BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER GENERATING COMPANY

Petitioner

PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

NOTICE OF FILING

To: Pollution Control Board, Attn: Clerk 100 West Randolph Street James R. Thompson Center Suite 11-500 Chicago, Illinois 60601-3218 <u>PCB.Clerks@illinois.gov</u> Division of Legal Counsel Illinois Environmental Protection Agency 1021 N. Grand Avenue East P.O. Box 19276 Springfield, Illinois 62794-9276 epa.dlc@illinois.gov

PLEASE TAKE NOTICE that I have today filed with the Office of the Clerk of the Pollution Control Board the attached **PETITION FOR REVIEW OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S NON-CONCURRENCE WITH ALTERNATIVE SOURCE DEMONSTRATION UNDER 35 ILL. ADM. CODE PART 845 AND MOTION FOR STAY; APPEARANCES OF JOSHUA MORE, BINA JOSHI, AND SAMUEL RASCHE**; and a **CERTIFICATE OF SERVICE**, copies of which are herewith served upon you.

> /s/ Samuel A. Rasche Dated: February 20, 2024

Joshua R. More Bina Joshi Samuel A. Rasche 233 South Wacker Drive, Suite 7100 Chicago, Illinois 60606 (312) 258-5500 Joshua.More@afslaw.com Bina.Joshi@afslaw.com Sam.Rasche@afslaw.com *Attorneys for Illinois Power Generating Company*

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER GENERATING COMPANY

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PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

APPEARANCE OF JOSHUA R. MORE AND CONSENT TO E-MAIL SERVICE

I, Joshua R. More, hereby enter my appearance on behalf of ILLINOIS POWER

GENERATING COMPANY and authorize the service of documents on me by email in lieu of

receiving paper documents in the above-captioned proceeding. My email address to receive service

is as follows:

Joshua.More@afslaw.com

/s/ Joshua R. More Joshua R. More

Dated: February 20, 2024

Joshua R. More 233 South Wacker Drive, Suite 7100 Chicago, Illinois 60606 (312) 258-5500 Joshua.More@afslaw.com

Attorney for Illinois Power Generating Company

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER GENERATING COMPANY

Petitioner

PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

APPEARANCE OF BINA JOSHI AND CONSENT TO E-MAIL SERVICE

I, Bina Joshi, hereby enter my appearance on behalf of ILLINOIS POWER GENERATING COMPANY and authorize the service of documents on me by email in lieu of

receiving paper documents in the above-captioned proceeding. My email address to receive service

is as follows:

Bina.Joshi@afslaw.com

<u>/s/ Bina Joshi</u> Bina Joshi

Dated: February 20, 2024

Bina Joshi 233 South Wacker Drive, Suite 7100 Chicago, Illinois 60606 (312) 258-5500 Bina.Joshi@afslaw.com

Attorney for Illinois Power Generating Company

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER GENERATING COMPANY

Petitioner

PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

APPEARANCE OF SAMUEL A. RASCHE <u>AND CONSENT TO E-MAIL SERVICE</u>

I, Samuel A. Rasche, hereby enter my appearance on behalf of ILLINOIS POWER

GENERATING COMPANY and authorize the service of documents on me by email in lieu of

receiving paper documents in the above-captioned proceeding. My email address to receive service

is as follows:

Sam.Rasche@afslaw.com

/s/ Samuel A. Rasche Samuel A. Rasche

Dated: February 20, 2024

Samuel A. Rasche 233 South Wacker Drive, Suite 7100 Chicago, Illinois 60606 (312) 258-5500 Sam.Rasche@afslaw.com

Attorney for Illinois Power Generating Company

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER GENERATING COMPANY

Petitioner

PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

PETITION FOR REVIEW OF ILLINOIS ENVIRONMENTAL PROTECTION AGENCY'S NON-CONCURRENCE WITH ALTERNATIVE SOURCE DEMONSTRATION UNDER 35 ILL. ADM. CODE PART 845 AND MOTION FOR STAY

Petitioner Illinois Power Generating Company ("IPGC" or "Petitioner"), pursuant to Sections 105.200 *et seq.* and 845.650(e) of Title 35 of the Illinois Administrative Code, 35 Ill. Adm. Code §§ 105.200 *et seq.* and § 845.650(e), appeals the final decision of the Illinois Environmental Protection Agency ("IEPA" or the "Agency") that did not concur with the Alternative Source Demonstration – G407 Sulfate and Total Dissolved Solids for the Coffeen Power Plant Ash Pond No. 2 submitted to the Agency on December 15, 2023 (the "Coffeen ASD"). IEPA's non-concurrence is stated in a letter from IEPA Division of Water Pollution Control Permit Section Manager Darin E. LeCrone to IPGC dated January 11, 2024, and served upon IPGC on January 16, 2023, via U.S. Mail, which is attached as **Exhibit A** (the "IEPA Denial"). As detailed in Section II below, IEPA's Denial is contrary to the applicable regulations and arbitrary and capricious. For the reasons set forth in Section III below, Petitioner also requests a partial stay of Part 845 requirements as they apply to the exceedances at issue in this Petition. In support of this Petition and Motion for Stay, IPGC states as follows:

I. BACKGROUND

Regulatory Background

 IEPA regulates coal combustion residuals ("CCR") surface impoundments under 35 Ill. Adm. Code. Part 845 ("Part 845").¹ Part 845 includes requirements for regular groundwater monitoring. 35 Ill. Adm. Code § 845.650.

2. If, during groundwater monitoring, one or more constituents are detected and confirmed to be in exceedance of the groundwater protection standards in Section 845.600 ("GWPS"), a series of additional steps are triggered.

3. Within 60 days after detecting an exceedance of a GWPS, an owner or operator may submit an Alternative Source Demonstration ("ASD") to IEPA demonstrating "that a source other than the CCR surface impoundment caused the contamination and the CCR surface impoundment did not contribute to the contamination, or that the exceedance of the GWPS resulted from error in sampling, analysis, statistical evaluation, natural variation in groundwater quality, or a change in the potentiometric surface and groundwater flow direction." 35 Ill. Adm. Code § 845.650(e).

4. The ASD must "include a report that contains the factual or evidentiary basis for any conclusions and a certification of accuracy by a qualified professional engineer." *Id.*

5. IEPA must send a public notice of the ASD, and members of the public may submit written comments to IEPA within 14 days of the notice. *Id*.

6. Within 30 days after receiving an ASD, IEPA must provide a written response to the owner or operator of the CCR surface impoundment either concurring or not with the ASD. If

¹ Subsequent references in this petition to "Section 845.xxx" or "§ 845.xxx" shall be to 35 Ill. Adm. Code, Part 845, unless otherwise specified.

IEPA concurs, the owner or operator must continue groundwater monitoring, but is not required to take additional actions in connection with the identified exceedance, including initiating an assessment of corrective measures. If IEPA does not concur, the owner or operator may petition the Board for review of the non-concurrence. *Id*.

7. Other requirements are prompted in the absence of an ASD, or in the event an ASD is denied and a stay is not granted. For example, within 90 days after detecting an exceedance of a GWPS, the owner or operator of the CCR surface impoundment must initiate an assessment of corrective measures. 35 III. Adm. Code § 845.660(a). The owner or operator must, within 90 days of initiating its assessment of corrective measures (or up to 60 days longer if an extension is requested and granted), submit to the Agency an assessment of corrective measures. *Id.* at § 845.660(a)(2). Within a year of completing the assessment of corrective measures, an owner or operator must submit a construction permit application and corrective action plan to IEPA identifying the selected remedy. *Id* at § 845.670(b).

B. IPGC's Alternative Source Demonstration

8. IPGC owns and operated the now retired Coffeen Power Plant ("Coffeen") located in Montgomery County, Illinois, approximately two miles south of the City of Coffeen in Section 11, Township 7 North, and Range 7 East. Coffeen includes Ash Pond No. 2 ("AP2"), a CCR surface impoundment regulated under Part 845.

9. On October 16, 2023, groundwater monitoring at Coffeen identified GWPS exceedances for sulfate and total dissolved solids ("TDS") at well G407 (respectively, the "Sulfate Exceedance" and "TDS Exceedance"). IPGC notified IEPA of its groundwater monitoring results, including the Sulfate and TDS Exceedances, placed the information in its operating record, and contracted with an environmental consultant to further investigate the cause of the GWPS

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exceedance. Coffeen Power Plant Ash Pond No. 2; IEPA ID # W135015004-02, Groundwater Monitoring Data and Detected Exceedances 2023 Quarter 2 (October 16, 2023), available at https://www.luminant.com/documents/ccr/il-ccr/Coffeen/2023/2023-

<u>Coffeen%20AP2%202023%202nd%20qtr%2035%20IAC%20845%20GW%20report-Coffeen-</u> <u>Ash%20Pond%202-W1350150004%E2%80%9002.pdf</u>.

10. On December 15, 2023, IPGC submitted the Coffeen ASD to IEPA. The Coffeen ASD concluded that sources other than AP2 were responsible for the Sulfate and TDS Exceedances. The Coffeen ASD is attached as **Exhibit B**.

11. The Coffeen ASD identified three lines of evidence to demonstrate that a source other than AP2 is the cause of the Sulfate and TDS Exceedances and that AP2 is not contributing to the Sulfate and TDS Exceedances. First, the Coffeen ASD demonstrated that "[g]roundwater beneath AP2 does not flow to G407" due to the existence of "a groundwater divide between AP2 and [G407]." **Exhibit B** at 6. The Coffeen ASD showed that, as demonstrated by potentiometric surface maps, "groundwater flow from AP2 towards G407 has never been observed, regardless of season." *Id.* at 4. Using both recent and historical groundwater modeling, the Coffeen ASD demonstrated that Coffeen and AP2 are "located on a peninsula between two lobes of Coffeen Lake" and that "groundwater naturally flows from the central portions of the peninsula toward the peninsula thus forms a "groundwater divide" that is located "between AP2 and monitoring well G407[.]" *Id.* Accordingly, the Coffeen ASD concluded that "impacts from AP2 would not be observed at G407 and the sulfate and TDS exceedances should be attributed to an alternative source." *Id.*

12. Second, the Coffeen ASD demonstrated that "a surface water divide has also been noted in the vicinity of AP2." *Id.* Similar to the groundwater divide, the Coffeen ASD explained that "[surface water present on the west side of the divide drains toward the west lobe of Coffeen Lake and water that falls on the east side of the divide flows toward the east lobe of Coffeen Lake." *Id.* at 4-5. Because "G407 is located on the west side of the divide and AP2 is located on the east side of the divide the divide and AP2 is located on the east side of the divide the divide and AP2 is located on the east side of the divide the divide and AP2 is located on the east side of the divide" the Coffeen ASD concluded that "surface water from AP2 will not flow west in the direction of G407." The Coffeen ASD further showed that groundwater at Coffeen "flows in the same direction as surface water." *Id.* at 5.

13. Finally, the Coffeen ASD demonstrated that "[g]roundwater at AP2 does not contain elevated boron that would indicate impacts from AP2 leachate." *Id.* at 6. The Coffeen ASD explained that boron concentrations observed in groundwater at well G407 have been "consistent with background" concentrations and with "other unimpacted wells" over the past five years. *Id.* at 5. Conversely, "wells which are known to be impacted by AP2 . . . exhibited boron concentrations two orders of magnitude greater than G407." *Id.* Accordingly, the Coffeen ASD concluded that "the sulfate and associated TDS exceedances observed in groundwater at G407 are not attributable to impacts from AP2." *Id.*

14. For the above reasons, the Coffeen ASD concluded that the evidence "demonstrated that the sulfate and TDS exceedances at G407 are not due to a release from the AP2 CCR unit and that the unit has not contributed to the exceedance[.]" *Id.* at 6. Instead, the evidence showed that "the exceedance is attributed to a source other than AP2[,]" namely that it may be attributed to "anthropogenic industrial activities that have historically occurred" at Coffeen such as historic coal mining and storage, construction of railroad beds and parking lots, material handling, or other similar activities. *Id* at 5-6.

