Iowa Environmental Council

ENVIRONMENTAL LAW & POLICY CENTER
Protecting the Midwest's Environment and Natural Heritage

SIERRA CLUB
FOUNDED 1892

January 16, 2026

Wendy Hieb
NPDES Section
Environmental Services Division
Iowa Department of Natural Resources
Email: wendy.hieb@dnr.iowa.gov

RE: Comments on the Draft National Pollution Discharge Elimination System Permit for the Interstate Power and Light Ottumwa Midland Landfill in Ottumwa, Iowa, #9000107

Dear Ms. Hieb:

The Iowa Environmental Council (IEC), Environmental Law and Policy Center (ELPC), and Sierra Club (collectively Environmental Commenters) offer the following comments on the draft National Pollution Discharge Elimination System Permit for the Interstate Power and Light (IPL) Ottumwa Midland Landfill in Ottumwa, Iowa, noticed on December 16, 2025.

These comments represent the views of the Iowa Environmental Council, an alliance of more than 100 organizations, over 500 individual members, and an at-large board of farmers, business owners, and conservationists. IEC works to build a safe, healthy environment and sustainable future for Iowa. Our members care about air and water quality across the state, and they hike, recreate, and enjoy the outdoors in Iowa and beyond.

ELPC is a Midwest-based not-for-profit public interest environmental legal and economic development advocacy organization focused on improving environmental quality, including clean water and healthy clean air, and protecting the Midwest's natural resources. ELPC has members who reside in the State of Iowa and an office in Des Moines.

Sierra Club is a nonprofit organization with more than 800,000 members nationally and over 5,200 members in the state of Iowa, many of whom are IPL ratepayers. Sierra Club's mission includes promoting clean energy, and reducing air and water pollution associated with electricity generation. Many Sierra Club members in Iowa are IPL customers who have a strong interest in receiving reliable power that is generated and supplied in a cost-effective and environmentally sound manner.

The Environmental Commenters have a significant interest in ensuring that the Ottumwa Midland Landfill NPDES permit complies with all applicable statutory and regulatory requirements, which are created to protect human health and the environment. To that end, we reserve the right to rely on all public comments submitted, request a written response to our comments, and request written notification when any action is taken on this Draft Permit. If the permit is amended or altered in response to comments, we request an opportunity to review and comment on any amended permit.

Additionally, the Environmental Commenters respectfully request an opportunity for members of the public to attend a hearing on this Draft Permit and submit further comment. The public at large and many members of the Environmental Commenters' organizations who live near, recreate on, and obtain municipal drinking water downstream from the Ottumwa power plant have an urgent interest in protecting the Des Moines River from toxic and heavy metal discharges from the facility.

Environmental Commenters have been concerned about discharges from this facility to issue a notice of intent to sue in early 2025.[1] This led IPL to capture discharges, transport wastewater to the municipal sewage treatment plant, and pursue this permit. As discussed in detail below, the Draft Permit unlawfully fails to address compliance with the federal effluent limitation guidelines ("ELGs" or "ELG Rule") for coal combustion leachate discharges. IDNR must impose the 2024 ELGs in the permit. The ELGs apply to discharges of managed and unmanaged leachate, and in particular set a deadline for the discharge of managed leachate.

Environmental Commenters raised the issue of the ELG Rule in comments on an amendment of the Ottumwa Generating Station NPDES permit last year, but DNR declined to add the ELG requirements to the permit. Despite the landfill continuing to produce toxic leachate, and despite IDNR amending, issuing, or reissuing the permits for the coal plant, coal ash landfill, and city sewage treatment plant in the last year, no NPDES permit includes the ELG requirements to implement a zero-discharge treatment system. IDNR must impose a schedule of compliance to implement the zero-discharge ELG.

HR Green conducted an Antidegradation Alternatives Analysis (AAA) for the IPL Ottumwa Midland Landfill (OML), which was publicly noticed on August 8, 2025, and provided a 30-day notice period to submit comments. The AAA evaluated four alternatives to allow IPL to discharge the OML underdrain water to the Des Moines River. On August 14, 2025, IPL submitted a request to amend the Ottumwa Midland landfill permit (Sanitary Disposal Project Permit #90-SDP-8-92P) to start construction of the AAA selected alternative as early as August 25, 2025.[2] On the same day, IPL submitted a request for an expedited review and IDNR approved the request to start construction of Alternative 3.[3] As described in its public comments, IEC found the AAA to be inadequate because it failed to address the actual underdrain water

[1] *See* Attachment A.
[2] Letter from Jeff Maxted (Alliant Energy) to Brian Rath (IDNR), Aug. 14, 2025, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/113669.
[3] Email from Brian Rath to Jeff Maxted, Aug. 14, 2025, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/113670.

being discharged, and appeared to be perfunctory given that construction of Alternative 3 had been approved by IDNR prior to the end of the AAA 30-day comment period.

On December 16, 2025, IDNR published the draft NPDES (National Pollutant Discharge Elimination System) permit to discharge the OML underdrain water to the Des Moines River.

IPL must perform a new AAA to address cobalt, lithium, manganese, and molybdenum as pollutants of concern in the underdrain water and to evaluate additional alternatives based on chemical precipitation consistent with the 2024 ELG. In addition, the AAA must analyze the social/economic importance and provide a justification for degrading water quality in the Des Moines River. In conducting its evaluation, IPL needs to address the ancillary benefits to water quality and environmental justice issues. In short, IPL needs to address deficiencies in the AAA before an NPDES permit and construction can proceed.

I. The Ottumwa Midland Landfill is Subject to the 2024 ELG Rule and Must Meet New BAT Limits on Leachate.

On May 9, 2024, EPA published a supplemental Clean Water Act rule updating the agency's effluent limitation guidelines for steam electric generating units, with an effective date of July 8, 2024. *See* 89 Fed. Reg. 40,198 (May 9, 2024) ("2024 ELG Rule"). That rule sets new, more stringent "best available technology," or BAT, limits on the three largest toxic waste streams from coal-burning power plants: flue gas desulfurization ("FGD") wastewater, bottom ash transport water, and managed and unmanaged combustion residual leachate ("CRL" or "leachate").

Relevant here, the 2024 ELG Rule sets new BAT limits on leachate, including what EPA calls "managed" and "unmanaged" leachate.[4] "Managed" leachate is leachate that is collected in a leachate collection and management system, typically at the bottom of, or within, a coal ash landfill or impoundment unit, and then discharged to a waterway. "Unmanaged" leachate is leachate that has leaked out of a coal ash waste management unit and contaminated groundwater and then subsequently discharged to a waterway.[5] Leachate (whether "managed" or "unmanaged") contains the same heavy metals and other pollutants, like lead, mercury, selenium, boron, and arsenic, that are found in coal ash and flue gas desulfurization wastewater.[6]

The 2024 ELG Rule requires coal plants to meet numeric limits on arsenic and mercury for "unmanaged" leachate discharges, and to eliminate "managed" leachate discharges entirely.[7] Specifically, for unmanaged leachate, the *ELG Rule's numeric limitations for arsenic and mercury are based on the installation and operation of chemical precipitation technology*; for managed leachate, the rule is based on the installation of membrane filtration or other

[4] 89 Fed. Reg. at 40,292.
[5] *Id.* at 40,247; 40 C.F.R. § 423.11(ff)(2).
[6] *See, e.g.*, EPA, Technical Development Document for Final Supplement Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, at 73 (Tbl. 20) (Apr. 2024) ("2024 ELG TDD"), https://www.epa.gov/system/files/documents/2024-04/se11757_steam- electric-elg-tdd_508.pdf.
[7] 40 C.F.R. §§ 423.13(*l*)(1)(i)(A), (*l*)(2)(i)(A), (*l*)(2)(ii).

zero- discharge technology.[8] For direct dischargers (i.e., coal-burning EGUs that discharge directly to waters of the United States), the rule requires state permitting authorities to incorporate those BAT limitations into the facility's NPDES permit "as soon as possible on or after July 8, 2024, but no later than December 31, 2029."[9] On December 31, 2025, EPA finalized a rule extending this deadline to December 31, 2034, but the extension is not effective until March 2, 2026.[10] For indirect discharges (*i.e.,* coal-burning EGUs that discharge to publicly owned treatment works ("POTWs"), the 2024 rule requires coal plants to meet the pretreatment BAT standards set out in 40 C.F.R. § 423.16 no later than May 9, 2027. EPA's Extension Rule would extend this deadline to January 2, 2028.[11] As explained below, however, the Extension Rule does not excuse IDNR of the obligation to address IPL's leachate discharges. The ELG Rule still requires the IDNR to eliminate managed leachate discharges and establish numeric limitations for unmanaged leachate discharges "as soon as possible," based on a careful consideration of the regulatory factors set out in 40 C.F.R. § 423.11(t).

