

Prepared for  
**Dynegy Midwest Generation, LLC**

Date  
**January 31, 2022**

Project No.  
**1940100711-008**

# **2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**

## **ASH POND NO. 2**

## **HENNEPIN POWER PLANT**

## **HENNEPIN, ILLINOIS**

## **CCR UNIT 802**

**2021 ANNUAL GROUNDWATER MONITORING AND  
CORRECTIVE ACTION REPORT  
HENNEPIN POWER PLANT ASH POND NO. 2**

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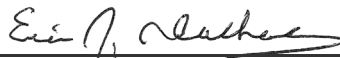
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## ACRONYMS AND ABBREVIATIONS

§	Section
40 C.F.R.	Title 40 of the Code of Federal Regulations
AP2	Ash Pond No. 2
CCR	coal combustion residuals
CMA	Corrective Measures Assessment
GWPS	groundwater protection standard
HPP	Hennepin Power Plant
NA	not applicable
No.	Number
NRT/OBG	Natural Resource Technology, an OBG Company
OBG	OBG, Part of Ramboll
Ramboll	Ramboll Americas Engineering Solutions, Inc.
SAP	Sampling and Analysis Plan
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
TBD	to be determined

## EXECUTIVE SUMMARY

This report has been prepared to provide the information required by Title 40 of the Code of Federal Regulations (40 C.F.R.) Section (§) 257.90(e) for the Ash Pond Number (No.) 2 (AP2) located at Hennepin (HPP) near Hennepin, Illinois.

Groundwater is being monitored at AP2 in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment Monitoring was initiated at AP2 on April 9, 2018.

No changes were made to the monitoring system in 2021 (no wells were installed or decommissioned).

The following Statistically Significant Levels (SSLs) of 40 C.F.R. § 257 Appendix IV parameters were determined in 2021:

- Lithium at well 18S
- Molybdenum at wells 03R and 18S

As required by 40 C.F.R. § 257.95(g)(3)(i), a Corrective Measures Assessment (CMA) (OBG, Part of Ramboll [OBG], 2019) following the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019.

A public meeting was held on December 17, 2019 at St. Margaret's Hospital Presentation Room in Spring Valley, Illinois to discuss the results of the CMA in accordance with 40 C.F.R. § 257.96(e).

Remedy selection is in progress and the associated semiannual reports required by 40 C.F.R. § 257.97(a) are being completed.

## 1. INTRODUCTION

This report has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) on behalf of Dynegy Midwest Generation, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for the AP2 located at the HPP near Hennepin, Illinois.

In accordance with 40 C.F.R. § 257.90(e), the owner or operator of a coal combustion residuals (CCR) unit must prepare an Annual Groundwater Monitoring and Corrective Action Report for the preceding calendar year that documents the status of the Groundwater Monitoring and Corrective Action Program for the CCR unit, summarizes key actions completed, describes any problems encountered, discusses actions to resolve the problems, and projects key activities for the upcoming year. At a minimum, the annual report must contain the following information, to the extent available:

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.
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.
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.
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 [SSI] relative to background levels).
5. Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.
6. A section at the beginning of the annual report that provides an overview of the current status of groundwater monitoring and corrective action programs for the CCR unit. At a minimum, the summary must specify all of the following:
  - i. At the start of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.
  - ii. At the end of the current annual reporting period, whether the CCR unit was operating under the detection monitoring program in §257.94 or the assessment monitoring program in §257.95.
  - iii. If it was determined that there was a SSI over background for one or more constituents listed in Appendix III of §257 pursuant to §257.94(e):
    - A. Identify those constituents listed in Appendix III of §257 and the names of the monitoring wells associated with the SSI(s).
    - B. Provide the date when the assessment monitoring program was initiated for the CCR unit.

- iv. If it was determined that there was a SSL above the Groundwater Protection Standard [GWPS] for one or more constituents listed in Appendix IV of §257 pursuant to §257.95(g) include all of the following:
  - A. Identify those constituents listed in Appendix IV of §257 and the names of the monitoring wells associated with the SSL(s).
  - B. Provide the date when the CMA was initiated for the CCR unit.
  - C. Provide the date when the public meeting was held for CMA for the CCR unit.
  - D. Provide the date when the CMA was completed for the CCR unit.
- v. Whether a remedy was selected pursuant to §257.97 during the current annual reporting period, and if so, the date of remedy selection.
- vi. Whether remedial activities were initiated or are ongoing pursuant to §257.98 during the current annual reporting period.