C. The IEPA Denial

15. On January 11, 2024, IEPA sent a two-page letter notifying IPGC of IEPA's nonconcurrence with the Coffeen ASD (the "IEPA Denial"). The IEPA Denial states that IEPA "does not concur" due to two "data gaps." **Exhibit A** at 1. The two listed data gaps according to IEPA are:

16. First, "[c]haracterization to include sample and analysis in accordance with 35 IAC 845.640 must be provided with ASD." ("Data Gap 1"). *Id.* Specifically, "Data Gap 1" states that "35 IAC 845.640(a) requires evidence of field collection methods, field and laboratory reports, and quality control and quality assurance." *Id.*

17. "Data Gap 1" includes an additional subpart which states that "35 IAC 845.650(e) requires evidence of the alternative source" and that "SW846, incorporated by reference in 35 IAC 845, states that regulatory decisions must be made with environmental data." This subpart directs IPGC to "see item1(a)(i) above." However, there is no "item 1(a)(i)" in "Data Gap 1" or elsewhere in the IEPA Denial. *Id*.

18. Second, "[u]pdated geologic cross section must be provided and must include data surrounding the hydrogeologic divide and the exceedance well G407 in accordance with 845.620(b)(9)." *Id*.

19. The IEPA Denial did not include any additional explanation or analysis.

II. Discussion

20. IEPA's bases for its non-concurrence, the two "Data Gaps," are each arbitrary and capricious and not supported by IEPA's regulatory authority or the requirements set forth under Section 845.650.

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A. There are no data gaps in the Coffeen ASD

21. IEPA's Denial unreasonably demands data and analysis that is not required by Section 845.650. The regulation requires only that IPGC submit a "demonstration . . . that a source other than the CCR surface impoundment caused the contamination and the CCR surface impoundment did not contribute to the contamination." 35 Ill. Adm. Code § 845.650(e). In support of the demonstration, the regulations require that an ASD "include a report that contains the factual or evidentiary basis for any conclusions and a certification of accuracy by a qualified professional engineer." *Id.* The Coffeen ASD report does just that through a scientifically supported analysis that contains multiple lines of evidence and is certified by a qualified professional engineer. **Exhibit B.** *See also*, Declaration of Melinda Hahn at 2-3 (February 20, 2024), attached as **Exhibit** C. The information identified by IEPA's "Data Gaps" is not necessary to form a "factual and evidentiary basis" for the conclusions reached in an ASD. The information would not lead to a different result, and the fact the data was not submitted is inadequate to support the Agency's nonconcurrence with the Coffeen ASD. IEPA's denial is, therefore, arbitrary and capricious.

1. <u>"Data Gap 1"</u>

22. "Data Gap 1" demands that a "characterization to include sample and analysis in accordance with 35 IAC 845.640 must be provided with the ASD." **Exhibit A**. It includes two subparts, the first stating that "35 IAC 845.640(a) requires evidence of field collection methods, field and laboratory reports, and quality control and assurance" (subpart 1.a) and the second stating that "35 IAC 845.650(e) requires evidence of the alternative source" and citing to SW846 requiring regulatory decisions being made with environmental data (subpart 1.b). *Id*. On its face, it is not clear what information IEPA is seeking through "Data Gap 1," and IEPA does not provide any further explanation or specificity as to the data it is seeking, including the source or purpose for which it is seeking Section 845.640(a) sampling and analysis, the scope of sampling and analysis

it believes should have been completed under Section 845.640, or its basis for the application of Section 845.640 or SW846 to an alternative source. Regardless, there is no legal or technical basis for the requested characterization and additional data, nor would it change the conclusions of the Coffeen ASD.

23. First, there is no failure to comply with requirements in Section 845.640, which applies to a CCR surface impoundment's "*groundwater monitoring program*" and does not apply to data requirements for ASDs under Section 845.650(e). *See* 35 Ill. Adm. Code 845.640 (emphasis added). Section 845.640(a), which is specifically referenced in subpart 1.a of "Data Gap 1," provides:

a) The groundwater monitoring program must include consistent sampling and analysis procedures that are designed to ensure monitoring results that provide an accurate representation of groundwater quality at the background and downgradient wells required by Section 845.630. The owner or operator of the CCR surface impoundment must develop a sampling and analysis program that includes procedures and techniques for:

- 1) Sample collection;
- 2) Sample preservation and shipment;
- 3) Analytical procedures;
- 4) Chain of custody control; and
- 5) Quality assurance and quality control.

IPGC submitted a groundwater monitoring program with its operating permit application for AP2 that is consistent with the requirements of Section 845.640, including containing the procedures and techniques in Section 845.640(a). *See* Initial Operating Permit, Coffeen Ash Pond 2 (October 25, 2021), available at https://www.luminant.com/documents/ccr/il-ccr/Coffeen/2021/2021%2010%2030%20Coffeen%20AP2%20Op%20Permit%20App%20W135 0150004-02.pdf. IPGC collected and analyzed samples in accordance with that groundwater

monitoring program as part of its quarterly sampling that discovered the Sulfate and TDS Exceedances. Coffeen Power Plant Ash Pond No. 2; IEPA ID # W135015004-02, Groundwater Monitoring Data and Detected Exceedances 2023 Quarter 2 (October 16, 2023), available at https://www.luminant.com/documents/ccr/il-ccr/Coffeen/2023/2023-

Coffeen%20AP2%202023%202nd%20qtr%2035%20IAC%20845%20GW%20report-Coffeen-Ash%20Pond%202-W1350150004%E2%80%9002.pdf.² Thus, IPGC is compliant with Section 845.640 as it applies and nothing in Part 845 requires further analysis under Section 845.640 for purposes of an ASD.

24. To the extent "Data Gap 1" is suggesting that the Coffeen ASD must include characterization, including sampling and analysis in accordance with Section 845.640, of an *alternative source*, there is no legal basis for that conclusion.³ The plain text of Part 845, including Section 845.650(e), contains no requirement that an alternative source be characterized "in accordance with" 35 Ill. Adm. Code 845.640 to support an ASD. IEPA appears to suggest that such characterization and monitoring is required because SW846 states that the Agency must make regulatory decisions based on "environmental data." **Exhibit A**. However, there is also no requirement in Part 845, including Section 845.650(e), that SW846 apply to an ASD.⁴

² IEPA has not yet issued a final operating permit with an approved groundwater monitoring program for AP2. In the interim, IPGC has, through agreement with IEPA, been monitoring in accordance with the proposed groundwater monitoring program submitted with its operating permit.

³ Again, the IEPA Denial is unclear, but to the extent it is suggesting that further sampling and analysis in accordance with 35 III. Adm. Code 845.640 is required for AP2, there also is no basis for that conclusion. As noted in the previous paragraph, IPGC *is* sampling under a groundwater monitoring program that incorporates the requirements in Section 845.640.

⁴ The plain language of the Part 845 rules does not require the utilization of SW846 for purposes of an ASD. While SW846 is incorporated by reference into Part 845 by Section 845.150, the only substantive provision of Part 845 requiring analysis using SW846 is Section 845.640(j), which applies to analyzing groundwater monitoring samples taken under a groundwater monitoring program and is not at issue here. 35 Ill. Adm. Code § 845.640(j). The text of SW846 itself makes clear that methods in that document are not "mandatory"

Nonetheless, the Coffeen ASD was prepared using quality environmental data as contemplated by SW846, and nothing in Chapter 1 of SW846 supports IEPA's conclusions that groundwater sampling under 845.640 is an appropriate (let alone required) means of collecting environmental data for purposes of an ASD. Chapter 1 of SW846 states that its guidance is intended to "ensure data are of sufficient quality *for their intended use.*" USEPA, *SW-846 Update V, Chapter 1* at 1 (July, 2014) (emphasis added). However, SW846 acknowledges that "[d]ue to the diversity of data collection efforts, it is not possible to provide all details necessary to meet the needs of all members of the intended audience." *Id.* There is no specific guidance under SW846 for preparing an ASD. IPGC prepared the Coffeen ASD in accordance with industry guidance and standards to ensure that the data presented was the best available for the intended use. *See* Exhibit C at 2-3, 8.

25. The multiple lines of evidence analysis in the Coffeen ASD, discussed in detail above, provided the "factual and evidentiary basis" for the ASD's conclusions that a source other than AP2 caused the Sulfate and TDS Exceedances and that AP2 did not cause or contribute to those exceedances, as required by Section 845.650(e). **Exhibit B** at 4-6; **Exhibit C** at 8. Following this approach, the Coffeen ASD reviewed and analyzed facts and evidence demonstrating that groundwater does not flow from AP2 to G407 and that, in fact, there is a known and confirmed groundwater divide between AP2 and G407. **Exhibit B** at 4-5; **Exhibit C** at 4-7. This divide provides evidence that impacts from AP2 would not be observed in G407 and, therefore, any contamination in that well must necessarily be from a source other than AP2. *Id*. Additionally, the Coffeen ASD provided facts and evidence that boron concentrations in G407 are not elevated, as would be expected if the well was impacted by AP2, but instead are consistent with background levels for boron. **Exhibit B** at 4-5; **Exhibit C** at 7-8. This is further evidence that a source other

unless specifically specified as such by regulation. United States Environmental Protection Agency ("USEPA"), SW-846 Update V, (July 2014) at 1.

than AP2 caused the Sulfate and TDS Exceedances and that AP2 did not cause or contribute to those exceedances.

26. Thus, the facts and evidence provided with the Coffeen ASD are supportive of the conclusion that "the sulfate and TDS exceedances at G407 are not due to a release from the AP2 CCR unit and that the unit has not contributed to the exceedance[s], but instead the exceedance is attributed to a source other than AP2." **Exhibit B** at 6. "Data Gap 1" requests information that is not required under § 845.650(e) and would not change the conclusions reached through the multiple lines of evidence presented in the Coffeen ASD. **Exhibit C** at 11. Accordingly, IEPA's use of "Data Gap 1" to support its nonconcurrence is arbitrary and capricious.

2. <u>"Data Gap 2"</u>

27. "Data Gap 2" demands that the Coffeen ASD should have included "[u]pdated geologic cross sections" and "data surrounding the hydrogeologic divide and the exceedance well G407 in accordance with 845.620(b)(9)." **Exhibit A**. Again, there is no legal or technical basis for requiring this information.

28. This information in "Data Gap 2" is not required by § 845.650(e). IEPA's denial references 35 III. Adm. Code 845.620(b)(9) as the basis for demanding this information. However, Section 845.620(b) relates to information that the owner or operator of a CCR surface impoundment must include in its hydrogeologic site characterization; not in its ASD. IPGC provided a hydrogeologic site characterization report to IEPA with its operating permit application for AP2 and that report is not at issue in the instant proceeding. *See* Initial Operating Permit, Coffeen Ash Pond 2 (October 25, 2021). Further, Section 845.620(b)(9) relates to soil characteristics. To the extent IEPA is requesting this information as further proof of the hydrogeologic divide that exists between AP2 and G407, it is unnecessary. The water level elevations are sufficient to demonstrate the presence of a groundwater divide. **Exhibit C** at 10-11.

29. As explained above in Section II.A.1., the Coffeen ASD presented multiple lines of evidence that are more than sufficient to demonstrate that the Sulfate and TDS Exceedances were caused by a source other than AP2 and that AP2 did not contribute to the exceedances. **Exhibit B** at 6; **Exhibit C** at 2-4. The data and evidence included with the ASD clearly demonstrate the presence of a hydrogeologic groundwater (and surface water) divide between AP2 and G407, indicating that leachate from AP2 is not influencing G407. **Exhibit C** at 10-11. Any additional assessment, including updated geologic cross sections and data regarding the hydrogeologic divide and exceedance well G407 would not alter those conclusions. *Id.* at 11.

30. The information requested by "Data Gap 2" is not required by Part 845 and would not change the conclusions of the Coffeen ASD. Accordingly, IEPA's use of "Data Gap 2" to justify its nonconcurrence is arbitrary and capricious.