1. IPL's Ottumwa Midland Landfill Discharges Managed and Unmanaged Combustion Residual Leachate.

Because IPL plainly maintains operational control over both the Ottumwa Generating Station and the nearby Ottumwa Midland Landfill, any leachate wastewater collected at the Ottumwa Midland Landfill fits within EPA's definition of combustion residual leachate, and must be regulated as such.[12] As noted, the 2024 ELG Rule requires IPL to eliminate all managed leachate discharges "as soon as possible beginning July 8, 2024, but no later than December 31, 2029." Notably, combustion residual leachate also "*includes* wastewater from landfills and surface impoundments located on *non-adjoining property when under the operational control of the permitted facility*."[13]

The ELG Rule defines "combustion residuals" as:

> Solid wastes associated with combustion-related steam electric power plant processes, including fly ash and BA from coal-, petroleum coke-, or oil-fired units; FGD solids; FGMC wastes; and other wastewater treatment solids associated with steam electric power plant wastewater. In addition to the residuals associated with coal combustion, this also includes residuals associated with the combustion of other fossil fuels.[14]

---

[8] 89 Fed. Reg. at 40,200, 40,214. For direct discharges of unmanaged leachate, a facility must meet the numeric limits set out in 40 C.F.R. § 423.13(*l*)(2)(A) (emphasis added).
[9] 89 Fed. Reg. at 40,200; *see generally* 40 C.F.R. § 423.13.
[10] "Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category—Deadline Extensions," 90 Fed. Reg. 61,328 (Dec. 31, 2025) at 61,353 ("Extension Rule").
[11] *Id.*
[12] 40 C.F.R. § 423.11(r) (combustion residual leachate "includes wastewater from landfills and surface impoundments located on *non-adjoining property when under the operational control of the permitted facility*.") (emphasis added).
[13] *Id.* (emphasis added).
[14] 89 Fed. Reg. at 40,292.

The rule further defines "combustion residual leachate" as:

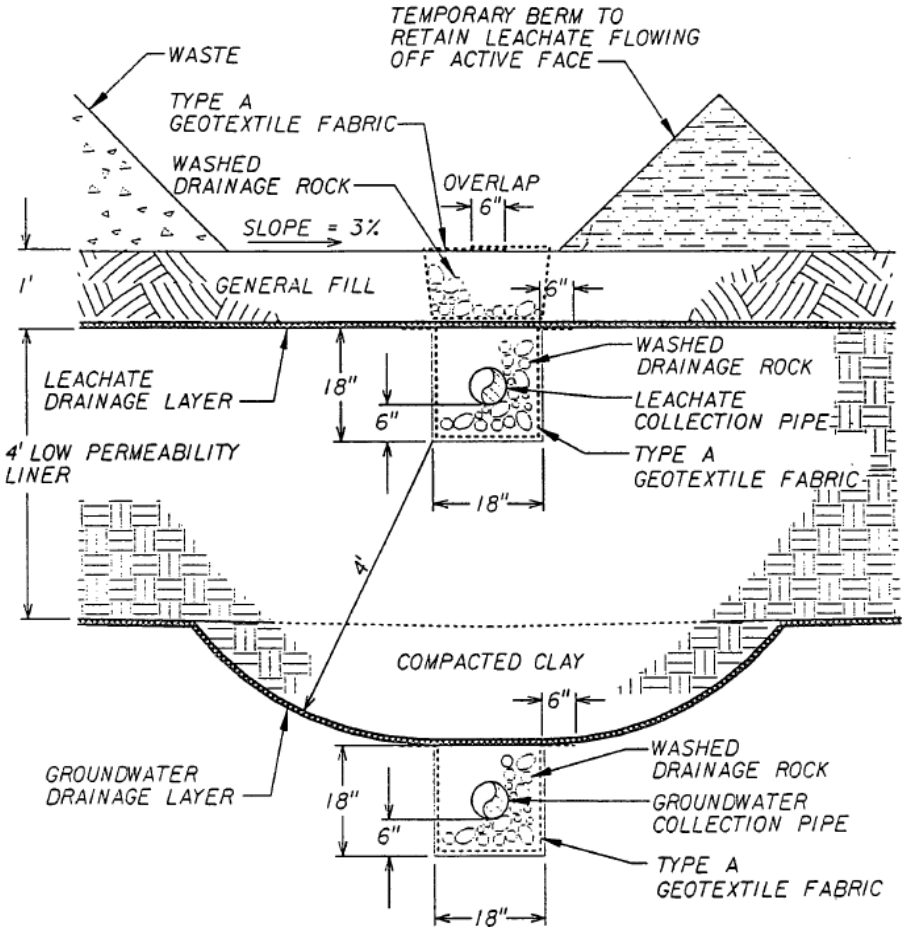
> Leachate from landfills or surface impoundments that contains combustion residuals. Leachate is composed of liquid, including any suspended or dissolved constituents in the liquid, that has percolated through waste or other materials emplaced in a landfill, or that passes through the surface impoundment's containment structure (e.g., bottom, dikes, berms). *Combustion residual leachate includes seepage and/or leakage from a combustion residual landfill or impoundment unit*.[15]

As noted above, the 2024 ELG Rule sets different BAT limits for "managed" and "unmanaged" leachate. "Managed" leachate is leachate that is collected in a leachate collection, management, or piping system, and then discharged to a waterway. "**Unmanaged" leachate is leachate that has leached from a waste management unit and contaminates groundwater prior to being captured and pumped to the surface and discharged directly to a waterway**.[16]

IPL owns and operates the Ottumwa Midland Landfill for the disposal of coal ash combustion residual waste. As part of the design, the landfill uses a "leachate collection" system, where leachate is "collected and diverted into a lined pond," and eventually hauled off-site.[17]

[15] *Id.*; 40 C.F.R. § 423.11(r).(emphasis added).
[16] 89 Fed. Reg. at 40,247; 40 C.F.R. § 423.11(ff)(2).
[17] Antidegradation Alternatives Analysis at PDF page 5.

Figure 1. Cross-Section of Ottumwa Midland Landfill Leachate and Underdrain Collection System.[18]



IPL collects wastewater from the leachate system (which is discharged through the Landfill Outfall 001) together with the underdrain collection system (which is discharged through Outfalls 002 and 003) for transport offsite by truck. Because IPL maintains "operational control" over both the Ottumwa Generating Station and the Ottumwa Midland Landfill, however, any managed leachate wastewater collected at the Landfill plainly falls within EPA's definition combustion residual leachate and must be regulated as such.[19] Again, the 2024 ELG Rule requires IPL to eliminate all managed leachate discharges "as soon as possible."[20]

[18] Solid Waste Permit 90-SDP-8-92P, Construction Certification Report filed July 11, 1995, at Appendix A (Montgomery Watson, Apr. 4, 1995), *available at* https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59283.

[19] 40 C.F.R. § 423.11(r) (combustion residual leachate "includes wastewater from landfills and surface impoundments located on *non-adjoining property when under the operational control of the permitted facility*.") (emphasis added).

[20] 89 Fed. Reg. at 40,200; *see generally* 40 C.F.R. § 423.13.

Ensuring compliance with the zero-discharge limit requires IDNR to make it a requirement in the NPDES permit and, if necessary, set a compliance schedule.[21] At present, no draft or issued NPDES permit contains the zero-discharge requirement for the facility. IPL trucks the wastewater to the City of Ottumwa Sewage Treatment Plant.[22]

IDNR must also address IPL's apparent discharge of *unmanaged* combustion residual leachate from the Ottumwa Midland Landfill. As reflected in Figure 1 above, in addition to the use of a managed leachate collection system, IPL installed a groundwater collection system below the coal ash landfill's clay liner. The piping is called an "underdrain" because it removes groundwater below the liner, which, in theory, should have no contact with the leachate above the liner. IPL has used this underdrain system to collect and pump as much as 84,000 gallons of groundwater per day[23] and discharge it through a point source to an area IPL characterizes as a wetland,[24] which flows to an unnamed creek that enters the Des Moines River north of Ottumwa. For many years, IPL collected and discharged this underdrain groundwater under Stormwater General Permit No. 1, which allows for the discharge of solely "uncontaminated groundwater."[25] Although IPL continues to claim the underdrain water consists solely of background groundwater that does not contact any landfilled waste,[26] IPL's own groundwater monitoring data demonstrates that the Ottumwa Midland Landfill underdrain groundwater discharges contain heavy metals and toxic pollutants commonly found in combustion residual leachate, including arsenic, barium, boron, calcium, cobalt, iron, lithium, magnesium, manganese, molybdenum, and zinc. [27]

Given the disparity in sampling results and the failure to address all pollutants of concern in the AAA, IEC calculated the potential quantity of toxics and pollutants being using the maximum concentrations experienced, as shown below in Table 11 and Appendix F, over the 2020 through 2025 timeframe.[28]

[21] *See* 40 C.F.R. § 122.47.
[22] Letter from Priyanth Manjooran (Alliant Energy) to Environmental Commenters (May 7, 2025) (Attachment B).
[23] 2025 Antidegradation Alternatives Analysis at PDF page 1.
[24] Ottumwa's underdrain and pump system is "a discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, . . . from which pollutants are or may be discharged." 33 U.S.C. 1362(14); 40 C.F.R. § 122.2.
[25] IDNR, General Permit No. 1, Part III(A), *available at* https://www.iowadnr.gov/media/7289/download?inline.
[26] 2025 Antidegradation Alternatives Analysis at PDF page 3.
[27] SCS Engineers, "Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER," (Nov. 27, 2024) at pages 43 and 437, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/111409.
[28] SCS Engineers, "Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2025 AWQ MSER LCSPER" (Nov. 25, 2025) at pages 46 and 453, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/114848.

