ILLINOIS POLLUTION CONTROL BOARD
June 17, 2021

| | | |
|---|---|---|
| SIERRA CLUB, PRAIRIE RIVERS NETWORK, and NATIONAL ASSOCIATION FOR THE ADVANCEMENT OF COLORED PEOPLE, | ) | |
| Complainants, | ) | |
| v. | ) | PCB 18-11 |
| | ) | (Citizens Enforcement – Water) |
| CITY OF SPRINGFIELD, OFFICE OF PUBLIC UTILITIES d/b/a CITY WATER, LIGHT AND POWER | ) | |
| Respondent. | ) | |

INTERIM OPINION AND ORDER OF THE BOARD (by A. Palivos):

In September 2017, Sierra Club, Prairie Rivers Network, and the National Association for the Advancement of Colored People (collectively, Citizen Groups) filed a complaint against the City of Springfield, Office of Public Utilities, doing business as "City Water, Light and Power" (CWLP). Citizen Groups allege that CWLP has polluted the groundwater at its power plant. The complaint concerns CWLP's Dallman Power Station, a coal-burning power plant located on Lake Springfield in Springfield, Sangamon County. The complaint also concerns CWLP's Lakeside Power Station, a former coal-burning power plant located on the same site.

After the parties conducted discovery, Citizen Groups filed an amended complaint in April 2019. The amended complaint alleges that CWLP violated Sections 12(a) and 12(d) of the Environmental Protection Act (Act) (415 ILCS 5/12(a), 12(d) (2018)) and Sections 620.115, 620.301(a), and 620.405 of the Board's groundwater quality rules (35 Ill. Adm. Code 620.115, 620.301(a), 620.405). According to the amended complaint, "CWLP, through its coal ash disposal ponds, unconsolidated coal ash fill, and/or other coal ash and coal combustion waste repositories at the CWLP Site, has discharged contaminants into the environment at the CWLP Site and thereby caused water pollution." Amended Complaint at ¶ 28. Citizen Groups allege that since groundwater monitoring began at the site in 2010, Illinois Class I potable resource groundwater quality standards for eight contaminants (arsenic, boron, chromium, iron, lead, manganese, sulfate, and total dissolved solids (TDS)) have been exceeded 365 times. Citizen Groups alternatively plead that Illinois Class II general resource groundwater quality standards for those same contaminants have been exceeded 237 times.

Citizen Groups ask the Board to find that CWLP has violated the Act and Board regulations. As remedies for proven violations, Citizen Groups ask that the Board order CWLP to: (1) pay civil penalties; (2) cease and desist from causing or threatening to cause water pollution; (3) modify coal ash and coal combustion waste disposal and storage practices to avoid

future groundwater contamination; and (4) remediate the contaminated groundwater so that it meets applicable groundwater quality standards.

Today, the Board rules on the parties' cross motions for partial summary judgment. Citizen Groups seek summary judgment on some alleged violations but not on any requested remedies. Specifically, Citizen Groups move for summary judgment on the alleged violations of Section 12(a) of the Act and the three sections of the groundwater quality rules, but not on the alleged violation of Section 12(d) of the Act. Citizen Groups further limit their summary judgment motion to the site's two "coal ash disposal ponds," to the exclusion of the "unconsolidated coal ash fill" and "other coal ash and coal combustion waste repositories" allegedly at the site. CWLP seeks summary judgment not on any of the alleged violations but rather on two parts of Citizen Groups' requested remedies: requiring CWLP to modify its coal ash handling practices; and requiring CWLP to remediate groundwater contamination.

For reasons detailed in this interim opinion, the Board denies Citizen Groups' motion for partial summary judgment. The Board finds that CWLP allowed releases of some contaminants from one or both coal ash disposal ponds causing exceedances of the Board's Class I and Class II groundwater quality standards at some of the downgradient monitoring wells. However, Citizen Groups failed to meet their burden of producing evidence demonstrating that these groundwaters are Class I or Class II groundwater under the Board's regulations. The classification of downgradient groundwaters as Class I or Class II is central to Citizen Groups' alleged violations as argued in their motion. Citizen Groups therefore failed to meet their burden of persuasion that there are no genuine issues of material fact and that they are entitled to judgment as a matter of law. Additionally, the Board denies CWLP's motion for partial summary judgment because the requested remedies being challenged are neither premature nor beyond the Board's authority.

The Board directs the hearing officer and the parties to proceed expeditiously to hearing on the alleged violations. If, after hearing, the Board finds that CWLP violated the Act or Board regulations as Citizen Groups allege, the Board will order a separate hearing on remedies, including any civil penalties.

In this interim opinion, the Board first provides the case's procedural background, followed by the applicable summary judgment standards. After that, the Board lays out the relevant statutory and regulatory language. Next, the Board sets forth the undisputed facts. The Board then analyzes the issues and makes its findings and conclusions on the cross motions for partial summary judgment.

## PROCEDURAL BACKGROUND

On September 27, 2017, Citizen Groups filed a single-count complaint against CWLP. On November 3, 2017, CWLP filed a motion to dismiss the complaint or, alternatively, to strike one of the alleged violations. Citizen Groups opposed this motion on November 17, 2017, after which CWLP filed a reply. On December 21, 2017, the Board denied CWLP's motion and accepted the complaint for hearing. During 2018 and the beginning of 2019, the parties engaged in discovery.

On April 19, 2019, Citizen Groups filed an unopposed motion for permission to file an amended complaint, accompanied by the amended complaint. The hearing officer granted that motion on April 23, 2019. The hearing officer's order of June 19, 2019, noted that Citizen Groups intended to file a modification of the amended complaint to correct minor errors in its exhibits, which they did on June 24, 2019. The Board cites the amended complaint, so modified, as "Am. Comp." CWLP filed an answer and claimed affirmative defenses on July 5, 2019 (Ans.).[1] On September 16, 2019, Citizen Groups replied to CWLP's claimed affirmative defenses. The parties continued to exchange discovery documents during this time.

On January 29, 2020, the parties filed their cross motions for partial summary judgment (CG Mot.; CWLP Mot.), which the Board rules on today. The parties filed responses to the cross motions on February 13, 2020 (CG Am. Resp.[2]; CWLP Resp.). CWLP's response requests oral argument but the request is unsupported and therefore denied. *See* 35 Ill. Adm. Code 101.700(b). On February 27, 2020, Citizen Groups filed a motion for permission to file a reply to CWLP's response, attaching their reply (CG Reply), which the Board grants. *See* 35 Ill. Adm. Code 101.500(e).

## LEGAL BACKGROUND

The Board first describes the standards it applies when considering motions for summary judgment. After that, the Board sets forth the provisions of the Act and Board regulations allegedly violated, along with pertinent definitions.

### Standard for Summary Judgment

Under its procedural rules, the Board grants summary judgment when "the record, including pleadings, depositions, and admissions on file, together with any affidavits, shows that there is no genuine issue of material fact, and that the moving party is entitled to judgment as a matter of law." 35 Ill. Adm. Code 101.516(b). As this standard mirrors the standard that applies in Illinois trial courts, cases interpreting Illinois' summary judgment standard can inform how the Board interprets its own standard.

"The purpose of summary judgment is not to try a question of fact, but rather to determine whether a genuine question of material fact exists." Illinois Environmental Protection Agency v. Illinois Pollution Control Bd., 386 Ill. App. 3d 375, 391 (3rd Dist. 2008). "In determining whether a genuine issue of material fact exists, the pleadings, depositions, admissions and affidavits must be construed strictly against the movant and liberally in favor of the opponent." Adames v. Sheahan, 233 Ill. 2d 276, 295-96 (2009). A genuine issue of material

[1] As concerns the alleged violations addressed in this order, CWLP's claimed affirmative defenses (Ans. at 17-22) consist of arguments that were either rejected earlier by the Board's December 21, 2017 order or subsumed later by CWLP's filings at issue today.

[2] On February 13, 2020, Citizen Groups filed a response and then an amended response. The Board refers to the latter.

fact precluding summary judgment exists when "the material facts are disputed, or, if the material facts are undisputed, reasonable persons might draw different inferences from the undisputed facts." *Id*. at 296. Summary judgment "is a drastic means of disposing of litigation, and therefore, should be granted only when the right of the moving party is clear and free from doubt." *Id*.

"In a summary judgment proceeding, the burden of persuasion is always on the moving party to establish that there are no genuine issues of material fact and that moving party is entitled to judgment as a matter of law." Performance Food Group Co., LLC v. ARBA Care Center of Bloomington, LLC, 2017 IL App (3d) 160348, ¶ 18. "The burden of production, however, may shift during the course of the proceedings." *Id*. "Initially, the burden of production is on the moving party." *Id*.

The party moving for summary judgment may meet its initial burden of production by "presenting facts which, if uncontradicted, would entitle it to judgment as a matter of law." Estate of Sewart, 236 Ill. App. 3d 1, 8 (1st Dist. 1992). Once the party moving for summary judgment "produces such evidence, the burden of production shifts to the party opposing the motion, who . . . is required to come forth with some facts which create a material issue of fact." *Id*. Although the party opposing the motion "need not prove her case at this point, she must provide some factual basis which would arguably entitle her to a judgment under the applicable law." *Id*. If the party opposing the motion "fails to produce such evidence, summary judgment is properly granted." *Id*.

## Provisions Allegedly Violated

Citizen Groups' amended complaint alleges that CWLP violated Section 12(a) of the Act. Section 12(a), which is a prohibition concerning water pollution, provides that "[n]o person shall . . . [c]ause or threaten or allow the discharge of any contaminants[3] into the environment in any State so as to cause or tend to cause water pollution in Illinois, either alone or in combination with matter from other sources . . . ." 415 ILCS 5/12(a) (2018). The Act defines "water pollution" as follows:

> such alteration of the physical, thermal, chemical, biological or radioactive properties of any waters[4] of the State, or such discharge of any contaminant into any waters of the State, as will or is likely to create a nuisance or render such waters harmful or detrimental or injurious to public health, safety or welfare, or to domestic, commercial, industrial, agricultural, recreational, or other legitimate

[3] "Contaminant" means "any solids, liquid, or gaseous matter, any odor, or any form of energy, from whatever source." 415 ILCS 5/3.165 (2018).

[4] "Waters" means "all accumulations of water, surface and underground, natural, and artificial, public and private, or parts thereof, which are wholly or partially within, flow through, or border upon this State." 415 ILCS 5/3.550 (2018).

uses, or to livestock, wild animals, birds, fish, or other aquatic life. 415 ILCS 5/3.545 (2018).

In addition, Citizen Groups' amended complaint alleges that CWLP violated Sections 620.115, 620.301(a), and 620.405 of the Board's Part 620 groundwater quality rules. These three sections are also prohibitions. First, Section 620.115 provides that "[n]o person shall cause, threaten or allow a violation of the Act, the [Illinois Groundwater Protection Act] or regulations adopted by the Board thereunder, including but not limited to this Part [620]." 35 Ill. Adm. Code 620.115. Second, Section 620.301(a) states:

> No person shall cause, threaten or allow the release[5] of any contaminant to a resource groundwater[6] such that:
>
> 1) Treatment or additional treatment is necessary to continue an existing use or to assure a potential use of such groundwater; or
>
> 2) An existing or potential use of such groundwater is precluded. 35 Ill. Adm. Code 620.301(a).