B. IEPA's Denial imposes practically infeasible requirements.

31. IEPA's interpretation of Section 845.650(e) is further unreasonable because the alleged "Data Gaps" are unclear and appear to demand complex sampling and analysis that cannot feasibly be completed within the timeframes contemplated by the regulations, if at all. Section 845.650(e) requires owners and operators to submit an ASD within 60 days after detecting a GWPS exceedance. The regulations further require IEPA to reach a final decision within 30 days after receiving an ASD. 35 Ill Adm. Code § 845.650(e)(4).

32. "Data Gap 1" requests characterization, including "sample and analysis in accordance with 35 Ill. Adm. Code 845.640." **Exhibit A**. Assuming IEPA is making this request with respect to the alternative source, completing these activities, including identifying the alternative source and completing the sampling and analysis contemplated by Section 845.640 is infeasible. Completing the investigation, sampling and analysis that would be required would take at least 24 weeks. **Exhibit D** at 1. Again, given that there is no regulatory requirement that EEI

conduct such an analysis, there would have been no reason for EEI to begin any such characterization prior to the detection of the GWPS exceedances. Even if EEI had fully anticipated IEPA's request, it would not have been possible to complete this analysis until months past the deadline to submit an ASD.

33. "Data Gap 2" requests full "updated geologic cross sections [including] data surrounding the hydrogeologic divide and the exceedance well G407 in accordance with 845.620(b)(9)." **Exhibit A.** Again, this request is unclear. However, assuming the Agency is requesting further evidence regarding the hydrogeologic divide, significant evidence was provided in the ASD to demonstrate that a hydrogeologic divide exists between AP2 and G407, rendering this additional evidence unnecessary. **Exhibit C** at 10-11. That said, providing this additional information within the 60-day time period for completing ASDs would have been infeasible. The activities needed to gather this information would likely take at least 10 weeks. **Exhibit D** at 1.⁵ Once again, even, if IPGC initiated the collection of this information on the same day it detected an exceedance, it would not be completed in time to include in an ASD.

34. The data collection the IEPA Denial categorizes as "gaps" in the Coffeen ASD could not feasibly be completed before the prescribed deadline for submitting an ASD. IEPA's interpretation that Section 845.650 requires these characterizations would thus make the entire ASD provision meaningless, as it would be impossible for any owner or operator to submit a sufficient ASD.

⁵ Undertaking the steps required to provide the information IEPA seeks through "Data Gaps 1 and 2" would also be costly. Collecting the information requested by "Data Gap 1" would likely cost approximately \$105,000 and collecting the information requested by "Data Gap 2" would likely cost approximately \$50,000. **Exhibit D** at 1. While cost is not a driver of actions taken for completing an ASD, as Dr. Hahn explains, accepted scientific practice is to not develop costly additional lines of evidence when sufficient evidence exists from other, better lines of evidence to support a conclusion. **Exhibit C** at 2-3.

35. Accordingly, IEPA's Denial is arbitrary and capricious and also ignores reality.

36. Furthermore, even if the data requested was required to be collected elsewhere under Part 845, there is no requirement in Section 845.650 that such data be used in connection with an ASD. Here, qualified professionals used best available information to develop an ASD within the regulatory deadline and in conformance with regulatory requirements. Certainly, additional lines of evidence could be added to the ASD analysis; however, professional judgment and practicality dictate that every possible line of evidence need not and cannot be developed. **Exhibit C** at 2-3, 11. Doing so would take an unreasonable amount of time. Additionally, doing so is unnecessary when existing information is sufficient to support the conclusion that an alternative source caused the contamination detected and that the CCR surface impoundment at issue did not contribute to that contamination. *Id*.

III. MOTION FOR PARTIAL STAY

37. Because Part 845 does not authorize an automatic stay, IPGC asks the Board to stay the requirements of Sections 845.650(d), 845.660, 845.670, and 845.680 for the Sulfate and TDS Exceedances at issue in this Petition until the later of (a) the Board's final resolution of this Petition, or (b) if this Petition is granted, IEPA's issuance of a concurrence.

A. The Board has authority to issue a stay.

38. The Board has long recognized its authority under Illinois law to issue discretionary stays. *See Community Landfill Co. and City of Morris v. IEPA*, PCB 01-48, PCB 01-49 (consol.), slip op. at 4 (Oct. 19, 2000); *see also, e.g., Ill. Power Generating Co. v. IEPA*, PCB 16-60, slip op. at 1 (Dec. 17, 2015). Section 845.650(e)(7), which authorizes a petition for review of an IEPA nonconcurrence with an ASD, "would be rendered meaningless" if the Board had no authority to stay the associated regulations. *See Id.* An IEPA nonconcurrence with an ASD triggers corrective

measure requirements that must be initiated within a short timeframe, likely far before the Board reaches a final resolution of this petition.⁶

39. Further, the rules specifically contemplate that the Board may stay certain regulatory requirements pending resolution of a petition for review: "The filing of a petition for review under subsection (e)(7) does not automatically stay any requirements of this Part as to the owner or operator, including the 90-day deadline to initiate an assessment of corrective measures (see Section 845.660(a)(1))." Section 845.650(e)(7). If the Board had no authority to stay the corrective measure requirements, there would have been no need for the rules to specify that the stay is not automatic.

B. A partial stay is appropriate under Illinois law.

40. The Board considers four factors⁷ when determining whether to grant a discretionary stay of a final Agency decision:

- **a.** a certain and clearly ascertainable right needs protection;
- **b.** irreparable injury will occur without injunction;
- **c.** adequate remedy at law exists;
- **d.** a probability of success on the merits.

PCB 16-60, slip op. at 2 (Dec. 17, 2015), citing *Community Landfill Co. and City of Morris v. IEPA*, PCB 01-48, PCB 01-49 (consol.), slip op. at 4 (Oct. 19, 2000). The Board need not find that all of these factors exist in order to grant a discretionary stay. *Id.* The Board will also consider the

⁶ Section 845.660(a) requires: "The assessment of corrective measures must be initiated within 90 days after finding [of any GWPS exceedance]" and the "assessment of corrective measures must be completed and submitted to the Agency within 90 days after initiation of assessment of corrective measures . . ."

⁷ When reviewing a request for a discretionary stay in the context of a permit appeal or appeal of final agency decision, the Board has held that "although there are no specific standards set by the Board for issuing stays, Illinois law provides for standards under which such equitable relief is appropriate." *Motor Oils Refining Co. v. IEPA*, PCB 89-116, slip op. at 1 (Aug. 31, 1989), *citing Junkunc v. S.J. Advanced Technology & Mfg.*, 101 Ill. Dec. 671, 498 N.E.2d 1179 (Ill. App. 1 Dist. 1986).

likelihood of environmental harm should stay be granted. *Id.*, citing *Motor Oils Refining Co. v. IEPA*, PCB 89-116, slip op. at 2 (Aug. 31, 1989).

41. For the reasons stated in this Petition, a stay is necessary to protect IPGC's right to appeal the IEPA Denial and to prevent IPGC from being unlawfully and unreasonably required to comply with costly and potentially unnecessary corrective measure requirements before it is able to exercise its right to appeal and be heard by the Board. Accordingly, IPGC has an ascertainable right that needs protection.

42. IPGC will suffer irreparable injury if it is subject to the corrective measure requirements of Sections 845.650(d), 845.660, 845.670, and 845.680 for the Sulfate and TDS Exceedances at issue in this Petition. Compliance with these requirements would require IPGC to expend resources to complete assessments of corrective measures, prepare corrective action plans and take other steps under Part 845 for alleged discharges that, as explained in detail in the Coffeen ASD and this Petition, likely never occurred. The assessments of corrective measures alone would likely cost approximately \$35,000. **Exhibit D** at 1. Selecting an appropriate remedy and developing a corrective action plan could cost approximately an additional \$225,000. *Id.* If IPGC complied with the corrective measure requirements for Sulfate and TDS at the Coffeen Ash Pond No. 2 and then succeeded on the merits of this Petition, costs, as well as time and other resources, would be lost. *Id.* Thus, IPGC would suffer irreparable injury.

43. IPGC has no other adequate remedy at law to prevent these injuries or to contest the IEPA Denial.

44. It is also likely that IPGC will succeed on the merits of this Petition. IPGC has demonstrated by a preponderance of the evidence that an alternative source other than AP2 is responsible for the Sulfate and TDS Exceedances and that AP2 did not contribute to that

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contamination as evidenced through the thorough analysis of a qualified professional engineer, and IPGC is prepared to demonstrate that IEPA's nonconcurrence was arbitrary and capricious and/or inconsistent with applicable laws and regulations. *See, e.g.*, **Exhibit B**; **Exhibit C**.

45. Finally, no harm to human health or the environment will result from a stay of these requirements. The exceedances are limited to a single monitoring well. As demonstrated in the Coffeen ASD and this Petition, the Coffeen AP2 is not the source of the Sulfate and TDS Exceedances. AP2 is located directly north of Coffeen Ash Pond 1 ("AP1") and would be expected to interact with similar receptors to AP1. A human health and risk assessment conducted for AP1 found there is no likely exposure pathway through any potable water source and that there are "no unacceptable risks to human or ecological receptors resulting from CCR exposures associated with AP1 . . ." Human Health and Ecological Risk Assessment, Ash Pond 1, Coffeen Power Plant, Coffeen Illinois 16. 32 (July 28, 2022), available at at https://www.luminant.com/documents/ccr/Illinois/Coffeen/2022/Coffeen%20AP%20No%201% 20Construction%20Permit%20Application.pdf. Notably, the IEPA Denial does not suggest that IEPA believes AP2 is the cause of or is contributing to the GWPS exceedances - rather, the IEPA Denial is based on alleged "data gaps." Exhibit A. Moreover, the corrective measure requirements of Sections 845.650(d), 845.660, 845.670, and 845.680 include an assumption that the impoundment under assessment is at least a partial cause of the exceedances.⁸ It is impossible to complete a corrective action assessment or to determine the optimal corrective action for a source that is not the cause of the exceedance, and to do so would provide no benefit to human health and the environment. Lastly, IPGC has been and will continue to be subject to the groundwater monitoring requirements of Section 845.650, which ensures that any changes in circumstances

⁸ See, e.g., Section 845.660(a) ("...the owner or operator must initiate an assessment of corrective measures to prevent further releases, to remediate any releases, and to restore the affected area.").

during the stay that could pose a risk to human health or the environment will be quickly identified and responded to in accordance with Part 845.

IV. <u>CONCLUSION</u>

46. For the above reasons, IPGC respectfully requests that the Board stay the requirements of Sections 845.650(d), 845.660, 845.670, and 845.680 relating to the Sulfate and TDS Exceedances at issue in this Petition until the later of (a) the Board's final resolution of this Petition, or (b) if this Petition is granted, IEPA's issuance of a concurrence. Moreover, IPGC respectfully requests that the Board grant this Petition for Review and remand to IEPA to issue a new final written response concurring with the Coffeen ASD.

Respectfully submitted,

/s/ Joshua R. More Joshua R. More

ARENTFOX SCHIFF LLP Joshua R. More Bina Joshi Samuel A. Rasche 233 South Wacker Drive, Suite 7100 Chicago, Illinois 60606 (312) 258-5500 Joshua.More@afslaw.com Bina.Joshi@afslaw.com Sam.Rasche@afslaw.com

Attorneys for Illinois Power Generating Company

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

ILLINOIS POWER GENERATING COMPANY

Petitioner

PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

CERTIFICATE OF SERVICE

I, the undersigned, certify that on this 20th day of February, 2024:

I have electronically served a true and correct copy of the attached Petition for Review of Illinois Environmental Protection Agency's Non-Concurrence with Alternative Source Demonstration Under 35 Ill. Admin. Code Part 845 and Motion for Stay and Appearances of Joshua R. More, Bina Joshi, and Samuel A. Rasche by electronically filing with the Clerk of the Illinois Pollution Control Board and by e-mail upon the following persons:

Pollution Control Board, Attn: Clerk 100 West Randolph Street James R. Thompson Center Suite 11-500 Chicago, Illinois 60601-3218 <u>PCB.Clerks@illinois.gov</u>

My e-mail address is sam.rasche@afslaw.com

Division of Legal Counsel Illinois Environmental Protection Agency 1021 N. Grand Avenue East P.O. Box 19276 Springfield, Illinois 62794-9276 epa.dlc@illinois.gov

The number of pages in the e-mail transmission is 93.

