMENT LLC LAWRENCEBURG, DEARBORN COUNTY, INDIANA.))))
Hoosier Environmental Council, Petitioner, Tanners Creek Development LLC, Permittee/Respondent,)))
Indiana Department of Environmental Management, Respondent.)

FINDINGS OF FACT, CONCLUSIONS OF LAW AND FINAL ORDER

This matter came before the Office of Environmental Adjudication (the "Court" or the "OEA") on a final evidentiary hearing on the merits, addressing issues remaining after the Court's June 16, 2021 and September 21, 2021 partial summary judgment orders¹ concerning the Indiana Department of Environmental Management's approval of closure in place for a surface impoundment containing coal combustion residuals. At the final hearing, all parties were represented by legal counsel. Chief Environmental Law Judge ("ELJ") Mary L. Davidsen, Esq., presided. Witnesses were sworn and evidence heard. The parties submitted Proposed Findings of Fact, Conclusions of Law, and Final Order, issue contentions and corrections to cites to the record; the parties consented to extend the issuance date of this Order.

The Court having heard the testimony, considered the evidence, reviewed the record, and now being duly advised, enters the following Findings of Fact, Conclusions of Law, and Final Order.

¹ These orders are incorporated by reference into this Final Order and reiterated when useful to understand the perspective of this case. Many facts elicited at final hearing expanded on, but did not directly contradict, those presented on summary judgment.

Findings of Fact

STATEMENT OF THE CASE

- [1] In summary, this matter concerns Petitioner Hoosier Environmental Council's ("HEC") timely May 8, 2020 Petition for Administrative Review of the Indiana Department of Environmental Management's ("IDEM") Approval ("Approval") for Tanners Creek Development, LLC ("TCD") closure in place of a Coal Combustion Residue ("CCR") surface impoundment at the site of the former Tanners Creek Power Plant, located in Lawrenceburg, Dearborn County, Indiana.
- [2] Instead of closure-in-place, HEC seeks invalidation of the Approval, and excavation and removal (with proper disposal) of the CCR, asserting that the Approval was not technically and legally valid in several respects. Prior to issuing the Approval, the City of Aurora (Ex. 156), HEC, Sierra Club Hoosier Chapter, Lower Ohio Waterkeeper, and Citizens Action Coalition also recommended that the Fly Ash Pond's CCR be excavated. Dem. Ex. 4, p. 8 (July 10, 2018 comments to IDEM); Maloney, Tr, Day 1, 82:7-20.
- [3] HEC's Petition alleged that the Approval did not comply with the requirements of applicable state and federal rules as follows:
 - a. The fly ash pond is a "legacy pond" an inactive impoundment at an inactive facility and as a result is subject to the requirements of 40 CFR 257 Subpart D.
 - b. The closure plan does not: (a) "control post closure escape of waste, waste constituents, leachate, contaminate precipitation, or waste decomposition products to the ground or surface waters or the atmosphere"; and/or (b) "minimize the need for further maintenance," as required by 329 IAC 10-30-1.
 - c. TCD has failed to verify that the pond is lined and must meet the requirements applicable to unlined ponds.
 - d. The Closure Plan violates the closure performance standards set forth in 40 CFR 257.102 and 329 IAC 10-9-1.
 - e. The Closure Plan does not protect human health and the environment as the plan allows pollutants to contaminate ground and surface water.
 - f. The Closure Plan violates Ind. Code § 13-30-2-1 (I) by allowing TCD to "discharge, emit, cause, allow, or threaten to discharge, emit, cause, or allow contaminant[s] or waste[s], ... either alone or in combination with contaminants from other sources," into the environment in a form that "causes or would cause pollution that violates or would violate rules, standards, or discharge or emission

requirements adopted by the board under the environmental management laws."

- g. The Closure Plan violates 40 CFR 257.9 1 by failing to include a groundwater monitoring system that will "yield groundwater samples from the uppermost aquifer that: (I) Accurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit."
- h. TCD failed to comply with the Recordkeeping Requirements of 40 CFR 257.105.
- i. The Closure Plan fails to meet the requirements as stated in HEC's comments.
- [4] In addition, HEC argued at hearing that the Fly Ash Pond's proximity to the Ohio River created a risk that floodwaters would cause a catastrophic failure of the Fly Ash Pond's berms and cover system. HEC requested that OEA revoke or modify the Approval to require complete excavation of all CCR in the Fly Ash Pond and removal of the CCR to a newly constructed CCR landfill elsewhere.
- [5] While this cause was pending, TCD submitted an Amended Monitoring Well Installation Plan ("AMWIP") on December 15, 2020. IDEM approved the AMWIP on February 9, 2021. HEC filed a petition for administrative review before OEA regarding the AWMIP on February 24, 2021. The case was assigned OEA Cause No. 21-S-J-5133. TCD's Motion to Dismiss was granted on June 3, 2021 and the Petition for Review objecting to the AMWIP was dismissed.
- [6] In HEC's March 2, 2021 Motion for Partial Summary Judgment, HEC argued that summary judgment was appropriate on the following issues:
 - a. HEC has associational standing to file the petition for review.
 - b. TCD failed to perform its recordkeeping duties.
 - c. TCD failed to install groundwater monitoring wells as was required in October 2020.
 - d. TCD's recently AMWIP will not detect pathways of potential contamination leaching from the Fly Ash Pond.
- [7] TCD filed its Motion for Summary Judgment on March 2, 2021, seeking summary judgment on all issues before the OEA.
- [8] IDEM filed its Concurrence in TCD's Motion for Summary Judgment on March 2, 2021. IDEM concurred with TCD's motion except for Footnote 3² and Section C.1³.

 $^{^{2}}$ This footnote raised the issue of whether the Federal CCR Rule is applicable to the FAP.

³ This section discusses whether the FAP is an unlined surface impoundment.

- [9] IDEM filed its response to HEC's Motion for Partial Summary Judgment on April 1, 2021. TCD and HEC filed their responses on April 2, 2021. TCD and HEC filed their replies on April 23, 2021.
- [10] After the parties completed summary judgment briefing, OEA's June 16, 2021 Order held that HEC had associational standing to file its petition, and granted summary judgment in favor of TCD regarding the following issues:
 - a. The AMWIP
 - b. HEC's allegations relating to TCD's failure to comply with various recordkeeping regulations, including 40 C.F.R. Sections 257.106 and 257.107.
 - c. The Monitoring Well Installation Plan.
- [11] OEA's September 21, 2021 Order denying HEC's July 21, 2021 motion to reconsider sustained the June 16, 2021 Order on Summary Judgment.
- [12] OEA's orders denying summary judgment retained the following issues for hearing: Whether IDEM had sufficient information regarding the site to decide whether the Approval would be protective of human health and the environment, or whether the Approval provides the mechanism for gathering and submitting this information. The proximity of municipal drinking water wells, the geology of the Site, its proximity to the Ohio River, groundwater elevations, and the experts' contradictory opinions, all created genuine issues of material facts as to whether the Approval is protective of human health and the environment.
- [13] Post-hearing, the parties collaborated to correct or complete the voluminous exhibit file, and to confirm or correct exhibit citations, the latest efforts submitted on January 18, 2023. On January 12, 2022, the parties filed Proposed Findings of Fact, Conclusions of Law and Proposed Orders ("Proposed Orders"). At the Court's request, on August 12, 2022, statements of outstanding issues surviving summary judgment orders and permissible to be raised at final hearing (other than associational standing) were filed by HEC and jointly by Respondent. In a series of emails, the Court proposed a schedule for the Court's January 31, 2023 issuance of a final order, and for any responsive motions the parties might file prior to filing any petitions for judicial review. Specifically, on February 24, 2023, post-final order motions are due to be filed, if any (e.g., motions to Reconsider, etc.). On March 10, 2023, responses to post-final order motions are due to be filed, if any. On March 20, 2023, replies to post-final order motions are due to be filed, if any.

ASSOCIATIONAL STANDING FOR PETITIONER HOOSIER ENVIRONMENTAL COUNCIL

[14] At final hearing, TCD presented a new challenge to HEC's associational standing. On summary judgment, HEC sought affirmation that it had associational standing;

Respondents TCD and IDEM concurred that HEC did have associational standing. The Court's June 16, 2021 summary judgment order held that "HEC is an Indiana 501(c)(3) non-profit corporation with the purpose of protecting the environment." Findings of Fact, Conclusions of Law and Order ("S.J. Order") at 2 ¶ 4. This finding is consistent with the hearing testimony presented by HEC Senior Policy Director Tim Maloney ("Maloney") on behalf of HEC. Tr. vol. I, 25:13–17. Maloney has been a member of the HEC staff since 1989. Tr. vol. I, 25:18–26:9.

- [15] HEC does not allege that it has standing to pursue this appeal in its own name, but claims standing through members, including Christine Mueller ("Mueller"). S.J. Order at 2 ¶¶ 4 & 5; Petition at 5 ¶ 14.
- [16] As held on summary judgment, Mueller lives nearby, and recreates in and near the Tanners Creek site, via the nearby walking and biking trails, and waterfront areas for enjoyment and recreation. Ex. 188 (Affidavit of Mueller) ¶¶ 5 & 6.

Mueller's 2021 Affidavit states:

I am a member of the Hoosier Environmental Council (HEC), an environmental advocacy group in Indiana that includes members from in and around Lawrenceburg and Southeastern Indiana. I have been an active member of HEC since 2019. I donate money to HEC, subscribe to the HEC newsletter, and attend local HEC events, such as Greening the Statehouse. I joined HEC because they provide valuable information and support on issues of interest to me such as coal ash disposal.

Ex. 188 at ¶ 2.

- [17] Mueller did not testify at final hearing. Maloney testified that HEC maintains a list of its current members. *Tr. vol. I, 127:23-128:5.* Maloney testified that someone becomes a "member" of HEC by making a contribution that is renewed every year. *Tr. vol. I, 128:6-12.* A person that fails to renew her dues or donation "would go on inactive status" and would not be considered a "member" unless she "made a contribution within the appropriate time frame." *Tr. vol. I, 128:13–129:12.*
- [18] No list of HEC's current members was made part of the record. Mueller did not testify at the hearing held from October 18 through 21, 2021. No evidence was presented at hearing to establish that Mueller's membership status had changed since she issued her 2021 affidavit. Ex. 188.
- [19] HEC's current Articles of Merger for HEC state as follows:

The Surviving Corporation does not have members within the meaning of § 23-17-2-17 of the Act. Therefore, the Merger Agreement does not require approval by members of the

Surviving Corporation. ... The Merging Corporation does not have members within the meaning of § 23-17-2-17 of the Act. Therefore, the Merger Agreement does not require approval by members of the Merging Corporation.

Ex. 229 §§ VI.6.01(b) & 6.02(b) (Feb. 8, 2012).4

[20] HEC's current bylaws state as follows:

No Voting Members. As provided in the Corporation's Articles of Incorporation, the Corporation shall have no members within the meaning of Indiana Code § 23-17-2-17.

Non-Voting Members. Subject to the Articles of Incorporation of the Corporation and Section 1.01 of these Amended and Restated Bylaws (the "Bylaws"), the Board of Directors may establish a class or classes of persons to be known as "members" of the Corporation, with such qualifications, rights, and duties as determined by the Board of Directors from time to time.

Establishment of Non-Voting Members. Per the "Non-Voting Members" section of the By-Laws, the Board of Directors establishes a class of "Non-Voting Members" to include those persons who donate to the Corporation. The period of membership shall be for the ensuing twelve (12) months immediately following the date of the donation. In addition, all persons who have donated to the Corporation within the twelve (12) months immediately preceding the amendment of these By-Laws shall be deemed a Non-Voting Member of the Corporation for the twelve (12) month period immediately following the date of the donation.

Standing.