Third, Section 620.405 provides that "[n]o person shall cause, threaten or allow the release of any contaminant to groundwater so as to cause a groundwater quality standard set forth in this Subpart [D of Part 620] to be exceeded." 35 Ill. Adm. Code 620.405.

Subpart D of Part 620 contains the Illinois groundwater quality standards for potable resource groundwater (Class I) and general resource groundwater (Class II). *See* 35 Ill. Adm. Code 620.410, 620.420.[7] Below are the Class I and Class II groundwater quality standards in milligrams per liter (mg/L) for the eight chemical constituents at issue:

| Chemical Constituent | Class I Groundwater Quality Standard | Class II Groundwater Quality Standard |
|---|---|---|
| Arsenic | 0.010 mg/L | 0.2 mg/L |

[5] "Release" means "any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injection, escaping, leaching, dumping, or disposing into the environment . . . ." 415 ILCS 5/3.395 (2018).

[6] "Groundwater" means "underground water which occurs within the saturated zone and geologic materials where the fluid pressure in the pore space is equal to or greater than atmospheric pressure." 415 ILCS 5/3.210 (2018). "Resource groundwater" means "groundwater that is presently being or in the future capable of being put to beneficial use by reason of being of suitable quality." 415 ILCS 5/3.430 (2018).

[7] The Act defines "potable" as "generally fit for human consumption in accordance with accepted water supply principles and practices." 415 ILCS 5/3.340 (2018).

| | | |
|---|---|---|
| Boron | 2.0 mg/L | 2.0 mg/L |
| Chromium | 0.1 mg/L | 1.0 mg/L |
| Iron | 5.0 mg/L | 5.0 mg/L |
| Lead | 0.0075 mg/L | 0.1 mg/L |
| Manganese | 0.15 mg/L | 10.0 mg/L |
| Sulfate | 400.0 mg/L | 400.0 mg/L |
| Total Dissolved Solids (TDS) | 1,200.0 mg/L | 1,200.0 mg/L |

35 Ill. Adm. Code 620.410(a) (Class I), 620.420(a) (Class II).

Generally, concentrations of these inorganic chemicals "must not be exceeded" in Class I or Class II groundwater, as applicable, "[e]xcept due to natural causes." *Id*.

All groundwaters of the State are designated as: Class I potable resource groundwater; Class II general resource groundwater; Class III special resource groundwater; Class IV other groundwater; or a groundwater management zone. 35 Ill. Adm. Code 620.201. Class I potable resource groundwater includes "[g]roundwater located 10 feet or more below the land surface and within . . . [a]ny geologic material which is capable of a . . . [h]ydraulic conductivity of 1 x $10^{-4}$ [centimeters per second] or greater using" a "[s]lug test." 35 Ill. Adm. Code 620.210(a)(4)(B)(2). "Any portion of the thickness associated with the geologic materials . . . should be designated as Class I: Potable Resource Groundwater if located 10 feet or more below the land surface." 35 Ill. Adm. Code 620.210 (Board Note). Class II general resource groundwater is "[g]roundwater which does not meet the provisions of Section 620.210 (Class I), Section 620.230 (Class III), or Section 620.240 (Class IV)." 35 Ill. Adm. Code 620.220(a).

## UNDISPUTED FACTS

### CWLP's Facilities

CWLP owns and operates a facility located at 3100 Stevenson Drive in Springfield, on the northwestern bank of Lake Springfield. CWLP Resp., Group Exh. F at 01626, 01689, 01692, 02029, 009381. At the facility, CWLP operated the Lakeside Power Station and currently operates the Dallman Power Station as coal-burning power plants. Ans. at ¶ 1. Lakeside Station was built in the 1930s and has two coal-fired burners; Dallman Station was built in the 1970s and has three coal-fired boilers. CWLP Resp., Group Exh. F at 01626. Lakeside Station was retired in 2009. *Id*. CWLP operates a potable water treatment plant at the same site. *Id*.

Northeast of the power stations, CWLP has two coal combustion residual (CCR) surface impoundments: Lakeside Ash Pond and Dallman Ash Pond. Ans. at ¶ 2; CG Mot., Becker[8]

[8] Patrick Becker is CWLP's Environmental Health and Safety Manager. CG Mot., Becker Dep. Tr. at 5. He has been in that position for about nine years but has worked at CWLP for a total of about 16 years. *Id.* at 8-9.

Deposition Transcript (Dep. Tr.) at 27-29. The ash ponds are located north of Lake Springfield and east of Interstate 55. CG Mot., Att. C; CWLP Resp., Group F Exh. at 1695, 8664. Lakeside Ash Pond is located just north of Lake Springfield; Dallman Ash Pond is located just northwest of Lakeside Ash Pond. *Id.* The impoundments are bordered on the south by East Lake Shore Drive, on the west and north by Sugar Creek, and on the east by CWLP's flue gas desulfurization (FGD)[9] landfill.[10] *Id.*

Dallman Ash Pond covers 34.5 acres and has a storage capacity of 1,100,000 cubic yards. CWLP Resp., Group Exh. F at 01692, 02029, 29242. As of January 1, 2009, Dallman Ash Pond contained 730,000 cubic yards of material. *Id*. at 01692. The material consisted of fly ash, bottom ash, boiler slag, FGD landfill leachate, and on-site industrial waste water treatment plant sludge. *Id*. at 01690. Lakeside Ash Pond covers 35 acres and has a storage capacity of 1,200,000 cubic yards; it consists of four separate ponds, *i.e.*, the settling pond and three lime-softening ponds. *Id*. at 01692, 02029, 29242. As of January 1, 2009, Lakeside Ash Pond contained 1,080,000 cubic yards of material. *Id*. at 01692. The material consisted of fly ash, bottom ash, boiler slag, flue gas emission control residuals (not including bulk amounts of scrubber sludge), and drinking water filter plant sludge. *Id*. at 01690.

Neither Dallman Ash Pond nor Lakeside Ash Pond has a bottom liner. CG Mot., Becker Dep. Tr. at 39, 42, Corcoran[11] Dep. Tr. at 20-21; CG Mot., Att. C; CWLP Resp., Group Exh. F at 01655, 01663, 27440, 009382. Neither Dallman Ash Pond nor Lakeside Ash Pond has an impermeable cap on top of it. CG Mot., Becker Dep. Tr. at 42-43, Corcoran Dep. Tr. at 20-21.

The Dallman impoundment is a diked embankment and approximately 20 feet high; the Lakeside impoundment is a diked embankment, with some incising along its east perimeter, and approximately 30 feet high. CWLP Resp., Group Exh. F at 01626-27. Dallman Ash Pond has received ash since it was placed into service in 1976 or 1977. *Id*. at 01696, 29242; CG Mot., Becker Dep. Tr. at 39. Dallman Ash Pond is still active and receives all the coal ash from the Dallman power plant's Units 31, 32, and 33. CG Mot., Becker Dep. Tr. at 34, 35, 39,

---

[9] The Act defines "coal combustion residual" or "CCR" as "fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers." 415 ILCS 5/3.142, added by P.A. 101-171, eff. 7-30-19.

[10] Among the differences between the complaint and the amended complaint, Citizen Groups "remove[d] all claims relating to contamination that is exclusively from the permitted FGD Landfill." Unopposed Motion for Leave to File Amended Complaint at 3 (Apr. 19, 2019).

[11] Susan Corcoran is an Engineer III who has worked at CWLP for over 30 years. CG Mot., Corcoran Dep. Tr. at 7, 10. She works in CWLP's Environmental Health & Safety Office on compliance with environmental regulations and permits. *Id*. at 8. Her responsibilities include groundwater sampling and reporting for the ash ponds. *Id*. at 8, 10; CG Mot., Becker. Dep. Tr. at 8.

Antonacci[12] Dep. Tr. at 66-67. Coal ash is sluiced from the power plant through pipes or "ash lines" to Dallman Ash Pond with raw lake water, industrial wastewater treatment plant clarifier blowdown,[13] and landfill leachate. CWLP Resp., Group Exh. F at 01626, 02029, 29242; CG Mot., Antonacci Dep. Tr. at 28-29. Some coal ash has been removed from Dallman Ash Pond but coal ash remains in the impoundment. CG Mot., Antonacci Dep. Tr. at 46-47, 49, 53-54, Becker Dep. Tr. at 41. The power plant's Unit 4 has a dry ash handling system; Unit 4's coal ash is not sluiced to the Dallman impoundment. CG Mot., Becker Dep. Tr. at 37, Antonacci Dep. Tr. at 72, 73, 76.

Lakeside Ash Pond, which was placed into service in or before 1958 and vertically expanded in 1988, received all the coal ash from Lakeside Station until that power plant closed in 2009. CWLP Resp., Group Exh. F at 01690, 01696, 02029, 009385, 29242; CG Mot., Becker Dep. Tr. at 42, 70, Corcoran Dep. Tr. at 27. When Lakeside Station operated, bottom and fly coal combustion ash was sluiced to the Lakeside Ash Pond with raw lake water. CWLP Resp., Group Exh. F at 01696. Lakeside Ash Pond still contains coal ash from that prior use. CG Mot., Becker Dep. Tr. at 41. The Lakeside impoundment receives lime-sludge from CWLP's drinking water purification plant, scrubber wastewater treatment plant clarifier blowdown, and water from floor drains. CWLP Resp., Group Exh. F at 29242, Becker Dep. Tr. at 41. CWLP has no plans to remove ash from Lakeside Ash Pond. CG Mot., Antonacci Dep. Tr. at 61-62. Antonacci testified that he was unaware of any coal ash being removed from the Lakeside impoundment except for minimal amounts of coal ash at the bottom of the lime ponds intermingled with the lime when CWLP digs out the lime ponds. *Id*. at 61.

CWLP also operates a clarification pond that receives settled water from Dallman and Lakeside Ash Ponds and discharges effluent to Sugar Creek; CWLP has National Pollutant Discharge Elimination System (NPDES) permit No. IL0024767 for the effluent. Ans. at ¶ 2; CWLP Resp., Group Exh. F at 01646, 01695-96, 009386. The clarification pond, which is part of the treatment process with Lakeside and Dallman Ash Ponds, uses a polymer to settle trace solids out of the water. CG Mot., Becker Dep. Tr. at 28; CWLP Resp., Group Exh. F at 29242. The clarification pond, which is located between Dallman and Lakeside Ash Ponds, is an unlined 10-acre pond containing trace amounts of coal ash. CG Mot., Becker Dep. Tr. at 28-29; CG Mot., Att. C; CWLP Resp., Group Exh. F at 01696.