The e-mail transmission took place before 5:00 p.m.

/s/ Samuel A. Rasche Samuel A. Rasche

Dated: January 12, 2024

ARENTFOX SCHIFF LLP Joshua R. More Bina Joshi Samuel A. Rasche 233 South Wacker Drive, Suite 7100 Chicago, Illinois 60606 (312) 258-5500 Joshua.More@afslaw.com Bina.Joshi@afslaw.com Sam.Rasche@afslaw.com

Attorneys for Illinois Power Generating Company

BEFORE THE ILLINOIS POLLUTION CONTROL BOARD

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Petitioner

PCB 2024-____

v.

ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

Respondent.

INDEX OF EXHIBITS

- Exhibit A Letter from Darin E. LeCrone, P.G., Manager, Permit Section, Division of Water Pollution Control, Illinois Environmental Protection Agency to Dianna Tickner, Illinois Power Generating Company (January 11, 2023).
- Exhibit B Ramboll, 35 I.A.C. § 845.650(e): Alternative Source Demonstration G407 Sulfate and Total Dissolved Solids, Coffeen Power Plant, Canton, Illinois, IEPA ID: W0578010001-04 (December 15, 2023).
- Exhibit C Declaration of Melinda W. Hahn, PhD (February 20, 2024)
- Exhibit D Declaration of Cynthia Vodopivec on behalf of Illinois Power Generating Company (February 19, 2024)

Exhibit A

217-782-1020

January 11, 2024

Dianna Tickner Electric Energy, Inc. 1500 Eastport Plaza drive Collinsville, Illinois 62234

Re: Coffeen Power Plant Ash Pond No. 2; W1350150004-02 Alternative Source Demonstration Submittal

Dear Ms. Tickner:

The purpose of this correspondence is to notify you that the Illinois Environmental Protection Agency (Illinois EPA) does not concur with the Coffeen Ash Pond No.2 Alternative Source Demonstration (ASD) for sulfate and total dissolved solids (TDS) dated December 15, 2023. The Illinois EPA does not concur due to the following data gaps:

- 1. Characterization to include sample and analysis in accordance with 35 IAC 845.640 must be provided with the ASD.
 - a. 35 IAC 845.640(a) requires evidence of field collection methods, field and laboratory reports, and quality control and quality assurance.
 - b. 35 IAC 845.650(e) requires evidence of the alternative source, see item 1(a)(i) above. SW846 chapter 1, incorporated by reference in 35 IAC 845, states that regulatory decisions must be made with environmental data.
- 2. Updated geologic cross sections must be provided and must include data surrounding the hydrogeologic divide and the exceedance well G407 in accordance with 845.620(b)(9).

If you have any questions, please contact: **Heather Mullenax** Illinois EPA, Bureau of Water, WPC #15, P.O. Box 19276, Springfield, Illinois 62794-9276. If you have any questions concerning the investigation described above, please call 217-782-1020.

Sincerely,

Darin E. LeCrone, P.E Manager, Permit Section Division of Water Pollution Control Illinois Environmental Protection Agency

2125 S. First Street, Champaign, IL 61820 (217) 278-5800 1101 Eastport Plaza Dr., Suite 100, Collinsville, IL 62234 (618) 346-5120 9511 Harrison Street, Des Plaines, IL 60016 (847) 294-4000 595 S. State Street, Elgin, IL 60123 (847) 608-3131 2309 W. Main Street, Suite 116, Marion, IL 62959 (618) 993-7200 412 SW Washington Street, Suite D, Peoría, IL 61602 (309) 671-3022 4302 N. Main Street, Rockford, IL 61103 (815) 987-7760

cc: Heather Mullenax Lauren Hunt Keegan MacDonna Records Files 06M

Exhibit B



Illinois Power Generating Company 1500 Eastport Plaza Drive Collinsville, IL 62234

December 15, 2023 Illinois Environmental Protection Agency DWPC – Permits MC#15 Attn: 35 I.A.C. § 845.650(e) Alternative Source Demonstration Submittal 1021 North Grand Avenue East P.O. Box 19276 Springfield, IL 62794-9276

Re: Coffen Power Plant Ash Pond No 2; IEPA ID # W1350150004-02

Dear Mr. LeCrone:

In accordance with Title 35 of the Illinois Administrative Code (35 I.A.C.) Section (§) 845.650(e), Illinois Power Generating Company (IPGC) is submitting this Alternative Source Demonstration (ASD) for the sulfate and TDS exceedance observed at well G407 from the Quarter 2 2023 sampling event at the Coffeen Power Plant Ash Pond No. 2, identified by Illinois Environmental Protection Agency (IEPA) ID No. W1350150004-02.

This ASD is being submitted within 60 days from the date of determination of an exceedance of a groundwater protection standard (GWPS) for constituents listed in 35 I.A.C. § 845.600. As required by 35 I.A.C. § 845.650 (e)(1), the ASD was placed on the facility's website within 24 hours of submittal to the agency.

One hard copy is provided with this submittal.

Sincerely,

Dianna Sickner

Dianna Tickner Sr. Director – Decommission and Demolition

Enclosures

Alternate Source Demonstration, Quarter 2 2023, Ash Pond No.2 Coffeen Power Plant, Coffeen Illinois

Geosyntec[▷] consultants

engineers | scientists | innovators

Alternative Source Demonstration -G407 Sulfate and Total Dissolved Solids

Coffeen Power Plant Ash Pond No. 2 (Unit ID #102) IEPA ID: W1350150004-02 35 I.A.C. 845.650

Prepared for

Illinois Power Generating Company 134 Cips Lane Coffeen, Ilinois 62017

Prepared by

Geosyntec Consultants, Inc. 500 W. Wilson Bridge Rd., Suite 250 Worthington, OH 43085

Project Number: GLP8029

December 2023

Geosyntec^D consultants

Alternative Source Demonstration -G407 Sulfate and Total Dissolved Solids

Coffeen Power Plant Ash Pond No. 2 (Unit ID #102) IEPA ID: W1350150004-02 35 I.A.C. § 845.650

Prepared for

Illinois Power Generating Company 134 Cips Lane Coffeen, Illinois 62017

Prepared by

Geosyntec Consultants, Inc. 500 W. Wilson Bridge Rd., Suite 250 Worthington, OH 43085

License No.: 062.040562 Expires: 11/30/2025

John Seymour, P.E.

Senior Principal

Project Number: GLP8029

December 2023



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- Attachment 2: G407 Boring Log and Well Construction Diagram
- Attachment 3: Compiled Potentiometric Surface Maps
- Attachment 4: Groundwater Model Output

ACRONYMS AND ABBREVIATIONS

ASD	Alternative source demonstration
AP2	Ash Pond No. 2
CCR	Coal combustion residuals
CPP	Coffeen Power Plant
DA	Deep aquifer
EPRI	Electric Power Research Institute
GWPS	Groundwater protection standard
HCR	Hydrogeologic site characterization report
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
IPGC	Illinois Power Generating Company
LCU	Lower confining unit
LOE	Line of evidence
mg/L	milligrams per liter
NID	National Inventory of Dams
TDS	Total dissolved solids
UA	Uppermost aquifer
UCU	Upper confining unit
USEPA	United States Environmental Protection Agency

1. INTRODUCTION

Geosyntec Consultants, Inc. has prepared this alternative source demonstration (ASD) on behalf of Illinois Power Generating Company (IPGC) regarding the Ash Pond No. 2 coal combustion residuals (CCR) unit at the Coffeen Power Plant (CPP) near Coffeen, Illinois. The ASD is completed pursuant to Illinois Administrative Code (IAC) Title 35, Part 845 ("Standards for the Disposal of CCR in Surface Impoundments") and was completed by December 15, 2023, within 60 days of determination of the exceedances (October 16, 2023), as required by 35 I.A.C.§ 845.650(e). This report applies specifically to the CCR Unit referred to as Ash Pond No. 2 (AP2), identification (ID) number (No.) 102, IEPA ID No. W1350150004-02, and National Inventory of Dams (NID) ID No. IL50723 and was prepared in conformance with guidance provided in the Electric Power Research Institute (EPRI) guidance for development of ASDs at CCR sites (EPRI 2017), and the United States Environmental Protection Agency (USEPA)'s Solid Waste Disposal Facility Criteria: Technical Manual (USEPA 1993).

An exceedance of sulfate was identified above the site-specific groundwater protection standard (GWPS) of 400 milligrams per liter (mg/L) at monitoring well G407 following the Second Quarter 2023 sampling event. An exceedance of total dissolved solids (TDS) was identified above the site-specific GWPS of 1,200 mg/L at monitoring well G407 following the Second Quarter 2023 sampling event. TDS represents the mass of dissolved material in the water rather than a specific chemical constituent. The TDS exceedance at G407 is controlled by the elevated concentrations of sulfate.

Under 35 IAC 845.650(e), the owner or operator of a CCR surface impoundment may submit a demonstration that a source other than the CCR surface impoundment caused the contamination and the CCR surface impoundment did not contribute to the contamination, or that the exceedance of the groundwater protection standard resulted from error in sampling, analysis, or statistical evaluation, natural variation in groundwater quality, or a change in the potentiometric surface and groundwater flow direction.

Pursuant to 35 IAC 845.650(e), the lines of evidence (LOEs) documented in this ASD demonstrate that a source other than the CPP AP2 CCR unit was the cause of the GWPS exceedances for sulfate and TDS at downgradient monitoring well G407 and that AP2 did not contribute to the exceedance. Anthropogenic impacts associated with CPP operations was identified as the alternative source for elevated sulfate and TDS concentrations at G407.

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2. BACKGROUND

2.1 Site Location and Description

The CPP, operated by the IPGC is located in Montgomery County, Illinois approximately two miles south of the City of Coffeen in Section 11, Township 7 North, and Range 7 East. The CPP is located between the two lobes of Coffeen Lake to the west, east, and south, and is bordered by agricultural land to the north. The CPP operated as a coal-fired power plant from 1964 to November 2019 and has five CCR management units. The approximately 1,100-acre Coffeen Lake was built by damming the McDavid Branch of the East Fork of Shoal Creek in 1963 for use as an artificial cooling lake for the CPP. The CPP and vicinity, including G407 and AP2, are located on a peninsula of land between two lobes of Coffeen Lake. Historically, coal mines were operated at depth in the vicinity of the CPP and a US Minerals processing facility is located to the north. An aerial view of the site is shown in shown in **Attachment 1**.

2.2 Description of the CCR Unit

Coffeen AP2 is an unlined surface impoundment with a surface area of approximately 60 acres, with berms up to 47 feet above the surrounding land surface. AP2 was removed from service and capped in the mid-1980s using a two-foot compacted clay and soil cap (Ramboll 2019).

AP2 was recapped starting in 2019 using a geomembrane cover system in accordance with a closure plan submitted to the Illinois Environmental Protection Agency (IEPA; AECOM, 2017). The cover system installation was completed on November 17, 2020. The geomembrane cap design addresses the potential for slope failure and water infiltration into the closed CCR unit by directing the drainage of surface water (i.e., precipitation) off the cover system.

2.3 Geology and Hydrogeology

Significant site investigation has been completed to fully characterize the geology, hydrogeology, and groundwater quality as provided in the AP2 Initial Operating Permit Application (Burns & McDonnell 2021) and the Hydrogeologic Site Characterization Report (HCR) for AP2 (NRT 2017). These materials are incorporated herein.

There are multiple layers of unlithified material present beneath AP2 and above bedrock which are categorized into hydrostratigraphic units listed below (from the surface downward) based on stratigraphic relationships and hydrogeologic characteristics:

- Upper Confining Unit (UCU): Composed of the Roxana and Peoria Silts (Loess Unit) and the upper clayey portion of the Hagarstown member which are classified as silts-clayey silts and gravelly clay below the surficial soil.
- **Uppermost Aquifer (UA):** Composed of the Hagarstown Member which is classified as primarily sandy-gravelly silts and clays with beds of sedimentary deposits. Beds consist of thin

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(generally less than three feet in thickness), moderate to high permeability sand, silty sand, and sandy silt/clay units.