The Corporation shall have standing to bring suit on behalf of its Members when: 1) its Members would otherwise have standing to sue in their own right; 2) the member(s)' interests the Corporation seeks to protect are germane to HEC's purpose; and 3) neither the claim asserted nor the relief requested requires the participation of individual Members in the lawsuit.

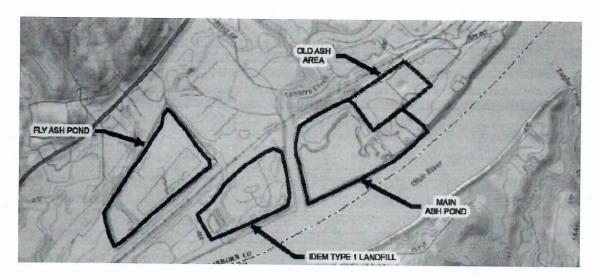
Ex. 187 at 1 (Sep. 13, 2017).

⁴ The Articles of Merger were discussed at the hearing and admitted, but not given an exhibit number. *Tr. vol. I,* 132–35. The Court hereby gives the Articles exhibit number 229.

[21] Further findings of fact concerning substantive challenges to the Approval will be follow, categorized as pertaining to specific challenges. As Respondent TCD's January 21, 2022 Proposed Findings were largely undisputed and its citations to the record presented the presiding ELJ with slightly more efficient record access on the presiding ELJ's word processing system, many findings are restated below, after consideration of the other parties' submissions, and confirmation with the Record.

THE FLY ASH POND'S CURRENT CONFIGURATION, PRIOR TO IMPLEMENTING CLOSURE PLAN

- [22] The Tanners Creek Power Plant came online in 1951 and was operated by the Indiana Michigan Power Company. Stip. I.4. The power plant ceased operation in May 2015. Stip. I.10. TCD purchased the power plant and the surrounding site in October 2016. Stip. I.11.
- [23] The Fly Ash Pond was constructed in 1977 and 1978. Stip. I.5.
- [24] The Fly Ash Pond is a CCR surface impoundment of approximately 70.7 acres located at the site of the former Tanners Creek Power Plant, at the south end of Shurlite Drive, in Lawrenceburg, Dearborn County, Indiana. Revised Joint Stipulations ("Stip.") I.2 & I.3 (Oct. 14, 2021).
- [25] A map of the Fly Ash Pond (left) and surrounding site is shown here:



[26] The Fly Ash Pond was excavated below the surrounding ground surface. *Tr. vol. III, 85–87.* The elevation at the bottom of the excavated FAP is 458 feet above mean sea level ("amsl")—*Stip. I.33.b.*—while the elevation of the surrounding ground surface is 465 to 470 feet amsl *Tr. vol. III, 87; Stip. I.33.d.* The "100 year flood" level (regulated floodway) of the Ohio River in the area of the Tanners Creek Power Plant is 488 feet amsl *Stip. I.33.f & 34*

- [27] The Fly Ash Pond is fully surrounded by a perimeter berm constructed of earthen material. *Stip. I.27; Tr. vol. III, 81.* The earthen berm extends from the ground surface (465 to 470 feet) up to 495 feet amsl *Stip. I.33.d & 33.h.*
- [28] At the time of construction, the Fly Ash Pond was lined with a 20 millimeter (approximately 0.787 inches) polyvinyl chloride geomembrane bottom liner. Stip. 1.6. The liner covers the bottom of the pond and extends up the inboard slopes of the earthen berm. Tr. vol. III, 86; Ex. 16 electronic page ("e.p.")⁵ 28.
- [29] The Fly Ash Pond was originally constructed as a single surface impoundment. Stip. 1.27; Tr. vol. III, 81. The pond was split into the clear water pond to the south and the upper basin to the north between 2003 and 2007. Stip. 1.20. The upper basin was split into an eastern basin and a western basin in 2010. Stip. 1.21. "Splits" were made by piling materials on top of material under the liner, not by cutting through it.
- [30] Between 2003 and 2007 an additional perimeter berm was constructed using bottom ash. Stip. I.24, Tr. vol. III, 87–88. This new ash berm was constructed just inside the existing earthen berm and on top of existing CCR disposed of in the impoundment. Tr. vol. III, 87–88; Tr. vol. II, 54; Ex. 10 e.p. 88; Ex. 6 e.p. 50. A portion of the perimeter berm constructed below the elevation of approximately 486 amsl was constructed of clayey soil. Rev. J. Stip. ¶ 25. A stormwater runoff channel that drains to the clear water pond was constructed and exists between the original earthen berm and the new interior ash berm. The new interior ash berm raised the elevation of the berm system to heights of 511 feet amsl between the upper basin and the clear water pond and 518 feet amsl on the north, east, and south sides of the upper basin. Stip. I.24, I.33.h, I.33.j, I.33.k. Tr. vol. III, 87–88.
- CCR reached the Fly Ash Pond via sluicing. *Tr. vol. II, 213–14; Tr. vol. III, 82.* CCR generated from the former Tanners Creek Power Plant were physically sluiced, that is transported by water pipelines through a sluicing water transport mechanism, then deposited in the Fly Ash Pond. *Tr. vol. III, 82.* The sluice water pipe entered the Fly Ash Pond on the central eastern side. *Tr. vol. III, 82.* As the water moved to the southwest end of the Fly Ash Pond, the physical CCR settled out of the water. *Tr. vol. II, 113; Tr. Vol. IV, 115.* The water accumulated at the southwest end of the Fly Ash Pond (specifically in the clear water pond) and was then pumped back to the Main Ash Pond. *Tr. vol. I, 202 & 213–14; Tr. vol. II, 112..* The water being pumped back is referred to as "return water" or "FAP return water." *Tr. vol. I, 202; Ex. 180 e.p. 32–58.* A sample of this water was taken as it was discharged to the Main Ash Pond and accounts for some of the available constituent concentration data. *Tr. vol. I, 202 & 208.* From the Main Ash Pond, the water was discharged in accordance with a National Pollutant Discharge Eliminate System permit to the Ohio River. *Tr. vol. III, 202.*
- [32] The Fly Ash Pond ceased receiving CCR in 2014. Stip. 1.9.

⁵ Exhibits were shared with the Court and the parties electronically. Pin cites labeled "e.p." cite to the page of the electronic document.

- [33] The Approval requires that the owner submit and environmental restrictive covenant ("ERC") and deed notation within ninety days after completion of construction of the final cover system, and establishment of vegetation. Stip. Ex. 17, p. 8, 9, §§ B17, C3. The ERC/deed notation is required to bind future owners or operators that they are responsible for:
 - a. Correcting and controlling any nuisance conditions at the facility (329 IAC 10-31-5);
 - b. Eliminating any threat to human health or the environment (329 IAC 10-31-6); and
 - c. Performing any remedial action at the facility, if necessary (329 IAC 10-31-7).
- [34] HEC's Proposed Order notes that IDEM's current ERC template includes additional requirements not stated in the Approval, such as restrictions for residential or agricultural land use, restrictions against extraction of groundwater, among others. HEC'sProposedOrder,p.45,¶180.See
 https://www.in.gov/idem/cleanups/files/institutional controls erc template rcra.doc.

THE APPROVAL

- [35] On October 18, 2017, TCD initially applied to IDEM for the Closure Plan of the Fly Ash Pond. [IDEM Virtual Filing Cabinet ("VFC") Doc. No. 80551695]. Ex. 2.
- [36] On April 23, 2020, IDEM issued the Approval of the Closure Plan for the Fly Ash Pond. (VFC Doc. No. 82954455). *Ex. 17.*
- [37] While TCD's closure plan application was pending Approval, IDEM issued several Requests for Additional Information and TCD responded and revised the Closure Plan. The record of the Approval includes those exchanges, which are as follows:
 - a. IDEM, Request for Additional Information (Feb. 6, 2018) (VFC Doc. No. 80608549). Ex. 3.
 - S&ME, Inc., Closure Plan, Rev. 1 (March 20, 2018) (VFC Doc. No. 80633887). Ex.
 4. The VFC document includes EnviroAnalytics Group LLC, Responses to IDEM 3/6/18 [sic] RAI (March 9, 2018).
 - c. IDEM, Insufficient Response to Request for Additional Information (May 10, 2018) (VFC Doc. No. 82539884). Ex. 5.
 - d. S&ME, Inc., Closure Plan, Rev. 2 (June 26, 2018) (VFC Doc. No. 82575444). Ex. 6. The VFC document includes EnviroAnalytics Group LLC, Responses to IDEM 5/10/18 RAI (June 26, 2018).

- e. IDEM, Insufficient Response to Request for Additional Information (Sep. 6, 2018) (VFC Doc. No. 82609086). Ex. 7.
- f. S&ME, Inc., Closure Plan, Rev. 3 (Oct. 12, 2018) (VFC Doc. No. 82637600). Ex. 8. The VFC document includes EnviroAnalytics Group LLC, Responses to IDEM 9/6/18 RAI (Oct. 12, 2018).
- g. IDEM, Insufficient Response to Request for Additional Information (Dec. 3, 2018) (VFC Doc. No. 82657546). Ex. 9.
- h. S&ME, Inc., Closure Plan, Rev. 4 (March 14, 2019) (VFC Doc. No. 82730924). Ex. 12. The Closure Plan includes the following:
 - S&ME, Inc., Responses to IDEM 12/3/18 RAI (March 15, 2019) (VFC Doc. No. 82730923). Ex. 13.
 - Attachment II, EnviroAnalytics Group LLC, Groundwater Monitoring Plan, Rev. 6 (March 12, 2019) (VFC Doc. No. 82730925). Ex. 11.
 - iii. Attachment VI, S&ME, Inc., Subsurface Data Report, Rev. 2 (March 1, 2019) (VFC Doc. No. 82730926). Ex. 10.
 - Attachment VII, S&ME, Inc., Comments and Response Log (March 14, 2019) (VFC Doc. No. 82730928). Ex. 14.
- i. IDEM, Insufficient Response to Request for Additional Information (Aug. 23, 2019) (VFC Doc. No. 82829790). Ex. 15.
- j. S&ME, Inc., Closure Plan, Rev. 5 (Oct. 28, 2019) (VFC Doc. No. 82858503). Ex. 16. The VFC document includes EnviroAnalytics Group LLC, Response to Comments (Oct. 28, 2019). The VFC document includes Attachment II, EnviroAnalytics Group LLC, Groundwater Monitoring Plan, Rev. 6 (Oct. 28, 2019) at e.p. 46–112.
- [38] The Approval requires TCD to close and maintain the Fly Ash Pond as described in the approved plans and specifications in the document titled "Closure Plan Tanners Creek Fly Ash Pond," dated October 19, 2017 (VFC #80551695), and with the requirements stated in the following submittals (some listed above) Ex. 17 §§ A1 & B1:
 - Document dated March 20, 2018 (VFC #80633887), Closure Plan, Rev.1, in response to the request for additional information (RAI) dated February 6, 2018 (VFC #80608549)
 - Document dated June 26, 2018 (VFC #82575444), Closure Plan, Rev.2, in response to the notice of insufficient response (NOIR) dated May 10, 2018 (VFC #82539884).

- c. Document dated October 12, 2018 (VFC #82637600), Closure Plan, Rev.3, in response to the NOIR dated September 6, 2018 (VFC #82609086).
- d. Document dated March 14, 2019 (VFC #82730923), Closure Plan, Rev.4, in response to NOIR dated December 3, 2018 (VFC #82657546), and supporting documentation dated March 1, 2019 (VFC #82730926), March 12, 2019 (VFC #82730925), and March 14, 2019 (VFC #82730924 and #82730928).
- e. Document dated October 28, 2019 (VFC #82858503), Closure Plan, Rev.5, response to NOIR dated August 23, 2019 (VFC #82829790).
- [39] The Approval authorizes a "closure in place," which provides for "leaving the CCR in place and installing a final cover system." 40 C.F.R. § 257.102(a). The Fly Ash Pond closure was approved under 329 IAC 10-9-1(c), which incorporates portions of 40 CFR 257, Subpart D (the federal Coal Combustion Residuals rule). Section B2 of the Approval states:

"The owner or operator is approved to close the entire 70.7 acres of Tanners Creek FAP, consisting of the approximately 59.2-acre Upper Basin and the approximately 11.5-acre CWP (Clear Water Pond), using the closure-in-place method subject to 329 IAC 10-3-1(9) and 329 IAC 10-9-1(c) with 40 CFR 257."