Lakeside Ash Pond's west berm has experienced seepage, resulting in puddling adjacent to the impoundment. CG Mot., Corcoran Dep. Tr. at 35-36, Antonacci Dep. Tr. at 28, 36-37. The seepage comes from where CWLP raised the height of Lakeside Ash Pond's berms in 1988. CG Mot., Corcoran Dep. Tr. at 36. CWLP installed a toe drain soon after the 1988 expansion to

---

[12] William Antonacci is a civil engineer, Technical Specialist III, in CWLP's Projects and Construction group. CG Mot., Antonacci Dep. Tr. at 7. He began working for CWLP in 2006. *Id*. at 20

[13] "Blowdown" is defined as "the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practice." 35 Ill. Adm. Code 310.110.

address the seepage and, in 2018, redid the toe drain. *Id*. at 36-37. The seepage occurred when the sluiced coal ash inside Lakeside Ash Pond rose above the base of the expansion. *Id*. at 37-38. Corcoran testified that this seepage "has not been uncommon." *Id*. at 36.

The area west of and below Lakeside Ash Pond's west berm, down the slope toward Sugar Creek, was so wet that CWLP installed a sump pump there. CG Mot., Corcoran Dep. Tr. at 38-41. CWLP discovered the wetness when it descended into the area to clear vegetation in an effort to comply with the federal CCR rules. *Id*. at 38-39. Antonacci testified that with "the sump pit that we put in in our flood plain on the west side of the Lakeside ash pond, we're pumping that water back into the ash [sluicing] line that then goes to the Dallman ash pond." CG Mot., Antonacci Dep. Tr. at 33.

The north berm of Lakeside Ash Pond has also experienced seepage at what Corcoran characterized as a "weak spot" due to a "design flaw" in the 1988 expansion. CG Mot., Corcoran Dep. Tr. at 43, Antonacci Dep. Tr. at 36-37. Seepage resulted in sogginess adjacent to the pond necessitating that CWLP in 2017 dig a ditch and install a drain tile there to direct the water into the clarification pond. *Id*., Antonacci Dep. Tr. at 27-28, 33-37.

Seepages at Lakeside Ash Pond, as well as CWLP responses to them, were documented in a 2011 report with recommendations prepared by Kleinfelder, which was the engineering contractor that inspected the impoundments in 2010 on behalf of the United States Environmental Protection Agency (USEPA). Resp. Group Exh. F at 01508, 01616, 01630, 01635, 01637-38, 01658, 01680-82; *see also id*. at 009389 (signs of seepage observed along Lakeside Ash Pond's west and north berms). CWLP responded to the recommendations by letter of August 8, 2011, to USEPA. *Id*. at 01513-14. Among other things, CWLP agreed to incorporate the ash impoundments into the existing emergency action plan for Spaulding Dam (located just south of Lakeside Ash Pond), establish a seepage monitoring program, control vegetation in the upstream and downstream slopes, and remove trees from the embankment, as well as request that the Illinois Department of Natural Resources perform a hazard classification assessment of the coal ash pond structures. *Id*.

## Site Groundwater

Due to an Illinois Environmental Protection Agency (IEPA) coal ash pond initiative, CWLP began monitoring groundwater around the CCR surface impoundments in 2010. CG Mot., Becker Dep. Tr. at 47; *see also* CWLP Resp., Exh. G. The groundwater flowing under Dallman and Lakeside Ash Ponds has been monitored by a network of monitoring wells. CWLP Resp., Group Exh. F at 01186, 01187, 08651, 26648. One of CWLP's consultants, Andrews Engineering, Inc., explained that, generally, the direction of groundwater flow in the impoundment area is west-northwest, *i.e.*, moving from its east and south sides (upgradient) to its west and north sides (downgradient). *Id.* at 01186, 008651. However, along the eastern portion of the impoundment area, there is also an eastward component of flow, likely moving toward the FGD landfill and then north toward Sugar Creek. *Id.* at 01186, 008667-68; CG Mot., Hunsberger Fact Dep. Tr. at 31.

In 2010, CWLP's groundwater monitoring network included one upgradient well (AP-4) and four downgradient wells (AP-1, AP-2, AP-3, AW-3). CWLP Resp., Group Exh. F at 01710, 01712, 01187, 008652. In early 2012, CWLP replaced monitoring wells AP-1 and AP-2 with AP-1R and AP-2R, respectively, because the former monitoring wells had been damaged by flooding. *Id*. at 01127. At the same time, CWLP installed an additional upgradient monitoring well (AP-5). *Id*. AW-3 was originally installed to monitor groundwater at the FGD landfill but was later designated a dual-purpose monitoring well, *i.e.*, also monitoring groundwater at the CCR surface impoundments. CG Mot., Becker Dep. Tr. at 37-38, Corcoran Dep. Tr. at 54, Hunsberger Fact Dep. at 31. In 2018, monitoring well AW-3 was replaced by RW-3 because CWLP determined that analytical results of groundwater samples from AW-3 detected chemical constituents different from the other monitoring wells, calling into question the integrity of AW-3; results from RW-3, however, were consistent with those of AW-3. CWLP Resp., Group Exh. F at 26648; CG Mot., Hunsberger Fact Dep. Tr. at 48-49, Becker Dep. Tr. at 37.

The upgradient wells are located near the southwest (AP-4) and southeast (AP-5) corners of the Lakeside Ash Pond. The downgradient wells are arrayed along the northern and western boundaries of the impoundment area: AW-3/RW-3 at Dallman Ash Pond's northeast corner; AP-1/AP-1R at Dallman Ash Pond's northwest corner; AP-2/AP-2R at Dallman Ash Pond's southwest corner; and AP-3 northeast of Lakeside Ash Pond and east of the clarification pond. CG Mot., Att. C, Becker Dep. Tr. at 37; CWLP Resp., Group Exh. F at 01187, 01720, 01761, 008651-52, 008664-64, 26648; *id*., Corcoran Dep. Tr. at 121.

IEPA informed CWLP that the monitoring wells should be screened in the uppermost water-bearing materials. CWLP Resp., Group Exh. F at 01329. Andrews Engineering explained that "the contaminant migration pathway" is "the first water-bearing zone that contains sufficient hydrogeologic characteristics to provide solute movement from the ash impoundments." *Id*. at 01187. Accordingly, monitoring wells "screened across this zone should provide the earliest and most-reliable indications of a release." *Id*. Andrews Engineering added that "[o]ver the site, the uppermost, laterally continuous, source of water to wells is the weathered upper surface of the bedrock along with any overlying silt, sand, and gravel to which it is hydraulically connected. In some locations, this includes creek fill material . . . ." *Id*.

The "uppermost aquifer" is the basal sand, which rests on top of the weathered bedrock surface. CWLP Resp., Group Exh. F at 01715, 008647, 008649. Stabilize, Inc., a consultant for CWLP, stated that the "predominant groundwater flow" occurs within the basal sand, which "consists of silty to clean sands to fine gravel and has a relatively high permeability." *Id*. at 01715. Andrews Engineering reported that "[t]he basal sand was saturated in all locations where it was encountered." *Id*.

Based on slug tests performed for CWLP by Professional Service Industries, Inc. (PSI) in 2010, the hydraulic conductivities of the geologic material in the screened zones of monitoring wells AP-1, AP-2, and AP-3 are as follows:

- AP-1: $1.15 \times 10^{-3}$ centimeters per second (cm/sec)
- AP-2: $1.27 \times 10^{-2}$ cm/sec and $1.14 \times 10^{-2}$ cm/sec ($1.21 \times 10^{-2}$ cm/sec, as the average of the two measurements)

- AP-3: 2.30 x $10^{-2}$ cm/sec. *Id*. at 01759-60, 01767.

Monitoring wells AP-1 and AP-2 and their respective replacements, AP-1R and AP-2R, were screened just above bedrock at these depths below the ground surface:

- AP-1: 22 feet (screen top) to 32 feet (screen bottom)
- AP-2: 9 feet (screen top) to 19 feet (screen bottom)
- AP-1R: 19.09 feet (screen top) to 28.47 feet (screen bottom)
- AP-2R: 8.41 feet (screen top) to 18.06 (screen bottom). CWLP Resp., Group Exh. F at 01132-36, 01763-66.

AP-1R's screened zone at the bedrock surface consists of a saturated layer of sand and gravel (*id*. at 01134); AP-1's consisted of a saturated layer of sand with silt (*id*. at 01763). AP-2R's screened zone at the bedrock surface consists of a saturated sand layer (*id*. at 01136); AP-2's consisted of a saturated sand layer. *Id*. at 01764.

Monitoring well AP-3 was screened just above bedrock at these depths below the ground surface: 9 feet (screen top) to 19 feet (screen bottom). CWLP Resp., Group Exh. F at 008661. AP-3's screened zone at the bedrock surface consists of a saturated layer of clayey silt. *Id*. at 01765. Monitoring well AW-3 was screened just above bedrock at these depths below the ground surface: 31.43 feet (screen top) to 41.43 feet (screen bottom). *Id*. at 01783-84. RW-3 was installed at a depth and well-screen interval nearly identical to AW-3, the monitoring well it replaced. *Id*. at 26648; CG Mot., Becker Dep. Tr. at 37.

CWLP's expert witness, Brad Hunsberger of Andrews Engineering, testified that because of the varied geology under the CCR surface impoundments, some areas would have a hydraulic conductivity of 1 x $10^{-4}$ cm/sec or greater and be Class I groundwater but other areas would have a hydraulic conductivity less than that and be Class II groundwater. CG Mot., Hunsberger[14] Fact Dep. Tr. at 151, 153. He stated that the basal sand deposits would be Class I groundwater but the creek fill and the lower cohesive deposits would be Class II groundwater. *Id*. Hunsberger testified that "[y]ou're going to get your largest migration or your fastest migration going through the basal sand deposit." CG Mot., Hunsberger Fact Dep. Tr. at 61.

According to Hunsberger, because of the "excessively complicated" investigations that would be required to prove specific groundwaters at the impoundments are Class II rather than Class I, it is simpler to assume that all the groundwater is Class I, which has "more stringent standards." CG Mot., Hunsberger Fact Dep. Tr. at 153-54; CWLP Resp., Hunsberger Fact Dep. Tr. at 151-52 ("One would have to put an excessive amount of borings in the ground to prove that [*i.e.*, distinguish between Class I and Class II groundwater], so it becomes one classification. It's simpler to say it's Class 1 than it is Class 2.").

[14] Brad Hunsberger has been the Director of Hydrogeological Services at Andrews Engineering for 20 years. CG Mot., Hunsberger Fact Dep. Tr. at 7-8. In that capacity, his responsibilities include designing and implementing hydrogeologic assessments. *Id.* at 8.

When coal ash is in contact with water, chemical constituents of the coal ash may leach out. CG Mot., Corcoran Dep. Tr. at 116. Hunsberger testified that by comparing chemical constituent concentrations of the two upgradient monitoring wells with those of the four downgradient monitoring wells, the differences "would be representative of the groundwater quality flowing beneath the Dallman ash pond." CG Mot., Hunsberger Fact Dep. Tr. at 29-30. This "variability in groundwater quality from background to downgradient" would also show any contribution to downgradient groundwater quality from Lakeside Ash Pond because that impoundment is upgradient of Dallman Ash Pond. *Id*. at 30.