- Lower Confining Unit (LCU): Comprised of the Vandalia Member, Mulberry Grove Member, and Smithboro Member. The LCU in the vicinity of AP2 consists of thick (generally greater than 15 feet), very low permeability sandy to silty till or clay till.
- **Deep Aquifer (DA):** Comprised of sand and sandy silt/clay units of the Yarmouth Soil, which include accretionary deposits of fine sediment and organic materials, typically less than five feet thick and discontinuous across the CPP.

Bedrock is comprised of the Pennsylvanian-age Bond Formation, which consists of limestone and calcareous clays and shale. Geologic cross-sections modified from versions provided in the Hydrogeologic Characterization Report are provided as **Figure 1**. CCR within AP2 is underlain by the UCU in the majority of the footprint.

G407 is screened from 13.8 to 18.6 ft. bgs (604.6 to 600.0 ft elevation [North American Vertical Datum of 1988, NAVD88]). The boring log for G407, provided in **Attachment 2**, indicates that the lithology of the screened interval is a yellowish brown silt with little fine-to coarse-grained sand.

The potentiometric groundwater contours and generalized groundwater flow directions at the site are shown in **Attachment 3**. Groundwater flow in the vicinity of AP2 is generally to the south and east. The groundwater to the west of AP2 is separated from the groundwater flow regime under AP2 by a groundwater divide. More information regarding this groundwater divide is provided in Section 3.1.

The groundwater monitoring well network for AP2 consists of 11 monitoring wells: three background monitoring wells (G270, G280, G281) and eight compliance monitoring locations (G1001, G401, G402, G403, G404, G405, G406, G407) (**Attachment 1**). Monitoring wells within the network are screened in the UA from approximately elevations 600 to 610 ft.

Monitoring well G407 was originally included in the IEPA-approved Closure Plan monitoring well network, which consisted of fourteen groundwater monitoring wells used to monitor the UA, including three background wells (G270, G280, and G281) and eleven compliance wells (G154, G279, G401, G402, G403, G404, G405, G406, G407, G410, and G411) (NRT 2017). Monitoring wells G154, G279, G407, G410, and G411 were included in the IEPA groundwater monitoring plan to monitor sulfate in groundwater that could potentially be attributed to AP2. These wells were monitored in accordance with Water Pollution Control Permit 2020-EA-65027-1 Special Condition No. 6. An Addendum to the Groundwater Monitoring Plan (Ramboll 2021a) submitted with the Operating Permit (Burns & McDonnell 2021) noted that while G407 is on the opposite side of the groundwater divide from AP2, it would continue to be monitored due to the elevated concentrations of sulfate at that location.

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3. G407 ASD LINES OF EVIDENCE

Monitoring well G407 and AP2 are located on opposite sides of a groundwater flow divide which presents a barrier to flow from AP2 toward G407. This groundwater divide is evidenced through groundwater potentiometric surface mapping and modeling, site topography, and groundwater chemistry at the site. This groundwater divide prevents groundwater underlying AP2 from migrating to G407; therefore, the sulfate and TDS exceedances are not attributed to AP2, as discussed below.

3.1 LOE #1 Groundwater Does Not Flow from AP2 to G407 due to the Presence of a Groundwater Divide

Compliance well G407 is located directly west of AP2 (Attachment 1). Groundwater flow from beneath AP2 has consistently been southeast. Potentiometric surface maps constructed by Ramboll since November 2016 (Attachment 3) indicate that groundwater flow from AP2 towards G407 has never been observed, regardless of season (Ramboll 2021b). Groundwater flow at G407 is predominantly southwest and is separated from groundwater flow beneath AP2 by a groundwater divide located near the western edge of AP2 and occasionally centered around G403. This groundwater divide is present in all potentiometric surface maps generated for the monitoring network between 2016 and 2023 (Attachment 3) and is likely related to thinning of the Hagarstown Beds under the western portions of AP2 (NRT 2017). The presence of the known groundwater divide indicates that the observed sulfate and TDS exceedances at G407 cannot be contributed to AP2, as G407 is not hydrologically downgradient of AP2.

The most recent groundwater modeling for AP1 and the historical modeling for AP2 completed by Ramboll indicate that at steady state the groundwater divide separates G407 and AP2 in alignment with the observed flow directions from groundwater measurements. CPP and the areas monitored by the well networks are located on a peninsula between two lobes of Coffeen Lake; groundwater naturally flows from the central portions of the peninsula toward the eastern and western lobes of Coffeen Lake. Groundwater potentiometric surface maps (**Attachment 3**) which include monitoring wells present throughout the peninsula clearly illustrate this flow pattern since monitoring under the 40 C.F.R. 257 regulations began in 2015. Calibration of the groundwater flow model also supports the presence of this flow pattern and the groundwater divide located between AP2 and G407 (**Attachment 4**).

Given the presence of this groundwater divide between AP2 and monitoring well G407, impacts from AP2 would not be observed at G407 and the sulfate and TDS exceedances should be attributed to an alternative source.

3.2 LOE #2 The Presence of a Surface Water Divide Further Supports the Presence of a Groundwater Divide

A surface water divide has also been noted in the vicinity of AP2. The CPP and vicinity, including G407 and AP2, are located on a peninsula of land between two lobes of Coffeen Lake. Topography of the land surface determines which direction precipitation (surface water) will drain towards lower elevations (Coffeen Lake). Connecting the high topographic areas within the peninsula defines the location of a surface water divide (**Figure 3**). Surface water present on the west side of

the divide drains toward the west lobe of Coffeen Lake and water that falls on the east side of the divide flows toward the east lobe of Coffeen Lake. As illustrated on **Figure 3**, G407 is located on the west side of the divide and AP2 is located on the east side of the divide; therefore, surface water from AP2 will not flow west in the direction of G407.

Shallow unconfined groundwater flow typically follows topography (flowing from high head to low head) and the attached groundwater potentiometric surface maps confirm that groundwater flows in the same direction as surface water (**Attachment 3**).

3.3 LOE #3 G407 Does Not Contain Elevated Levels of Boron, which is Indicative of AP2 Leachate

The co-located detection of elevated boron and sulfate concentrations has been noted as a key indicator of the presence of CCR constituents related to AP2 (NRT 2017). Boron concentrations at G407 are consistent with background, with reported values ranging between 0.06 and 0.15 mg/L for groundwater sampling events completed between March 2018 and May 2023 (**Figure 2**). This concentration range is substantially lower than concentrations observed at wells which are known to be impacted by AP2, such as G404, which exhibited boron concentrations two orders of magnitude greater than G407 (up to 15.0 mg/L) over the same time interval.

As shown in **Figure 4**, boron concentrations at G407 are comparable to other unimpacted wells within the monitoring network, including the background wells (G270, G280, and G281) and compliance well G403, which is located cross-gradient of AP2 near the center of the groundwater flow divide. Monitoring locations which are located on the same side of the flow divide as AP2 and downgradient of the unit, such as G404 and G405, tend to exhibit much higher boron concentrations which are indicative of impacts from AP2. These results support the presence of the groundwater divide between AP2 and G407.

The lack of elevated boron concentrations at G407 on the west side of the groundwater divide suggests that the sulfate and associated TDS exceedances observed in groundwater at G407 are not attributable to impacts from AP2. Instead, the presence of elevated sulfate may be attributed to a host of anthropogenic sources at the site, such as the historical mining activities, coal storage activities, construction of engineered features such as railroad beds or parking lots, material handling, or similar.

4. CONCLUSIONS

It has been demonstrated that the sulfate and TDS exceedances at G407 are not due to a release from the AP2 CCR unit and that the unit has not contributed to the exceedance, but instead the exceedance is attributed to a source other than AP2. The following summarizes the three LOEs used to support the sulfate and TDS demonstration:

- 1. Groundwater beneath AP2 does not flow to G407, as demonstrated by temporally consistent potentiometric surface maps of groundwater elevation across the site and groundwater flow modeling showing a groundwater divide between AP2 and the well of concern.
- 2. The presence of a surface water divide between AP2 and G407 provides further support for the presence of the groundwater divide which prevents potential migration of groundwater from underneath AP2 to the well of concern. Therefore, G407 is not impacted by the AP2 unit.
- 3. Groundwater at G407 does not contain elevated boron that would indicate impacts from AP2 leachate. The lack of elevated boron at G407 compared to wells in the immediate vicinity of G407 provides further evidence in support of the presence of the groundwater divide between the unit and G407.

The GWPS exceedances of sulfate and TDS at G407 are not attributable CPP AP2, as the groundwater divide at the CPP prevents migration of groundwater along that flow path. Instead, the exceedances are attributed to impacts from anthropogenic industrial activities that have historically occurred at the CPP. This demonstration fulfills the requirements of both 35 IAC 845.650(e) and the technical manual for the Municipal Solid Waste Landfill federal regulatory program (Code of Federal Regulations, Title 40, Section 258).

Electronic Filing: Received, Clerk's Office 02/20/2024 **PCB 2024-056** Geosyntec Consultants

5. REFERENCES

AECOM. 2017. Closure and Post-Closure Care Plan for the Coffeen Ash Pond No. 2 at Illinois Power Generating Company Coffeen Power Station. January.

Burns & McDonnell. 2021. Initial Operating Permit, Coffeen Ash Pond 2. October.

- Illinois Environmental Protection Agency (IEPA). 2016. Dynegy Midwest Generation, Inc. Baldwin Energy Complex: Baldwin Fly Ash Pond System Closure – NPDES Permit No. IL000043, letter from William Buscher (IEPA) to Rick Diericx (Dynegy Operating Company), dated August 16, 2016.
- Natural Resource Technology, Inc. (NRT). 2017. *Hydrogeologic Site Characterization Report, Ash Pond 2, Coffeen Power Station, Coffeen, Illinois.* January.
- Ramboll. 2021a. Groundwater Monitoring Plan Addendum for Ash Pond No. 2. Coffeen Power Plant, Coffeen, IL. Ramboll Americas Engineering Solutions, Inc. October.
- Ramboll. 2021b. *Hydrogeologic Site Characterization Report, Ash Pond No. 1, Coffeen Power Plant, Coffeen, Illinois.* Ramboll Americas Engineering Solutions, Inc. October.
- Ramboll. 2023. 35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances – Quarter 2, 2023. Ash Pond No. 2, Coffeen Power Plant, Coffeen, Illinois. Ramboll Americas Engineering Solutions, Inc. October.
- United States Environmental Protection Agency (USEPA). 1993. Criteria for Solid Waste Disposal Facilities: A Guide for Owners/Operators. March.

FIGURES









ATTACHMENT 1 Proposed 845 Groundwater Monitoring Network



RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.