SURFACE WATERS

- [40] The former Tanners Creek Power Plant is located along the Ohio River. Ex. 6 e.p. 48. The Fly Ash Pond is separated from the Ohio River by a Type I restricted waste landfill, other undesignated land, a railroad, and an access road. Ex. 6 e.p. 48 & 50. The record does not appear to reflect the linear distance between the Ohio River and the Fly Ash Pond. Using the graphic scale of Exhibit 6 e.p. 50, it appears the distance between the southwest corner of the Fly Ash Pond and the Ohio River can be conservatively estimated as at least 750 feet and the distance between the southeast corner of the Fly Ash Pond and the Ohio River can be conservatively estimated as at least 1,100 feet. Ex. 6 e.p. 50.
- [41] The normal pool of the surface waters of the Ohio River is 455 feet amsl *Stip. I.33.a.* The ordinary high-water level is 462 feet amsl *Stip. I.33.c.*
- [42] The "100 year flood" level of the Ohio River in the area of the Tanners Creek Power Plant is 488 feet amsl *Stip. I.33.f & 34*. The 100 year flood refers to the magnitude of flood that has a one (1) percent chance of occurring in any given year. *Tr. vol. I, 21; Tr.*

- vol. II, 40. The 100 year flood, or regulated floodway, is defined by the Federal Emergency Management Agency ("FEMA") using historical flood data. Tr. vol. II, 41.
- [43] Compared to the Fly Ash Pond, the 100 year flood level is *below* the top of the original earthen berm by seven (7) feet (495 feet amsl *Stip. I.33.h*); the bottom of the interior ash berm (same); the top of the interior ash berm by 23 to 30 feet (511 to 518 feet amsl *Stip. I.33.j & k*), and, as will be discussed later, the entire cover system required by the Approval (*Tr. vol. III, 151*). The 100 year flood level is *above* the bottom of the pond (458 feet amsl *Stip. I.33.b*); the surrounding ground surface (465 to 470 feet amsl *Stip. I.33.d*); the bottom of the original earthen berm (same); and the railroad embankment between the Fly Ash Pond and the Ohio River (480 feet amsl *Stip. I.33.e*).
- [44] During a 100 year flood, water is likely to flow from the Ohio River toward the Fly Ash Pond. *Stip. I.36.* FEMA maps show that floodwaters from the Ohio River will surround the Fly Ash Pond during a 100 year flood. *Ex. 21, 22, & 146; Tr. vol. II, 43.* But those same maps do not show the Fly Ash Pond as being inundated by the 100 year flood. Instead, the maps show the floodwaters surrounding the outer earthen berm (*Tr. vol. II, 47–48*), the original earthen berm serving to some extent as a levee protecting the Fly Ash Pond (*Tr. vol. III, 151*), and the Fly Ash Pond "sticking" or "protruding" up out of the floodwaters (*Tr. vol. II, 43 & 46*).
- [45] In addition, the 500 year flood level is 494 feet amsl, which refers to the two-tenths (0.2) percent annual chance of flood. Ex. 24 e.p. 632; Ex. 181 e.p. 3. The 500 year flood level is also below the top of the original earthen berm and a majority of the cover system. Tr. vol. III, 152.
- [46] FEMA is in the process of updating the "100 year flood" map to consider the effects of climate change, but that process is not complete. *Tr. vol. II, 41.* HEC's expert testified that the elevation of the "100 year flood" will likely increase as a result of FEMA's process. *Tr. vol. II, 41–42.* The record does not reflect how high the "100 year flood" elevation might rise as a result. As the map revision process was not complete when IDEM issued the Approval, the best data IDEM had available was the current "100 year flood" as defined by FEMA.
- [47] The parties dispute whether flooding will cause a catastrophic failure of the Fly Ash Pond's berms and cover system. No evidence has been presented that floodwaters will ever overtop the outer perimeter earthen berm and reach the interior ash berm or the cover system. Based on historical flood data analyzed by FEMA and presented by the parties, there is not even a two tenths (0.2) percent ("500 year flood") chance of floodwaters reaching 495 feet amsl.
- [48] The question is whether floodwaters will erode the outer perimeter earthen berm to the extent that CCR and its toxic constituents would be released into the environment. During a 100 year flood, floodwaters will surround the Fly Ash Pond and a vertical height of eighteen (18) to twenty three (23) feet of the outer perimeter earthen berm will be exposed to floodwaters. TCD's expert testified that at the level of a 100 year flood, the

outer perimeter earthen berm is approximately sixty (60) feet thick. *Tr. vol. IV, 141, 144–45; Ex. 1 e.p. 12 & 13.* At ground level, the outer perimeter earthen berm appears to be anywhere from approximately 140 feet to approximately 160 feet thick depending on the cross-section. *Ex. 1 e.p. 12 & 13.*

- [49] Water velocity, not just water level, is a relevant consideration for protection of human health and the environment. Higher flow velocity flow increases the chance of eroding the earthen berm. *Tr. vol. II, 84.* The credible testimony regarding the velocity of flow around the Fly Ash Pond is mixed. HEC's expert testified that the velocity of flood waters will be high around the Fly Ash Pond due to a constricted flow zone created by the berms of the Fly Ash Pond and the landfill. *Tr. vol. II, 81–82 & 84–85.* TCD's expert reported that the Fly Ash Pond sits in an ineffective flow zone and that flow will be slowed by the landfill and the railroad berm. *Ex. 182 e.p. 8, 20–21.*
- [50] TCD would be required to inspect the Fly Ash Pond after a 100 year flood and repair any identified damage. *Tr. vol. III, 161.* The Approval requires TCD to eliminate any threat to human health or the environment and perform any necessary remedial actions. *Ex. 17 § C3.b & c, e.p. 9.* The Approval requires TCD to maintain the integrity and effectiveness of the final cover system and make any repairs necessary to correct the effects of erosion or other events. *Ex. 17 § C1.a, e.p. 9;* 40 C.F.R. § 257.104(b)(1). The Approval requires TCD to inspect the Fly Ash Pond and remedy any identified deficiency or release. *Ex. 17 § B7, e.p. 6;* 40 C.F.R. § 257.83(b)(5).
- [51] The burden of proof and persuasion lies with HEC. The Court finds that HEC has not produced sufficient evidence to prove that floodwaters from the Ohio River will erode the earthen perimeter berm and cover system to cause a release of CCR which would not be protective of human health and the environment. The Approval requires TCD to inspect the Fly Ash Pond and repair damage caused by erosion. OEA presumes that TCD will comply with the Approval and may not overturn the Approval upon speculation that the regulated entity will not operate in accordance with the law. Blue River Valley, 2005 OEA 1, 12. Because the Approval requires TCD to repair erosive damage, the only opportunity for the release posited by HEC to occur is during a single catastrophic event. HEC relies on speculation that this event will occur. Speculation, without evidence, is not sufficient to meet the burden of proof to defeat IDEM's Approval.

GROUNDWATER

- [52] The flow of groundwater in the area immediately around the Fly Ash Pond typically goes from east to west, and from south to north. *Stip. I.35.* The Ohio River is hydraulically connected to the aquifer underneath the Fly Ash Pond. *Stip. I.37.* Groundwater flows from the Ohio River toward the cone of depression associated with a public water supply well field located to the northwest of the Fly Ash Pond. *Stip. I.35.*
- [53] Based on sampling results from monitoring wells in the vicinity of the Fly Ash Pond, the average groundwater level below the Fly Ash Pond is 454.6 feet amsl Ex. 10 e.p. 16; Tr. vol. III, 89. This is 3.4 feet below the bottom of the Fly Ash Pond (458 feet amsl, Stip.

- I.33.b). The range of groundwater elevation sampling results is 449.5 to 465.4 feet amsl. Ex. 10 e.p. 16; Ex. 180 e.p. 7; Tr. vol. II, 120–22; Tr. vol. III, 90.
- [54] Groundwater analytical results are available from 1981 to 2018 for the monitoring wells in the vicinity of the Fly Ash Pond, the nearby CCR Landfill, and municipal water supply wells. Stip. 15; Ex. 158 & 159. Some data was not detected, or not recorded, for a specific reading at a specific location and time for a specific constituent. Ex. 158, p. 208 234. Respondents' expert witnesses disregarded these nondetect events. Tr. Day 2, 137:15-18, 194:12-195:15; Ex. 201, p. 11. Groundwater has been analyzed for approximately forty (40) constituents over the years. Ex. 158 & 159. Historical groundwater data is also available from prior to Fly Ash Pond construction. Ex. 19 e.p. 30. Respondents' witnesses Robinson and Becker did not recall specific review of the groundwater analytical results. Tr. Vol. III, 163:17 165:8, 187: 18-19, 241:11 242:20.
- [55] On three (3) occasions between 2009 and 2016, monitoring wells hydraulically downgradient of the Fly Ash Pond measured groundwater elevations that exceeded the bottom of the Fly Ash Pond (458 feet amsl). *Stip. I.8.* Other than those three (3) occasions, all measured groundwater elevations downgradient of the Fly Ash Pond have been below 458 feet amsl. *Stip. I.8.* This includes measurements at the same wells on other dates. *Stip. I.8.*
- The downgradient wells associated with the Fly Ash Pond are GM-1S, GM-1D, GM-2S, GM-2D, and GM-3 and the municipal water wells. *Tr. vol. I, 98 & 221*. The municipal water wells are as follows. Aurora Utilities has three (3) drinking water wells (Aurora-1, Aurora-2, and Aurora-3) within 500 feet from the northwest side of the Fly Ash Pond. *Stip. I.28*. In 2019, the City of Aurora advised IDEM that Aurora's drinking water wells had shown trace amounts of boron. *Ex. 156*. The Lawrenceburg, Manchester, Sparta Water Conservancy District ("LMS") has two (2) drinking water wells (LMS-2 and LMS-3) within 1,000 feet from the southwest side of the Fly Ash Pond. *Stip. I.29*. The Fly Ash Pond is located within the wellhead protection area for the Aurora and LMS wells. *Ex. 16 e.p. 238*. The wells upgradient of the Fly Ash Pond and associated with the Landfill are MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8. *Ex. 182 e.p. 22*. The locations of the monitoring wells are visually depicted on the map in Exhibit 16 at e.p. 74 and 81 and Exhibit 182 at e.p. 22.
- [57] Of the approximately forty (40) constituents analyzed in groundwater, three are most significant as exemplars to demonstrate whether the Fly Ash Pond may have a harmful impact upon groundwater; data relevant to other harmful constituents has as similar detection pattern. Constituents that are representative of CCR that have been detected in groundwater in the vicinity of the Fly Ash Pond include boron, sulfate, and lead.
- [58] Boron and sulfate are often used as indicators of CCR. *Tr. vol. I, 207 & 221.* U.S. Environmental Protection Agency ("EPA") maximum contaminant levels ("MCL") do not exist for boron and sulfate. *Ex. 180 e.p. 8 & 9.* An unenforceable Child Health Advisory criterion of three (3) mg/L has been used for boron. *Ex. 180 e.p. 8.* An unenforceable

