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January 31, 2019

Mr. David M. Heger Senior Counsel AES US Services, LLC One Monument Circle, Suite 701A Indianapolis, Indiana 46204-2901

Re: 2018 CCR Annual Groundwater Monitoring and Corrective Action Report Indianapolis Power & Light Company Eagle Valley Generating Station Indianapolis, Indiana ATC Project No. 170LF00523

Dear Mr. Heger:

ATC Group Services LLC (ATC) has prepared this 2018 CCR Annual Groundwater Monitoring and Corrective Action Report for the ash pond system at Indianapolis Power & Light Company's (IPL) Eagle Valley Generating Station located outside Martinsville, Morgan County, Indiana. This report has been prepared to comply with reporting requirements described in the United States Environmental Protection Agency's (USEPA) Coal Combustion Residuals (CCR) Rule § 257.90(e). This annual report documents the status of the groundwater monitoring and corrective action program for the ash pond system and summarizes information required by § 257.90(e)(1) through § 257.90(e)(5).

Federal CCR Rule § 257.90(e) specifies the following:

For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1).

The following key actions have been completed to comply with the CCR Rule:

- Appendix III groundwater monitoring data was evaluated for statistically significant exceedances (SSIs) pursuant to § 257.93(h) and 257.94(e).
- A Notice of Establishment of an Assessment Monitoring Program was completed as required by § 257.94(e)(3), effective July 16, 2018.
- Assessment monitoring sampling events were conducted in May and September 2018 as required by § 257.95. Appendix III constituents were included as part of the May 2018 sampling event during the transition period from detection monitoring to assessment monitoring.
- Groundwater Protection Standards were established in accordance with 40 CFR 257.95(d)(2) and 257.95(h) (Table 4).
- A Revised Groundwater Sampling and Analysis Plan (GW SAP), dated October 30, 2018, was submitted to the Indiana Department of Environmental Management (IDEM).

To report on the activities conducted during the prior calendar year and document compliance with the CCR Rule, the specific requirements listed in § 257.90(e)(1) through § 257.90(e)(5) are provided below in bold/italic type followed by a short narrative addressing how that specific requirement has been met.

At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:

§ 257.90(e)(1) A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

IPL operates the Eagle Valley Station located approximately four miles north of Martinsville, Indiana. It is located at 4040 Blue Bluff Road. A Site Location Map is provided as Figure 1. A map showing the location of each CCR management unit and associated upgradient and downgradient monitoring wells is provided as Figure 2. This information was previously presented in the Indianapolis Power & Light Company Eagle Valley Generating Station Ash Pond System Closure & Post-Closure Plan, Rev. A, dated July 28, 2016.

§ 257.90(e)(2) Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No monitoring wells were installed or decommissioned during this reporting period. The CCR ash pond groundwater monitoring system at the Eagle Valley Station consists of twenty-four (24)

monitoring wells: MW-1S, MW-1I, MW-1D, MW-2S, MW-2I, MW-2D, MW-3S, MW-3I, MW-4S, MW-4I, MW-4D, MW-6S, MW-6I, MW-6D, MW-7S, MW-8S, MW-9S, MW-9I, MW-9D, MW-10S, MW-11S, MW-11I, MW-11D, and MW-12S. Monitoring wells MW-4S, MW-4I, MW-4D, MW-8S, MW-9S, MW-9I, and MW-9D represent upgradient/background wells, while the remaining represent downgradient wells. The wells were installed in accordance with the requirements of Federal CCR Rule § 257.91 between September 28, 2015 and March 17, 2016. The location of the CCR monitoring well network is depicted on Figure 2.

Monitoring well MW-10S was previously designated as an upgradient well. In response to regulatory agency inquiry, this well was redesignated as a downgradient well in the revised GW SAP. Based on gradient position depicted on historic flow maps, the MW-10S position with regard to the impoundments varies from upgradient, sidegradient, or downgradient.