ADDENDUM TO THE GROUNDWATER MONITORING PLAN ASH POND NO. 2 COFFEEN POWER PLANT COFFEEN, ILLINOIS

PROPOSED 845 GROUNDWATER MONITORING WELL NETWORK

- BACKGROUND WELL SITE FEATURE
- LIMITS OF FINAL COVER HONITORING WELL r -PROPERTY BOUNDARY
- STAFF GAGE

COMPLIANCE WELL

200 400

ATTACHMENT 2 G407 Boring Log and Well Construction Diagram

FIELED BORGNER Clerk's Office 02/20/2024 ** PCB 204 56**													
CLIENT: Natural Resources Technology, Inc. Site: Coffeen Power Station - Ash Pond 2 Rig mfg/model: CME-750 ATV Drill BOREHOLE ID: G407													
Location: 134 CIPS Lane, Coffeen, IL 62017 Drilling Method: 4 1/4" Hollow Stem Auger Well ID: 6407													
	DATE	S: St	art: 8/1	6/20	16		Surface Liev:618.35 ft. MSFIELD STAFF: Driller:J. DittmaierCompletion:20.00 ft. BGS	S					
WE	ATHE	Fir R: Ra	tish: 8/1 ain, (mid-	6/20 -70s)	16		Helper: M. Hill Station: 2,513,705.87N Eng/Geo: K. Theesfeld 2,513,705.87E	1 3					
S	SAMPL	E	Т	EST	INC	Ĵ	TOPOGRAPHIC MAP INFORMATION: WATER LEVEL INFORMATION:	WATER LEVEL INFORMATION:					
	al (in		ı	(0)	b/ft^3	ט (tsf) יפ	Quadrangle: Coffeen $\mathbf{Y} = 16.00$ - During DrillingTownshin: East Fork $\mathbf{V} =$	$\Psi = 16.00$ - During Drilling $\Psi =$					
er	r / Tot		/6 in alue	ure (%	en. (ll	$\int_{e} \frac{D_{f}}{D_{f}}$	Section 10, Tier 7 N.; Range 3 W. $\overline{\Sigma} =$						
Numb	Recov % Rec	Type	Blows N - V; RQD	Moist	Dry D	Qu (ts Failur	DepthLithologicBoreholeElevationft. BGSDescriptionDetailft. MSLRemarks						
	12/24	M	4-3				Very dark gray (10YR3/1), wet, medium, SILT with some organics. $p \rightarrow 0$ 618						
1A	50%	Å ss	3-3 N=6	14		3.50	Gray (10YR6/1), wet, loose, SAND with some gravel and little clay.						
		\square					2 - [Fill] Yellowish brown (10YR5/6) with 5% dark yellowish herver (10YP2/6) weith some stiff. SUI T with						
2.4	20/24 <i>83%</i>	ss	2-2 4-4 N=6	1.0		1.50	brown (10 Y R5/0) motules, moist, very still, SiL1 with/						
2A		Д		10		1.50	4 definition of the second sec						
	23/24	M	1-2				Brown (10YR5/3) with 25% yellowish brown (10YR5/6)						
3A	96%	A ss	3-4 N=5	19		1.75	mottles, moist, stiff, CLAY with some silt, trace fine-grained sand and trace small gravel.						
		$\left(\right)$											
	24/24	V ss	1-3 3-5				Brown (10YR5/3) with 10% yellowish brown (10YR5/6) mottles, moist, stiff, CLAY with some silt, little fine- to						
4A	100%	N	N=6	19		1.50							
		Π					8 Yellowish brown (10YR5/6) with 25% brown (10YR5/3)						
5 4	21/24 88%	ss	1-2 4-4 N=6	10		0.50	mottles, moist, medium, CLAY with few silt, few fine-grained sand, and trace small gravel.						
JA		Д	IN O	19		0.50							
	22/24	M	1-2				Yellowish brown (10YR5/8) with 5% gray (10YR5/1) mottles, moist, very loose, fine-grained SAND with some						
6A	92%	ss	2-1 N=4	17			clay and trace small gravel.						
		$\left(\right)$					$12 = \frac{1}{2}$ Gray (10YR5/1) with 25% vellowish brown (10YR5/8)						
7A	24/24	ss	7-29 33-17	8			mottles, moist, very dense, fine-grained SAND						
	100%	N	N=62				Brown (10YR5/3), moist, hard, SILT with some clay and						
		$\overline{\mathbf{n}}$	2.7				14 <u>little fine- to coarse-grained sand.</u> V III. is here a (10VD5(4)) is 50(- all, is here a - 604						
0 4	24/24 100%	ss	3-7 12-17 N=19	12		1.50	(10YR5/6) and 5% black (10YR2/1) mottles, SILT with some clay and liftle fine, to carries and and						
oA		Д		12		4.50							
	24/24	M	4-9				Yellowish brown (10YR5/4) with 5% yellowish brown						
9A	100%	ss	14-20 N=23	13		4.00	(10YR5/6), 5% dark gray (10YR4/1) and 5% black (10YR2/1) mottles, moist, hard, SILT with little fine- to						
		$\left(\right)$					$18 \stackrel{=}{=} \qquad \text{coarse-grained sand and trace small gravel.} \qquad \qquad$						
	24/24	V ss	2-8 14-19				Yellowish brown (10YR5/4) with 5% yellowish brown (10YR5/6), 5% dark gray (10YR4/1) and 5% black						
10A	100%	N	N=22	14		4.50	(10YR2/1) mottles, wet, stiff, SILT with little fine- to coarse-grained sand and little small gravel.						
	I		I	T	I	I	20 Dark grayisn brown (10 Y k4/2) with 10% dark yellowisn brown (10 Y k3/6) mottles, moist, hard, CLAY with some silt little fine- to coarse-grained and and trace small gravel						
							End of Boring = 20.0 ft. BGS						
NO	TE(S):	G40	7 installe	d in	borin	ıg.							

Electronic Filino Illinois Environ	y: Received, (mental Protecti	Clerk's Offi on Agency	ce 02	/20/2024 *	*PCB 2 Well	2024-056 Completi	** on Report
Site #:		County: <u>Montgomery</u>			Well #: G407		G407
Site Name: Coffeen Power Sta	tion - Ash Pond 2				В	orehole #·	G407
State Diana Coordinator X 2 512 705	$\frac{1}{2} = \frac{1}{2} = \frac{1}$	(ar) Latituda	20°	2' 11 665"	D	ev 80°	24' 7 212"
Plane Coordinate. $X_{2,313,703}$	<u>19</u> 1 <u>0/2,9/3.4</u>	_ (or) Latitude.			Longitud	e. <u>-09</u>	24 7.213
Surveyed By: <u>Gary C. Rogers</u>		IL Registration #:035-002957					
Drilling Contractor: <u>Bulldog D</u>	rilling, Inc.	Driller: J. Dittmaier					
Consulting Firm: <u>Hanson Profe</u>	essional Services Inc.	Geologist: Rhonald W. Hasenyager, LPG #196-000246					
Drilling Method: <u>Hollow stem</u>	auger	Drilling Fluid (Type):					
Logged By: <u>Kristen L. Theesfe</u>	eld		Date Started: <u>8/16/2016</u> Date Finished: <u>8/16/2016</u>				
Report Form Completed By:	zanna L. Keim		Date: _	8/24/2016			
ANNULAR SPA	CE DETAILS			Elevations (MSL)*	Depths (BGS)	(0.01	t.)
				621.70	-3.35	Top of Protect	ive Casing
				621.32	-2.97	Top of Riser F	ipe
Type of Surface Seal: <u>Concrete</u>				<u> </u>	0.00	Ground Surfa	ce
Type of Annular Sealant: High-s	olids bentonite			616.35		Top of Annula	r Sealant
Installation Method Tremie							
Setting Time: >24 hours			7			Static Water I	evel
Setting Time:			<u>×</u>			(After Completio	n)
Type of Bentonite Seal Gram	<u>ilar</u> Pellet Slur	ry					
Installation Method:	(choose one)	× ×	××	607.50	_10.85_	Top of Seal	
Setting Time: <u>15 minutes</u>		— X	×	605.50	12.85	Top of Sand P	ack
Type of Sand Pack: Quartz Sand	1						
Grain Size:10-20 (sie	ve size)			604.57	13.78	Top of Screen	
Installation Method: Gravity	1						
				599.74	18.61	Bottom of Scr	een
Type of Backfill Material: <u>Quart</u>	z Sand (if applicable)	L		599.31		Bottom of We	1
Installation Method:Gravity	/		598.35	20.00	Bottom of Bor	ehole	
				 Referenced to a 	1 National Geodet	ic Datum	
				CAS	SING MEAS	SUREMENTS	
WELL CONS	ΤΡΙ ΤΙΟΝ ΜΑΤΕΡ	ŀ	Diameter of Boreh	ole	(inch	es) 8.0	
(Choose on	e type of material for each area)	-	ID of Riser Pipe	1	(inch	es) 2.0	
				Protective Casing I	Length	(fe	et) 5.0 et) 16.75
Protective Casing	SS304 SS316 PTFE	PVC OTHER:	steel	Bottom of Screen t	o End Can	(fe	(10.73) et) 0.43
Riser Pipe Above W.T.	SS304 SS316 PTFE	PVC OTHER:		Screen Length (1	st slot to last slo	t) (fe	et) 4.83
Riser Pipe Below W.T.	SS304 SS316 PTFE	PVC OTHER:		Total Length of Ca	sing	(fe	et) 22.01

Well Completion Form (revised 02/06/02)

Screen

SS304 SS316 PTFE PVC OTHER:

**Hand-Slotted Well Screens Are Unacceptable

Screen Slot Size **

0.010

(inches)

ATTACHMENT 3 Compiled Potentiometric Surface Maps

GROUNDWATER ELEVATION CONTOUR MAPS MONITORING PERIOD 2016 - 2023

LOCATION: COFFEEN POWER PLANT UNIT NAME: ASH POND NO. 2



Electronic Filing: Received, Clerk's Office 02/20/2024 ** PCB 2024-056**



Electronic Filing: Received, Clerk's Office 02/20/2024 ** PCB 2024-056**



Electronic Filing: Received, Clerk's Office 02/20/2024 ** PCB 2024-056**















LEGEND



1/7/2020 12:16:43 PM



3Q\R2018_3Q_Coffeen_GW_Contours.mxd

LEGEND

1/7/2020 12:23:12 PM

1Q\R2019_1Q_Coffeen_GW_Contours.mxd

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2019_3

PROJECT: 169000XXXX | DATED: 6/18/2020 | DESIGNER: STOLZSD

300 600 0 _ Feet

COLLECTED. ² MW10S WAS DAMAGED PRIOR TO THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED.

RAMBOLL US CORPORATION A RAMBOLL COMPANY

RAMBOLL

CCR RULE GROUNDWATER MONITORING

COFFEEN POWER STATION COFFEEN, ILLINOIS

PROJECT: 169000XXXX | DATED: 12/16/2020 | DESIGNER: galarnmc

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2020_3Q\R2020_3Q_Coffeen_GW_Contours.mxd

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)

- - INFERRED GROUNDWATER ELEVATION CONTOUR JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE
- GROUNDWATER FLOW DIRECTION

0 300 600

SURFACE WATER FEATURE

NOTE:

* = NOT USED FOR CONTOURING NM = NOT MEASURED ¹ G307 WAS FROZEN DURING THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED. ² MW10S WAS DAMAGED PRIOR TO THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED. GROUNDWATER ELEVATION CONTOUR MAP AUGUST 10, 2020

COFFEEN POWER STATION

COFFEEN, ILLINOIS

CCR RULE GROUNDWATER MONITORING

RAMBOLL US CORPORATION A RAMBOLL COMPANY

RAMBOLL

PROJECT: 169000XXXX | DATED: 2/21/2022 | DESIGNER: galarnmc

Y:\Mapping\Projects\22\2285\MXD\2021_AnnualGWM_CAR\Coffeen\AP2_102\COF AP2 GWE Contours D8A4 20210120.mxd

- BACKGROUND WELL
- COMPLIANCE WELL
- MONITORING WELL

GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)

- - INFERRED GROUNDWATER ELEVATION CONTOUR

PART 257 REGULATED UNIT

LIMITS OF FINAL COVER

POTENTIOMETRIC SURFACE MAP JANUARY 20, 2021

NOTE:

ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING. NM = NOT MEASURED 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO.2 COFFEEN POWER PLANT COFFEEN, ILLINOIS RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

PROJECT: 169000XXXX | DATED: 3/16/2022 | DESIGNER: galarnmc

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2021\Coffeen\AP2_102\COF AP2 GWE Contours D9A4D 20210816.mxd

POTENTIOMETRIC SURFACE MAP AUGUST 16, 2021

2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO.2 COFFEEN POWER PLANT COFFEEN, ILLINOIS RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

PROJECT: 169000XXXX | DATED: 5/23/2022 | DESIGNER

Y:\Mapping\Projects\2 en\AP2 102\COF AP2 102 Pot Surface 20220207.mxd

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO. 2 COFFEEN POWER PLANT

FEBRUARY 7, 2022

COFFEEN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

PROJECT: 169000XXXX | DATED: 12/8/2022 | DESIGNER: galammc

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2022\Coffeen\AP2_102\COF AP2 102 Pot Surface 20220823.mxd

PROJECT: 169000XXXX | DATED: 11/15/2023 | DESIGNER: egreaves

Y:\Mapping\Projects\22\2285\MXD\GW_Contours\Round_2023\Coffeen\AP2_102\2023_AP2_102.aprx

COMPLIANCE MONITORING WELL BACKGROUND MONITORING WELL SOURCE SAMPLE LOCATION

650

___ Feet

- PORE WATER WELL
- + LEACHATE WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

325

0

L

- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88) INFERRED GROUNDWATER ELEVATION CONTOUR
- -> GROUNDWATER FLOW DIRECTION
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY
- REGULATED UNIT (SUBJECT UNIT)

POTENTIOMETRIC SURFACE MAP MAY 30, 2023

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

NOTES: 1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING. 2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) ASH POND NO. 2 COFFEEN POWER PLANT COFFEEN, ILLINOIS

ATTACHMENT 4

Coffeen Power Plant Groundwater Model Output


SIMULATED STEADY STATE GROUNDWATER LEVEL CONTOURS FROM UA (LAYER 3) FROM THE CALIBRATED MODEL

GROUNDWATER MODELING REPORT ASH POND NO. 1 COFFEEN POWER PLANT COFFEEN, ILLINOIS



Exhibit C

DECLARATION OF MELINDA W. HAHN, PhD

In support of Illinois Power Generation Company's Petition for Review of IEPA's Non-concurrence with the Coffeen Alternative Source Demonstration for Sulfate and Total Dissolved Solids and Request for Stay.