EPA Drinking Water Advisory of 500 milligrams per liter ("mg/L") has been issued for sulfate. *Ex. 180 e.p. 9.* Boron did not exceed the three (3) mg/L criterion and sulfate did not exceed the 500 mg/L criterion in any samples collected from the upgradient or downgradient monitoring locations, including the municipal wells. *Ex. 158 & 159.* The boron and sulfate concentrations in the upgradient wells (MW-1, MW-2, and MW-3) were similar to or higher than downgradient groundwater concentrations at the Fly Ash Pond monitoring wells GM-1S, GM-1D, GM-2S, GM-2D, and GM-3. *Ex. 158, 159, & 182 e.p. 3-5, 23, & 24.*

[59] EPA has set a MCL action level for lead of fifteen (15) micrograms per liter, which is equivalent to fifteen (15) parts per billion. *Stip. I.15; Tr. vol. I, 205.* Groundwater samples collected prior to construction of the Fly Ash Pond found lead concentrations above the current MCL action level, indicating lead was in the groundwater prior to the operation of the Fly Ash Pond. *Ex. 19 e.p. 30.* Lead continued to be detected at concentrations above the MCL in groundwater collected from upgradient and downgradient locations from 1981 to 2018. *Ex. 158 & 159.* For the five (5) most recent years that data is available (2013–2018), fourteen (14) downgradient groundwater samples from GM-1S, GM-1D, GM-2S, GM-2D, and GM-3 reported lead concentrations above the MCL action level. *Ex. 158 & 159.* Similar groundwater data for lead was also noted in the upgradient locations MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, and MW-8. Lead did not exceed the MCL action level in any of the downgradient groundwater from municipal well samples for the comparable monitoring period. *Ex. 158 & 159; Tr. vol. II, 156.*

GROUNDWATER MONITORING AND CORRECTIVE MEASURES

- [60] The Approval requires TCD to conduct groundwater monitoring throughout the closure process and during the following thirty (30)-year post-closure period. Ex. 17 § D2, e.p. 10. The Approval prohibits TCD from exiting the post-closure period if the Fly Ash Pond is under Assessment Monitoring. Id.
- [61] The Fly Ash Pond's groundwater monitoring system includes the twelve (12) nested monitoring wells listed in Condition D3, which are visually depicted on the map in Exhibit 16 at e.p. 74. Ex. 17 § D3, e.p. 10.. Wells MW-1, MW-2, MW-29, and MW-30 are identified as upgradient wells and MW-31, MW-22, MW-23, MW-24, MW-25, MW-26, MW-27, and MW-28 are identified as downgradient wells. Ex. 16 e.p. 54. Nested monitoring wells refers to wells at different depths but in the same location. Tr. vol. I, 83. Therefore, the Approval requires TCD to collect twenty-four (24) samples during each groundwater monitoring event. Ex. 17 § D3, e.p. 10.
- [62] The CCR rule requires the groundwater monitoring system to include background wells, which are wells that "[a]ccurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit." 40 C.F.R. § 257.91(a)(1). The Approval repeats this requirement: "Background groundwater monitoring well(s) must provide groundwater samples that represent historical conditions unaffected by a CCR

unit or facility activities" Ex. 17 § D17. However, the Approval does not yet designate which wells are background wells for purposes of the CCR rule. Tr. vol. I, 95; Tr. vol. III, 106–7. Instead, the Approval requires TCD to conduct baseline monitoring and submit a demonstration that wells identified as potential background wells will in fact qualify as background wells. Ex. 17 § F5, e.p. 21. If TCD (or IDEM) determines that the system fails to have the required background wells, TCD must submit a plan to propose new or additional background well locations. Ex. 17 § D.17, e.p. 16-17.

- [63] The CCR rule requires the groundwater monitoring system to include downgradient wells that "[a]ccurately represent the quality of groundwater passing the waste boundary of the CCR unit. The downgradient monitoring system must be installed at the waste boundary that ensures detection of groundwater contamination in the uppermost aquifer." 40 C.F.R. § 257.91(a)(2). The parties dispute whether there is an adequate quantity of downgradient monitoring well locations and whether the wells are appropriately spaced to meet this requirement.
- [64] IDEM recommends no more than 500 feet spacing between downgradient monitoring wells (Ex. 9 e.p 6), although no guidance document or other citation appears in the record to support this recommendation. HEC's expert testified that he could not recall whether 500 feet was required by the CCR rule or any Indiana rules or statutes. Tr. vol. II, 184. The downgradient wells in the approved monitoring well system appear to be spaced more than 500 feet apart. Tr. vol. II, 19–20.
- [65] HEC's expert testified that 500 feet is too far apart because the groundwater in the area flows rapidly, the downgradient wells are close to the boundary line of the Fly Ash Pond, and therefore a plume of contaminants do not have sufficient time to widen out before traveling past the downgradient wells. *Tr. vol. II, 17–18.* HEC's expert opined that a maximum spacing of 300 feet would be more protective. *Tr. vol. II, 18.*
- [66] TCD's witness testified at length regarding how the monitoring well system met each requirement of the performance standard in the CCR rule. *Tr. vol. III, 106–13.*
- [67] IDEM's geologist testified that the number and spacing of the wells met the performance standard in the CCR rule, but also that groundwater monitoring was "something that is an ongoing process throughout the groundwater monitoring period [and that] as you accumulate data from groundwater monitoring including groundwater chemistry and groundwater elevation data and so forth that will potentially lead to tweaking and modifying the program like this." Tr. vol. III, 209–12.

The Approval requires the following regarding groundwater monitoring system modifications:

a. If a groundwater flow map indicates that the groundwater flow direction, including flow reversals, is other than anticipated in the design of the System listed in Requirement D3, then the owner or operator must notify IDEM of the difference in the groundwater monitoring report submitted for Requirement D23. The notification must include either of the following: information demonstrating that the System complies with 40 CFR 257.91 (c); or a proposal to revise the System design for IDEM approval.

The owner or operator must determine if the System currently complies with 40 CFR 257.91(c) before collecting samples for the scheduled semiannual sampling event. ...

If design changes to the existing System are necessary, then the owner or operator must make the changes within 30 days after receiving IDEM approval of the revised design or other time frame approved by IDEM.

Ex. 17 § D16, e.p. 16 - 17..

b. Background groundwater monitoring well(s) must provide groundwater samples that represent historical conditions unaffected by a CCR unit or facility activities that may contribute Appendix III and Appendix IV constituents listed in Requirement D14 against which background comparisons occur. ...

If the owner, operator, or IDEM determines that the current System (see Requirement D3) does not have the required background well(s), then within 60 days the owner or operator must submit a plan per Requirement D3 proposing to establish new or additional background wells for the current System for IDEM review and approval.

Ex. 17 § D17, e.p. 14 - 15..

- [68] The Approval requires TCD to sample each well semiannually during May and November of each year. Ex. 17 § D14, e.p. 12 13. The Approval requires TCD to analyze each sample for the constituents listed in Approval Condition D14.a through g, which match the constituents required by the federal CCR rule. 40 C.F.R. § 257, Subpart D, Appendix III.
- [69] During Assessment Monitoring, the Approval requires TCD to analyze each sample for the constituents listed in Approval Condition D14.h through w, which match the constituents required by the federal CCR rule with the addition of Total Boron. 40 C.F.R. § 257, Subpart D, Appendix IV.
- [70] The Approval requires TCD to use the groundwater monitoring sampling results to determine whether groundwater flow reversals have occurred and if so, to determine whether design changes to the groundwater monitoring system are necessary. Ex. 17 §§ D15 & D16. No similar requirement appears in the federal CCR rule.

- [71] The Detection Monitoring program of the Approval requires that if a statistically significant increase over background concentrations of any Appendix III constituent is detected at any downgradient groundwater monitoring well, then TCD must either demonstrate that the statistically significant increase was caused by a source other than the Fly Ash Pond or submit to Assessment Monitoring. Ex. 17 § D19, e.p. 15.
- [72] The Assessment Monitoring program in the Approval requires that if a statistically significant level exceeding the groundwater protection standards of any Appendix IV constituent is detected, then TCD must either demonstrate that the statistically significant level was caused by a source other than the Fly Ash Pond or complete an assessment of Corrective Measures. Ex. 17 § D20, e.p. 16.
- [73] The Approval requires the assessment of Corrective Measures to meet the standards in the federal CCR rule (specifically 40 C.F.R. § 257.97(b)), to be approved by IDEM, and to be the subject of a public meeting. Ex. 17 §§ D20 & D21, e.p. 16.

a. Remedies must:

- (1) Be protective of human health and the environment;
- (2) Attain the groundwater protection standard as specified pursuant to § 257.95(h);
- (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in appendix IV to this part into the environment;
- (4) Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems;
- (5) Comply with standards for management of wastes as specified in § 257.98(d).

40 C.F.R. 257.97(b).

- [74] The Approval requires TCD to initiate the selected remedy within ninety (90) days of approval by IDEM. Ex. 17 § D21, e.p. 16.
- [75] The Approval states that Corrective Measures are not completed until TCD demonstrates that the concentrations of Appendix IV constituents have not exceeded groundwater protection standards for three (3) consecutive years at all points of the plume. Ex. 17 § D22, e.p. 16.

DAMAGE TO THE BOTTOM LINER

- [76] Whenever the groundwater elevation under the Fly Ash Pond exceeds 458 feet amsl, the 20 mil polyvinyl chloride geomembrane bottom liner would protect the CCR from rewetting unless the bottom liner has been punctured, ripped, or other otherwise damaged. *Tr. vol. I, 94.* If the liner bottom liner has been punctured, ripped, or other otherwise damaged, groundwater could come in contact with the CCR and as the groundwater recedes back to its normal level, contaminants from the CCR would leach into the aquifer. *Ex. 180 e.p. 12; Ex. 182 e.p. 11–12; Tr. vol. I, 229–30; Tr. vol. II, 72–73.*
- [77] The parties dispute whether the geomembrane bottom liner underlying the Fly Ash Pond has been damaged. The bottom liner is covered by many feet of CCR and has been for some time (Ex. 10 e.p. 88, showing the CCR depth of 32 feet in 1996). The liner could not be certified, despite such requirement in 40 CFR § 257.70(a) (c). HEC further argues that as a portion of the sub-liner soil is sandy or sandy clay, that the Fly Ash Pond is functionally unlined. Such liner failure or absence would result in significantly higher detection levels in monitoring wells. None of the parties have direct evidence regarding whether the bottom liner has been damaged.
- [78] HEC argues that the bottom liner must have been damaged because CCR-related contaminants have been detected in groundwater monitoring sampling results downgradient of the Fly Ash Pond. Ex. 180, e.p. 8.. HEC argues that this damage occurred due to repeated filling and emptying of the Fly Ash Pond. Id. The HEC expert testified that he has experienced damage to bottom liners. Tr. vol. I, 230–31; Tr. vol. II, 71–72.
- [79] Witnesses for Respondents TCD and IDEM testified that nothing in the record indicates that the liner has been damaged. *Tr. vol. III, 115–16; Tr. vol. IV, 67; Tr. vol. IV, 83.*
- [80] TCD argues that sluicing of CCR is a protective way to place materials in a lined pond and eliminate the potential for any damage. *Tr. vol. III, 116.* TCD argues that work within the pond, including construction of the interior ash berm and movement of CCR, was conducted after the CCR was approximately 20 feet deep, deep enough that equipment would not damage the bottom liner. *Tr. vol. III, 116.* TCD's witness testified that he has not experienced damage to bottom liners after construction certification. *Tr. vol. III, 116–17.*
- [81] TCD's expert testified that groundwater monitoring data were at best inconclusive to determine whether the bottom liner has been damaged for several reasons. CCR-related contaminants have been detected in groundwater monitoring sampling results both upgradient and downgradient of the Fly Ash Pond, with upgradient results (MW-1, MW-2, and MW-3) sometimes higher than downgradient results. Tr. vol. IV, 83 & 96; Ex. 182 e.p. 25 & 26. Lead was detected in downgradient monitoring wells in 1976, before the Fly Ash Pond was constructed. Tr. vol. IV, 83, 96, & 122; Ex. 19 e.p. 30. In addition, lead has been detected in the Ohio River, which is also upgradient of the Fly Ash Pond

and hydraulically connected to the public water supply wells downgradient of the Fly Ash Pond. *Tr. vol. IV, 83–84; Ex. 180 e.p. 45.*