Table 11
Data Analytical Summary - Additional Points
2025 Annual Water Quality Report
Ottumwa Midland Landfill
Permit No. 90-SDP-8-92P

CHEMICAL PARAMETER	GWPS	GWPS SOURCE	EVENT	GU-1 TEMP	GU-2	GU-EX	LP-1	SW-1R	SW-2R	SW-3	SW-4	SW-5	LEACHATE BASIN	TCB-1/2
ARSENIC, µg/L	10	MCL	2025-Aug	<0.53		1.1 J				3.6			13	0.90 J
BARIUM, µg/L	2,000	MCL	2025-Aug	34 B		46 B				72 B			61 B	65 B
BERYLLIUM, µg/L	4	MCL	2025-Aug	<0.33		<0.33				<0.33			<0.33	<0.33
BORON, µg/L	6,000	SWS	2025-Aug	300		820				700			2,000	430
CALCIUM, mg/L	–	–	2025-Aug	200		110				68			200	110
COBALT, µg/L	2.1	SWS	2025-Aug	6.0		0.64				0.30 J			0.32 J	0.85
COPPER, µg/L	1,300	SWS	2025-Aug	<3.2		<3.2				<3.2			<3.2	<3.2
FLUORIDE, mg/L	4	MCL	2025-Aug	0.52 J		0.45 J				0.48 J			<0.38	<0.38
IRON, µg/L	–	–	2025-Aug	<50		240				170			<50	340
LEAD, µg/L	15	SWS	2025-Aug	<0.33		<0.33				<0.33			<0.33	<0.33
LITHIUM, µg/L	14	SWS	2025-Aug	46		17				8.1 J			24	<2.9
MAGNESIUM, µg/L	–	–	2025-Aug	61000		38000				30000			26000	15000
MANGANESE, µg/L	300	SWS	2025-Aug	1700	DRY	110	DRY	DRY	DRY	28	DRY	DRY	25	8.5 J
MOLYBDENUM, µg/L	40	SWS	2025-Aug	2.1		35				11			560	4.4
SELENIUM, µg/L	50	MCL	2025-Aug	<1.4		4.4 J				<1.4			46	<1.4
ZINC, µg/L	2000	SWS	2025-Aug	31		<13				<13			25	<13
CHLORIDE, mg/L	–	–	2025-Aug	20		22				12			450	14
SULFATE, mg/L	–	–	2025-Aug	410		530				340			2,000	370
TOTAL DISSOLVED SOLIDS, mg/L	–	–	2025-Aug	1100		880				580			3,200	590
TOTAL SUSPENDED SOLIDS, mg/L	–	–	2025-Aug	<1.3		13				38			160	1.4 J
pH, SU	–	–	2025-Aug	6.76		7.34				7.8			8.23	8.70
TEMPERATURE, DEGREES C	–	–	2025-Aug	21.5		23.1				27.4			29.9	27.8
SPECIFIC CONDUCTANCE, UMHOS/CM	–	–	2025-Aug	1422		1238				--(1)			4,497	809
FIELD OXIDATION POTENTIAL, mV	–	–	2025-Aug	172		188.5				--(1)			--(1)	118.4
DISSOLVED OXYGEN, mg/L	–	–	2025-Aug	8.86		7.00				--(1)			--(1)	9.26

Notes:
MCL = Maximum Contaminant Level
SWS = Statewide Standard for Groundwater
– = Not Applicable
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B = Compound was found in the blank and sample.
(1): Parameter not recorded by field staff at the time of the August 2025 sampling.

Updated by: RM Date: 10/7/2025
Checked by: LH Date: 10/16/2025

I:\25225073.00\Deliverables\2025 OML AWQR\Tables\[AWQR_OML_Tables.xlsx]11-Additional Points

Appendix F
Additional Points Data History, 2020-Present*
Ottumwa Midland Landfill
Permit No. 90-SDP-8-92P

CHEMICAL PARAMETER	GU-1 TEMP						GU-2						GU-EX					
	2020	2021	2022	2023	2024	2025	2020	2021	2022	2023	2024	2025	2020	2021	2022	2023	2024	2025
ARSENIC, UG/L	<0.88	<0.75			<0.53	<0.53							<0.88	1.9 J	2.2		0.70 J	1.1 J
BARIUM, UG/L	45	41 B			38	34 B							30	25 B	64		35	46 B
BERYLLIUM, UG/L	<0.27	<0.27			<0.33	<0.33							<0.27	<0.27	<0.27		<0.33	<0.33
BORON, UG/L	520	370			270	300							1,000	1,000	870		900	820
CALCIUM, MG/L(1)	--	--			230	200							--	--	--		150	110
COBALT, UG/L	11	14			11	6.0							1.3	2.6	4.0		3.5	0.64
COPPER, UG/L	<1.5	<1.4			<1.8	<3.2							<1.5	<1.4	7.5		<1.8	<3.2
FLUORIDE, MG/L	<0.23	0.47 J			0.42 J	0.52 J							0.30 J	0.76	<0.22		0.46 J	0.45 J
IRON, UG/L	<50.0	41 J			<36	<50							720	810	6,900		260	240
LEAD, UG/L	<0.11	<0.21			<0.26	<0.33							<0.11	<0.21	1.1		<0.26	<0.33
LITHIUM, UG/L(1)	--	--			48	46							--	--	--		26	17
MAGNESIUM, UG/L	70,000	67,000	Too Little		61,000	61,000							29,000	38,000	53,000		36,000	38,000
MANGANESE, UG/L	3,100	3,000	Water to	DRY	2,000	1,700	DRY	DRY	DRY	DRY	DRY	DRY	240	530	400	DRY	250	110
MOLYBDENUM, UG/L(1)	--	--	Sample		2.2	2.1							--	--	--		48	35
SELENIUM, UG/L	<1.0	<0.96			1.4 J	<1.4							<1.0	0.97 J	2.0 J		4.7 J	4.4 J
ZINC, UG/L	40	35			29	31							10.0 J	<10	36		39	<13
CHLORIDE, MG/L	16	17			20	20							5.5	8.2	15		32	22
SULFATE, MG/L	500	460			390	410							390	440	700		460	530
TOTAL DISSOLVED SOLIDS, MG/L	1,200	1,100			1,100	1,100							750	880	1,200		930	880
TOTAL SUSPENDED SOLIDS, MG/L(1)	--	--			<1.4	<1.3							--	--	--		2.5	13
pH, SU	7.03	6.44			6.73	6.76							7.16	7.25	6.76		7.7	7.34
TEMPERATURE, DEGREES C	16	15.9			20.7	21.5							20.5	19.9	17.8		23.3	23.1
SPECIFIC CONDUCTANCE, UMHOS/CM	1,758	1,615			6.66	1,422							1,114	1,298	1,489		7.22	1238
OXIDATION REDUCTION POTENTIAL, MV(1)	--	--			83.1	172							--	--	--		56.2	188.5
DISSOLVED OXYGEN, MG/L(1)	--	--			1,438	8.86							--	--	--		1281	7.00

NOTES:
1. Parameter added to sampling list in 2023 as part of monitoring program modifications directed by IDNR.
2. Specific conductivity probe was likely not fully submerged in liquid at SW-3 in 2023.
* Historical data through 2019 are included in Appendix C

Updated: RM, 10/13/2025
Checked: LMH, 11/24/2025

B = Compound was found in the blank and sample.
J = Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

I:\25225073.00\Deliverables\2025 OML AWQR\Tables\[AWQR_OML_Tables_rev.xlsx]Appendix F_Add. Points History

The table below shows the IEC-calculated potential annual quantity of toxics and pollutants proposed to be discharged into the Des Moines River based on the OML monitoring data above.[29]

Table 1. Potential Annual Discharge Mass by Pollutant.

Based on 84,000 gallons per day (30,660,000 gallons per year)							
Conversion Factors:	1 gallon = 3.78541178 Liters						
	1 mg = 0.0000022046 lbs						
Highlighted rows:	**toxics identified by the World Health Organization, and ELG POC's**						
Highlighted rows:	**Analytes above groundwater protection standards**						
Analyte	**2020-2025**			**Highest**	**Maximum**		
	GU1	**GU-EX**	**GWPS**	**mg/L**	**Liters/year**	**mg**	**lbs**
ARSENIC, UG/L	<0.88	2.20		0.0022	116,060,725	255,334	0.56
BARIUM, UG/L	45.00	64.00		0.064	116,060,725	7,427,886	16.38
BERYLLIUM, UG/L	<0.33	<0.33		0.0003	116,060,725	38,300	0.08
BORON, UG/L	520.00	1000.00		1	116,060,725	116,060,725	255.87
CALCIUM, MG/L[(1)]	230.00	150.00		230	116,060,725	26,693,966,790	58,849.52
COBALT, UG/L	14.00	4.00	2.1 UG/L	0.014	116,060,725	1,624,850	3.58
COPPER	<3.2	7.50		0.0075	116,060,725	870,455	1.92
FLUORIDE, MG/L	0.52	0.76		0.76	116,060,725	88,206,151	194.46
IRON, UG/L	50.00	6900.00		6.9	116,060,725	800,819,004	1,765.49
LEAD, UG/L	<0.33	1.10		0.0011	116,060,725	127,667	0.28
LITHIUM, UG/L[(1)]	48.00	26.00	14 UG/L	0.048	116,060,725	5,570,915	12.28
MAGNESIUM, UG/L	70000.00	53000.00		70	116,060,725	8,124,250,762	17,910.72
MANGANESE, UG/L	3100.00	530.00	300 UG/L	3.100	116,060,725	359,788,248	793.19
MOLYBDENUM, UG/L[(1)]	2.20	48.00	40 UG/L	0.048	116,060,725	5,570,915	12.28
SELENIUM, UG/L	1.40	4.70		0.005	116,060,725	545,485	1.20
ZINC, UG/L	40.00	39.00		0.04	116,060,725	4,642,429	10.23
CHLORIDE, MG/L	20.00	32.00		32	116,060,725	3,713,943,206	8,187.76
SULFATE, MG/L	500.00	700.00		700.00	116,060,725	81,242,507,622	179,107.23
TOTAL DISSOLVED SOLIDS, MG/L	1200.00	1200.00		1,200.00	116,060,725	139,272,870,210	307,040.97
TOTAL SUSPENDED SOLIDS, MG/L[(1)]	<1.4	13.00		13	116,060,725	1,508,789,427	3,326.28