According to Hunsberger, because there is no space between the Lakeside and Dallman Ash Ponds to install monitoring wells, it is difficult to distinguish contributions between Lakeside Ash Pond and Dallman Ash Pond, but the differences in upgradient and downgradient monitoring well groundwater quality reflect the collective contribution of those two ash ponds. CG Mot., Hunsberger Fact Dep. Tr. at 30-31, 84. Hunsberger also testified that it is "unlikely" monitoring well AW-3 was impacted by the FGD landfill because the direction of groundwater flow at that location is "straight north or even a little bit to the northeast." *Id*. at 31; *see also* CWLP Resp., Group Exh. F at 008652 ("The locations and depths of these wells [AP-1R, AP-2R, AP-3, and AW-3] accurately represent the quality of groundwater passing the impoundment boundaries of the CCR units and reasonably make possible the detection of geochemical changes in the uppermost aquifer.").

Laboratory analytical testing of groundwater samples from downgradient wells identified concentrations of chemical constituents that exceeded Class I groundwater quality standards 347 times and exceeded Class II groundwater quality standards 223 times:

| **Exceedances of Class I Groundwater Quality Standards (GQS)** | | | | |
|---|---|---|---|---|
| Downgradient Monitoring Well | Chemical Constituent | Date Range of Sampling | Number of Exceedances of Class I GQS | Range of Concentrations Exceeding Class I GQS (mg/L) |
| AP-1 | | | | |
| | Iron | 06/10 | 1 | 5.08 |
| | Manganese | 06/10 | 1 | 0.27 |
| AP-1R | | | | |
| | Arsenic | 08/12 – 02/14 | 2 | 0.0141 – 0.158 |
| | Boron | 02/12 – 11/17 | 23 | 3.9 – 22.5 |
| | Iron | 02/12 – 11/17 | 23 | 9.22 – 48.3 |
| | Lead | 02/12 – 02/14 | 2 | 0.0184 – 0.0291 |
| | Manganese | 02/12 – 11/17 | 24 | 0.182 – 0.877 |
| | Sulfate | 02/12 – 11/17 | 23 | 436 – 672 |
| | TDS | 05/13 – 11/17 | 15 | 1230 – 1490 |
| AP-2 | | | | |
| | Boron | 06/10 | 1 | 2.63 |

| | | | | |
|---|---|---|---|---|
| | Manganese | 06/10 | 1 | 2 |
| AP-2R | | | | |
| | Arsenic | 08/12 – 08/13 | 5 | 0.0156 – 0.0738 |
| | Boron | 02/12 – 11/17 | 23 | 3.16 – 10 |
| | Chromium | 02/12 – 08/12 | 2 | 0.111 – 0.277 |
| | Iron | 02/12 – 02/17 | 17 | 6.73 – 242 |
| | Lead | 02/12 – 11/13 | 6 | 0.0104 – 0.266 |
| | Manganese | 02/12 – 11/17 | 23 | 7.21 – 46 |
| | Sulfate | 11/14 – 05/16 | 6 | 418 – 711 |
| | TDS | 05/15 – 08/15 | 2 | 1460 – 1520 |
| AP-3 | | | | |
| | Arsenic | 06/10 – 05/13 | 5 | 0.0136 – 0.0784 |
| | Boron | 06/10 – 11/17 | 24 | 8.03 – 29.1 |
| | Iron | 06/10 – 11/17 | 25 | 8.39 – 165 |
| | Lead | 02/12 – 08/12 | 2 | 0.0084 – 0.0118 |
| | Manganese | 06/10 – 11/17 | 25 | 5.58 – 10.6 |
| AW-3 | | | | |
| | Arsenic | 06/10 – 11/17 | 24 | 0.015 – 0.231 |
| | Iron | 06/10 – 11/17 | 20 | 9.1 – 62.5 |
| | Manganese | 06/10 – 11/17 | 22 | 0.217 – 2.02 |

CG Mot., Att. J; *see also id*., Att. H; Am. Comp., Exh. D.

| **Exceedances of Class II Groundwater Quality Standards (GQS)** | | | | |
|---|---|---|---|---|
| Downgradient Monitoring Well | Chemical Constituent | Date Range of Sampling | Number of Exceedances of Class II GQS | Range of Concentrations Exceeding Class II GQS (mg/L) |
| AP-1 | | | | |
| | Iron | 06/10 | 1 | 5.08 |
| AP-1R | | | | |
| | Boron | 02/12 – 11/17 | 23 | 3.9 – 22.5 |
| | Iron | 02/12 – 11/17 | 23 | 9.22 – 48.3 |
| | Sulfate | 02/12 – 11/17 | 23 | 436 – 672 |
| | TDS | 05/13 – 11/17 | 14 | 1230 – 1490 |
| AP-2 | | | | |
| | Boron | 06/10 | 1 | 2.63 |
| AP-2R | | | | |
| | Boron | 02/12 – 11/17 | 24 | 3.16 – 10 |
| | Iron | 02/12 – 02/ 17 | 17 | 6.73 – 242 |
| | Lead | 02/12 | 1 | 0.226 |
| | Manganese | 02/12 – 08/17 | 17 | 10.3 – 46 |
| | Sulfate | 11/14 – 05/16 | 6 | 418 – 711 |

| | | | | |
|---|---|---|---|---|
| | TDS | 05/15 – 08/15 | 2 | 1460 – 1520 |
| AP-3 | | | | |
| | Boron | 06/10 – 11/17 | 24 | 8.03 – 29.1 |
| | Iron | 06/10 – 11/17 | 25 | 8.39 – 165 |
| | Manganese | 02/12 | 1 | 10.6 |
| AW-3 | | | | |
| | Arsenic | 08/16 – 02/17 | 3 | 0.21 – 0.231 |
| | Iron | 06/10 – 08/17 | 19 | 9.1 – 62.5 |

CG Mot., Att. J; *see also id*. Att. I; Am. Comp., Exh. E.

Based on samples from the two upgradient monitoring wells (AP-4 and AP-5), Andrews Engineering developed groundwater background values (originally in June 2013 and partially revised in October 2017) for the eight chemical constituents at issue:

| **CWLP's Proposed Groundwater Background Values** | |
|---|---|
| Chemical Constituent | Groundwater Background Value (mg/L) |
| Arsenic | 0.0724 |
| Boron | 0.787 |
| Chromium | 0.811 |
| Iron | 1832 |
| Lead | 0.638 |
| Manganese | 44.6 |
| Sulfate | 84.5 |
| TDS | 97.94 |

CWLP Resp., Group Exh. F at 00991 (June 21, 2013); *id*. at 008681, 008685 (Oct. 17, 2017).

The following tabulates groundwater sample concentrations exceeding both Class I groundwater quality standards and CWLP's proposed background values:

| **Exceedances of CWLP's Groundwater Background Values Among Class I Exceedances** | | | | | |
|---|---|---|---|---|---|
| Downgradient Monitoring Well | Chemical Constituent | Date Range of Sampling | CWLP Background Level | Number of Exceedances of CWLP Background | Range of Concentrations Exceeding CWLP's Background (mg/L) |
| AP-1 | | | | | |
| | Iron | 06/10 | 1832 | 0 | |
| | Manganese | 06/10 | 44.6 | 0 | |
| AP-1R | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | Arsenic | 08/12 – 02/14 | 0.0724 | 0 | |
| | Boron | 02/12 – 11/17 | 0.787 | 23 | 3.9 – 22.5 |
| | Iron | 06/10 – 11/17 | 1832 | 0 | |
| | Lead | 02/12 – 02/14 | 0.638 | 0 | |
| | Manganese | 06/10 – 11/17 | 44.6 | 0 | |
| | Sulfate | 02/12 – 11/17 | 84.5 | 23 | 436 – 672 |
| | TDS | 05/13 – 11/17 | 97.94 | 15 | 1230 – 1490 |
| AP-2 | | | | | |
| | Boron | 06/10 | 0.787 | 1 | 2.63 |
| | Manganese | 06/10 | 44.6 | 0 | |
| AP-2R | | | | | |
| | Arsenic | 08/12 – 08/13 | 0.0724 | 1 | 0.0738 |
| | Boron | 02/12 – 11/17 | 0.787 | 23 | 3.16 – 10 |
| | Chromium | 02/12 – 08/12 | 0.811 | 0 | |
| | Iron | 02/12 – 02/17 | 1832 | 0 | |
| | Lead | 02/12 – 11/13 | 0.638 | 0 | |
| | Manganese | 02/12 – 11/17 | 44.6 | 1 | 46 |
| | Sulfate | 11/14 – 05/16 | 84.5 | 6 | 418 – 711 |
| | TDS | 05/15 – 08/15 | 97.94 | 3 | 1460 – 1520 |
| AP-3 | | | | | |
| | Arsenic | 06/10 – 05/13 | 0.0724 | 1 | 0.0784 |
| | Boron | 06/10 – 11/17 | 0.787 | 24 | 8.03 – 29.1 |
| | Iron | 06/10 – 11/17 | 1832 | 0 | |
| | Lead | 02/12 – 08/12 | 0.638 | 0 | |
| | Manganese | 06/10 – 11/17 | 44.6 | 0 | |
| AW-3 | | | | | |
| | Arsenic | 06/10 – 11/17 | 0.0724 | 21 | 0.015 – 0.231 |
| | Iron | 06/10 – 11/17 | 1832 | 0 | |
| | Manganese | 06/10 – 11/17 | 44.6 | 0 | |

CWLP Resp., Group Exh. F at 00991, 008681, 008685; Am. Comp., Exh. D; CG Mot., Atts. H, J.

The following tabulates groundwater sample concentrations exceeding both Class II groundwater quality standards and CWLP's proposed background values:

| **Exceedances of CWLP's Background Values Among Class II Exceedances** | | | | | |
|---|---|---|---|---|---|
| Downgradient Monitoring Well | Chemical Constituent | Date Range of Sampling | CWLP Background Level | Number of Exceedances of CWLP Background | Range of Concentrations Exceeding CWLP's Background (mg/L) |
| AP-1 | | | | | |
| | Iron | 06/10 | 1832 | 0 | |
| AP-1R | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| | Boron | 02/12 – 11/17 | 0.787 | 23 | 3.9 – 22.5 |
| | Iron | 02/12 – 11/17 | 1832 | 0 | |
| | Sulfate | 02/12 – 11/17 | 84.5 | 23 | 436 – 674 |
| | TDS | 05/13 – 11/17 | 97.94 | 14 | 1230 – 1490 |
| AP-2 | | | | | |
| | Boron | 06/10 | 0.787 | 1 | 2.63 |
| AP-2R | | | | | |
| | Boron | 02/12 – 11/17 | 0.787 | 23 | 3.16 – 10 |
| | Iron | 02/12 – 02/ 17 | 1832 | 0 | |
| | Lead | 02/12 | 0.638 | 0 | |
| | Manganese | 02/12 – 08/17 | 44.6 | 1 | 46 |
| | Sulfate | 11/14 – 05/16 | 84.5 | 6 | 418 – 711 |
| | TDS | 05/15 – 08/15 | 97.94 | 2 | 1460 – 1520 |
| AP-3 | | | | | |
| | Boron | 06/10 – 11/17 | 0.787 | 24 | 8.03 – 29.1 |
| | Iron | 06/10 – 11/17 | 1832 | | |
| | Manganese | 02/12 | 44.6 | | |
| AW-3 | | | | | |
| | Arsenic | 08/16 – 02/17 | 0.0724 | 3 | 0.21 – 0.231 |
| | Iron | 06/10 – 08/17 | 1832 | 0 | |

CWLP Resp., Group Exh. F at 00991, 008681, 008685; Am. Comp., Exh. E; CG Mot., Atts. I, J.