- [82] A witness for IDEM testified that even if the geomembrane bottom liner underlying the Fly Ash Pond has been damaged and CCR came into contact with groundwater, that does not mean the Approval fails to comply with the closure performance standard of the CCR rule. *Tr. vol. IV, 63*. The CCR rule allows closure in place as long as the Approval requires TCD to "control, minimize, or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters." 40 C.F.R. § 257.102(d)(1)(i); *Tr. vol. IV, 64*. The Approval's groundwater monitoring program is designed to detect whether such leakage is occurring and if constituents are detected, TCD must assess whether they originate from the Fly Ash Pond. *Tr. vol. IV, 64*; Ex. 17 §§ D3–D22.
- [83] The burden of proof and persuasion lies with HEC. No direct evidence indicates whether the bottom liner has been damaged. HEC relies on downgradient constituent concentrations in groundwater monitoring samples as evidence that the CCR is coming into contact with groundwater and therefore the bottom liner must be damaged. The parties have stipulated that the groundwater level exceeded the elevation of the bottom of the Fly Ash Pond on three (3) occasions. *Stip. I.8.* It seems unlikely that the constituent concentrations in the groundwater monitoring samples on which HEC relies resulted from these three (3) incidents. These constituents appear in the Ohio River upgradient, in upgradient wells, and in sampling results taken before the Fly Ash Pond was constructed. HEC has not produced sufficient evidence to prove that the bottom liner has been damaged causing CCR to come into contact with groundwater.
- [84] In addition, the Court finds IDEM's testimony persuasive that if future sampling results indicate that the bottom liner has in fact been damaged, causing CCR to come into contact with groundwater, the Approval requires Assessment Monitoring and Corrective Measures. Ex. 17 §§ D3–D22, e.p. 10 16. The Court found on summary judgment:

The Approval requires TCD to implement a groundwater detection monitoring program. If a statistically significant increase over background concentrations is observed, TCD must take specific actions, including assessment monitoring and ultimately culminating in corrective measures and remedies for statistically significant levels exceeding groundwater protection standards. Corrective action is not complete until groundwater protection standards have been met for three (3) consecutive years.

S.J. Order at 4, ¶ 20.

COVER SYSTEM

[85] A final cover system will be installed above all areas where ash is exposed and down the outside slopes of the interior ash berm. Ex. 16 e.p. 27. Prior to installing the final cover

system, the Approval requires TCD to dewater and stabilize existing CCR. The Approval requires that the final cover system consist of the following layers, from top to bottom:

- a. 6 inches of vegetative soil;
- b. 30 inches of protective soil;
- c. 16-ounce/square yard nonwoven geotextile or geocomposite; and
- d. 40-mil low-density polyethylene ("LLDPE") or 60 mil high-density polyethylene ("HDPE") geomembrane liner. ⁶Ex. 17 § B14, e.p. 8.
- The Approval requires TCD to construct, install, and test the final cover system in accordance with the Quality Assurance/Quality Control Plan that is e.p. 113 through 157 of Exhibit 16. Ex. 17 § B15, e.p. 8. The Plan includes numerous quality control, conformance testing, and performance requirements, which were summarized by TCD's witness during the hearing. Ex. 16 e.p. 113–57, Attachment III Quality Assurance/Quality Control Plan; Tr. vol. III, 124–33. For example, the six (6) inches of material immediately beneath the cover system must be free of all rocks, stones, sticks, and debris of any kind, with no particle being larger than three-eighths (3/8) inch in diameter. Ex. 16 e.p. 127. The cover soil layer must meet listed requirements for visual classification, particle size, and Atterberg limits. Ex. 16 e.p. 153. The vegetative layer must meet listed visual classification, unacceptable material, and cap system survey requirements. Ex. 16 e.p. 155.
- [87] The Approval requires a cover system that includes thirty-six (36) inches of earthen material. Ex. 17 § B14, e.p. 8. The CCR rule requires a cover system that includes twenty-four (24) inches of earthen material. 40 C.F.R. § 257.102(d)(3)(i)(B) & (C); Tr. vol. IV, 33-34.
- [88] All parties' witnesses agree that the cover system meets or exceeds the requirements of the federal CCR rule. Tr. vol. II, 108 (Mark Hutson for HEC); Tr. vol. IV, 31–34 (Xuefie Lu for IDEM); Tr. vol. IV, 92 (John Seymour for TCD).

CONCLUSIONS OF LAW

The Office of Environmental Adjudication ("OEA") has jurisdiction over the decisions of the Commissioner of the Indiana Department of Environmental Management ("IDEM") and the parties to this controversy pursuant to Ind. Code § 4-21.5-7, et seq. IDEM is authorized to implement and enforce Indiana environmental statutes and rules promulgated relevant to those statutes. See I.C. § 13-13 et seq. and I.C. § 13-14-1-11.5. OEA has jurisdiction over the decisions of the Commissioner of the IDEM and the parties to the controversy pursuant to I.C. § 4-21.5-7-3. In the exercise of its jurisdiction, OEA is governed by the Administrative Orders and Procedures Act (AOPA) per I.C. § 4-21.5 et

⁶ 40 mil is approximately 1.575 inches; 60 mil is approximately 2.362 inches.

seq. and OEA-specific rules per 315 IAC 1, et seq.

- [2] Findings of Fact that may be construed as Conclusions of Law and Conclusions of Law that may be construed as Findings of Fact are so deemed.
- [3] OEA must apply a *de novo* standard of review to this proceeding when determining the facts at issue. *Indiana Dept. of Natural Resources v. United Refuse Co., Inc., 615* N.E.2d 100 (Ind. 1993). Findings of fact must be based exclusively on the evidence presented to the environmental law judge ("ELJ"), and deference to the agency's initial factual determination is not allowed. *Id.;* I.C. 4-21.5-3-27(d). "*De novo* review" means that "all issues are to be determined anew, based solely upon the evidence adduced at that hearing and independent of any previous findings. *Grisell v. Consol. City of Indianapolis*, 425 N.E.2d 247 (Ind. Ct. App. 1981).
- [4] OEA is required to base its factual findings on substantial evidence. *Huffman v. Office of Envtl. Adjud.*, 811 N.E.2d 806, 809 (Ind. 2004) (appeal of OEA review of a permit); see also Ind. Code § 4-21.5-3-27(d). "Standard of proof generally has been described as a continuam with levels ranging from a 'preponderance of the evidence test' to a 'beyond a reasonable doubt' test. The 'clear and convincing evidence' test is the intermediate standard, although many varying descriptions may be associated with the definition of this intermediate test." *Matter of Moore*, 453 N.E.2d 971, 972, n. 2. (Ind. 1983). "The 'substantial evidence' standard requires a lower burden of proof than the preponderance test, yet more than the scintilla of the evidence test." *Burke v. City of Anderson*, 612 N.E.2d 559, 565, n.1 (Ind. Ct. App. 1993). *Gas Am. 347*, 2004 OEA 123, 129. *See also Blue River Valley*, 2005 OEA 1, 11-12. *Marathon Point Serv. and Winamac Serv.*, 2005 OEA 26, 41.
- The OEA and IDEM, as state agencies, only have the authority to take those actions that are granted by the law. "An agency, however, may not by its rules and regulations add to or detract from the law as enacted, nor may it by rule extend its powers beyond those conferred upon it by law." Lee Alan Bryant Health Care Facilities, Inc. v. Hamilton, 788 N.E.2d 495, 500 (Ind. Ct. App. 2003). IDEM can only determine whether a permit should be issued by applying the relevant statutes and regulations and may only consider those factors specified in the applicable regulations in deciding whether to issue a permit. As the ultimate authority for the IDEM, the OEA's authority is limited by statute (I.C. §4-21.5-7-3) to determining whether the IDEM decision complies with the applicable statutes and regulations. OEA is an impartial litigation forum, not a body which formulates or advises as to public policy or regulatory content.
- [6] In this case, HEC challenged the Approval's technical and legal validity, seeking complete excavation and removal of all CCR waste. As petitioner, HEC bears the burden of proof and persuasion, by substantial evidence. I.C. § 4-21.5-3-14.
- [7] OEA's summary judgment rulings held that the following could not be resolved as a matter of law, on summary judgment: Whether IDEM had sufficient information

regarding the site to decide whether the Approval would be protective of human health and the environment, or whether the Approval provides the mechanism for gathering and submitting this information. The proximity of municipal drinking water wells, the geology of the Site, its proximity to the Ohio River, groundwater elevations, and the experts' contradictory opinions, all created genuine issues of material facts as to whether the Approval is protective of human health and the environment.

[8] 329 IAC 10-9-1(c) governs as to whether the Approval is technically and legally valid:

For a coal combustion residuals impoundment subject to 40 CFR 257, Subpart D, final disposal of solid waste in the impoundment at the end of the operation of the impoundment is subject to approval by the commissioner, based on the requirements for coal combustion residuals impoundments in 40 CFR 257.50* through 40 CFR 257.107* and on other management practices that are protective of human health and the environment.

[9] To succeed on its Petition for Administrative Review, HEC is required to present substantial evidence that the Approval was not based upon 329 IAC 10-9-1 and the referenced CCR Rule, and upon other management practices that are protective of human health and the environment, including plans to provide the mechanism for gathering and submitting this information, as required by the Approval.

PETITIONER HEC HAS ASSOCIATIONAL STANDING IN THIS CAUSE.

- [10] As a threshold issue, a party must establish that it qualifies for administrative review before OEA, based on the party's relationship to the IDEM action subject to review. I.C. § 4-21.5-3-7(a); Huffman v. Indiana Office of Environmental Adjudication, et al., 811 N.E.2d 806 (Ind. 2004)
- [11] Indiana recognized associational standing, adopting the doctrine as stated in *Hunt v. Washington State Apple Advertising Comm'n*, 432 U.S. 333, 97 S.Ct. 2434, 53 L.Ed.2d. 383 (1977) in *Save the Valley, Inc. v. Indiana-Kentucky Elec. Corp.*, 820 N.E.2d 677, 679 680 (Ind.Ct.App. 2005)(a case arising from a HEC challenge before OEA, *Id. at* 682).
- [12] In this cause, HEC raised the issue of its associational standing and prevailed on summary judgment; in summary judgment briefing, Respondents IDEM and TDC concurred that HEC had associational standing through its member Mueller.
- A. The challenge to Petitioner HEC's associational standing raised at final evidentiary hearing is waived.
 - [13] During the evidentiary hearing, TCD raised the issue of standing by referring to Indiana corporate law and HEC's Articles of Incorporation to question whether HEC has

"members" within the meaning of relevant standing doctrines. (*Griggs, Tr. Day 1, 126:6-134:8; Griggs, Tr. Day 2, 221:2-225:21.*) Moreover, TCD's counsel argued in this context that "a summary judgment order [on standing] is an interlocutory decision that can be changed at any time during the case." (Griggs, Tr. Day 1, 127:9-11.) TCD further argued that the issue of "subject matter jurisdiction" is always before the Court. TCD actually disputes HEC's associational standing, its right to bring the Petition, and not OEA's subject-matter jurisdiction over IDEM's decision to issue the Approval. *See Huffman, 811 N.E.2d 806, 813.* "[A] party's legal capacity to assert its claim affects the trial court's jurisdiction over the particular case and not jurisdiction over the subject matter." *Burcham v. Metro. Bd. Of Zoning Appeals, 883 N.E.2d 204, 211* (Ind. Ct. App. 2008). "Unlike subject matter jurisdiction, which cannot be waived by a party and may be raised, *sua sponte,* by the court, jurisdiction over the particular case may be waived by the failure to make a specific and timely objection." *Id.*⁷