This represents the potential of over 577,000 pounds of untreated pollutants per year that will be discharged from the Ottumwa landfill to the Des Moines River under the draft NPDES permit, and includes four pollutants (Cobalt, Lithium, Manganese, and Molybdenum) above

[29] SCS Engineers, "Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2025 AWQ MSER LCSPER" (Nov. 25, 2025) at pages 46 and 453, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/114848.

groundwater protection standards. Also, the AAA made the representation that the "Pollutants of Concern (POCs) for the underdrain operation were listed in Table 3 and included all parameters that have a reasonable potential to be present in the underdrain water and are *currently sampled for compliance monitoring.*"[30] However, contrary to the representation, notably absent from the available underdrain monitoring data is any information on Cadmium, Chromium, Cyanide, Nickel, Silver, and Thallium.[31]

2. IDNR Must Assume the Underdrain Water is Unmanaged Leachate from the Unlined Midwest Flyash Landfill Unless IPL Provides Further Demonstration

Prior to the operation of the Ottumwa Midland Landfill, the flyash from the Ottumwa Generating Station (OGS) was deposited in the Midwest Flyash Landfill. The landfill was created by filling abandoned strip mines from the 1940s. The flyash from OGS was placed in the unlined strip mines under the guise of mine reclamation.

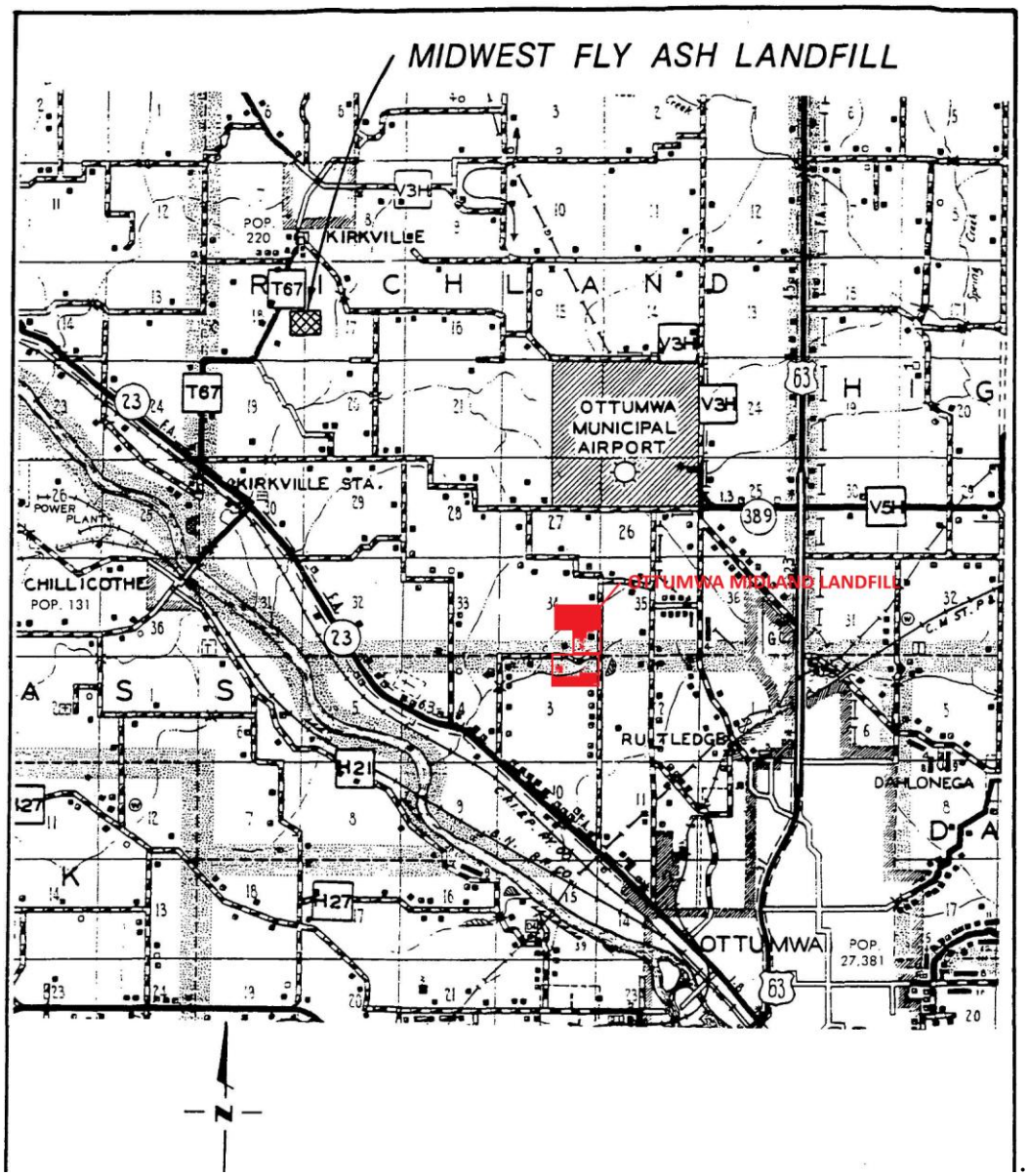
In IDNR's review of Midwest Flyash Landfill's 2003 Annual Water Quality Summary Report and Landfill Closure Recommendation, increases in cobalt, sulfate, barium, iron, magnesium and manganese were observed between up and downgradient wells. Sulfate concentrations in MW-21 (3410 mg/l) were more than 3 times the upgradient concentration (958 mg/I). Barium and cobalt levels were higher in downgradient wells than MW-9, and iron, magnesium and manganese concentrations were as much as an order of magnitude higher in MW-21 than the background well.[32] In addition, the report raised the following issues (emphasis added):

> In the 1990 Hydro report, an assessment of the landfill cover estimated that **5.4 million gallons of leachate would be produced annually** over the 41-acre landfill from downward leakage through the-compacted clay soil cap. Annual percolation through the final cover into the fill at closure was estimated to be 4.85 inches. An assessment of the amount of actual leachate in the landfill would seem warranted to determine how much leachate will be left behind should landfill monitoring be discontinued. Considering 4.85 inches to new leachate per year, **where did this leachate go?** Is this quantity remaining in the landfill, or **is it migrating off site?** Leachate heads and groundwater heads should be evaluated to determine the hydraulic gradients between fill and native areas. A water balance should be considered to estimate the input and output from the landfill waste and evaluate the effectiveness of the landfill cap.[33]

[30] Antidegradation Alternatives Analysis at page 5.
[31] SCS Engineers, "Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2024 AWQ MSER LCSPER," (Nov. 27, 2024) at pages 43 and 437, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/111409.
[32] Iowa DNR, "Review of 2003 Annual Water Quality Summary Report and Landfill Closure Recommendation" (June 16, 2004), Midwest Flyash Landfill Permit number 90-SDP-03-81, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59180.
[33] *Id.*

Without addressing the issues regarding the leachate, the facility received approval to discontinue any further inspection, monitoring, or reporting events on October 4, 2004. [34]
The location of the Midwest Flyash landfill is shown in relation to the Ottumwa Midland landfill in Figure 2.