Documentation of the design and construction of the monitoring well network for the CCR management units at the Eagle Valley Station is included in the Indianapolis Power & Light Company Eagle Valley Generating Station Ash Pond System Closure & Post-Closure Plan, Rev. A, dated July 28, 2016. This document is currently under review by the state regulatory agency. After agency approval is obtained, the well certification will be updated to reflect the re-classification of MW-10S from an upgradient well designation to a downgradient well designation.

§ 257.90(e)(3) In addition to all the monitoring data obtained under § 257.90 through § 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

Table 1 provides a summary of the number of samples collected at each well, sampling dates, and designation of whether samples were required by the detection or assessment monitoring program. Groundwater analytical results for samples collected during the 2018 sampling events are summarized in Table 2 and Table 3.

§ 257.90(e)(4) A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels);

Consistent with § 257.90(e), this annual report documents activities conducted during the 2018 calendar year at the CCR management units subject to the Rule.

Pursuant to 257.93(h) and 257.94(e), the statistical analysis of the initial minimum eight rounds of Appendix III groundwater sampling data was completed in January 2018. Based on the analysis, SSIs over background were detected as follows:

- Boron, total
- Calcium, total
- Total dissolved solids (TDS)
- Chloride

- Sulfate
- Fluoride

Pursuant to 40 CFR 257.94(e)(2), an Alternative Source Demonstration was initiated to evaluate whether a source other than the facility was causing the SSIs; however, a successful demonstration was not completed.

Pursuant to 40 CFR 257.94(e)(2), 257.94(e)(3) and 257.95(b), the facility established an Assessment Monitoring Program in accordance with the requirements of § 257.95 on July 16, 2018.

§ 257.90(e)(5) Other information required to be included in the annual report as specified in § 257.90 through § 257.98.

In accordance with §257.95(b), Appendix IV assessment monitoring was completed in May 2018. In accordance with §257.95(d), a resampling assessment monitoring event was completed in September 2018. Analytical results are summarized in Tables 2 and 3. Table 4 summarizes the groundwater protection standards established in accordance with § 257.95(d)(2) and § 257.95(h). Background analytical data was previously provided in the CCR Annual Groundwater Monitoring and Corrective Action Report dated January 31, 2018.

Projected key activities for the upcoming year include the following:

- Completion of statistical evaluation to determine whether there is a statistically significant exceedance of groundwater protection standards for Appendix IV constituents in accordance with § 257.95(g) and 257.93(h).
- Annual and semi-annual assessment monitoring sampling events in accordance with § 257.95.

We appreciate the opportunity to assist with IPL's CCR Rule groundwater monitoring program at Eagle Valley Station's ash pond system. Please contact any of the undersigned at 317.849.4990 if you have any questions regarding this report.

Sincerely,

Kindra K

Kendra Reininga Staff Geologist

Mark 5. Breting

Mark E. Breting, L.P.G. Senior Project Geologist

find Noel

John R. Noel, L.P.G. Principal Geologist

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TABLES

Table 1:	Well Sampling Summary
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- Table 2:
- Summary of Monitoring Results May 2018 Summary of Monitoring Results September 2018 Groundwater Protection Standards Summary Table 3:
- Table 4:

Well Sampling Summary Multiunit Ash Pond System Indianapolis Power and Light Company Eagle Valley Generating Station Martinsville, Indiana ATC Project No. 170LF00523