I, Dr. Melinda W. Hahn, declare and state as follows:

1) I am an Environmental Engineer and Senior Managing Consultant with Ramboll Americas Engineering Solutions, Inc. Attachment 1 is a true and accurate copy of my Curriculum Vitae.

2) I hold a PhD in Environmental Engineering from Johns Hopkins University. The focus of my research for my PhD dissertation was contaminant transport in porous media (e.g., groundwater).

3) My practice over my 25-year career includes site investigation and remediation in multiple state and federal programs, such as voluntary remediation, Resource Conservation and Recovery Act (RCRA) corrective action, and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) response action. My work in these programs includes contaminant fate and transport modelling, site investigation and remediation, and statistics and forensic

1

analysis of environmental contamination data. I have evaluated sites from many different industrial sectors with many different contaminants of concern, including volatile organic compounds (VOCs), which includes chlorinated volatile organic compounds (CVOCs), semivolatile organic compounds (SVOCs), metals, polychlorinated biphenyls (PCBs), and dioxins/furans.

4) To prepare this Declaration, I reviewed the Illinois Power Generation Company (IPGC) December 15, 2023 Alternative Source Demonstration (ASD) -G407 Sulfate and Total Dissolved Solids (TDS) Report for the Coffeen Power Plant (CPP) Ash Pond No. 2 (AP2), the January 11, 2024 dated IEPA denial of the ASD, and supporting information for the ASD. I reviewed the documents submitted by IPGC independently and was not personally involved in their preparation.

5) The ASD report addresses sulfate and TDS concentrations observed in groundwater in well G407 above the Groundwater Protection Standards (GPS). The ASD report relies on a multiple lines of evidence (MLE) approach that is standard practice in causal determinations in environmental forensic analysis, risk

2

assessment, and site investigation.^{1,2,3,4,5} The MLE approach involves analysis of multiple independent sets of data to test whether an identified source can explain observed data. Information to consider can be site-specific, regional, or from the literature.^{6,7} These independent lines of evidence are developed until sufficient confidence is achieved to either confirm or rule out a source.⁸ For the CPP AP2 sulfate and TDS ASD, the independent lines of evidence are based on hydrogeological data to establish the direction of groundwater flow, topographical information to establish the direction of surface water flow, chemical porewater data from wells set in the AP2 CCR to characterize source concentrations, and groundwater chemical data from upgradient and compliance wells.

6) The porewater well source concentrations in the AP2 have been characterized through the collection of porewater samples. The source porewater

¹ Miller, J. Methods and Advances in the Forensic Analysis of Contaminated Rivers, E3S Web of Conferences Vol. 125, 2019, p. 3.

² U.S. EPA, U.S. Navy SPAWAR Systems Center, GeoChem Metrix Inc., and Battelle Memorial Institute, A Handbook for Determining the Sources of PCB Contamination in Sediments, Technical Report, TR-NAVFAC EXWC-EV-1302, October 2012, p. 13.

³ U.S. EPA, Office of the Science Advisor, Risk Assessment Forum, Weight of Evidence in Ecological Assessment, EPA/100/R-16/001, December 2016.

⁴ U.S. EPA, Office of Solid Waste and Emergency Response, OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor in Indoor Air, June 2015, pp. xv-xvii, 17-18, 38-40, 60-61, 117-123.

⁵ EPRI, Guidelines for Development of Alternative Source Demonstrations at Coal Combustion Residual Sites, 2017 Technical Report, p. viii.

⁶ U.S. EPA, Office of the Science Advisor, Risk Assessment Forum, Weight of Evidence in Ecological Assessment, EPA/100/R-16/001, December 2016, p. 20 et seq.

⁷ U.S. EPA, U.S. Navy SPAWAR Systems Center, GeoChem Metrix Inc., and Battelle Memorial Institute, A Handbook for Determining the Sources of PCB Contamination in Sediments, Technical Report, TR-NAVFAC EXWC-EV-1302, October 2012, p. 30.

⁸ Miller, J. Methods and Advances in the Forensic Analysis of Contaminated Rivers, E3S Web of Conferences Vol. 125, 2019, p. 3.

data for the AP2 are consistent with literature values for coal ash leachate,^{9,10,11} and define the maximum concentrations for groundwater impact outside of the AP2.

Lines of Evidence

7) The three lines of evidence (LOEs) presented in the December 152023 ASD report for sulfate and TDS are as follows:¹²

a) LOE 1: Groundwater does not flow from AP2 to G407 due to the presence of a groundwater divide;

b) LOE 2: The presence of a surface water divide further supports the presence of a groundwater divide; and

c) LOE 3: G407 does not contain elevated levels of boron, which is indicative of AP2 leachate.

⁹ U.S. EPA, Industrial Environmental Research Laboratory, Chemical and Biological Characterization of Leachates from Coal Solid Wastes, EPA-600/7-80-039, March 1980.

¹⁰ U.S. EPA and TVA, Effects of Coal-ash Leachate on Ground Water Quality, EPA-600/7-80-066, March 1980.

¹¹ U.S. EPA, Office of Research and Development, Characterization of Coal Combustion Residues from Electric Utilities – Leaching and Characterization Data, EPA-600/R-09/151, December 2009.

¹² Geosyntec, Alternative Source Demonstration – G407 Sulfate and Total Dissolved Solids, Coffeen Power Plant Ash Pond No. 2.

8) Coffeen Lake is a V-shaped dendritic lake. The CPP lies in the middle of the "V" such that surface water flows toward a finger of the lake on the western side of the plant property and toward another finger of the lake on the eastern side of the plant property (i.e., there is a surface water divide on-site).



9) Shallow groundwater typically flows in the direction of the local topography (i.e., in the direction of surface water runoff). Gradients of groundwater elevation data indicate the directions of groundwater flow. All shallow groundwater elevation data available (2016 - 2023) indicate the presence of a groundwater flow divide. The groundwater elevation contour map from 2018 provides an example

(the red arrow indicates the direction of groundwater flow in the vicinity of well G407):¹³



¹³ Geosyntec, Alternative Source Demonstration – G407 Sulfate and Total Dissolved Solids, Coffeen Power Plant Ash Pond No. 2, Attachment 3

10) At locations in AP2, groundwater flows to the southeast, however to the west of AP2, groundwater flows to the southwest. G407 does not lie downgradient from AP2, does not receive groundwater or leachate from AP2, and therefore cannot be impacted by AP2.

11) The AP2 is not a source of sulfate and TDS to well G407 because G407 groundwater contains boron at levels more closely resembling background concentrations rather than concentrations at wells impacted by CCR. Boron is considered by U.S. EPA to be the CCR indicator analyte with the fastest travel time and likely the first indicator analyte to be detected.¹⁴ If sulfate and TDS are elevated in a well impacted by CCR, then boron would be commensurately elevated also. A lack of commensurately elevated boron signals that a source other than CCR is causing the exceedance of sulfate and TDS. The following table illustrates the difference in boron concentrations in G407 versus CCR impacted compliance wells at AP2 with similarly (but less) elevated sulfate and TDS concentrations.¹⁵

¹⁴ EPA Proposed Rule: Amendments to the National Minimum Criteria (Phase One for Disposal of Coal Combustion Residuals from Electric Utilities, FR Vol. 83, No. 51, March 15, 2018, p. 11588.

¹⁵ Ramboll, Groundwater Monitoring Data and Detected Exceedances Report, Quarter 2, 2023, Ash Pond No. 2, Coffeen Power Plant, Coffeen, Illinois, Table 1.

Well	Boron	Sulfate	TDS	Sulfate/B	TDS/B
	(mg/L)	(mg/L)	(mg/L)	-	-
G402	4.9	580	1,400	118	286
G404	9.3	700	1,300	75	140
G405	9.5	1,000	1,700	105	179
G406	1.4	480	1,100	343	786
G407	0.09	1,100	2,000	12,222	22,222

As shown in the table, the second quarter 2023 boron concentration in G407 is two orders of magnitude lower than that in the well with similar concentrations of sulfate and TDS (G405), and more than one order of magnitude lower than that in all wells to be addressed under 35 IAC 845.660 for sulfate and TDS at AP2. The dramatic difference in ratios of sulfate and TDS to boron (B) in G407 compared to CCR impacted wells is further evidence than an alternate source caused the sulfate and TDS exceedances at G407.

12) The three LOEs presented in the ASD for the AP2 are sufficient to demonstrate that a source other than the AP2 caused the exceedances at well G407 of sulfate and TDS, and that the AP2 did not contribute to these exceedances.

IEPA Denial and Stated Data Gaps

13) In its January 11, 2024 letter, the IEPA denied the ASD due to perceived "data gaps" that included the following:

a) Characterization to include sample and analysis in accordance with 35 IAC 845.640 must be provided with the ASD.

8

i) 35 IAC 845.640(a) requires evidence of field collection methods, field and laboratory reports, and QA/QC.

ii) 35 IAC 845.650(e) requires evidence of the alternative source.

b) Updated geologic cross sections must be provided and must include data surrounding the hydrogeologic divide and the exceedance well G407 in accordance with 845.620(b)(9).

14) It is unclear what IEPA is requesting with respect to 35 IAC 845.640. That part and section refers to the groundwater sampling plan required for CCR surface impoundments in general to characterize and evaluate upgradient and downgradient groundwater chemistry. 35 IAC 845.640(a) simply lists the components of a sampling and analysis plan such as methods and procedures for sample collection, preservation, shipment, chain of custody, analytical procedures and quality control. The AP2 has a sampling and analysis plan that was submitted with the operating permit application, but is not yet approved. Under an agreement with IEPA, IPGC is sampling in accordance with the submitted plan until approved by IEPA.

15) 35 IAC 845.650 (e) does not require specific evidence or information/characterization of the alternative source in an ASD. It requires only a demonstration that the CCR unit has not caused or contributed to the exceedance

of a GPS. That demonstration that a source other than the CCR unit is causing the exceedance and that the CCR unit is not contributing to the exceedance can be made without specifically identifying or evaluating the alternative source. Performing the steps to identify and evaluate an alternative source would not change the conclusion of the ASD that the sulfate and TDS exceedances at G407 are caused by an alternative source (other than AP2), and that AP2 did not contribute to the exceedances.

The IEPA is also requesting that the geological cross sections 16) be updated with data from the vicinity of the groundwater divide and well G407 in accordance with IAC 845.620(b)(9). That section states that a hydrogeological characterization for a CCR surface impoundment must include "soil characteristics". It seems the IEPA may be requesting additional soil borings in the vicinity of G407 that identify soil types and thicknesses. The key data that clearly identify the groundwater divide are groundwater level elevations. Additional soil type characterization will not change our understanding of the hydraulic conditions at the CPP. Additional soil type characterization will also not change the fact that the groundwater at G407 has a different chemical signature compared to CCR impacted wells that indicates an alternative source of the sulfate and TDS exceedances in G407. Additional soil type characterization in the vicinity of G407 is therefore not necessary for purposes of the ASD and would not change the

conclusions of the ASD.