- [14] HEC's argument is persuasive and is adopted in the following conclusions. Petitioner Hoosier Environmental Council's Proposed Findings of Fact, Conclusions of Law and Order, ("HEC's Proposed Order"), Jan. 21. 2022, pp. 47 50, ¶ ¶ 191 -199.
- [15] Under Administrative Orders and Procedures Act ("AOPA"), the OEA considers motions for summary judgment "as would a court that is considering a motion for summary judgment filed under Trial Rule 56 of the Indiana Rules of Trial Procedure." I.C. § 4-21.5-3-23(b). In turn, Indiana Trial Rule 56(C) provides that "[a] summary judgment upon less than all the issues involved in a claim or with respect to less than all the claims or parties shall be interlocutory unless the court in writing expressly determines that there is no just reason for delay and in writing expressly directs entry of judgment as to less than all the issues, claims or parties." Ind. Trial Rule 56(C). Here, none of the exceptions in Trial Rule 56(C) have obtained; moreover, the OEA did not designate that the June 16, 2021 order is a "Final Order" within the meaning of the OEA's procedural rules. 315 I.A.C. 1-3-13(b)(1) ("[w]hen the presiding environmental law judge issues an order that fully disposes of the issues, the order shall be denominated specifically as a final order").
- [16] Additionally, under Indiana Trial Rule 54(B), "any order or other form of decision, however designated, which adjudicates fewer than all the claims or the rights and liabilities of fewer than all the parties shall not terminate the action as to any of the claims or parties, and the order or other form of decision is subject to revision at any time before the entry of judgment adjudicating all the claims and the rights and liabilities of all the parties." Ind. Trial Rule 54(B). Therefore, the OEA's June 16, 2021 partial summary judgment ruling as to HEC's associational standing is a non-final order that is interlocutory in nature.

⁷ In contrast, standing to sue in federal court is a matter of subject matter jurisdiction due to "Article III of the United States Constitution [which] limits the jurisdiction of federal courts to actual cases and controversies," while "the Indiana Constitution does not contain any similar restraint." *Burcham*, 883 N.E.2d at 211 (citing *Indianapolis v. Ind. State Bd. of Tax Comm'rs*, 308 N.E.2d 868, 870 (Ind. 1974)).

- [17] A motion challenging a non-final order is a motion to reconsider. Snyder v. Snyder, 62 N.E.3d 455, 458 (Ind. Ct. App. 2016) ("motions to correct error are proper only after the entry of final judgment; any such motion filed prior to the entry of final judgment must be viewed as a motion to reconsider"); Severance v. Pleasant View Homeowners Ass'n, Inc., 94 N.E.3d 345, 349 n.4 (Ind. Ct. App. 2018) ("because there was no final judgment, the [homeowner association's ("HOA's")] self-styled motion was in fact a motion to reconsider and, contrary to the trial court's conclusion here, its subsequent ruling on that motion could not itself be considered a final judgment"). Therefore, because the OEA's ruling granting summary judgment to HEC on standing is not a final order, the OEA shall deem TCD's challenge to that ruling at the evidentiary hearing as, in effect, a motion to reconsider. As with all motions, the moving party must demonstrate that it is entitled to the requested relief.
- [18] OEA procedural rules allow for correction of "[c]lerical mistakes and other errors resulting from oversight or omission in a final order or other part of the record of a proceeding . . . on the motion of any party or on the presiding environmental law judge's own motion." 315 IAC 1-3-13(c). It is clear that "oversight or omission" must refer to facts that were available to the OEA at the time of the original ruling; if not, no "oversight" or "omission" would have been possible. Similarly, in *Mitchell v. 10th and The Bypass, LLC,* 3 N.E.3d 967, 973 (Ind. 2014), the Indiana Supreme Court held that newly-discovered evidence (there, new factual affidavits submitted more than a year after the trial court issued its non-final summary judgment order) could not be considered for purposes of a motion to reconsider, explaining:

"[A]Ithough a trial court may indeed make material modifications to a non-final summary judgment order, it must do so based on the timely submitted materials already before the court when the order was initially entered. Stated somewhat differently the "subject to revision" language in Rule 54(B) permits a trial court to revise, modify, or vacate a non-final prior ruling; but where that non-final ruling was the grant or denial of a motion for summary judgment, the trial court may only consider the Rule 56 materials properly before it at the time the order was first entered."

- [19] TCD's challenge to HEC's associational standing is waived, for lack of proper procedural form. To promote judicial economy, OEA will evaluate TCD's substantive challenges to HEC's associational standing, notwithstanding waiver.
- B. Petitioner HEC retains associational standing, despite HEC's bylaws changes rendering its named member a "non-voting member".
- [20] Per I.C. § 23-17-2-17(a) (1991), a "member" of a nonprofit corporation is defined as "a person who, on more than one (1) occasion, has the right to vote for the election of a director under a corporation's articles of incorporation or bylaws." This 1991 statute was not raised in *Save The Valley*, nor in summary judgment briefing in this case.

- The record evidence is unanimous that as of the filing of the Petition HEC had no "members" as that term is defined by Indiana's nonprofit corporation statute. Ex. 187 e.p. 1; Ex. 229 §§ VI.6.01(b) & 6.02(b). However, I.C. § 23-17-7-4 and I.C. § 23-17-11-3(a) both reference member rights limitations applying "unless articles of incorporation or bylaws provide otherwise." Here, HEC's bylaws do provide otherwise as to the rights of nonvoting members.
- [22] HEC simultaneously claims that it has no members for the purpose of Indiana's nonprofit statute but that it does have members for the purpose of associational standing. Ex. 187 electronic page ("e.p.")⁸ 1. The contradiction of HEC having donating but nonvoting members, contrasted with the Indiana legislature's definition of a nonprofit "member", is the crux of TCD's challenge to HEC's associational standing, raised at the October 18 21, 2021 final hearing in this matter. This contradiction may present an issue of first impression in Indiana.
- TCD challenged the adoption of HEC's 2005 associational standing at final evidentiary hearing in this cause. TCD correctly asserts that the record does not disclose whether, in 2005, HEC had members according to its Articles in effect at that time. HEC amended its Articles at some point, to exclude members for purposes of I.C. § 23-17-2-17. *Tr. vol. II, 223–25; Ex. 229 §§ VI.6.01(b) & 6.02(b).* TCD did not examine HEC's Maloney to determine when and to what extent the 2012 Articles were amended, so as to determine whether the HEC's Articles applicable in 2005 excluded members for purposes of Indiana Code § 23-17-2-17. *Ex. 229 §§ VI.6.01(b) & 6.02(b).* Nor does *Save the Valley* include any consideration of I.C. § 23-17-2-17 (1991).
- OEA has not applied the 2005 Save the Valley decision to hold that OEA adopts HEC's unexamined associational standing in any future OEA case. Instead, in this case, OEA applied the factors stated in Save the Valley decision to HEC's member Ms. Christine Mueller, in her own right, to find that she was is aggrieved or adversely affected by the Approved Closure Plan. Ind. OEA, June 16, 2021 Findings of Fact, Conclusions of Law and Order, at 6. "The Petitioner's interest in this proceeding is directly related to its purposes as an association". Id. "The relief requested by the Petitioner does not require the participation by any of the individual members". Id.
- [25] HEC's persuasively argues that its associational standing to sue on behalf of its nonvoting members is provided for in its bylaws and thus survives the 1991 Nonprofit Corporation Act. HEC's Proposed Order, pp. 50-53, ¶ ¶ 201-206.
- [26] As HEC argues, the concept of indicia of membership taking precedence to corporate form takes root in *Hunt*, a seminal associational standing case. In *Hunt*, the U.S. Supreme Court weighed "whether the [State Apple Advertising] Commission's status as a state agency . . . preclude[d] it from asserting the claims of the Washington apple growers and dealers who form[ed] its constituency" because they were "not 'members'

⁸ Exhibits were shared with the Court and the parties electronically; some cites were corrected in January, 2023. Pin cites labeled "e.p." cite to the page of the electronic document.

of the Commission in the traditional trade association sense." *Id.* at 344. "[F]or all practical purposes [the Commission] perform[ed] the functions of a traditional trade association representing the Washington apple industry" through "advertising, market research and analysis, public education campaigns, and scientific research" and "provide[d] the means by which [the growers and dealers could] express their collective views and protect their collective interests." *Id.* at 344-345. Therefore, "the apple growers and dealers . . . possess[ed] all of the *indicia of membership* in an organization" sufficient to confer associational standing on the Commission. *Id.* (emphasis added). A contrary decision would impermissibly "exalt form over substance." *Id.* at 345.

- [27] In Indiana's adoption of the *Hunt* test for associational standing in *Save the Valley, Inc.* there is no disagreement with the *Hunt* decision in any respect or any indication that the 2005 decision considered whether Save the Valley's named witnesses met the statutory definition of a "member" under Indiana's Nonprofit Corporation Act.
- As HEC correctly argues, several federal courts follow Hunt and confirm that a nonprofit [28] organization's associational standing does not depend on it having legal members as defined by state corporation law. See, e.g., Friends of the Earth v. Chevron Chem. Co., 129 F.3d 826, 828 (5th Cir. 1997) (organization could assert associational standing in the absence of legal members under applicable corporation law where members voluntarily associated with the organization and the lawsuit clearly fell within the organization's central purpose and the scope of reasons individuals joined the organization); U.S. Pub. Int. Rsch. Grp. v. Bayou Steel, Inc. 1997 U.S. Dist. LEXIS 24551 (E.D. La. Sept. 15, 1997) (even though articles of incorporation provided that the organization shall have no members, the court found associational standing existed because the organization consistently treated all contributors as members, and provided them with a means of expressing their collective views and protecting their collective interests in environmental issues); Citizens Coal Council v. Matt Canestrale Contracting, Inc., 40 F. Supp. 3d 632, 637-42 (W.D. Pa. 2014) (non-profit had associational standing to sue on behalf of its non-voting members because they had voluntarily affiliated with the organization for the specific purpose of filing the lawsuit and paid annual dues of \$10.00); Quad Cities Waterkeeper v. Ballegeer, 84 F.Supp.3d 848 (C.D. III. 2015) (even though non-profit organization's bylaws indicated that it had no legal members, the non-profit had associational standing to sue on behalf of its members who voluntarily associated with and contributed to the organization as means of expressing and protecting their collective interests).
- [29] Friends of the Earth v. Chevron Chem. Co. and Quad Cities Waterkeeper v. Ballegeer are effectively applied by HEC here. In Friends of the Earth ("FOE"), the defendant Chevron, like Respondent TCD, argued for the first time at trial that FOE lacked associational standing because it "had no legal members under the corporate laws of the District of Columbia" and, instead "simply followed a practice of considering all those who gave a donation, as well as those who had a donation made in their name, to be members."

 129 F.3d at 827. Rejecting that argument, the 5th Circuit reasoned that "[w]hile a corporation's failure to comply with state and internal rules for identification of its

members might be relevant to the issue of whom the corporation represents, we do not believe this defect should overshadow the considerable activities of FOE with and for those persons its officers and staff have consistently considered to be members." *Id. at 828.* FOE's associational standing was sustained:

"[T]he members ha[d] voluntarily associated themselves with FOE, in contrast to the apple growers [in *Hunt*] who financed the Commission through mandatory assessments. The individuals testified in court that they were members of FOE. FOE ha[d] a clearly articulated an understandable membership structure [and the] suit [was] clearly within FOE's central purpose, and thus within the scope of reasons that individuals joined the organization."

Id. at 829.