Identification	Date Installed	Upgradient/Background or Downgradient	Number of Samples	Sample Date	Detection or Assessment Monitoring
MW-1S	9/29/2015	Downgradient	2	5/23/2018	Assessment
		.		9/11/2018	
MW-1I	3/1/2016	Downgradient	2	5/23/2018	Assessment
		.		9/11/2018	
MW-1D	10/1/2015	Downgradient	2	5/23/2018	Assessment
		-		9/11/2018	
MW-2S	9/28/2015	Downgradient	2	5/22/2018	Assessment
				9/11/2018	
MW-2I	3/7/2016	Downgradient	2	5/22/2018	Assessment
				9/11/2018	
MW-2D	3/4/2016	Downgradient	2	5/22/2018	Assessment
				9/11/2018	
MW-3S	9/28/2015	Downgradient	2	0/11/2018	Assessment
				5/22/2018	
MW-3I	3/8/2016	Downgradient	2	0/11/2018	Assessment
				5/22/2018	
MW-4S	10/1/2015	Upgradient/Background	2	0/12/2018	Assessment
				9/12/2018	
MW-4I	3/11/2016	Upgradient/Background	2	0/11/2018	Assessment
				5/21/2019	
MW-4D	3/2/2016	Upgradient/Background	2	0/11/2018	Assessment
				5/22/2018	
MW-6S	10/2/2015	Downgradient	2	0/11/2018	Assessment
				5/22/2018	
MW-6I	3/17/2016	Downgradient	2	0/12/2018	Assessment
				5/22/2018	
MW-6D	3/8/2016	Downgradient	2	9/10/2018	Assessment
				5/23/2018	
MW-7S	10/2/2015	Downgradient	2	9/11/2018	Assessment
				5/22/2018	
MW-8S	9/29/2015	Upgradient/Background	2	9/12/2018	Assessment
				5/21/2018	
MW-9S	10/21/2015	Upgradient/Background	2	9/12/2018	Assessment
			_	5/21/2018	
MW-91	3/10/2016	Upgradient/Background	2	9/12/2018	Assessment
	0/10/00 10			5/21/2018	
MW-9D	3/10/2016	Upgradient/Background	2	9/12/2018	Assessment
N/1/ 400	40/0/0045	Description	0	5/23/2018	A
IVIVV-10S	10/3/2015	Downgradient	2	9/11/2018	Assessment
N/N/ 440	2/40/2040	David and light	0	5/23/2018	A
10100-115	3/16/2016	Downgradient	2	9/11/2018	Assessment
NAVA/ 111			2	5/22/2018	Assessment
1111	3/10/2010	Downgraulent	<u> </u>	9/12/2018	Assessment
	3/16/2016	Downgradient	2	5/22/2018	Assessment
	3/10/2010		۷	9/12/2018	A356551116111
MW-129	3/17/2016	Downgradient	2	5/23/2018	Assessment
10100-120	0/17/2010	Downgradient	<u> </u>	9/12/2018	Assessment

Table 2Summary of Monitoring Results - May 2018Multiunit Ash Pond SystemIndianapolis Power and Light CompanyEagle Valley Generating StationMartinsville, IndianaATC Project No. 170LF00523