CWLP is aware of methods to reduce groundwater contamination resulting from coal ash impoundments. CG Mot., Staley[15] Dep. Tr. at 34-39. For example, CWLP employees know that closing and capping ash impoundments reduces groundwater contamination. CG Mot., Corcoran Dep. Tr. at 116. Hunsberger was aware of no CWLP "plans to assess the scope of contamination or to mitigate that contamination around wells AP-1, 2, or 3." CG Mot., Hunsberger Fact Dep. Tr. at 88-89; *see also id*. (that assessment and mitigation is "not necessary under the [federal] CCR Rules").

## IEPA's Statements on Site Groundwater and CWLP Responses and Other Activities

In an August 3, 2011 letter to CWLP, IEPA stated that CWLP's June 2010 "groundwater monitoring data . . . shows elevated levels of boron, manganese, arsenic, and iron at monitoring wells located downgradient from the ash storage impoundments." CG Mot., Att. L. An October 19, 2011 letter from IEPA asked CWLP to establish a quarterly monitoring program, including sampling for "Class I groundwater chemical parameters." CWLP Resp., Group Exh. F at 01174. On November 18, 2011, Andrews Engineering submitted CWLP's groundwater monitoring program to IEPA. *Id*. at 01180-01208. In the program, CWLP proposed sampling for Class I groundwater chemical parameters but only for those parameters already detected in groundwater.

[15] Eric Staley is Environmental Specialist with CWLP. Because he would be taking over Corcoran's responsibilities upon her pending retirement, he was receiving training on ash ponds, groundwater, and landfill work. CG Mot., Staley Dep. Tr. at 8, Becker. Dep. Tr. at 8.

*Id*. at 01184. On December 29, 2011, IEPA approved CWLP's groundwater monitoring program with one revision:

> The monitoring wells must be sampled for Class I groundwater chemical parameters listed in 35 IAC 620.410(a) and (d). Once adequate data has been collected to provide a statistically valid representation of groundwater quality, CWLP may request that analytes, which have been consistently below detectable levels, be dropped from the monitoring program. CWLP Resp., Exh. I.

On February 20, 2014, IEPA issued a violation notice to CWLP, alleging violations of "Section 12 of the Act, 415 ILCS 5/12, 35 Ill. Adm. Code 620.115, 620.301, 620.401, 620.405, and 620.410."[16] CG Mot., Att. K at 01110, 01112-14. According to the violation notice, "[o]perations at ash impoundments have resulted in violations of Groundwater Quality Standards." *Id.* at 01112-13. IEPA's violation notice lists boron, sulfate, and TDS exceedances of Class I groundwater quality standards at monitoring wells AP-1R, AP-2, AP-2R, and AP-3 from 2010, 2012, and 2013:

| **IEPA Violation Notice** | | | | |
|---|---|---|---|---|
| Downgradient Monitoring Well | Chemical Constituent | Concentration (mg/L) | Date Sampled | Citation to Lab Report Page in CG Mot., Att. J |
| AP-1R | Boron | 18.9 | 11/20/13 | 02282 |
| | Boron | 14.7 | 08/28/13 | 02242 |
| | Boron | 7.76 | 05/23/13 | 02203 |
| | Boron | 3.9 | 02/21/13 | 02184 |
| | Boron | 4.3 | 11/28/12 | 02129 |
| | Boron | 15.2 | 08/23/12 | 02104 |
| | Boron | 10.4 | 04/25/12 | 02079 |
| | Boron | 14.6 | 02/22/12 | 02059 |
| | Sulfate | 581 | 11/20/13 | 02282 |
| | Sulfate | 597 | 08/28/13 | 02242 |
| | Sulfate | 603 | 05/23/13 | 02203 |
| | Sulfate | 506 | 02/21/13 | 02184 |
| | Sulfate | 488 | 11/28/12 | 02129 |
| | Sulfate | 469 | 08/23/12 | 02104 |
| | Sulfate | 463 | 04/25/12 | 02079 |
| | Sulfate | 521 | 02/22/12 | 02059 |

[16] Section 620.401 provides that "[g]roundwaters must meet the standards appropriate to the groundwater's class as specified in this Subpart [D] and the nondegradation provisions of Subpart C." 35 Ill. Adm. Code 620.401. The other Part 620 regulations cited in IEPA's violation notice are identified in the Legal Background section of this interim opinion, including the Section 620.410, which contains the Board's Class I groundwater quality standards.

| | | | | |
|---|---|---|---|---|
| | TDS | 1250 | 11/20/13 | 02282 |
| | TDS | 1380 | 08/28/13 | 02242 |
| | TDS | 1390 | 05/23/13 | 02203 |
| AP-2 | | | | |
| | Boron | 2.63 | 06/01/10 | 02048 |
| AP-2R | | | | |
| | Boron | 4.78 | 11/20/13 | 02286 |
| | Boron | 5.46 | 08/28/13 | 02246 |
| | Boron | 5.01 | 05/23/13 | 02207 |
| | Boron | 10.0 | 02/21/13 | 02164 |
| | Boron | 6.24 | 11/28/12 | 02133 |
| | Boron | 6.88 | 08/24/12 | 02110 |
| | Boron | 5.51 | 04/25/12 | 02081 |
| | Boron | 5.0 | 02/22/12 | 02061 |
| AP-3 | | | | |
| | Boron | 20.6 | 11/20/13 | 02290 |
| | Boron | 21.3 | 08/28/13 | 02250 |
| | Boron | 18.7 | 05/23/13 | 02211 |
| | Boron | 29.1 | 02/21/13 | 02176 |
| | Boron | 8.03 | 11/28/12 | 02137 |
| | Boron | 20.9 | 08/24/12 | 02112 |
| | Boron | 18.4 | 04/24/12 | 02083 |
| | Boron | 17.7 | 02/22/12 | 02063 |
| | Boron | 11.9 | 06/01/10 | 02049 |

CG Mot., Att. K at 01112-13.

The violation notice also stated that CWLP "must take actions to mitigate existing contamination and prevent the continuing release of contaminants into the environment." *Id.* at 01112.

In response to IEPA's violation notice, CWLP wrote letters to IEPA on April 2 and May 12, 2014, each of which proposed a Compliance Commitment Agreement (CCA). CG Mot., Att. M at 01116-18; CWLP Resp., Group Exh. F at 01122-25. In the first letter, CWLP stated that the "groundwater exceedances . . . appear to have resulted from CWLP's operation of its ash impoundments . . . ." CG Mot., Att. M at 01117. Both letters note that monitoring wells AP-1R, AP-2, AP-2R, and AP-3 were "voluntarily installed and sampled, and the results submitted to [IEPA] by CWLP pursuant to a groundwater monitoring plan voluntarily filed with the IEPA for approval (and approved) pursuant to [IEPA's] request to CWLP as part of its Ash Impoundment Strategy." CG Mot., Att. M at 01116; CWLP Resp., Group Exh. F at 01122.

In the revised CCA, CWLP proposed to "[c]omplete additional activities to investigate and assess the extent of concentrations exceeding the applicable standards and/or the background concentrations to the groundwater, . . . potentially addressing the conditions in 35 Ill. Adm. Code 620.250 [groundwater management zones]." CWLP Resp., Group Exh. F at 01123. More specifically, the revised CCA included these proposed steps:

> Subsequent to identifying the extent of COC [constituents of concern] attributable to the impoundment(s), a Groundwater Management Zone (GMZ) shall be established within one (1) year of [IEPA's] acceptance of CWLP's CCA.
>
> As part of the establishment of the GMZ, potential corrective actions will be evaluated for implementation to control and/or mitigate the COC exceed[a]nces. Potential compliance options that may be considered after the extent of elevated concentrations has been determined are set forth below.
>
> - Establishing a CWLP site-specific rule or an adjusted standard (Illinois Pollution Control Board) for alternative groundwater standards for COC(s) (timetable – one (1) year from initiating). An adjusted standard pursuant to 415 ILCS 5/28.1 may not require corrective action, dependent upon the content of the Adjusted Standard Petition;
>
> - Groundwater extraction and discharge via outfall 004 and/or to the Springfield Metro Sanitary District (timetable - two (2) years from initiating);
>
> - Installing a dry fly-ash handling system on Dallman Unit 33 (timetable - four (4) years from initiating);
>
> - Dredge portion of the Dallman ash impoundment and retrofit with compliant liner. Close and cap unused portion of Dallman ash impoundment (timetable - six (6) years from initiating). *Id*. at 01123-24; *id*. at 009381 (NPDES-permitted outfall 004 discharges from clarification pond to Sugar Creek).

On May 29, 2014, IEPA rejected CWLP's proposed CCA, as revised. CWLP Resp., Group Exh. F at 01126; CG Mot., Becker Dep. Tr. at 78-79. IEPA stated:

> Due to the nature and seriousness of the violations and the extended time requested to achieve compliance, [IEPA] has determined that these violations may not be able to be resolved without the involvement of the Office of the Attorney General or the State's Attorney.
>
> Because the violations remain the subject of disagreement between [IEPA] and [CWLP], this matter will be considered for referral to the above-referenced prosecutorial authorities for formal enforcement action and the imposition of penalties. *Id*.

Numerous reports, notifications, and certifications were issued by or on behalf of CWLP from 2016 to 2019 concerning the surface impoundments and related activities, citing USEPA requirements at 40 C.F.R. Part 257, Subpart D, "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments." For example, in October 2016, Andrews Engineering issued a "Liner Status Report for Coal Combustion Residuals Surface

Impoundments," citing 40 C.F.R. § 257.71. CWLP Resp., Group Exh. F at 009379-82. That report concluded:

> Both the Lakeside Ash Pond and the Dallman Ash pond were built on top of in-place clayey soils. While the vertical hydraulic conductivity is generally low, soils were not compacted beneath impoundments except for sections where the dikes of the Dallman Ash Pond were built atop existing creek bed. No composite liner or alternate composite liner as specified in 40 CFR Part 257.70 (b) or 40 CFR Part 257.70 (c)(1), was used to line the bottom of either ash pond. *Id*. at 009382.

Also in October 2016, citing 40 C.F.R. § 257.73, Andrews Engineering issued a "History of Construction Report for Coal Combustion Residuals Surface Impoundments" (CWLP Resp., Group Exh. F at 009383-09403), an "Initial Hazard Potential Classification Assessment Report for Coal Combustion Residuals Surface Impoundments" (*id*. at 29616-29621), and an "Initial Safety Factor Assessment for Coal Combustion Residuals Surface Impoundments" (*id*. at 29622-29854); *see also id*. at 01512-16 (2011 CWLP response to 2010 USEPA pond inspection report and recommendations, *id*. at 01616-93).

On October 17, 2017, Andrews Engineering issued a "Groundwater Monitoring Program" for the impoundments, citing, among other federal CCR rules, groundwater monitoring and corrective action requirements at 40 C.F.R §§ 257.90-257.98. CWLP Resp. Group Exh. F at 008643-008715; *see also id*. at 26648 (June 2018 groundwater monitoring system certification noted April 2018 revision to Groundwater Monitoring Program for replacement of AW-3 with RW-3). In January 2018, Andrews Engineering issued an "Annual Groundwater Monitoring and Corrective Action Report Year Ending December 31, 2017," citing 40 C.F.R. § 257.90(e). *Id*. at 02027-02036.