- As in the case of Respondent TCD, in 7th Circuit case, Quad Cities Waterkeeper v. [30] Ballegeer, the defendant argued at the evidentiary hearing, that the plaintiff, Waterkeeper, lacked associational standing because its bylaws, like HEC's, indicated that the organization has no members as defined by state corporation law. 84 F. Supp. 3d at 853-854, 858. The district court rejected that argument, noting first that "the doctrine of associational standing recognizes that the primary reason people join an organization is often to create an effective vehicle for vindicating interests that they share with others." Id. at 860 (quoting Int'l Union, United Auto., Aerospace & Agric. Implement Workers of Am. v. Brock, 477 U.S. 274, 290 (1986)). "Although Waterkeeper's Board appears to be self-perpetuating, its approximately 160 members voluntarily associate with the organization and their financial contributions are intended to promote Waterkeeper's mission — including financing the litigation expenses arising from this case." Id. at 860. Therefore, "[i]n spite of the prohibition against members found in [Waterkeeper's] bylaws, . . . [the organization] provides a means of expressing and protecting its constituents' collective interests" and, therefore, "has the requisite indicia of membership to assert associational standing for its members." Id. at 860.
- [31] OEA agrees with HEC's application of these cases, as to HEC's associational standing on the merits here even if Ms. Mueller and other HEC donating members (as defined by HEC's by-laws) who are aggrieved or adversely affected by the Approved Closure Plan, although they are not "members" as defined by Indiana's 1991 Nonprofit Corporation Law. As in *Friends of the Earth*, HEC's 2017 Bylaws "clearly articulate an understandable membership structure" one that Christine Mueller plainly meets as attested to in her Affidavit. The instant litigation is within HEC's programmatic mission and "within the

scope of reasons" that Ms. Mueller joined HEC.⁹ As in *Quad Cities,* HEC's members, including Ms. Mueller, voluntarily associate with HEC through financial contributions that are intended to promote HEC's mission of protecting the environment, and the organization "provides a means of expressing and protecting its constituents' collective interests" and, therefore, "has the requisite indicia of membership to assert associational standing for its members." Whether HEC's members meet a particular corporate governance definition under state statutory law is independent of whether these members have voluntarily associated with the organization.

[32] To construe Indiana's Nonprofit Corporation Law to use membership form to defeat associational standing in this case would be to "exalt form over substance", as specifically rejected by the U.S. Supreme Court in *Hunt*. For all these reasons, the OEA reaffirms its conclusion in its June 16, 2021 partial summary judgment Order that HEC has standing to bring this administrative challenge, despite the requirements of I.C. § 23-17-2-17.

C. HEC affiant Mueller is a member of HEC, for purposes of supporting associational standing.

[33] Based on Mueller's sworn affidavit, Ex. 188, that she was and had been a member of HEC since 2019, OEA ELJ Catherine Gibbs granted summary judgment in favor of HEC's associational standing. S.J. Order, p. 6, ¶ 7. On summary judgment, OEA held:

Even without IDEM's and TCD's concession, there is no question of fact that Petitioner can bring this action under the doctrine of associational standing as adopted in *Hunt v. Washington State Apple Advertising Comm'n*, 432 U.S. 333, 97 S. Ct. 2434, 2442, 53 L. Ed. 2d 383 (1977). The Supreme Court held that an association has standing to sue on behalf of its members when: "(a) its members would otherwise have standing to sue in their own right; (b) the interests it seeks to protect are germane to the organization's purpose; and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Id* at 344.

This test was adopted in Indiana in Save the Valley, Inc. v. Ind.-Kentucky Elec. Corp., 820 N.E.2d 677, 679-80 (Ind. Ct. App. 2005). Ms. Mueller stated sufficient facts in her affidavit to prove that she is aggrieved or adversely affected by the issuance of the Permit. Second, HEC's interests are germane to the organization's

⁹ In particular, Ms. Mueller testified that she has "been an active member of HEC since 2019[,]" has "donate[d] money to HEC, subscribe[d] to the HEC newsletter, . . . attend[ed] local HEC events, . . . joined HEC because [it] provide[s] valuable information and support on issues of interest to [her] such as coal ash disposal," and the instant litigation seeks "a more protective closure plan for the [TCD] site, [which] would help address [her] concerns" about "water contamination from the coal ash on the site that adversely affect[s] [her] and [her] family." (Ex. 188, Affidavit by Christine Mueller (Feb. 23, 2021).).

purpose. Third, HEC seeks to invalidate the permit and does not request relief that requires Ms. Mueller's participation. The three requirements of the Hunt test are satisfied. Summary judgment in Petitioner's favor on this issue is appropriate. Petitioner's named member, Christine Mueller, is aggrieved or adversely affected and under associational standing doctrine, Petitioner has standing to file a petition for review.

- [34] At final hearing, TCD challenged whether Mueller was a member at any time relevant to this proceeding.
- [35] According to HEC's Amended and Restated Bylaws, its Board of Directors has established "a class of 'Non-Voting Members' to include those persons who donate to the Corporation. The period of membership shall be for the ensuing twelve (12) months immediately following the date of the donation." Ex. 187 at 1.
- [36] The 2021 Mueller affidavit stated that she had been a HEC member since 2019, and continued to remain so. "I have been an active member of HEC since 2019. I donate money to HEC[.]" (Ex. 188, Affidavit by C. Mueller (Feb. 23, 2021), at 1.) HEC Senior Policy Director Maloney testified that Ms. Mueller "is a HEC member." (Maloney, Tr. Day 1, 127:20.)
- [37] HEC Senior Policy Director Maloney did not produce a copy of the list it maintains of active members, when examined at final hearing by TCD counsel. No discovery dispute, voluminous exhibits presented at final hearing, or other pleadings filed with the Court demonstrated that TCD had spurned requests for the membership documentation it sought from witness Maloney at final hearing. Although HEC was in sole possession and control of its own membership list, no evidence was presented to contradict the Mueller affidavit, with which Respondents concurred on summary judgment. OEA will not speculate that HEC's membership list would contradict Mueller's affidavit, and therefore declines TCD's invitation to draw a negative inference from HEC's lack of membership documents at final hearing.
- [38] Respondent TCD failed to meet its burden of proving that Mueller was not a "member" of HEC as that term is defined by HEC's Bylaws. For this reason, also, the Court finds that HEC maintains associational standing to file its Petition.

ISSUES RESOLVED ON SUMMARY JUDGMENT WILL NOT BE REDETERMINED IN THIS FINAL ORDER.

[39] HEC made offers of proof on the record, for several issues already adjudicated in OEA's summary judgment orders. These issues include allegations of future noncompliance by TCD or future owner/operators, speculation that TCD will not submit or IDEM will not require further monitoring well plan revisions, depending on data to be submitted, TCD's compliance with reporting requirements, site maintenance including erosion control, and others. And, as HEC successfully argued in support of its associational

standing, final hearing is not the appropriate procedure to follow to relitigate these issues. These issues were addressed on summary judgment and on reconsideration and will not be revisited in this Final Order. HEC sought reconsideration of these issues. HEC's record on these issues remain for further review by appropriate tribunals.

IDEM'S APPROVAL COMPLIED WITH APPLICABLE LAW STATED IN 329 IAC 10-9-1 AND THE REFERENCED CCR RULE, AND UPON OTHER MANAGEMENT PRACTICES THAT ARE PROTECTIVE OF HUMAN HEALTH AND THE ENVIRONMENT, INCLUDING PLANS TO PROVIDE THE MECHANISM FOR GATHERING AND SUBMITTING THIS INFORMATION.

- [40] Having considered and researched each party's arguments in their Proposed Orders, the ELJ determines that the following Respondents' arguments are persuasive and are adopted in the following conclusions.
- [41] For CCR surface impoundments in Indiana, "final disposal of solid waste in the impoundment at the end of the operation of the impoundment is subject to approval by the commissioner, based on the requirements for coal combustion residuals impoundments in 40 CFR 257.50* through 40 CFR 257.107* [(that is, the federal CCR rule)] and on other management practices that are protective of human health and the environment." 329 IAC 10-9-1(c).
- The Petition objected to IDEM's issuance of the Approval based on the following allegations: the Approval allowed CCR to remain in contact with groundwater; the Approval failed to meet the closure performance standards of the federal CCR rule; the Approval included an inadequate groundwater monitoring system; and the Approval failed to include the recordkeeping, notification, and internet site requirements of the federal CCR rule. In addition, HEC argued at the hearing that the Fly Ash Pond's proximity to the Ohio River created a risk that floodwaters would cause a catastrophic failure of the Fly Ash Pond's berms and cover system. The Petition requested that OEA revoke or modify the Approval to require complete excavation of all CCR in the Fly Ash Pond and removal of the CCR to a newly constructed CCR landfill elsewhere.
- A. IDEM's Approval complies with the closure performance standard stated in the federal CCR rule, as codified in 329 IAC 10-9-1.
 - [43] The federal CCR rule includes requirements that surface impoundments meet the following performance standard when closing in place:
 - (d) The owner or operator of a CCR unit must ensure that, at a minimum, the CCR unit is closed in a manner that will:
 - (i) Control, minimize or eliminate, to the maximum extent feasible, post-closure infiltration of liquids into the waste and releases of CCR, leachate, or contaminated run-off to the ground or surface waters or to the atmosphere;

- (ii) Preclude the probability of future impoundment of water, sediment, or slurry;
- (iii) Include measures that provide for major slope stability to prevent the sloughing or movement of the final cover system during the closure and post-closure care period;
- (iv) Minimize the need for further maintenance of the CCR unit; and
- (v) Be completed in the shortest amount of time consistent with recognized and generally accepted good engineering practices.

40 C.F.R. § 257.102(d).

- As to the cover system and bottom liner, the Approval's closure performance standard requires the CCR unit prevent the infiltration of liquids into the CCR, releases of CCR, releases of contaminated run-off, and impoundment of water. As will be discussed below, the Fly Ash Pond's bottom liner prevents releases of CCR. The Approval achieves the other parts of this standard via the cover system. The cover system exceeds the requirements of the federal CCR rule. All components of the cover system are above both the 100 year and the 500 year flood levels. The Approval cites to a Quality Assurance/Quality Control Plan to ensure the cover system is installed to achieve the requirements of the CCR rule and the Approval. HEC has not presented sufficient evidence that the cover system fails to prevent the infiltration of liquids, releases of contaminated run-off, or impoundment of water.
- [45] The Approval fulfills stabilization requirements. The Approval's closure performance standard requires slope stability to prevent the sloughing or movement of the final cover system. In the process of obtaining the Approval, TCD completed and submitted to IDEM a Slope Stability Analysis. Ex. 2 e.p. 283–316. Conditions B12 and B13 of the Approval require TCD to stabilize the existing CCR, achieve a stable subgrade, place a stabilization layer, and stabilize the final cover. The Court does not believe stabilization is in dispute and finds that the Approval satisfies the requirements for stabilization.
- The Approval's closure performance standard requirements minimize the need for further maintenance. The Approval requires closure in place of the Fly Ash Pond. Closure in place does not inherently fail to minimize the need for further maintenance; if it did, many sections of the federal CCR rule would be nonsensical. Condition C1 of the Approval requires TCD to perform a minimum of thirty (30) years of maintenance on the Fly Ash Pond. HEC's testimony included speculation, derived from observations at a few sites, that the cover would erode without repair and that the site would be abandoned after the 30-year maintenance period ended. HEC did not specify in the Petition or during testimony what flaws the Approval had related to minimizing the need for further maintenance, but did speculate that TCD or a possible successor may abandon long-term facility maintenance duties. The Court finds the Approval satisfies the requirements for maintenance.