This report provides the required information for the AP2 for calendar year 2021.

## **2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS**

Groundwater is being monitored at AP2 in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment Monitoring was initiated on April 9, 2018. SSLs were determined for AP2 and alternate source evaluations were inconclusive. In accordance with 40 C.F.R. § 257.95(g)(5), a CMA following the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019. A public meeting was held on December 17, 2019 at St. Margaret's Hospital Presentation Room in Spring Valley, Illinois to discuss the results of the CMA in accordance with 40 C.F.R. § 257.96(e). Remedy selection is in progress and the associated semiannual reports required by 40 C.F.R. § 257.97(a) are being completed.

AP2 remains in the Assessment Monitoring Program in accordance with 40 C.F.R. § 257.96(b).



### 3. KEY ACTIONS COMPLETED IN 2021

The Assessment Monitoring Program is summarized in **Table A** on the following page. The groundwater monitoring system, including the CCR unit and all background and compliance monitoring wells, is presented in **Figure 1**. No changes were made to the monitoring system in 2021. One groundwater sample was collected from each background and compliance well during each monitoring event. All samples were collected and analyzed in accordance with the Sampling and Analysis Plan (SAP; Natural Resource Technology, an OBG Company [NRT/OBG], 2017a). All monitoring data obtained under 40 C.F.R. § 257.90 through 257.98 (as applicable) in 2021, and analytical results for the September 2020 sampling event, are presented in **Tables 1 to 3**. Analytical data were evaluated in accordance with the Statistical Analysis Plan (NRT/OBG, 2017b) to determine any SSLs of Appendix IV parameters over GWPSs. Notifications were completed in accordance with 40 C.F.R. § 257.95(g).

Statistical background values are provided in **Table 4** and GWPSs in **Table 5**. The background values reported in **Table 4** are slightly different from those reported previously because different software was utilized to calculate these values in 2021.

Alternate source evaluations were inconclusive for one or more of the SSLs. Consequently, and in accordance with 40 C.F.R. § 257.95(g)(5), a CMA following the requirements of 40 C.F.R. § 257.96 was initiated on April 9, 2018 and the required notification completed. The CMA (OBG, 2019) was completed on September 5, 2019 and posted to the publicly accessible website, as required by 40 C.F.R. § 257.107(h)(8).

Remedy selection is in progress and the associated semiannual reports required by 40 C.F.R. § 257.97(a) were completed in March and September of 2021.

**Table A. 2020-2021 Assessment Monitoring Program Summary**

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSL(s)	SSL(s) Determination Date	CMA Initiated
September 3, 2020	October 16, 2020	Appendix III Appendix IV Detected <sup>1</sup>	Lithium (18S) Molybdenum (03R, 18S)	January 14, 2021	NA
March 18, 2021	April 14, 2021	Appendix III Appendix IV	Lithium (18S) Molybdenum (03R, 18S)	July 13, 2021	NA
September 10 - 22, 2021	October 15, 2021	Appendix III Appendix IV Detected <sup>1</sup>	TBD	TBD	NA

**Notes:**

NA: not applicable

TBD: to be determined

<sup>1</sup> Groundwater sample analysis was limited to Appendix IV parameters detected during previous events in accordance with 40 C.F.R. § 257.95(d)(1).

#### **4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS**

No problems were encountered with the Groundwater Monitoring Program during 2021. Groundwater samples were collected and analyzed in accordance with the SAP (NRT/OBG, 2017a), and all data were accepted.

## 5. KEY ACTIVITIES PLANNED FOR 2022

The following key activities are planned for 2022:

- All or part of the monitoring well network that was proposed for compliance with Title 35 of the Illinois Administrative Code § 845 is under evaluation for incorporation into the current monitoring system.
- Continuation of the Assessment Monitoring Program with semi-annual sampling scheduled for the first and third quarters of 2022.
- Complete evaluation of analytical data from the compliance wells, using GWPSs to determine whether an SSL of Appendix IV parameters has occurred.
- Remedy selection will continue; semiannual progress reports required by 40 C.F.R. § 257.97(a) will be completed and posted to the publicly accessible website as required by 40 C.F.R. § 257.107(h)(9).

## 6. REFERENCES

Natural Resource Technology, an OBG Company (NRT/OBG), 2017a. Sampling and Analysis Plan, Hennepin Ash Pond No. 2, Hennepin Power Station, Hennepin, Illinois, Project No. 2285, Revision 0, October 17, 2017.