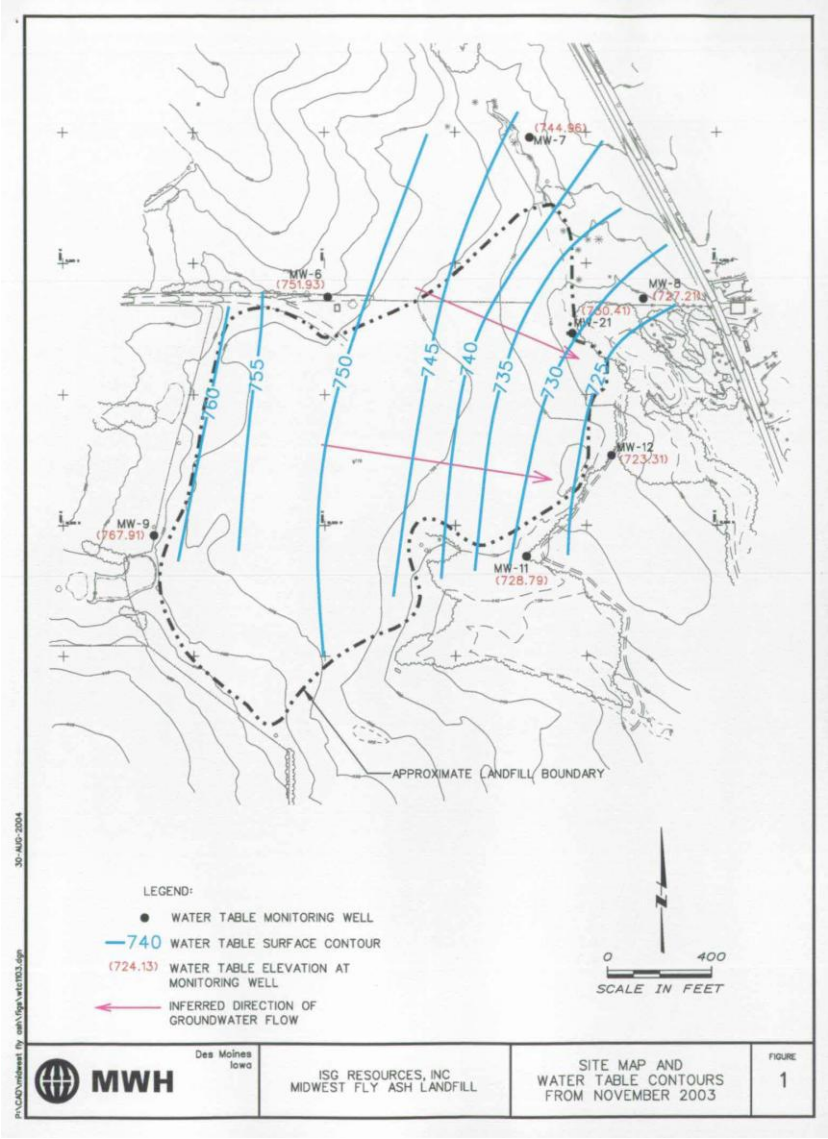
Figure 2. Midwest Fly Ash Landfill Site.



[34] Midwest Fly Ash CCR Landfill (CLOSED), Permit No. 90-SDP-03-81C, "Discontinuance of Closure and Postclosure Requirements" (Oct. 4, 2004), available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59162.

Based on the hydrogeological reports from both landfills, it is entirely plausible that the two landfills are hydraulically connected. Figure 3[35] shows the water table groundwater flow for the Midwest Flyash landfill is from west to east southeast, and Figure 4[36] shows the Ottumwa Midland landfill water table groundwater flow impacting background monitoring well MW-122M is from the northwest.

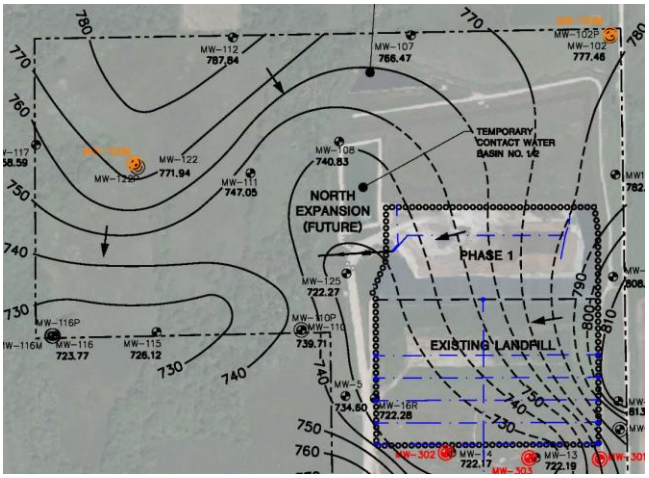
Figure 3. Water Table at Midwest Flyash Landfill.



[35] Request to Discontinue Monitoring and Reporting Requirements, Midwest Flyash Landfill (Aug. 30, 2004), Permit #90-SDP-3-81C at 4, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59163.

[36] SCS Engineers, "Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2025 AWQ MSER LCSPER" (Nov. 25, 2025) at 50, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/114848.

Figure 4. Water Table at Ottumwa Midland Landfill.



Without further demonstration, the contaminated groundwater at OML background monitoring well MW-122M is not naturally occurring, but rather is unmanaged combustion residual leachate from the Midwest Flyash Landfill. If the Ottumwa Landfill's underdrain water is actually unmanaged leachate from the Midwest Flyash Landfill, IDNR must impose numeric arsenic and mercury limits on any such discharges as a part of the NPDES permit for the underdrain *based on the installation and operation of chemical precipitation technology*.[37]

3. *The Underdrain Water is Just as Likely Unmanaged Leachate Without Further Demonstration*

IPL may dispute the presence of combustion residual leachate in Ottumwa Midland Landfill's underdrain groundwater. The AAA claims the "underdrain water does not contact waste, and data is regularly submitted to IDNR to show that the liner remains intact."[38] However, the regularly submitted data is based on visual inspections, and as such is clearly insufficient to demonstrate an intact liner.[39] The 2024 annual inspection consisted of the following:[40]

> SCS completed a visual inspection of OML to identify signs of distress or malfunction of the CCR unit. The visual inspection included observations of the following:
>
> • CCR placement areas including active filling areas, intermediate cover areas, and exterior non-CCR berms or slopes.
>
> • Leachate collection and removal system components including visible leachate drainage layer materials, leachate vaults, cleanouts, and the leachate storage lagoon.

[37] 40 C.F.R. § 423.13(*l*)(ii) & Tbl. 11.
[38] 2025 Antidegradation Alternatives Analysis at PDF page 2.
[39] *See* SCS Engineers, "Annual CCR Landfill Inspection" (Dec. 2024), available at https://ccr.alliantenergy.com/-/media/aeccr/ccrdocuments/ottumwa/landfill/operatingcriteria/omlannuallfinspection2024.pdf?sc_lang=en
[40] *Id.* at 3.

• Contact water run-off management features including internal contact water drainage features and Temporary Contact Water Basin 1/2.

• Non-contact storm water run-on and run-off control features including swales and sedimentation basins located adjacent to active fill areas but outside the landfill limits.

• Groundwater underdrain system components including the visible underdrain discharge pipes.

The visual inspection cannot conclusively demonstrate that the liner is intact, or that the underdrain water has not come into contact with the coal combustion residue. In fact, the hydrogeological studies concluded that the Ottumwa Midland landfill was constructed over old underground coal mines raising the prospects that the liner is not intact.[41] At the time, this raised the very likely prospect that underground cavities would jeopardize the structural integrity of the landfill structures, rendering the site unacceptable.[42] Despite evidence that the site was not acceptable, the landfill construction proceeded. During construction additional evidence of landfill instability suggests the landfill is prone to a lack of structural integrity. [43]

The following wells showed exceedances of the ground water protection standards (GWPS) as part of the 2025 Annual Water Quality Report:[44]

GWPS exceedances in 2025 were:

• Shallow wells:

– Cobalt above the GWPS at MW-15R and MW-108

– Lithium above the GWPS at MW-1R, MW-15R, MW-100R, MW-101R, and MW-108

– Manganese above the GWPS at wells MW-15R and MW-108

• Mid-depth Pennsylvanian wells:

– Lithium at MW-12, MW-13, MW-14, MW-16R, MW-102P, and MW-125.

[41] *See* meeting notes from January 14, 1994 identifying the discovery of underground coal mines during the hydrogeologic study, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/66345

[42] *Id.*

[43] *See* the January 19, 1995, letter notifying DNR of a landslide issue on the slope due to the slope material and groundwater seepage calling for the installation of "finger drains" for the groundwater, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59293, and the December 20, 1995, letter notifying DNR of a cracked leachate line due to settlement available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/59253

[44] SCS Engineers, "Annual Water Quality Report, Monitoring System Evaluation Report, Leachate Performance Evaluation Report; 2025 AWQ MSER LCSPER" (Nov. 25, 2025) at 42, available at https://programs.iowadnr.gov/solidwaste/OpenText/DownloadDocument/114848.

Notably, as shown in Appendix F[45], the underdrain water exceeds the GWPS for cobalt, lithium and manganese. Although IPL attempts to point to other sources as being responsible for the exceedances, given the potential lack of structural integrity and stability issues, it is just as plausible that the coal combustion residue is contributing to the exceedances and is contaminating the underdrain water.

The Company does not dispute that the groundwater is contaminated and no longer eligible for discharge under Stormwater General Permit No. 1. Moreover, IPL now collects wastewater from the leachate system (which is discharged through the Landfill Outfall 001) together with the underdrain collection system (which is discharged through Outfalls 002 and 003) for transport offsite by truck.[46] As noted, because IPL maintains "operational control" over both the Ottumwa Generating Station and the Ottumwa Midland Landfill, IDNR must evaluate whether the wastewater collected at the Landfill includes managed or unmanaged leachate.