On January 11, 2018, CWLP notified IEPA that it intended to "cease sampling the complete groundwater parameter lists from 35 Illinois Administrative Code Part 620.410 (a) Inorganic Chemical Constituents and (b) Organic Chemical Constituents, starting in the first quarter of 2018." CWLP Resp., Group Exh. F at 00986. CWLP added:

> As you know, CWLP has been voluntarily sampling these lists quarterly since the third quarter of 2011. On April 17, 2015 (effective October 19, 2015), USEPA finalized 40 CFR Part 257 Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments (CCR) rule.
>
> In accordance with the CCR rule, CWLP has been and will continue to sample groundwater at our landfill and ash impoundments in accordance with our CCR Ground Water Monitoring Program, which includes Appendix III to Part 257 constituents (boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS)) and Appendix IV to Part 257 constituents (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, selenium, thallium, and radium 226 and 228 combined). *Id*.

On July 11, 2018, CWLP issued "Groundwater Protection Standards," citing 40 C.F.R. § 257.95(h). CWLP Resp., Group Exh. F at 27435. On the same date, CWLP issued a notification stating:

> Due to statistically significant increases over background concentrations for specific Appendix III parameters at certain wells, assessment monitoring was initiated pursuant to 40 CFR 257.95(b). The initial assessment monitoring sampling event occurred May 4, 2018, with resampling occurring July 9, 2018. Groundwater Protection Standards were subsequently established pursuant to 40 CFR 257.95(d)(2). In accordance with 40 CFR 257.95(g), provided herein is notification of a statistically significant increase above the Groundwater Protection Standard for one parameter, total arsenic at well RW-3.
>
> An investigation has been initiated to evaluate the geochemical properties in the vicinity of RW-3 and is currently ongoing. *Id*. at 27437; *see also* CG Mot., Corcoran Dep. Tr. at 64-65.

When asked whether CWLP had found elevated levels of any constituent other than arsenic at RW-3, Becker testified:

> In accordance with the [federal] CCR Rule, the detection monitoring program, there are elevated levels of boron, TDS, and some other items, but for Appendix IV we have not – we've only determined ars[e]nic in RW-3. *** We are following the CCR Rule to determine if there is groundwater contamination at the site. CG Mot., Becker Dep. Tr. at 48-49.

On November 16, 2018, Andrews Engineering issued "an evaluation of the CCR locations standards with respect to closure or retrofitting the CCR surface impoundments," citing 40 C.F.R. §§ 257.60 (Placement Above the Uppermost Aquifer), 257.61 (Wetlands), 257.62 (Fault Areas), 257.63 (Seismic Impact Zones), and 257.64 (Unstable Areas). CWLP Resp., Group Exh. F at 27438-40. The evaluation concluded:

> Of the five location requirements, four appear to comply with the specific rules. However, unlined ponds are placed directly above and within 5 feet of the high water table for the uppermost aquifer. Either it must be demonstrated that there will not be intermittent, reoccurring or sustained hydraulic connection between any portion of the base of the CCR unit and the uppermost aquifer, or cessation of disposal and closure must begin.
>
> Hydraulic separation can be shown by retrofitting the ponds. A composite liner consisting of a two-foot (minimum) low hydraulic conductivity ($< 1.0 \times 10^{-7}$ cm/sec) clayey material overlain by a minimum 30 mil geomembrane (or equivalent) will be adequate to demonstrate hydraulic separation. Part or all of the impoundments can be retrofitted to meet the location requirement. *Id*. at 27440.

In April 2019, CWLP issued a "Notification of Intent to Comply with Alternative Closure requirements in Accordance with 40 CFR 257.103(a)(1)," stating that "CWLP became subject to 257.101(a) and (b)(1) retrofit or closure requirements in October 2018" and "qualifies for the Alternative Closure Requirements 257.103(a) since no alternative disposal capacity is currently available." CWLP Resp., Group Exh. F at 29242. The notification also cited an "environmental compliance study" completed in April 2018 for CWLP and an "economic evaluation in the form of an Integrated Resource Plan" to be complete in May 2019, after which "CWLP will decide on a compliance plan for the impoundments, either retrofitting and/or closing the Lakeside Ash Pond and Dallman Ash Pond." *Id*. at 29243; *see also id*. ("CWLP commissioned Burns & McDonnell in 2012 and again in 2016 to perform an environmental compliance study"); CWLR Resp., Becker Dep. Tr. at 69-70 ("Part of [the Burns & McDonnell] analysis was to look at the closure of the Lakeside ash pond, as well as the Dallman ash pond, as well as possibly retrofitting and kind of looking at all of the costs associated with that."); *id*., Corcoran Dep. Tr. at 114 (Integrated Resource Plan was evaluating a potential switch to dry-ash handling for Units 31, 32, 33).

In July 2019, CWLP issued a report entitled "Completion of Corrective Measures in Accordance with 40 CFR 257.96(a)," in which it stated:

> [D]ue to 40 CFR 257.95(g)(5) the surface impoundments must either retrofit and/or close, which are the long term corrective measures. CWLP has not made a decision on either retrofitting and/or closing the impoundments at this point in time due to the complexities of our system (all CCR and non-CCR material going to these impoundments are wet-generated, not dry). CWLP has initiated the alternative closure requirements in accordance with 40 CFR 257.103(a)(1) and will be submitting an annual progress report in May of 2020 updating the status of the impoundments. CWLP Resp., Group Exh. F at 29238-39.

## DISCUSSION OF CITIZEN GROUPS' MOTION FOR PARTIAL SUMMARY JUDGEMENT

### Overview

The Board denies Citizen Groups' motion for partial summary judgment concerning Dallman Ash Pond and Lakeside Ash Pond. In determining whether a genuine issue of material fact exists, precluding summary judgment in favor of Citizen Groups, the Board construes the record strictly against Citizen Groups and liberally in favor of CWLP. As detailed below, the Board finds genuine issues of material fact, primarily as to the source of some elevated contaminant concentrations in groundwaters hydraulically downgradient of the coal ash surface impoundments. The Board finds no genuine issue of material fact that CWLP allowed contaminant releases from one or both surface impoundments resulting in exceedances of Class I and Class II groundwater quality standards for boron, sulfate, and TDS at some downgradient monitoring wells.

However, the Board also finds that Citizen Groups failed to meet their burden to produce evidence establishing that the groundwaters at issue are Class I or Class II groundwaters—as

argued in their motion, the alleged violations hinge on that classification. Citizen Groups therefore failed to meet their burden of persuasion to show that there are no genuine issues of material fact and that they are entitled to judgment as a matter of law.

## Analysis

### Contaminants in Groundwaters

Analytical results of groundwater samples from six monitoring wells located hydraulically downgradient of the coal ash surface impoundments—AP-1, AP-1R, AP-2, AP-2R, AP-3, and AW-3—have shown arsenic, boron, chromium, iron, lead, manganese, sulfate, and TDS in concentrations exceeding either or both of their respective Class I and Class II groundwater quality standards. These eight constituents are "contaminants," as defined in the Act. The Board finds no genuine issue of material fact that these contaminants have been detected in "groundwaters," which are accumulations of underground waters and therefore "waters" of the State, all as defined in the Act.

Citizen Groups also allege exceedances of groundwater quality standards in samples collected during 2018 at RW-3. But because the record lacks laboratory reports of analytical results to substantiate this allegation, the Board finds a genuine issue of material fact as to whether RW-3 had elevated contaminant concentrations.

### Source of Exceedances

For the eight contaminants at issue, the Class I standards, which apply to "potable resource" groundwaters, are equal to or more stringent than the Class II standards, which apply to "general resource" groundwaters. For AP-1, AP-1R, AP-2, AP-2R, AP-3, and AW-3, the record contains eight years of laboratory reports—from 2010 to 2017—documenting downgradient contaminant concentrations in excess of Class I or Class II groundwater quality standards.

CWLP developed "background" values for the same eight contaminants based on groundwater samples collected from monitoring wells located hydraulically upgradient of the coal ash surface impoundments, namely AP-4 and AP-5. The Board agrees with Citizen Groups that CWLP "does not cite to any provision of the Illinois Environmental Protection Act or Illinois Administrative Code that supports [its] argument that one must establish an exceedance of background in order to establish a violation of Part 620 or the Illinois Environmental Protection Act's prohibition on water pollution." CG Reply at 12. And the Board is not finding that a complainant must establish background to prove these provisions have been violated.

But Citizen Groups seek summary judgment on CWLP having allowed releases *from its surface impoundments* resulting in groundwater contamination. For purposes of this motion, the Board accepts that constituents present in downgradient groundwater at concentrations up to CWLP's background values might be naturally occurring or otherwise have resulted from sources other than the impoundments. *See* CWLP Resp. at 20 ("If levels of constituents are a

result of natural causes there is no violation of the Part 620 regulations. The same is true of any constituents otherwise not caused by [CWLP's] surface impoundments.").

Some downgradient exceedances of the Class I or Class II groundwater quality standards for arsenic, chromium, iron, lead, and manganese were detected in AP-1, AP-1R, AP-2, AP-2R, AP-3, or AW-3 at concentrations *less than* their corresponding background levels. Construing the record strictly against Citizen Groups and liberally in favor of CWLP, the Board finds a genuine issue of material fact as to whether the surface impoundments caused these exceedances.

In addition, Hunsberger testified that the surface impoundments would account for groundwater quality differences between AW-3 and the upgradient monitoring wells. But as AW-3 was installed at a location designed to detect releases from the FGD landfill (CWLP Resp. at 19), contaminant concentrations in AW-3 might be the result of releases from that source. At summary judgment, the Board cannot weigh and resolve this conflicting evidence like it can after hearing. Construing the record as it must at summary judgment, the Board finds a genuine issue of material fact as to whether the surface impoundments caused Class I or Class II groundwater quality standard exceedances at AW-3.

**CWLP Allowed Releases from the Coal Ash Ponds**

Hunsberger testified that the differences in groundwater quality between the upgradient monitoring wells and the downgradient monitoring wells reflect the contribution to downgradient groundwater quality of either Dallman Ash Pond or Lakeside Ash Pond or both. Monitoring wells AP-1, AP-1R, AP-2, AP-2R, and AP-3 were installed and located solely to detect groundwater releases from the surface impoundments. Four of these five downgradient monitoring wells (all but AP-1) have collectively detected arsenic, boron, manganese, sulfate, and TDS in concentrations *greater than* not only their respective Class I or Class II groundwater quality standards, but also their respective background values.

The Board agrees with Citizen Groups (CG Mot. at 18) that proving the alleged violations does not require pinpointing which specific impoundment—Dallman or Lakeside—is the source of the releases. *See* Sierra Club v. Midwest Generation, LLC, PCB 13-15, slip op. at 79 (June 20, 2019). Construing the record strictly against Citizen Groups and liberally in favor of CWLP, there is no genuine issue of material fact that these elevated groundwater concentrations—at AP-1R, AP-2, AP-2R, and AP-3—were caused by "releases," as defined in the Act, from one or both surface impoundments.