17) The IEPA's stated data gaps reference plans and procedures that are already in place at AP2 and appear to request additional soil characterization. The multiple independent LOEs rely on observed surface and groundwater elevations, and groundwater chemistry. The collection of additional soil characterization data would not change the conclusion of the ASD and are therefore unnecessary. The presented LOEs are sufficient to make the required demonstrations.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: February 20, 2024

Melih W Hohn

Melinda W. Hahn, PhD

ATTACHMENT 1 Curriculum Vitae of Melinda Hahn, PhD

RAMBOLL

MELINDA W. HAHN, PH.D.

Senior Managing Consultant

Dr. Hahn's practice areas include site investigation and remediation, contaminant fate and transport modelling, statistics of environmental data, forensic analysis, and litigation support, including primarily environmental liability and cost allocation. Regulatory areas include RCRA, CERCLA, TSCA, and Voluntary Cleanup/Risk-Based Corrective Action. Dr. Hahn has experience in the following industry categories: energy (electric utilities, petroleum dispensing, pipeline operations, former manufactured gas plant sites), industrial equipment manufacturing, metal working and metal recycling, automobile manufacturing, ink and chemical manufacturing, wood treating, mining, cement manufacturing, milling and smelting operations, secondary aluminum production, and dry cleaning.

EDUCATION

1995 PhD, Environmental Engineering The Johns Hopkins University

1990 BS, Physics The University of Texas at Austin

1990 BS, Mathematics The University of Texas at Austin

ACADEMIC HONORS

1992-1995 Graduate Fellow, National Science Foundation

1995 Most Distinguished Environmental Engineering Dissertation, Association of Environmental Engineering Professors

CAREER

1998-Present Senior Managing Consultant, ENVI RON/Ramboll

1997-1998 Consultant, Roy Ball, PC

1995-1997 Senior Project Engineer, Environmental Resources Management-North Central, Inc. CONTACT INFORMATION Melinda W. Hahn, PhD

<u>mhahn@ramboll.com</u> +1 (512) 239-9883

Ramboll Environ 11782 Jollyville Road Suite 211 Austin, TX 78759 United States of America

PROJECTS

- Provided technical litigation support for over 50 matters regarding extent, severity, timing, and source of soil and ground water contamination and vapor intrusion, necessity for and costs of remediation, human health risk assessment, toxic tort liability, Superfund cost allocation (including consistency with the NCP), insurance cost recovery, and the siting and monitoring of a hazardous waste landfill. The regulatory frameworks included Illinois Voluntary Cleanup Program, Illinois Leaking Underground Storage Tank Program, RCRA, CERCLA, TSCA, NCP, and California Proposition 65. Completed projects in more than twenty states, with a focus in the Midwest.
- Provided expert testimony in matters involving Superfund cost allocation, statistics of environmental data, and contaminant fate and transport.
- Retained as an expert witness and provided litigation/mediation support for a number of cost allocation cases involving remediation of contaminated soil, groundwater, and sediment.
- Provided litigation support for environmental liability/cost allocation mediation and litigation at several large sediment sites. Evaluated historical information on industrial processes and discharges, and conducted forensic/statistical analysis to estimate the relative contribution of contaminants to sediments.
- Provided litigation support for a number of insurance cost recovery projects, including a former wood treating facility, a jewelry manufacturer, metal plating facility, machine shop and dry cleaner. Tasks included the identification of likely sources and timing of contamination.
- Evaluated claims of residents living near a scrap metal facility of transport and deposition of leadcontaining particles in their homes using statistical analysis of plaintiffs' chemical data. Provided expert testimony based on this analysis.
- Evaluated the hydrogeological setting of a proposed petroleum pipeline pumping station and estimated the likelihood of a release and groundwater contamination. Provided expert testimony based on this analysis.
- Provided expert testimony on proposed coal ash impoundment closure regulations and proposed new state groundwater standards in Illinois.
- Conducted environmental forensic evaluations to determine sources of observed environmental contamination in soil, groundwater, sediment and sub-slab/indoor air for sites in litigation and pre-litigation phases.
- Performed multivariate statistical analyses of data for forensic analysis, for contaminant ecological impact analysis, to determine appropriate remedial objectives, and as part of human health and ecological risk assessments.
- Lead RCRA Corrective Action at a former manufacturing facility.
- Directed and assisted in the closure of a number of sites in the Illinois Voluntary Cleanup Program and the Illinois Leaking Underground Storage Tank Program.
- Evaluated the potential contribution of urban industrial sources of heavy metals to urban soil and sediments using both simple data comparisons and multivariate statistical techniques.
- Performed ground water and contaminant fate and transport modeling using MODFLOW and MT3D for use as a Superfund cost allocation tool in support of expert testimony. Relative mass of TCE entering the Superfund Site from sources on two PRP's properties was used as a basis for cost allocation. A Monte Carlo analysis was also performed to evaluate the sensitivity of the proposed allocation to changes in key variables.

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- Performed Monte Carlo analysis of risk to ground water posed by a proposed petroleum pipeline in support of expert testimony. The analysis examined the likelihood of the exceedance of the Illinois Class I ground water standard for benzene per mile of proposed pipeline.
- Performed Monte Carlo cost allocation among four PRPs for a Superfund Site in support of expert testimony. Total volume, volume of hazardous substances, and volume of drummed materials were considered.
- Utilized 3-D geostatistical interpolation techniques to visualize environmental data, to estimate excavation volumes for remediation, and to identify and distinguish source areas and potential preferential pathways of migration for a number of contaminated sites.
- Performed research and analysis of remedial activities and associated costs to determine compliance with the NCP for cost recovery matters for a number of sites.

PUBLICATIONS AND PRESENTATIONS

1993

Stochastic Models of Particle Deposition in Porous Media Paper presented at the 1993 Midwest Regional Conference on Environmental Chemistry, University of Notre Dame Authors: Hahn, M.W., and C. F. O'Melia

1994

Deposition and Reentrainment of Particles in Porous Media Poster presented at the 1994 Gordon Research Conference on Environmental Science, Water, New Hampshire

Authors: Hahn, M.W., D. Abadzic, and C. R. O'Melia

1994

Colloid Transport in Groundwaters: Filtration of Fine Particles at Low Filtration Rates Presented at the 1994 ASCE National Conference, Boulder, Colorado Authors: Hahn, M.W., D. Abadzic, and C. R. O'Melia

1995

Deposition and Reentrainment of Brownian Particles under Unfavorable Chemical Conditions Presented at the 1995 ACE National Conference, Environmental Chemistry Division Authors: Hahn, M.W., D. Abadzic, and C. R. O'Melia

1995

Deposition and Reentrainment of Brownian Particles under Unfavorable Chemical Conditions Doctoral Dissertation, Johns Hopkins University Author: Hahn, M.W.

1997 Some Effects of Particles Size in Separation Processes Involving Colloids Wat. Sci. Tech. Vol. 36, No. 4 pp. 119–126

Authors: O'Melia, C.R., M.W. Hahn, and C. Chen

1997

Literature Review 1997: Storage, Disposal, Remediation, and Closure Water Environment Research, Vol. 69, No. 4, pp 6389-719 Authors: Millano E.F. and M.W. Hahn

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1998

The Statistics of Small Data Sets Accepted for publication, Superfund Risk Assessment in Soil Contamination Studies: Third Volume, ASTM STP 1338, K.B. Hoddinott Ed., American Society for Testing and Materials Authors: Ball, R.O., and M.W. Hahn

1998

RBCA Compliance for Small Data Sets Battelle Conference Proceedings, Remediation of Chlorinated and Recalcitrant Compounds: Risk, Resource and Regulatory Issues The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, California, pp. 73-78 Authors: Hahn, M.W., A.E. Sevcik, and R.O.Ball

1998

Contaminant Plume and using 3D Geostatistics Battelle Conference Proceedings, Remediation of Chlorinated and Recalcitrant Compounds: Risk, Resource and Regulatory Issues The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds, Monterey, California, pp. 85-90 Authors: Ball, R.O., M.W. Hahn, and A.E. Sevcik1998 RBCA Closure at DNAPL Sites Battelle Conference Proceedings, Remediation of Chlorinated and Recalcitrant Compounds: Risk, Resource and Regulatory Issues The First International Conference on Remediation of Chlorinated and Recalcitrant Compounds; Monterey, California, pp.181-186 Authors: Sheahan, J.W., R.O. Ball, and M.W. Hahn

1998

RBCA Closure at DNAPL Sites, Ground Water Monitoring and Research Authors: Sheahan, J.W., R.O. Ball, and M.W. Hahn

2004

Deposition and Reentrainment of Brownian Particles in Porous Media under Unfavorable Chemical Conditions: Some Concepts and Applications Environmental Science & Technology, Vol. 38, pp 210-220 Authors: Hahn, M.W. and C.R. O'Melia

2010

Making the Case for Causation in Toxic Tort Cases: Superfund Rules Don't Apply Environmental Law Reporter, News & Analysis, July 2010, pp. 10638-10641 Authors: More, J.R. and M.W. Hahn

Exhibit D

DECLARATION OF CYNTHIA VODOPIVEC ON BEHALF OF ELECTRIC ENERGY INC.

I, Cynthia Vodopivec, affirm and declare as follows:

1. I present this Declaration on behalf of Illinois Power Generating Company, LLC (hereinafter "IPGC"). I am Senior Vice President, Environmental Health and Safety at Vistra Corp., the indirect corporate parent of IPGC. As part of my duties, I oversee permitting, regulatory development, compliance (air, water, and waste issues), and health and safety at the Company, including IPGC's Coffeen Power Plant in Montgomery County, Illinois. I received a Bachelor's Degree in Engineering from Dartmouth College in 1998 and an MBA from Rensselaer in 2009. I state the following in support of IPGC's Petition for Review of Illinois Environmental Protection Agency's Non-Concurrence with Alternative Source Demonstration under 35 Ill. Adm. Code Part 845 and Motion for Stay ("Petition").

2. IPGC received IEPA's letter dated January 11, 2024, notifying IPGC of IEPA's nonconcurrence with the Coffeen Power Plant Ash Pond 2 ("AP2") Alternative Source Demonstration for sulfate and TDS via U.S. Mail on January 16, 2024. This letter is attached as Exhibit A of the Petition.

3. Conducting an investigation to identify and characterize the alternative source for the sulfate and total dissolved solids ("TDS") exceedances at G407 using methods described in 35 Ill. Adm. Code 845.640 (assuming such sampling and analysis would be feasible for the alternative source) would involve drilling of 5 borings, installation of 3 monitoring wells, solids and groundwater analyses, and data evaluation and reporting. Assuming a driller is readily available, which is not always the case, this process would likely take 24 weeks, and would cost approximately \$105,000.

4. Preparing an updated hydrogeologic characterization report with new geologic cross sections that include data surrounding the hydrogeologic divide and well G407 would take approximately 10 weeks, and would cost approximately \$50,000.

5. Completing an assessment of corrective measures for the sulfate and TDS exceedances identified in the ASD in accordance with the requirements and deadlines of 35 III. Adm. Code § 845.660 would likely cost approximately \$35,000. Completing the requirements of 35 III. Adm. Code § 845.670, including determining nature and extent, conducting geochemical evaluation, preparing and submitting the semi-annual reports, a construction permit application and a corrective action plan for the cobalt exceedance would likely cost approximately \$225,000. Undertaking the steps required in Sections 845.660 and 845.670 is a considerable undertaking that requires the dedication of many resources. For example, the corrective measures assessment may require development of groundwater models specific to sulfate and TDS, and could result in the development of potential engineered remedies. The corrective action plan may require a 30 percent design for the selected remedy, a groundwater monitoring plan, a new construction permit application, and attendance at a public meeting. Significant personnel time and resources will be necessary to dedicate specifically to this work.

FURTHER, the Declarant sayeth not.

Dated: February <u>19</u>, 2024

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