As noted above, there is no dispute that the Ottumwa Midland Landfill uses a managed leachate system. Under the 2024 ELG Rule, IPL must eliminate all managed leachate discharges "as soon as possible beginning July 8, 2024, but no later than December 31, 2029."[47] If unmanaged leachate from the Landfill has leaked into the Ottumwa Landfill's underdrain system, IDNR must impose numeric arsenic and mercury limits on any such discharges, as soon as possible.[48]

4. EPA's Extension of the Final ELG Compliance Deadline Does Not Excuse IDNR From Addressing IPL's Leachate Discharges.

As noted, on December 31, 2025, EPA finalized a rule (effective March 2, 2026) extending the final compliance deadline for eliminating managed leachate discharges and treating unmanaged leachate discharges to December 31, 2034.[49] For indirect dischargers, like IPL, who trucks leachate to the City of Ottumwa's public works, EPA's Extension Rule also extends the compliance deadlines to January 2, 2028.[50] In issuing the Extension Rule, however, EPA emphasized that the underlying effluent limitations remain in effect, and therefore state permitting authorities are still required to establish compliance deadlines "as soon as possible," subject to the consideration of the four regulatory factors set out in 40 C.F.R. § 423.11(t).[51]

---

[45] *Id.* at 453.
[46] Industrial User Permit (Permit Number 36) for Ottumwa Midland Landfill
[47] 40 C.F.R. § 423.13(*l*)(i)(A).
[48] 40 C.F.R. § 423.13(*l*)(ii) & Tbl. 11.
[49] 90 Fed. Reg. at 61,353
[50] *Id.*
[51] *Id*. at 61,343, 61,346 (noting that permitting authorities are still "required to evaluate the same criteria in section 423.11(t) as was required in the 2024 rule when considering the 'as soon as possible'" compliance date for each source); *see also* EPA, Response to Public Comments for Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category – Deadline Extensions at 227, EPA Doc. EPA-HQ-OW-2009-0819-13722 (Dec. 2025) ("this final action does not revise the specified factors that a permitting authority may consider determining the 'as soon as possible' date for a particular facility at 40 CFR 423.11(t).").

Under 40 C.F.R. § 423.11(t), when determining a compliance deadline that is "as soon as possible," the permitting authority must consider the following factors "after receiving information from the discharger"[52]:

(a) Time to expeditiously plan (including to raise capital), design, procure, and install equipment to comply with the requirements of the final rule;

(b) Changes being made or planned at the plant in response to greenhouse gas regulations for new or existing fossil fuel-fired power plants under the Clean Air Act, as well as regulations for the disposal of coal combustion residuals under subtitle D of the Resource Conservation and Recovery Act;

(c) For FGD wastewater requirements only, an initial commissioning period to optimize the installed equipment; and

(d) Other factors as appropriate.

Consequently, under the still-effective 2024 effluent limitations, the presumptive compliance deadline for compliance with the rule's leachate provisions is July 8, 2024.[53] The permitting authority may determine a later compliance date (but no later than December 31, 2029, or December 31, 2034, under the Extension Rule) but *only if* it receives information from the discharger justifying the later date, and only if the permitting authority provides a "*well-documented justification*" based on a consideration of the factors set forth in 40 C.F.R. §423.11(t).[54] Thus, EPA's recent Extension Rule does not relieve IDNR of the obligation to address IPL's leachate discharges, and incorporate deadlines in this permit that require the Company to eliminating or treat those discharges "as soon as possible."

Here, the record does not include any technical information justifying the deferral of compliance with the ELG Rule's leachate requirements until 2029, let alone 2034. EPA's 2024 ELG Rule, on the other hand, contains ample evidence demonstrating that it is technologically and economically feasible for utilities like IPL to meet those leachate standards within five years.[55] And for indirect dischargers like IPL, the plain language of the Clean Water Act itself requires compliance within three years.[56] There is nothing in the record demonstrating that there are any unique technical or economic issues at Ottumwa that would prevent IPL from complying with the ELG Rule's leachate provisions within 3-5 years. Indeed, there is nothing in the record demonstrating that IDNR considered the mandatory Section 423.11(t) factors at all. Consequently, the proposed permit is arbitrary and capricious and contrary to law and must be revised to require IPL to comply with the ELG Rule "as soon as possible."[57]

[52] U.S. EPA, Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 80 Fed. Reg. 67,838, 67,883 n.57 (Nov. 3, 2015); *see also* 40 C.F.R. § 423.11(t).
[53] 89 Fed. Reg. at 40,200.
[54] 80 Fed. Reg. at 67,883 (emphasis added).
[55] *See generally* 89 Fed. Reg. 40,198.
[56] 33 U.S.C. § 1317(b)(1); 90 Fed. Reg. at 61,346.
[57] 89 Fed. Reg. at 40,200; *see generally* 40 C.F.R. § 423.13; 40 C.F.R. § 11(t).

II. Antidegradation Requirements Apply to the Proposed Discharge

The Clean Water Act requires an antidegradation review before new or increased discharges of pollutants.[58] Antidegradation is a fundamental part of the Clean Water Act's effort to restore the "chemical, physical, and biological integrity" of water across the country.[59] Paired with designated uses and water quality criteria, antidegradation procedures act as a ratchet to prevent water quality from worsening. EPA has adopted regulations defining how states implement antidegradation requirements, including the process of considering alternatives and providing a justification before degrading water quality.[60] EPA requires that in conducting an AAA:

> "The analysis of alternatives shall evaluate a **range of practicable alternatives that would prevent or lessen the degradation** associated with the proposed activity. When the analysis of alternatives identifies one or more practicable alternatives, the State shall only find that a lowering is necessary if one such alternative is selected for implementation."[61]

In Iowa, the Department of Natural Resources is responsible for implementing antidegradation requirements. Iowa has a complicated history of antidegradation policy. Iowa adopted an antidegradation policy in 2010 that incorporated an Antidegradation Implementation Procedure (AIP), which U.S. EPA approved.[62] Under this policy, degradation of surface water that meets water quality standards is only allowed where "lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located."[63] In 2016, Iowa attempted to update its antidegradation policy, but the EPA disapproved the proposed rule amendments in 2017.[64] The denial left the 2010 Antidegradation Implementation Procedure issued by the Iowa Department of Natural Resources (IDNR) in effect as an enforceable water quality standard,[65] even though state rules were not updated to reflect the denial.

As noted in the antidegradation alternatives analysis, the current stream designation for the impacted section of the Des Moines River is A1, B (WW-1), HH.[66] The Des Moines River meets water quality standards for numerous pollutants, so it qualifies for Tier 2 protection according to the AIP.[67] The AIP states:

---

[58] 33 U.S.C. § 1313(d)(4)(B).
[59] 33 U.S.C. § 1251.
[60] 40 C.F.R. § 131.12.
[61] 40 C.F.R. § 131.12 (a)(2)(ii).
[62] *See* "Chapter 61, Water Quality Standards," U.S. EPA, available at https://www.epa.gov/sites/production/files/2017-05/documents/ia-chapter61-provisions.pdf.
[63] 40 C.F.R. § 131.12(a)(2); IOWA ADMIN. CODE r. 567-61.2(2).
[64] Letter from Mark Hague, U.S. EPA Region 7, to John Tack, IDNR (Jan. 19, 2017), at 8 ("Despite the concerted effort by IDNR and EPA to reach consensus on an approvable rule, the EPA is disapproving the revised rules.").
[65] *Id.* ("Pursuant to 40 C.F.R. 131.21, the Antidegradation Rules and AIP approved by the EPA on September 30, 2010 remain in effect for CWA purposes."). *See* "Section 2: Chapter 61, Water Quality Standards," U.S. EPA, available at https://www.epa.gov/sites/production/files/2017-05/documents/ia-chapter61-provisions.pdf.
[66] Antidegradation Alternatives Analysis at 3.
[67] "Iowa Antidegradation Implementation Procedure," Iowa DNR (Feb. 17, 2010), at 4, available at https://www.iowadnr.gov/Portals/idnr/uploads/water/standards/files/antideg_2_17.pdf ("Tier 2 protection level

> "Where the quality of the waters exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality *shall be maintained and protected unless* the department finds, after full satisfaction of the intergovernmental coordination and public participation provisions, that *allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located.* In allowing such degradation or lower water quality, the department shall assure water quality adequate to protect existing uses fully. Further, *the department shall assure the highest statutory and regulatory requirements for all new and existing point sources* and all cost-effective and reasonable best management practices for nonpoint source control *before allowing any lowering of water quality*.[68]

Since OML first started operations in 1995 and until recently, OML had been pumping the underdrain water into a wetland. The wetland connects to the Des Moines River via unnamed creeks. IPL applied for the undrain water to be covered under IDNR Stormwater General Permit number 1, and received initial approval from the Iowa Department of Natural Resources (IDNR) on October 1, 1994.

However, as a condition of coverage under Stormwater General Permit 1, "all discharges covered by this permit shall be composed entirely of storm water except as follows:… uncontaminated groundwater…". The underdrain water is contaminated and is not an allowed discharge under Stormwater General Permit 1. In response to IDNR communication in 2023 to seek an individual National Discharge Pollution Elimination System (NPDES) permit for the OML underdrain water, IPL conducted an antidegradation analysis noticed on December 19, 2024.[69]

On January 17, 2025, the Iowa Environmental Council (IEC), Environmental Law and Policy Center (ELPC), and Sierra Club submitted comments on the Antidegradation Alternatives Analysis for Interstate Power and Light Company (IPL), noticed on December 19, 2024. The comments concluded that…

> "IPL must perform the AAA to address arsenic, cobalt, lithium, manganese, and molybdenum as pollutants of concern in the underdrain water. In addition, the AAA must analyze the social/economic importance of the discharge and provide a justification for degrading water quality in the Des Moines River. In conducting its evaluation, IPL needs to address the ancillary benefits to water quality and environmental justice issues. In short, IPL needs to address deficiencies in the AAA before an NPDES permit can proceed"

applies to all surface waters where existing water quality is better than applicable water quality standards as determined on a pollutant-by-pollutant basis").