Well ID		MW-1D	MW-1I	MW-1S	MW-2D	MW-2I	MW-2S	MW-3I	MW-3S	MW-4D	MW-4I	MW-4S	MW-6D	MW-6I
Pace Lab ID		50197571014	50197571013	50197571012	50197571017	50197571016	50197571015	50197571004	50197571005	50197571019	50197571002	50197571018	50197571022	50197571021
Sample Date		5/23/2018	5/23/2018	5/23/2018	5/22/2018	5/22/2018	5/22/2018	5/22/2018	5/22/2018	5/21/2018	5/21/2018	5/22/2018	5/22/2018	5/22/2018
Static Water Elevation (ft MSL)		589.43	589.50	589.50	590.30	590.28	590.30	590.94	591.45	592.90	592.90	593.02	589.67	589.64
Field Parameters														
Temperature	°C	14.53	14.90	15.33	13.47	13.37	12.94	15.47	15.08	13.50	12.78	18.15	14.92	16.04
Dissolved Oxygen, Field	mg/L	0.15	0.15	0.15	0.13	0.08	0.06	0.08	0.02	0.28	0.24	0.22	0.27	0.21
Conductivity, Field	uS/cm	1265.23	1315.12	1245.82	994.88	914.68	1391.03	728.37	709.41	946.51	609.67	2784.20	1361.10	1278.72
ORP, Field	mV	-135.06	-42.17	59.62	-163.10	-48.47	5.25	215.32	233.40	-130.42	-26.47	-146.18	-55.12	46.94
pH, Field	Std. Units	7.51	7.48	7.39	7.54	7.51	7.08	7.46	7.37	7.40	7.41	7.22	7.42	7.38
Analytical Data														
Antimony, Total	ug/L	<1.0	<1.0	4.2	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic, Total	ug/L	1.6	<1.0	12.8	1.6	<1.0	28.5	<1.0	<1.0	6.3	<1.0	3.2	<1.0	<1.0
Barium. Total	ug/L	87.7	75.6	81.1	53.2	64.6	222	63.8	73.9	60.1	53.4	198	49.7	42.4
Beryllium, Total	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Boron, Total	ug/L	2600	3460	6110	1840	1410	3500	290	218	189	174	3060	4820	4140
Cadmium, Total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Calcium, Total	ug/L	93300	95700	115000	75600	69800	135000	68500	75400	80600	56500	249000	91200	76200
Chloride	mg/L	167	187	112	116	82.7	91.6	94.8	76.6	100	78.1	295	163	118
Chromium, Total	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Cobalt, Total	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Fluoride	mg/L	0.36	0.34	0.34	0.32	0.32	0.23	0.28	0.28	0.21	0.33	0.26	0.12	0.22
Lead, Total	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Lithium, Total	ug/L	99.2	120	128	91.1	88.8	107	57.1	25.3	<20.0	<20.0	95.5	105	101
Mercury	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Molybdenum, Total	ug/L	107	107	57.4	128	75.4	19.3	79.7	39.3	17.4	15.1	73.4	208	257
pH at 25 Degrees C	Std. Units	7.8	7.7	7.4	7.6	7.5	7.3	7.6	7.6	7.6	7.7	7.3	7.6	7.8
Selenium, Total	ug/L	<1.0	<1.0	23.5	<1.0	<1.0	2.4	<1.0	1.1	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	201	185	208	116	80.4	298	91.2	71.8	81.9	61.8	832	208	202
Thallium, Total	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Dissolved Solids	mg/L	769	784	775	561	516	894	497	491	531	415	1860	781	772
Total Radium	pCi/L	1.86	1.34	0.0862	2.26	1.64	1.40	1.42	0.575	1.08	0.736	0.824	0.923	1.63

Notes:

ft MSL: Elevation, feet mean sea level °C: Degrees celcius uS/cm: microsiemen per centimeter umhos/cm: micromhos per centimeter mV: millivolt Std. Units: standard units mg/L: milligram per liter ug/L: microgram per liter pCi/L: picoCurie per liter Static water elevation listed for a well may have been collected on a date different than date of well

sampling.

Table 2Summary of Monitoring Results - May 2018Multiunit Ash Pond SystemIndianapolis Power and Light CompanyEagle Valley Generating StationMartinsville, IndianaATC Project No. 170LF00523