The Illinois Supreme Court has established that "knowledge or intent is not an element to be proved for a violation of the Act." People v. Fiorini, 143 Ill. 2d 318, 336 (1991); *see also* Freeman Coal Mining Corp. v. Pollution Control Bd., 621 Ill. App. 3d 157, 163 (5th Dist. 1974) (the Act is *malum prohibitum* and no proof of guilty knowledge or *mens rea* is necessary to find liability). Accordingly, whether CWLP knew of or intended the releases has no bearing on whether it violated the Act. But the Act's prohibition against "allowing" specified discharges "does not impose strict liability on property owners for pollution which results from a cause beyond the owner's control." Perkinson v. Illinois Pollution Control Bd, 187 Ill. App. 3d 689, 693 (3rd Dist. 1989). Instead, a complainant "must show that the alleged polluter has the

capability of control over the pollution or that the alleged polluter was in control of the premises where the pollution occurred." People v. A.J. Davinroy Contractors, 249 Ill. App. 3d 788, 793 (5th Dist. 1993). "Property owners are responsible for the pollution on their land unless the facts establish the owners either 'lacked the capability to control the [pollution] source' or 'had undertaken extensive precautions to prevent vandalism or other intervening causes'" of the pollution. Gonzalez v. Illinois Pollution Control Bd., 2011 IL App (1st) 093021, ¶ 33, quoting Perkinson, 187 Ill. App. 3d at 695.

CWLP "concedes that it has ownership and control of the surface impoundments" but asserts that it has taken "extensive precautions" to prevent water pollution "over the decade," listing some 50 documents "provided in discovery that verify each activity." CWLP Resp. at 9-12. Citizen Groups acknowledge that CWLP has performed activities related to the impoundments but maintain that those activities do not "rise to the level of extensive precautions that would shield [CWLP] from liability for [its] ash ponds causing groundwater contamination." CG Reply at 5-10, Exh. 1 ("CWLP does not and cannot dispute that it has not installed dry ash handling or capped, closed, lined, or removed the ash ponds.").

The Board finds that CWLP "allowed" these contaminant releases because it "exercised sufficient control over the source of the pollution." Fiorini, 143 Ill. 2d at 346. The source of the groundwater exceedances is one or both of these unlined surface impoundments. CWLP built the surface impoundments and has used them for decades to store coal ash sluiced from its power plants. As the owner and operator of the site and the impoundments all along, CWLP "had the capability of controlling the pollutional discharge." Meadowlark Farms, Inc. v. Pollution Control Bd., 17 Ill. App. 3d 851, 861 (5th Dist. 1974).

The impoundment area's groundwater monitoring system, established by CWLP voluntarily and then implemented under the federal CCR rules, has undoubtedly been important. CWLP's inspections and maintenance to avoid catastrophic failure of impoundment berms are also important. But neither the monitoring nor these other measures could have prevented groundwater releases from happening in the first place or continuing to happen. The record provides no factual basis to arguably support that CWLP implemented extensive precautions at the impoundments, the source of the releases, which might have included installing liners or removing the coal ash.

CWLP asserts that no ash pond seepage has "left the CWLP site" by any means other than discharge under its NPDES permit. CWLP Resp. at 8-9 (quoting deposition testimony of Corcoran and Antonacci). But even if the wet areas resulting from Lakeside Ash Pond's seepage did lead to groundwater impacts, CWLP's drainage efforts around the impoundment were not extensive precautions, *i.e.*, even considering those efforts, CWLP "allowed" the releases evidenced by the contaminant concentrations in downgradient groundwaters.

CWLP claims that "until the Board adopts a state CCR program pursuant to P.A. 101-171,[17] there is no means or method of 'complying' with 35 Ill. Adm. Code Part 620." CWLP Resp. at 9. This is incorrect. CWLP itself considered pursuing corrective action through the establishment of a groundwater management zone (35 Ill. Adm. Code 620.250). Moreover, neither the absence of a prescriptive regulatory program nor compliance with the federal CCR rules is a defense to violating the Act or Part 620.

The Board finds no genuine issue of material fact that CWLP allowed releases from one or both impoundments resulting in elevated contaminant levels at AP-1R, AP-2, AP-2R, and AP-3.

**Exceedances at AP-1, AP-1R, AP-2, AP-2R, and AP-3**

**Manganese and Arsenic.** None of the provisions allegedly violated require establishing "a statistically significant increase above background levels" (CWLP Resp. at 22) to prove the violation. Nor must there be repeated exceedances of a groundwater quality standard to violate it. But summary judgment "is a drastic means of disposing of litigation, and therefore, should be granted only when the right of the moving party is clear and free from doubt." Adames, 233 Ill. 2d at 296. CWLP questions whether "only 1 or 2 data points"—from when the monitoring wells were first installed—for parameters that have not since been found at those concentrations might be unrepresentative "outliers" or "simply a function of the initial monitoring wells 'settling down.'" CWLP Resp. at 21-22, Hunsberger Fact Dep. at 61, 77 (variability in new wells).

Once in 2012, the concentration of manganese in AP-2R was 46 mg/L, which greatly exceeded the Class I groundwater quality standard of 0.15 mg/L and was over four times greater than the Class II groundwater quality standard of 10.0 mg/L. However, CWLP's background value for manganese is 44.6 mg/L, just less than this downgradient concentration. Once in 2013, the concentration of arsenic in AP-2R was 0.0738 mg/L, which is over seven times greater than the Class I groundwater quality standard of 0.010 mg/L. But CWLP's background value for arsenic is 0.0724 mg/L, just less than this downgradient concentration. Similarly, once in 2013, the arsenic concentration in AP-3 was 0.0784 mg/L, well above the Class I groundwater quality standard but just above the background value.[18]

These are undisputed facts but a genuine issue of material fact exists not only when material facts are disputed but also "if the material facts are undisputed [and] reasonable persons might draw different inferences from the undisputed facts." Adames, 233 Ill. 2d at 296. Construing the record strictly against Citizen Groups and liberally in favor of CWLP, the Board finds that reasonable persons might draw different inferences from these undisputed facts—that

[17] Effective July 30, 2019, the Act was amended by Public Act 101-171, also known as the "Coal Ash Pollution Prevention Act," which required IEPA to propose and the Board to adopt CCR surface impoundment rules.

[18] Both the AP-2R and the AP-3 concentrations of arsenic were less than the Class II groundwater quality standard of 0.2 mg/L.

is, whether these manganese and arsenic concentrations validly reflect contaminant releases from one or both coal ash surface impoundments.

**Boron, Sulfate, and TDS.**

***Monitoring Well AP-1R.*** The Class I and Class II groundwater quality standards for boron are the same: 2.0 mg/L. Concentrations of boron in AP-1R exceeded both CWLP's background value (0.787 mg/L) and the Board's Class I and Class II groundwater quality standard 23 times from 2012 to 2017, with exceedances ranging from 3.9 mg/L to 22.5 mg/L.

The Class I and Class II groundwater quality standards for sulfate are the same: 400.0 mg/L. From 2012 to 2017, concentrations of sulfate in AP-1R exceeded both CWLP's background value (84.5 mg/L) and the Board's Class I and Class II groundwater quality standard 23 times, with exceedances ranging from 436 mg/L to 672 mg/L.

The Class I and Class II groundwater quality standards for TDS are the same: 1,200.0 mg/L. Concentrations of TDS in AP-1R exceeded both CWLP's background value (97.94 mg/L) and the Board's Class I and Class II groundwater quality standard 15 times from 2013 to 2017, with exceedances ranging from 1230 mg/L to 1490 mg/L.

***Monitoring Wells AP-2 and AP-2R.*** Once in 2010, the boron concentration in AP-2 (2.63 mg/L) exceeded both CWLP's background value (0.787 mg/L) and the Board's Class I and Class II groundwater quality standard (2.0 mg/L). From 2012 to 2017, boron concentrations in AP-2R exceeded those background and Class I levels 23 times, with exceedances ranging from 3.16 mg/L to 10 mg/L.

Sulfate concentrations in AP-2R exceeded both CWLP's background value (84.5 mg/L) and the Board's Class I and Class II groundwater quality standard (400.0 mg/L) six times from 2014 to 2016, with exceedances ranging from 418 mg/L to 711 mg/L.

And TDS concentrations in AP-2R exceeded both CWLP's background value (97.94 mg/L) and the Board's Class I and Class II groundwater quality standard (1,200.0 mg/L) three times in 2015, with exceedances ranging from 1460 mg/L to 1520 mg/L.

***Monitoring Well AP-3.*** In AP-3, boron concentrations exceeded both CWLP's background value (0.787 mg/L) and the Board's Class I and Class II groundwater quality standard (2.0 mg/L) 24 times from 2010 to 2017, with exceedances ranging from 8.03 mg/L to 29.1 mg/L.

**Groundwater Classification**

"[I]f [complainant] is the moving party, to satisfy the initial burden of production, [complainant] must establish through its pleadings and supporting documents the validity of its factual position on all of the contested elements of the cause of action (all of the essential elements of [complainant's] claim that are not admitted in the pleadings). Performance Food Group, 2017 IL App (3d) 160348, ¶ 18.

As argued by Citizen Groups in their motion for summary judgment, classifying the groundwaters at monitoring wells AP-1, AP-1R, AP-2, AP-2R, and AP-3 as Class I or Class II is a pivotal element of all the alleged violations. Citizen Groups rely on Class I and Class II exceedances as evidence that CWLP violated all alleged provisions of the Act and Board regulations, not just the groundwater quality standards. *See* CG MSJ at 2, 5-8, 18-24.

On the current record, if the groundwaters at monitoring wells AP-1R, AP-2, AP-2R, and AP-3 are Class I or Class II groundwaters, the boron, sulfate, and TDS exceedances would preclude the potential use of the groundwaters as either a potable or general resource, at least absent treatment, and would render or likely render them harmful, detrimental, or injurious to public health, safety, or welfare or to legitimate use, which would constitute "water pollution," as defined in the Act. And contrary to CWLP's position (CWLP Resp. at 13-14), for "water pollution" to be established, "there is no need to show that actual harm *will* occur, only that harm *would* occur if the contaminated water were to be used." Central Ill. Pub Serv. Co. v. Pollution Control Bd., 116 Ill. 2d 397, 409-10 (1987) (emphasis in original) (rejecting position that "no pollution has occurred unless actual harm to humans or crops will occur as a result of the contamination, and that thus there is no pollution if any harmful effects can be avoided by not using the water"). Nor must groundwater exceedances be "found off-site" (CWLP Resp. at 14) to constitute "water pollution." *See* Int'l. Union v. Caterpillar, Inc., PCB 94-240, slip op. at 33-34, 37 (Aug. 1, 1996) (finding releases resulting in exceedances of Part 620 groundwater quality standards at manufacturing facility had degraded "one of the State's water resources," constituting "water pollution" in violation of Section 12(a)); *see also* 415 ILCS 5/3.550 (2018) (definition of "waters").