- [47] HEC has not presented sufficient evidence that the Approval failed to meet the closure performance standards of the federal CCR rule.
- B. The Groundwater Monitoring System required in IDEM's Approval complies with the federal CCR rule, as codified in 329 IAC 10-9-1.
 - [48] Among other requirements, the federal CCR rule requires groundwater monitoring systems at CCR units meet the following standards:
 - (a) Performance standard. The owner or operator of a CCR unit must install a groundwater monitoring system that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield groundwater samples from the uppermost aquifer that:
 - (1) Accurately represent the quality of background groundwater that has not been affected by leakage from a CCR unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the CCR management area where:
 - (i) Hydrogeologic conditions do not allow the owner or operator of the CCR unit to determine what wells are hydraulically upgradient; or
 - (ii) Sampling at other wells will provide an indication of background groundwater quality that is as representative or more representative than that provided by the upgradient wells; and
 - (2) Accurately represent the quality of groundwater passing the waste boundary of the CCR unit. The downgradient monitoring system must be installed at the waste boundary that ensures detection of groundwater contamination in the uppermost aquifer. All potential contaminant pathways must be monitored.
 - (b) The number, spacing, and depths of monitoring systems shall be determined based upon site-specific technical information that must include thorough characterization of:
 - (1) Aquifer thickness, groundwater flow rate, groundwater flow direction including seasonal and temporal fluctuations in groundwater flow; and
 - (2) Saturated and unsaturated geologic units and fill materials overlying the uppermost aquifer, materials comprising the uppermost aquifer, and materials comprising the confining unit defining the lower boundary of the uppermost aquifer, including, but not limited to, thicknesses, stratigraphy, lithology, hydraulic conductivities, porosities and effective porosities.

- (c) The groundwater monitoring system must include the minimum number of monitoring wells necessary to meet the performance standards specified in paragraph (a) of this section, based on the site-specific information specified in paragraph (b) of this section. The groundwater monitoring system must contain:
 - (1) A minimum of one upgradient and three downgradient monitoring wells; and
 - (2) Additional monitoring wells as necessary to accurately represent the quality of background groundwater that has not been affected by leakage from the CCR unit and the quality of groundwater passing the waste boundary of the CCR unit.

40 C.F.R. § 257.91.

- [49] The performance standard requires background wells that represent groundwater that has not been affected by leakage from a CCR unit. The Approval does not specify which monitoring wells are background wells. Instead, the Approval requires TCD to conduct baseline monitoring and submit a demonstration that wells identified as potential background wells will in fact qualify as background wells. Because this demonstration will occur in the future, the background wells are not currently under review.
- [50] The performance standard requires downgradient wells that represent groundwater passing the waste boundary and ensure detection of groundwater contamination. The map of the monitoring well system shows monitoring wells lining the downgradient sides of the Fly Ash Pond. IDEM recommends spacing of no more than 500 feet between wells. The monitoring system in the Approval exceeds this recommended spacing. If the CCR rule or any Indiana rules or statutes require a specific distance, the Court has not been made aware of it. HEC's expert testified that 300 feet would be more protective, but that testimony seemed subjective¹⁰ and was not otherwise corroborated. HEC has not presented any hydrogeologic analysis indicating the speed of the groundwater flow or the shape or width of a resulting plume at the waste boundary. IDEM's geologist testified that the number and spacing of the wells met the performance standard in the CCR rule. IDEM's geologist also testified that the Approval includes mechanisms to require additional wells later if future monitoring data indicates the wells are needed to comply with the CCR rule. HEC has not presented sufficient evidence that the groundwater flow in the area requires additional downgradient wells or that the Approval is inadequate to account for future data indicating the need for additional downgradient wells.
- [51] The federal CCR rule requires a minimum of one upgradient and three downgradient monitoring wells. The Approval specifies that the monitoring system includes four (4)

¹⁰ "I've seen some plumes as narrow as a hundred feet across in this -- in this kind of a situation. It's likely to be broader than that, so, you know, perhaps two, two-fifty. ... I would think that a maximum of 300 feet would be more protective." *Tr. vol. II, 18.*

- upgradient wells and eight (8) downgradient wells. The Approval satisfies this requirement.
- [52] HEC has not presented sufficient evidence that the Approval includes an inadequate groundwater monitoring system.
- C. IDEM's Approval complies with the federal CCR rule concerning groundwater contact with CCR, as codified in 329 IAC 10-9-1.
 - [53] HEC objected to IDEM's issuance of the Approval by alleging that the Approval allowed CCR to remain in contact with groundwater.
 - [54] Among other requirements, the federal CCR rule requires the following regarding groundwater in contact with CCR:

New CCR landfills, existing and new CCR surface impoundments, and all lateral expansions of CCR units must be constructed with a base that is located no less than 1.52 meters (five feet) above the upper limit of the uppermost aquifer, or must demonstrate that there will not be an intermittent, recurring, or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer due to normal fluctuations in groundwater elevations (including the seasonal high water table).

40 C.F.R. § 257.60(a).

- [55] If a CCR unit fails to meet this standard, the owner or operator must cease placing CCR in the unit and close the unit either by closure in place or by removal of the CCR. 40 C.F.R. §§ 257.60(c)(4); 257.101(b)(1); 257.102(a).
- [56] HEC argues that the Fly Ash Pond is less than five feet above the upper limit of the uppermost aquifer, on the basis that at that elevation, the liner is failing, and lays over a sand and gravel aquifer where clay is absent or insufficient. See HEC's Proposed Order, p. 25, 26. ¶ 105, p. 27, ¶¶ 114, 115. The liner underneath the Fly Ash Pond has been buried for some time; therefore no direct evidence indicates whether the bottom liner has been damaged and is allowing groundwater to come into contact with CCR on the limited occasions that the groundwater level exceeds 458 feet amsl.
- [57] HEC relies on downgradient constituent concentrations in the groundwater to infer that the bottom liner is damaged. The constituent concentrations are, at best, inconclusive because of concentrations in upgradient wells and the Ohio River (which is also upgradient). The downgradient constituent concentrations are not sufficient evidence to overturn the Approval and require complete excavation of all CCR in the Fly Ash Pond.

- [58] More importantly, even if HEC is correct and the bottom liner is damaged, the Approval's groundwater monitoring program is designed to detect such leakage and require its remediation. Provisions in the Approval and in the CCR rule for Detection Monitoring, Assessment Monitoring, and Corrective Measures/Remedies ensure that any constituent sampled at a statistically significant level exceeding the groundwater protection standards will be remedied.
- [59] Under the CCR rule, even if CCR is in contact with groundwater underneath the Fly Ash Pond, the remedy would be to close the unit in accordance with the closure performance standard discussed earlier in this Order; the remedy would not be complete excavation of all CCR as HEC has requested.
- [60] HEC has not presented sufficient evidence that the Approval allows CCR to remain in contact with groundwater or that complete excavation of all CCR in the Fly Ash Pond is required by the applicable statutes and regulations.
- D. IDEM'S APPROVAL COMPLIES WITH THE FEDERAL CCR RULE CONCERNING HARM TO THE BERMS AND COVER SYSTEMS FROM PROJECTED "100-YEAR" AND "500-YEAR" FLOODS.
 - [61] HEC objected to IDEM's issuance of the Approval by alleging that the Fly Ash Pond's proximity to the Ohio River created a risk that floodwaters would cause a failure of the Fly Ash Pond's berms and cover system.
 - [62] Among other requirements, the federal CCR rule requires the following during the postclosure period:

Maintaining the integrity and effectiveness of the final cover system, including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and run-off from eroding or otherwise damaging the final cover.

40 C.F.R. § 257.104(b)(1).

- [63] No evidence has been presented that floodwaters will ever overtop the outer perimeter earthen berm and reach the interior ash berm or the cover system. FEMA predicts that the 500 year flood level could reach 494 feet amsl. The height of the outer perimeter earthen berm is 495 amsl.
- [64] During a 100 year flood, eighteen (18) to twenty three (23) feet of the outer perimeter earthen berm will be exposed to floodwaters. At that level, the outer perimeter earthen berm appears to be approximately sixty (60) feet thick. At ground level, the outer perimeter earthen berm appears to be anywhere from approximately 140 feet to 160 feet thick depending on the cross-section. HEC has proved that floodwaters will surround the Fly Ash Pond, but HEC has not presented sufficient evidence that

- floodwaters will erode a 60, 140, or 160 feet of the earthen berm during a single flooding event.
- [65] The Approval requires TCD to respond to damage, including damage caused by floods. The Approval requires TCD to eliminate any threat to human health or the environment and perform any necessary remedial actions. The Approval requires TCD to maintain the integrity and effectiveness of the final cover system and make any repairs necessary to correct the effects of erosion or other events. The Approval requires TCD to inspect the Fly Ash Pond and remedy any identified deficiency or release.
- [66] HEC has not presented sufficient evidence that the Approval is inadequate to prevent a catastrophic release from the Fly Ash Pond as a result of flooding.

FOR ALL OF THE FOREGOING REASONS, IDEM'S APPROVAL SHOULD BE SUSTAINED.

- [67] Hoosier Environmental Council's member Christine Mueller provides sufficient associational standing for HEC.
- [68] The Approval addresses each of the risks that HEC contends makes the Approval inadequate. This Court presumes that TCD will comply with the Approval and address each risk HEC identifies if that risk materializes into a real damage or deficiency in the future.
- [69] As a matter of law, closure in place is allowed under the state and federal laws. IDEM, and OEA for that matter, is limited to determining whether the Approval complies with the applicable state and federal laws. Even if OEA disagreed with the requirements of those laws, regulatory content cannot be formulated via Order. That function belongs to the Environmental Rules Board and the Legislature.
- [70] IDEM can only determine whether to issue the Approval by applying the applicable statutes and regulations. As the ultimate authority for IDEM, OEA's authority is limited to determining whether IDEM's decision complies with the applicable statutes and regulations. HEC presented evidence regarding errors allegedly made by IDEM in issuing the Approval. HEC has not met its burden of persuasion and the burden of presenting substantial evidence showing that the Approval is lawfully inadequate and that the remedy (excavation of all CCR in the Fly Ash Pond) is warranted. HEC's evidence was rebutted or outweighed by Respondents IDEM's and TCD's evidence that IDEM correctly issued the Approval to TCD. Judgment should be entered in favor of IDEM and TCD.

FINAL ORDER

IT IS THEREFORE ORDERED, ADJUDGED, AND DECREED that Petitioner Hoosier Environmental Council ("HEC") has established its associational standing in this cause. For Petitioner HEC's lack of substantial evidence, judgment is entered in favor the Indiana Department of Environmental Management and Tanners Creek Development LLC. The Approval of Closure/Post-Closure Plan issued on April 23, 2020 by the Indiana Department of

Environmental Management to Tanners Creek Development LLC for the Fly Ash Pond (Solid Waste Program ID 15-UP-04) is **AFFIRMED**. All further proceedings are **VACATED**.

IT IS FURTHER ORDERED that the following schedule applies to any motions filed prior to a petition for judicial review:

February 24, 2023:post-final order motions are due to be filed, if any (e.g., motions to Reconsider, etc.).

March 10, 2023: responses to post-final order motions are due to be filed, if any.

March 20, 2023: replies to post-final order motions are due to be filed, if any.

You are further notified that pursuant to provisions of Ind. Code § 4-21.5-7-5, the Office of Environmental Adjudication serves as the ultimate authority in administrative review of decisions of the Commissioner of the Indiana Department of Environmental Management. This is a Final Order subject to Judicial Review consistent with applicable provisions of Ind. Code § 4-21.5. Pursuant to Ind. Code § 4-21.5-5-5, a Petition for Judicial Review of this Final Order is timely only if it is filed with a civil court of competent jurisdiction within thirty (30) days after the date this notice is served.

IT IS SO ORDERED this 31st day of January, 2023 in Indianapolis, Indiana.

Hon. Mary L. Davidsen, Esq. Chief Environmental Law Judge