Well ID		MW-6S	MW-7S	MW-8S	MW-9D	MW-91	MW-9S	MW-10S	MW-11D	MW-11I	MW-11S	MW-12S
Pace Lab ID		50197571020	50197571010	50197571003	50197571025	50197571001	50197571024	50197571026	50197571006	50197571007	50197571008	50197571009
Sample Date		5/22/2018	5/23/2018	5/22/2018	5/21/2018	5/21/2018	5/21/2018	5/23/2018	5/22/2018	5/22/2018	5/23/2018	5/23/2018
Static Water Elevation (ft MSL)		589.67	591.63	593.32	592.72	592.70	592.72	589.43	589.62	589.62	DRY	DRY
Field Parameters												
Temperature	°C	13.43	15.90	12.53	15.68	15.60	14.97	17.71	17.49	16.62	16.03	15.50
Dissolved Oxygen, Field	mg/L	2.25	0.06	0.15	0.26	0.16	4.16	1.66	0.16	0.17	2.61	0.23
Conductivity, Field	uS/cm	1363.95	1034.79	656.30	845.88	737.65	1415.27	1165.63	1070.99	1110.88	880.37	1118.96
ORP, Field	mV	93.36	193.05	208.61	29.11	435.17	129.87	94.48	-142.21	-127.08	155.65	169.46
pH, Field	Std. Units	6.80	7.11	7.42	7.13	7.41	7.10	7.18	7.40	7.39	7.51	7.22
Analytical Data												
Antimony, Total	ug/L	1.1	3.3	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	1.2
Arsenic, Total	ug/L	<1.0	<1.0	2.7	<1.0	<1.0	<1.0	<1.0	6.1	<1.0	126	2.1
Barium, Total	ug/L	115	117	56.6	96.4	77.6	106	65.4	71.5	66.1	66.5	123
Beryllium, Total	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Boron, Total	ug/L	4310	5570	161	136	103	898	3500	5050	7180	6570	3300
Cadmium, Total	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Calcium, Total	ug/L	179000	169000	71300	81000	74600	145000	124000	100000	106000	82300	127000
Chloride	mg/L	57.2	51.0	75.6	69.3	96.7	130	79.7	149	184	51.6	208
Chromium, Total	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Cobalt, Total	ug/L	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Fluoride	mg/L	0.16	0.11	0.27	0.16	0.35	0.17	0.36	0.20	0.37	0.30	0.33
Lead, Total	ug/L	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Lithium, Total	ug/L	68.8	136	<20.0	<20.0	<20.0	<20.0	91.9	91.9	109	102	105
Mercury	ug/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
Molybdenum, Total	ug/L	80.1	195	13.0	<10.0	11.6	<10.0	168	189	170	269	51.5
pH at 25 Degrees C	Std. Units	7.2	7.6	7.6	7.4	7.8	7.4	7.5	7.5	7.5	7.6	7.5
Selenium, Total	ug/L	11.8	6.0	<1.0	<1.0	<1.0	<1.0	2.8	<1.0	<1.0	6.0	<1.0
Sulfate	mg/L	234	294	75.2	63.3	100	275	217	238	230	290	126
Thallium, Total	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Total Dissolved Solids	mg/L	900	836	474	462	500	909	746	758	816	616	794
Total Radium	pCi/L	0.385	1.86	0.569	1.66	0.564	0.402	1.02	1.17	1.82	1.30	0.453

Notes:

ft MSL: Elevation, feet mean sea level

°C: Degrees celcius

uS/cm: microsiemen per centimeter

umhos/cm: micromhos per centimeter

mV: millivolt

Std. Units: standard units

mg/L: milligram per liter

ug/L: microgram per liter

pCi/L: picoCurie per liter

Static water elevation listed for a well may have

been collected on a date different than date of well

sampling.

Summary of Monitoring Results - September 2018 Multiunit Ash Pond System Indianapolis Power and Light Company Eagle Valley Generating Station Martinsville, Indiana ATC Project No. 170LF00523