[68] *Id.* at 4.

[69] Antidegradation Alternatives Analysis at 1 December 19, 2024; email from Matthew Bizjack (Alliant Energy) to DNR, dated Sept. 6, 2023.

On May 1, 2025, IPL started hauling the underdrain water to the Ottumwa Water Pollution Control Facility (WPCF). The Industrial User Permit (Permit Number 36) for Ottumwa Midland Landfill accepts the coal combustion residue leachate from Ottumwa Midland Landfill, and was amended to accept the underdrain water from GU-EX and GU-1 effective May1, 2025.

Consistent with the Iowa Antidegradation Implementation procedure, *all new or expanded regulated activities are subject to antidegradation review requirements*.[70] The creation of a discharge of the underdrain water to the Des Moines River will clearly result in the addition of pollution, including numerous pollutants found in the underdrain water that will degrade water quality. Thus, the proposed change in process required an antidegradation analysis.

III. A New Discharge and Additional Pollutants of Concern Trigger a New Antidegradation Review that Corrects Deficiencies of the Prior Analysis.

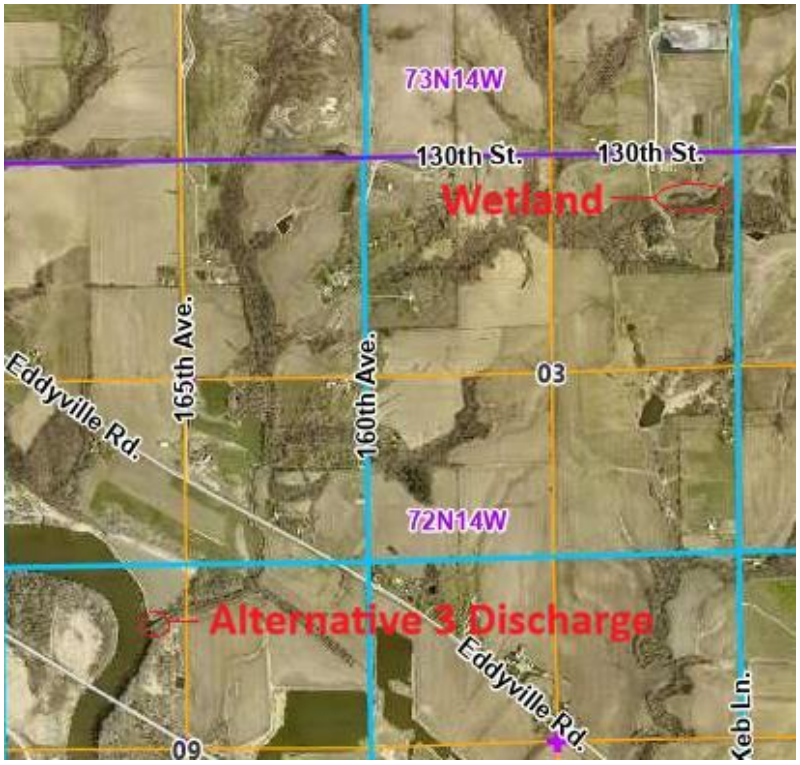
The AAA selected alternative proposed to pump the underdrain water from OML to an area IPL characterizes as a wetland, which then connects to the Des Moines River via unnamed creeks.[71] The proposed discharge point is shown in Figures 5 and 6. As shown in Figure 5, the segment of the Des Moines River where the OML discharge is proposed is not currently a state impaired water based on the 2024 section 303(d) listing of impaired waters.

Figure 5. Proposed OML Underdrain Discharge.

[70] "Iowa Antidegradation Implementation Procedure," Iowa DNR (Feb. 17, 2010), at 12, available at https://www.iowadnr.gov/Portals/idnr/uploads/water/standards/files/antideg_2_17.pdf

[71] Antidegradation Alternatives Analysis at 1.

Figure 6. OML site (top right), receiving water wetland, and potential discharge point at the Des Moines River.



Since the December 19, 2024 AAA, the underdrain water is being trucked to the Ottumwa Water Pollution Control Facility instead of discharging to the wetland. Table 2 summarizes the alternatives identified in each AAA.

Table 2: AAA Comparison.

12/19/24 AAA	20-yr Cost	8/8/25 AAA	20-yr Cost
1. Continued discharge to creek under stormwater permit	Not allowed	1. Continue trucking to OWPC facility	$25,929,000
2. Pipe to the Des Moines River	$4,101,000	2. Pipe to the Des Moines River	$6,627,000
3. Iron and Manganese treatment prior to discharge to wetland	$7,593,400	3. Iron removal with bag filters and discharge to wetland	$1,852,000
		4. Reverse Osmosis and discharge to wetland	$16,654,600

The current AAA selected Alternative 3 is to remove particulate iron via bag filters and discharging to the nearby Wetland Complex. However, given that the proposed discharge traverses over and through the soils between the landfill and the river, it is highly improbable that the entire underdrain water discharge reaches the river. By discharging to a wetland, some of the water infiltrates or evaporates on its path from the existing discharge point and the Des

Moines River. The evaporation and infiltration that occurs before reaching the Des Moines River, as proposed by Alternative 3, increases the concentrations of the pollutants of concern. As a result, Alternative 3 not only further contaminates the ground water, but would clearly increase the polluted discharge to the river.

1. The Antidegradation Alternatives Analysis for Ottumwa Midland Landfill Must Evaluate Additional Alternatives for all Pollutants.

The AIP requires that the DNR "assure the highest statutory and regulatory requirements for existing point sources must be met before allowing any lowering of water quality."[72] The alternative selected in the AAA is inconsistent with both the state's antidegradation requirements and the statutory intent of the Clean Water Act. Discharging the underdrain water to the Des Moines River via the wetland and unnamed streams neither prevents nor lessens the degradation, and as discussed below, has not been justified.

2. The AAA Must Include Additional Alternatives for the Underdrain Water.

As noted previously, the 2024 ELG Rule requires numeric limits on arsenic and mercury for "unmanaged" leachate discharges *based on the installation and operation of chemical precipitation technology.*[73] Neither the 2024 AAA nor 2025 AAA proposed an alternative utilizing chemical precipitation. (See Table 2).

Before an NPDES permit can be issued, the AAA needs to include alternatives based on chemical precipitation. [74] Because the 2024 ELG Rule rule sets new, more stringent "best available technology," or BAT for "unmanaged" leachate discharges, the current AAA cannot rely merely on calculating waste load allocations/Permit Limits for IPL Ottumwa Midland Landfill's Wastewater Discharge.[75]

3. The AAA Completely Misunderstands Social and Economic Importance.

Antidegradation regulations prohibit degradation of water unless the lower water quality is "necessary to accommodate important economic or social development in the area in which the waters are located."[76] The DNR has explained that this importance addresses the "social and economic benefits to the community that will occur from any activity resulting in a new or expanded discharge"[77]

The AAA notes "Alternative 3 uses Iron Removal via Bag Filters and Discharges to Wetlands.[78] Alternative 1, continuing to truck the underdrain water to the Ottumwa Water Pollution Control Facility, is listed as a non-degrading alternative. [79] The AAA notes that Alternative 3 and

[72] AIP at 4.
[73] 40 C.F.R. §§ 423.13(*l*)(1)(i)(A), (*l*)(2)(i)(A), (*l*)(2)(ii). (emphasis added).
[74] *Id.*
[75] 2025 Antidegradation Alternatives Analysis at PDF page 32.
[76] 40 C.F.R. § 131.12(a)(2); IOWA ADMIN. CODE r. 567-61.2(2)(b).
[77] AIP at 2.
[78] 2025 Antidegradation Alternatives Analysis at PDF page 15.
[79] *Id.* at 8.

Alternative 4 are less degrading than Alternative 2.[80] However, in attempting to justify the proposed degradation and demonstrate the important economic and social development in the area, the AAA provides an abbreviated and deficient analysis. It never identifies the "benefits to the community" that justify the new discharge.

The analysis compares five social and economic factors of Ottumwa to the Iowa average. The analysis notes that this implies that Ottumwa is more susceptible to social and economic disruption than the average town in Iowa, and that "IPL has an obligation to prevent unnecessary increases to energy customer costs."[81] The AAA further claims that Alternative 3 "is not anticipated to impact the local community" and offers significant cost savings long-term compared to the other Alternatives.[82] These claims misrepresent the impact of costs and ignore the potential downstream impact of the degradation on the community drinking water supply.

The analysis never identifies impacts to the local community – either socioeconomic benefits or avoided costs – that could possibly justify degradation. The only potential socioeconomic benefit identified in the AAA is avoidance of treatment costs. But those costs would be spread over the full-service area of IPL, not just Ottumwa customers.

The AAA estimates the 20-year cost of indirectly discharging to the Des Moines River with treatment for iron removal at $1.85 million ($92,600 per year) while estimating the 20-year cost of treating the underdrain water prior to discharge using reverse osmosis at $16.65 million ($832,730 per year).[83] The AAA claims that this difference in 20-year costs ($3.5 million) is significant, and implies that the cost to treat the water poses an "important economic impact."