But the Board agrees with CWLP that the Class I and Class II groundwater quality standards under Part 620 are "mutually exclusive" (CWLP Resp. at 15) in that they cannot apply to the same groundwater at the same time. Citizen Groups show that in 2011, IEPA called for monitoring the surface impoundment area's groundwater for Class I chemical constituents. And IEPA's 2014 violation notice applied Class I groundwater quality standards to CWLP's 2010, 2012, and 2013 analytical results from monitoring wells AP-1R, AP-2, AP-2R, and AP-3. Further, Hunsberger testified that the site's basal sand deposits, through which contaminants migrate "fastest," would be classified as Class I groundwaters. All this information, however, does not demonstrate that these downgradient monitoring wells accessed groundwaters meeting the Class I criteria of Part 620.

CWLP correctly asserts that Citizen Groups, with their motion, did not meet their burden of production on groundwater classification. *See* CWLP Resp. at 16-18. Citizen Groups admit as much. *See* CG Reply at 11 ("both parties agree that the groundwater beneath the ash ponds is not formally classified and there is no proof as to the Class of that groundwater"). Citizen Groups' failure to meet their burden means the burden of production did not shift to CWLP to present evidence establishing a genuine issue of material fact as to groundwater classification. Estate of Sewart, 236 Ill. App. 3d at 8. CWLP's response to the motion, however, included CWLP's own technical reports, which provide evidence at least suggesting that the groundwaters meet Class I criteria.

Slug tests performed by PSI on monitoring wells AP-1, AP-2, and AP-3 had hydraulic conductivities of 1 x $10^{-4}$ cm/sec or greater, which is a criterion for Class I groundwater (35 Ill. Adm. Code 620.210(a)(4)(B)(ii)). Both AP-1 and its replacement, AP-1R, were screened at approximately the same depths, with a basal sand layer at the bedrock surface. Both AP-2 and its replacement, AP-2R, were screened at approximately the same depths, with a basal sand layer at the bedrock surface. In addition, the groundwaters at AP-1, AP-1R, AP-2, AP-2R, and AP-3 were at least ten feet below the land surface, another criterion for Class I potable resource groundwater (*id*. at 620.210(a)). The parties did not address these aspects of CWLP's technical reports.

Because this information, without more, would appear to meet "the technical definition of Class I groundwater" (CWLP Resp. at 18 (emphasis in original)), the Board declines Citizen Groups' suggestion to "conclude as a matter of law that the groundwater beneath the Dallman and Lakeside ash ponds is Class 2" (CG Reply at 11). It would be premature to conclude that this record is or will remain "[a]bsent proof that the groundwater falls into one of the more specific categories." People v. ESG Watts, Inc., PCB 96-233, slip op. at 20 (Feb. 5, 1998) (in final decision on alleged violations after hearing, Board held: "Absent proof that the groundwater falls into one of the more specific categories, however, groundwater is considered Class II. 35 Ill. Adm. Code 620.220(a)."). The Board makes no finding as to the classification of groundwaters at the site.

That there are "no potable groundwater wells within the vicinity of [CWLP's] facility," as CWLP claims (CWLP Resp. at 13), does not dictate that these groundwaters are not Class I. CWLP also mentions Class III and Class IV groundwaters and suggests that the FGD landfill might have a Class IV zone of attenuation. CWLP Resp. at 18. Although the Board found nothing in the record to arguably support applying either of those classifications to the groundwater downgradient of the ash ponds at AP-1, AP-1R, AP-2, AP-2R, or AP-3, CWLP did not have the burden to supply such evidence.

**Ruling**

Because Citizen Groups did not meet their burden of persuasion to establish that there are no genuine issues of material fact and that they are entitled to judgment as a matter of law, the Board denies their motion for partial summary judgment.

## DISCUSSION OF CWLP'S MOTION FOR PARTIAL SUMMARY JUDGMENT

CWLP moves for summary judgment on two of Citizen Groups' requested remedies:

> C. ORDER [CWLP], pursuant to 415 Ill. Comp. Stat. 5/33, to:
>
> * * *
>
> ii. Modify [CWLP's] coal ash and coal combustion waste disposal and storage practices so as to avoid future groundwater contamination,

iii. Remediate the contaminated groundwater so that it meets applicable Illinois Groundwater Quality Standards (GQSs). Am. Comp. at 16; *see* CWLP Mot. at 2.

As explained below, although there is no genuine issue of material fact regarding these requests, the Board finds that CWLP is not entitled to judgment of a matter of law. The requested remedies are neither premature nor beyond the Board's authority.

CWLP argued that taking up these requests is premature because the Illinois CCR surface impoundment rules required by Public Act 101-171 were not yet adopted. CWLP Mot. at 8-13. But, as Citizen Groups point out (CG Resp. at 2), the Board has already determined that when USEPA and the Board were considering proposed CCR rules, neither then-pending rulemaking warranted staying a citizen action seeking to enforce the Act and the Board's groundwater quality rules: "rulemakings and enforcement actions are entirely distinct proceedings with different aims. Rulemakings are forward-looking and impose future obligations, while enforcement actions concern alleged past or ongoing violations and the proper remedies to redress proven violations." Sierra Club v. Midwest Generation, LLC, PCB 13-15, slip op. at 13-14 (Apr. 17, 2014) (complaint alleging violations of all the provisions being alleged here).

Of course, since CWLP filed its motion, the Board adopted Illinois' CCR surface impoundment rules (35 Ill. Adm. Code 845, eff. Apr. 21, 2021), mooting CWLP's timing argument. Plus, as adopted, Part 845 specifies that compliance with those rules "does not affect the need for the owner or operator of a CCR surface impoundment . . . to comply with all other applicable federal, state, tribal, or local laws or other requirements." 35 Ill. Adm. Code 845.110(a); *see also id*. at 845.210(f) ("failure to comply with the Act or regulations promulgated under the Act must be grounds for enforcement action as provided in the Act").

CWLP focused on new closure requirements called for by Public Act 101-171 (CWLP Mot. at 9-15) but neither request for relief being challenged would necessarily entail impoundment "closure" or preclude analyzing closure or remedial alternatives. "In an enforcement proceeding the Board may order the submission of a program or order further hearings to develop one." People v. Jersey Sanitation Corp., PCB 97-2, slip op. at 4 (June 16, 2005), quoting Currie, David P., "Enforcement Under the Illinois Pollution Law," 70 Northwestern University Law Review 389, 424 (1975). Moreover, the Board would ensure that any measures it orders CWLP to take to redress proven violations at the impoundments comply or otherwise do not conflict with applicable laws and regulations.

CWLP also argues that the Board lacks authority to issue a "mandatory injunction." CWLP Resp. at 3-4. The Board agrees that it lacks the injunctive authority of the circuit courts. *See* Clean the Uniform Company-Highland v. Aramark Uniform & Career Apparel, Inc., PCB 03-21, slip op. at 3 (Nov. 7, 2002) ("The Board is not authorized to grant injunctive relief"); *compare* 415 ILCS 5/42(e), 43(a) (2018) (civil actions for injunctions) with 415 ILCS 5/33(d) (2018) ("orders issued and entered by the Board pursuant to this Section [33] shall be enforceable by injunction"). But, as Citizen Groups observe (CG Resp. at 7), they do not seek a mandatory injunction.

"Illinois decisions reflect the generally acknowledged authority of the Board to take whatever steps are necessary to rectify the problem of pollution and to correct instances of pollution on a case-by-case basis." Discovery South Group, Ltd. v. Pollution Control Bd., 275 Ill. App. 3d 547, 559 (1st Dist. 1995). Section 33(a) of the Act authorizes the Board to "enter such final order, or make such final determination, as it shall deem appropriate under the circumstances." 415 ILCS 5/33(a) (2018). The Board's enforcement order "may include" a direction to cease and desist from violations. 415 ILCS 5/33(b) (2018). These provisions of the Act vest the Board with "wide discretion in fashioning a remedy." Roti v. LTD Commodities, 355 Ill. App. 3d 1039, 1053 (2nd Dist. 2005). In Roti, the appellate court upheld the measures imposed by the Board on a trucking operation to address nuisance noise violations—ceasing nighttime operations and disconnecting a yard tractor's back-up beeper or, alternatively, building a noise wall. *Id*. at 1053-54.

The appellate court upheld another enforcement remedy imposed by the Board to address nuisance noise violations. The Board ordered an outdoor amphitheater to comply with Board regulations on sound monitoring and numeric sound limits, as well as use sound-measurement procedures tailored to the amphitheater. Discovery South, 275 Ill. App. 3d at 558-59. These steps were within "the Board's power to order compliance." *Id*. at 560. And even though a facility is subject to an environmental permitting program, the Board may order additional "steps to bring the site into compliance and prevent further violations." Jersey Sanitation, PCB 97-2, slip op. at 3-4; *see also* People v. Jersey Sanitation Corp., PCB 97-2, slip op. at 38-39 (Feb. 3, 2005) (ordered to perform specific measures, in addition to complying with permits and ceasing and desisting from further violations).

Finally, fashioning a remedy for any violations in this case would not be improper rulemaking, contrary to CWLP's claim (CWLP Mot. at 4). The Illinois Administrative Procedure Act defines a "rule" as an "agency statement of general applicability that implements, applies, interprets, or prescribes law or policy." 5 ILCS 100/1-70 (2018). Applying this definition in Discovery South, the appellate court held that the sound-measurement procedures crafted for the outdoor amphitheater as part of the enforcement remedy was "not a new standard of general applicability" and thus the Board was not "rulemaking." Discovery South, 275 Ill. App. 3d at 560. Here, if violations are established and, in turn, the Board fashions a remedy, the Board would also not be adopting any standard of general applicability. *See* CG Resp. at 13 ("any remedy imposed on CWLP in the present case will not be a standard of general applicability that gets applied to CWLP ash ponds and ash ponds not owned by CWLP alike"). Citizen Groups ask for remedies within the Board's authority to order.

Because CWLP is not entitled to judgment of a matter of law, the Board denies its motion for summary judgment on Citizen Groups' requests that CWLP modify its coal ash handling practices and remediate groundwater contamination.

## CONCLUSION

The Board denies the cross motions for partial summary judgment. The Board directs that the hearing officer and the parties proceed expeditiously to hearing on all violations alleged

in the amended complaint. All evidence related to the alleged violations may be admitted under 35 Ill. Adm. Code 101.626. If, after hearing, the Board finds that CWLP violated the Act or Board regulations as alleged by Citizen Groups, the Board will order a separate hearing on remedies, including civil penalties. *See* 35 Ill. Adm. Code 103.212(d) ("The Board in its discretion may hold a hearing on the violation and a separate hearing on the remedy.").

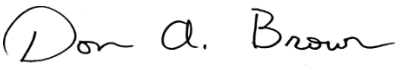
## ORDER

1. The Board denies Citizen Groups' motion for partial summary judgment. The Board directs the hearing officer and the parties to proceed expeditiously to hearing on the alleged violations.

2. The Board denies CWLP's motion for partial summary judgment.

IT IS SO ORDERED.

I, Don A. Brown, Clerk of the Illinois Pollution Control Board, certify that the Board adopted the above interim opinion and order on June 17, 2021, by a vote of 4-0.



Don A. Brown, Clerk
Illinois Pollution Control Board