Well ID		MW-1D	MW-1I	MW-1S	MW-2D	MW-2I	MW-2S	MW-3I	MW-3S	MW-4D	MW-4I	MW-4S	MW-6D	MW-6I
Pace Lab ID		50205411003	50205411002	50205411001	50205411006	50205411005	50205411004	50205411008	50205411007	50205411011	50205411010	50205411009	50205411014	50205411013
Sample Date		9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/11/2018	9/12/2018	9/10/2018	9/12/2018
Static Water Elevation (ft MSL)		595.47	595.54	595.54	594.91	594.86	594.75	595.90	597.05	597.84	597.83	598.18	591.77	591.74
Field Parameters														
Temperature	°C	14.57	14.29	14.07	13.14	12.45	13.32	15.24	14.75	16.86	15.92	23.40	15.35	15.73
Dissolved Oxygen, Field	mg/L	0.34	0.05	0.01	0.0	0.0	0.0	0.04	0.0	1.17	0.04	0.99	0.07	0.43
Conductivity, Field	uS/cm	1100.00	1200.00	1300.00	960.90	953.6	1300.00	888.1	936.60	841.90	770.92	714.12	1260.28	1314.90
ORP, Field	mV	-35.30	410.60	421.30	-10.20	195.70	494.90	131.70	406.10	-106.85	-106.91	87.58	-85.6	525.20
pH, Field	Std. Units	7.51	7.51	7.13	7.50	7.45	7.07	7.43	7.38	7.41	7.39	7.02	7.28	7.35
Analytical Data														
Antimony, Total	ug/L	<1.0	<1.0	4.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Arsenic, Total	ug/L	1.6	<1.0	11.6	3.9	<1.0	60.3	<1.0	<1.0	5.7	1.0	2.1	<1.0	<1.0
Barium, Total	ug/L	72.2	65.7	73.8	40.7	53.7	186	53.9	92.3	49.9	58.4	56.7	50.0	42.3
Boron, Total	ug/L	2670	2700	3240	1110	979	1370	189	189	163	157	238	4230	3500
Calcium, Total	ug/L	78600	81500	96600	65800	59300	122000	62600	73100	67900	58000	75900	81300	80800
Chloride	mg/L	134	153	127	98.5	92.2	52.8	92.8	96.6	84.5	76.4	56.9	155	125
Cobalt, Total	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Fluoride	mg/L	0.32	0.29	0.25	0.29	0.27	0.13	0.25	0.27	0.21	0.30	0.28	0.12	0.26
Lithium, Total	ug/L	89.0	98.2	90.0	69.2	68.4	78.7	34.1	<20.0	<20.0	<20.0	<20.0	90.6	90.1
Molybdenum, Total	ug/L	111	100	33.1	101	56.1	15.8	75.9	38.4	13.7	11.7	50.3	190	191
pH at 25 Degrees C	Std. Units	7.6	7.7	7.3	7.8	7.7	7.7	7.7	7.6	7.6	7.7	7.3	7.8	7.5
Selenium, Total	ug/L	<1.0	<1.0	10.7	<1.0	<1.0	2.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Sulfate	mg/L	171	187	207	101	82.4	296	89.1	86.7	76.9	56.9	51.5	216	186
Total Dissolved Solids	mg/L	638	695	773	540	498	812	485	515	471	424	412	772	772
Total Radium	pCi/L	1.42	1.64	1.30	1.71	1.94	1.69	1.20	0.968	0.878	1.22	0.716	2.35	1.51

Notes:

ft MSL: Elevation, feet mean sea level °C: Degrees celcius uS/cm: microsiemen per centimeter umhos/cm: micromhos per centimeter mV: millivolt Std. Units: standard units mg/L: milligram per liter ug/L: microgram per liter pCi/L: picoCurie per liter Static water elevation listed for a well may have been collected on a date different than date of well sampling.

Summary of Monitoring Results - September 2018 Multiunit Ash Pond System Indianapolis Power and Light Company Eagle Valley Generating Station Martinsville, Indiana ATC Project No. 170LF00523