In the latest IPL rate case, the agreed upon amount IPL is allowed to charge customers annually was $1,961,339,337.[84] Although rates are determined based on a class of service study, and the rates for industrial, commercial, and residential customers are based on the cost to serve each class of customer, for purposes of demonstrating the insignificant impact of the cost to treat the underdrain water, a simplified analysis is sufficient. In 2024, IPL sold 13,612,143,000 kwh to customers.[85]As demonstrated below in Table 3, the customer impact to treat the water using reverse osmosis prior to discharge adds a little over 6.12 cents to a residential customer's annual electric bill, compared to the customer impact to discharge after iron filtration to the wetland adding 0.68 cents to the customer's annual electric bill.

[80] *Id.* at 16.
[81] *Id.* at 18.
[82] *Id.* at 18.
[83] *Id.* at 9, 11.
[84] *In re: Interstate Power & Light Company*, "Final Decision and Order" (Sept. 17, 2024), Docket no. RPU-2023-0002, at 6, available at https://efs.iowa.gov/document/document-permalink/5100789.
[85] IPL 2024 FERC Form 1 at page 304.

Table 3. Marginal cost of treatment for typical residential customer.

	20-Year Cost	Average Cost/Year	2024 Kwh Sold	$/Kwh	Customer Impact per year *
Alternative 3	$ 1,852,000	$ 92,600	13,612,143,000	$ 0.0000068	$ 0.0816
					$ -
Alternative 4	$ 16,654,600	$ 832,730	13,612,143,000	$ 0.0000612	$ 0.7341
Alternative 1	$ 25,929,000.00	$ 1,296,450.00	13,612,143,000	$ 0.0000952	$ 1.1429
*** Based on average residential customer of 1000 Kwh per month**					

By any definition, this is an insignificant economic impact to either the local community or IPL customers. In fact, even alternative 1 to continue trucking to the Ottumwa Water Pollution Control Facility would add less than $1.15 annually to a residential customers bill.

The AAA also argues that the degradation is justifiable because the effluent being discharged will still reach the same body of water (Des Moines River) while avoiding the need for treatment.[86] However, the AAA does not mention or discuss the underdrain water POCs above groundwater protection standards from OML in the design conditions or in the alternatives analysis.[87]

Five miles downstream from the proposed discharge, the City of Ottumwa has a drinking water intake on the Des Moines River.[88] The AAA proposes to discharge the underdrain water to the wetland with minimal treatment.[89] The AAA makes no effort to account for potential treatment costs by the city for removing the tons of pollutants discharged by from underdrain. By its own findings, the socioeconomic analysis of Ottumwa means that if the drinking water treatment system requires upgrades due to the pollution load, the community is "more susceptible" to disruption from those costs.[90]

Because the AAA did not identify any legitimate social or economic benefits from the degradation, no degradation is allowed by law.

4. The AAA Cannot Ignore Ancillary Water Quality And Environmental Justice Benefits of Treatment.

In its recently revised technology-based effluent limitations guidelines and standards (ELGs) for the steam electric power generating point source category, EPA included an analysis on environmental justice. The analysis showed that benefits associated with improvements to water quality, wildlife, and human health resulting from reductions in pollutants in surface water and drinking water will accrue to minority and low-income populations at a higher rate under some or all of the proposed regulatory options.

[86] *Id.* at 6-12.
[87] *Id.*
[88] *See* 2025 Antidegradation Alternatives Analysis at 22.
[89] *See id.* at 17.
[90] *Id*. at 14.

Using the Environmental Justice Screening tool, the area within 20 miles of the Ottumwa Midland Landfill has potentially significant environmental justice issues. The area is above the 50th percentile nationally for multiple demographic indicators (low-income, unemployment, limited English speaking households, less than high school education, under age 5, and over age 64) as well as numerous environmental indicators (lead paint, RMP facility proximity, underground storage tanks, and drinking water non-compliance).

Figure 7. Point of Reference for EJSCREEN Analysis.

Table 4. EJSCREEN Results.

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
ENVIRONMENTAL BURDEN INDICATORS					
Particulate Matter 2.5 ($\mu g/m^3$)	7.6	7.66	59	8.45	32
Ozone (ppb)	56.7	57.9	29	61.8	31
Nitrogen Dioxide (NO_2) (ppbv)	5.3	7	29	7.8	26
Diesel Particulate Matter ($\mu g/m^3$)	0.0984	0.113	50	0.191	27
Toxic Releases to Air (toxicity-weighted concentration)	580	2,800	47	4,600	49
Traffic Proximity (daily traffic count/distance to road)	450,000	1,400,000	51	1,700,000	37
Lead Paint (% Pre-1960 Housing)	0.5	0.45	54	0.3	74
Superfund Proximity (site count/km distance)	0.0024	0.16	71	0.39	56
RMP Facility Proximity (facility count/km distance)	0.63	0.89	52	0.57	69
Hazardous Waste Proximity (facility count/km distance)	0.51	0.62	58	3.5	34
Underground Storage Tanks (count/km^2)	1.7	1.9	68	3.6	60
Wastewater Discharge (toxicity-weighted concentration/m distance)	22	1100	61	700000	42
Drinking Water Non-Compliance (points)	0.89	0.16	95	2.2	77
SOCIOECONOMIC INDICATORS					
Demographic Index USA	1.05	N/A	N/A	1.34	45
Supplemental Demographic Index USA	1.7	N/A	N/A	1.64	59
Demographic Index State	1.46	1.31	69	N/A	N/A
Supplemental Demographic Index State	1.8	1.46	75	N/A	N/A
People of Color	15%	15%	63	40%	29
Low Income	35%	29%	68	30%	63
Unemployment Rate	4%	4%	65	6%	53
Limited English Speaking Households	2%	2%	80	5%	65
Less Than High School Education	10%	8%	77	11%	60
Under Age 5	7%	6%	63	5%	67
Over Age 64	19%	19%	54	18%	60

At a state level, the area is at the 95th percentile in the state for drinking water non-compliance. The antidegradation analysis makes no mention of the drinking water intake for the City of Ottumwa five miles downstream from the proposed discharge point.

Accordingly, we recommend that Interstate Power and Light consider the environmental justice issues associated with Ottumwa as a part of a new antidegradation analysis.

5. *The AAA Conflates the Need to Operate the Underdrain System with Justified Degradation.*

The AAA notes that the underdrain system is required to continue to discharge to maintain landfill stability and comply with the disposal permit issued by the IDNR, regardless of whether the generating station or landfill were to cease operations.[91] It then makes a giant leap in logic

[91] *Id.* at 17.

that because the landfill is required to maintain a separation between the groundwater table and liner, degradation is justified.[92]

As discussed above, antidegradation regulations prohibit degradation of water unless the lower water quality is "necessary to accommodate important economic or social development in the area in which the waters are located."[93] Not only has the AAA failed identify any legitimate social or economic benefits from the degradation, it failed to identify any alternatives to minimize the degradation under the guise that the landfill is required to maintain a separation between the groundwater table and liner.

IV. Conclusion

Before issuing an NPDES permit for OML, IDNR must impose numeric arsenic and mercury limits on any such discharges as a part of the NPDES permit for the underdrain *based on the installation and operation of chemical precipitation technology*. Without further demonstration, the contaminated underdrain groundwater at OML is not naturally occurring, but rather is unmanaged combustion residual leachate from the Midwest Flyash Landfill or unmanaged combustion residual leachate leakage from OML.

Additionally, IPL must perform the AAA to address cobalt, lithium, manganese, and molybdenum as pollutants of concern in the underdrain water and expand the alternatives to evaluate chemical precipitation. In addition, the AAA must analyze the social/economic importance and provide a justification for degrading water quality in the Des Moines River. In conducting its evaluation, IPL needs to address the ancillary benefits to water quality and environmental justice issues.

Thank you for the opportunity to comment. We would be happy to discuss any of these comments informally prior to submission of the final alternatives analysis to DNR. If you have questions or we can clarify these comments further, please feel free to contact us.

Sincerely,

/s/ Steve Guyer
Steve Guyer
Senior Energy Policy Counsel
Iowa Environmental Council
505 5th Ave, Ste 850
Des Moines, IA 50309
guyer@iaenvironment.org

/s/ Michael Schmidt
Michael Schmidt
General Counsel
Iowa Environmental Council
505 5th Ave, Ste 850
Des Moines, IA 50309
schmidt@iaenvironment.org

[92] *Id.*
[93] 40 C.F.R. § 131.12(a)(2); IOWA ADMIN. CODE r. 567-61.2(2)(b).

/s/ Joshua Smith
Joshua Smith
Staff Attorney
Sierra Club Environmental Law Program
2101 Webster Street, Suite 1300
Oakland, CA 94612
Phone: (415) 977-5560
joshua.smith@sierraclub.org

/s/ Josh Mandelbaum
Josh Mandelbaum
Senior Attorney
Environmental Law & Policy Center
505 5th Ave, Ste 333
Des Moines, IA 50309
jmandelbaum@elpc.org

Attachments

A. Environmental Commenters' 60-day Notice of Intent to Sue

B. IPL Response to Notice and Pretreatment Agreement

C. Ottumwa Generating Station Final Amended Permit

D. Environmental Commenters' Ottumwa Generating Station NPDES Permit Comments

E. IDNR Response to Comments on Ottumwa Generating Station

F. 2025 Antidegradation Analysis

G. Environmental Commenters' Comments on 2025 Antidegradation Analysis