Well ID		MW-6S	MW-7S	MW-8S	MW-9D	MW-91	MW-9S	MW-10S	MW-11D	MW-11I	MW-11S	MW-12S
Pace Lab ID		50205411012	50205411015	50205411016	50205411019	50205411018	50205411017	50205411020	50205411023	50205411022	50205411021	50205411024
Sample Date		9/11/2018	9/11/2018	9/12/2018	9/12/2018	9/12/2018	9/12/2018	9/11/2018	9/12/2018	9/12/2018	9/11/2018	9/12/2018
Static Water Elevation (ft MSL)		591.67	594.92	598.69	597.38	597.26	597.38	592.28	595.13	595.21	595.18	591.43
Field Parameters												
Temperature	°C	14.88	16.01	21.26	15.51	14.66	19.40	18.00	16.33	16.31	16.27	17.38
Dissolved Oxygen, Field	mg/L	0.68	0.01	0.79	0.12	0.05	5.72	0.03	0.15	0.18	1.29	0.11
Conductivity, Field	uS/cm	611.40	1288.31	1274.58	820.24	1850.55	1240.85	1146.47	1294.20	1352.10	935.57	1210.8
ORP, Field	mV	390.80	139.91	116.72	-14.19	72.42	111.16	142.70	-78	70.4	121.06	369.90
pH, Field	Std. Units	6.89	6.96	7.11	7.21	7.39	7.12	7.24	7.33	7.39	7.48	7.27
Analytical Data												
Antimony, Total	ug/L	1.6	2.8	<1.0	<1.0	<1.0	<1.0	1.4	<1.0	<1.0	1.8	1.5
Arsenic, Total	ug/L	<1.0	<1.0	2.5	<1.0	<1.0	<1.0	<1.0	5.3	<1.0	63.2	1.1
Barium, Total	ug/L	84.7	102	110	94.7	115	51.6	67.0	67.5	72.6	63.9	78.1
Boron, Total	ug/L	3700	1330	902	121	693	1170	4770	4940	7190	5830	4540
Calcium, Total	ug/L	138000	171000	113000	88300	156000	132000	129000	94900	112000	86500	89200
Chloride	mg/L	108	82.5	134	61.7	215	87.5	90.6	153	168	78.0	106
Cobalt, Total	ug/L	<1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Fluoride	mg/L	0.21	<0.10	0.24	0.13	0.24	0.15	0.36	0.17	0.29	0.29	0.32
Lithium, Total	ug/L	69.4	103	<20.0	<20.0	<20.0	33.5	74.0	83.0	107	109	86.2
Molybdenum, Total	ug/L	143	121	23.9	<10.0	<10.0	<10.0	185	156	165	242	77.0
pH at 25 Degrees C	Std. Units	7.2	7.3	7.4	7.4	7.6	7.8	7.5	7.5	7.5	7.7	7.5
Selenium, Total	ug/L	1.2	12.0	<1.0	<1.0	<1.0	1.2	<1.0	<1.0	<1.0	9.3	2.0
Sulfate	mg/L	146	234	284	51.8	477	243	239	234	243	124	163
Total Dissolved Solids	mg/L	745	845	828	476	1260	825	749	789	821	570	710
Total Radium	pCi/L	0.510	1.46	0.873	1.35	1.63	0.534	0.957	0.443	1.81	1.11	1.86

Notes:

ft MSL: Elevation, feet mean sea level

°C: Degrees celcius

uS/cm: microsiemen per centimeter

umhos/cm: micromhos per centimeter

mV: millivolt

Std. Units: standard units mg/L: milligram per liter

ug/L: microgram per liter

pCi/L: picoCurie per liter

Static water elevation listed for a well may have

been collected on a date different than date of well

sampling.

Groundwater Protection Standards Multiunit Ash Pond System Indianapolis Power and Light Company Eagle Valley Generating Station Martinsville, Indiana ATC Project No. 170LF00523

Parameter	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Fluoride	Lead	Lithium	Mercury	Molybdenum	Selenium	Thallium	Radium 226/228 Combined
Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	mg/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	pCi/L
Shallow Zone GWPS	6	10	2000	4	5	100	6	4	15	95.5	2	100	50	2	5
Intermediate Zone GWPS	6	10	2000	4	5	100	6	4	15	40	2	100	50	2	5
Deep Zone GWPS	6	12.6	2000	4	5	100	6	4	15	40	2	100	50	2	5

Notes:

ug/L = micrograms per liter (ppb) mg/L = milligrams per liter (ppm)

pCi/L = picoCuries per liter

GWPS = Groundwater Protection Standard

FIGURES

- Figure 1: Figure 2:
- Site Location Map CCR Groundwater Monitoring System



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