Natural Resource Technology, an OBG Company (NRT/OBG), 2017b. Statistical Analysis Plan, Baldwin Energy Complex, Havana Power Station, Hennepin Power Station, Wood River Power Station, Dynegy Midwest Generation, LLC, October 17, 2017.

OBG, Part of Ramboll (OBG), 2019. Corrective Measures Assessment, Hennepin Ash Pond No. 2, Hennepin Power Station, Hennepin, Illinois, Dynegy Midwest Generation, LLC, September 5, 2019.

## TABLES

**TABLE 1**  
**GROUNDWATER ELEVATIONS**  
2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
HENNEPIN POWER PLANT  
802 - ASH POND NO. 2  
HENNEPIN, IL

Well ID	Well Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Depth to Groundwater (ft BMP)	Groundwater Elevation (ft NAVD88)
03R	Compliance	41.30458	-89.30869	09/02/2020	33.02	448.90
				12/09/2020	34.98	446.94
				02/24/2021	35.81	446.11
				03/22/2021	34.70	447.22
				04/07/2021	34.62	447.30
				05/05/2021	33.60	448.32
				06/08/2021	33.69	448.23
				06/25/2021	33.05	448.87
				07/13/2021	31.00	450.92
				08/03/2021	33.13	448.79
				09/08/2021	34.35	447.57
				12/07/2021	34.12	447.80
07	Background	41.29799	-89.30571	09/02/2020	64.90	453.37
				12/09/2020	67.20	451.07
				02/24/2021	68.73	449.54
				03/18/2021	68.18	450.09
				04/07/2021	68.12	450.15
				05/05/2021	62.67	455.60
				06/08/2021	66.72	451.55
				06/24/2021	66.78	451.49
				07/13/2021	65.45	452.82
				08/03/2021	65.66	452.61
				09/08/2021	67.02	451.25
				12/07/2021	67.21	451.06
08	Background	41.30070	-89.30440	09/02/2020	51.69	449.69
				12/09/2020	53.86	447.52
				02/24/2021	54.97	446.41
				03/18/2021	53.88	447.50
				04/07/2021	53.61	447.77
				05/06/2021	52.29	449.09
				06/08/2021	52.40	448.98
				06/24/2021	52.12	449.26
				07/13/2021	49.90	451.48
				08/03/2021	51.71	449.67
				09/08/2021	53.08	448.30
				12/07/2021	53.64	447.74
08D	Background	41.30080	-89.30452	09/02/2020	51.62	449.72
				12/09/2020	54.12	447.22
				02/24/2021	55.13	446.21
				03/18/2021	54.00	447.34
				04/07/2021	53.78	447.56
				05/06/2021	52.28	449.06
				06/08/2021	52.59	448.75
				06/24/2021	52.03	449.31
				07/13/2021	49.90	451.44
				08/03/2021	51.92	449.42

**TABLE 1**  
**GROUNDWATER ELEVATIONS**  
 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
 HENNEPIN POWER PLANT  
 802 - ASH POND NO. 2  
 HENNEPIN, IL

Well ID	Well Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Depth to Groundwater (ft BMP)	Groundwater Elevation (ft NAVD88)
08D	Background	41.30080	-89.30452	09/08/2021	53.80	447.54
				12/07/2021	53.92	447.42
18S	Compliance	41.30494	-89.30710	09/02/2020	39.84	447.86
				12/09/2020	40.82	446.88
				02/24/2021	41.58	446.12
				03/22/2021	40.43	447.27
				04/07/2021	40.40	447.30
				05/05/2021	39.39	448.31
				06/08/2021	39.44	448.26
				06/25/2021	38.80	448.90
				07/13/2021	36.65	451.05
				08/03/2021	38.90	448.80
				09/08/2021	40.12	447.58
				12/07/2021	40.56	447.14
18D	Compliance	41.30492	-89.30709	09/02/2020	39.09	448.51
				12/09/2020	40.94	446.66
				02/24/2021	41.58	446.02
				03/22/2021	40.42	447.18
				04/07/2021	40.49	447.11
				05/05/2021	39.51	448.09
				06/08/2021	39.61	447.99
				06/25/2021	38.91	448.69
				07/13/2021	36.64	450.96
				08/03/2021	39.17	448.43
				09/08/2021	40.28	447.32
				12/07/2021	40.70	446.90
45S	Compliance	41.30375	-89.31019	09/02/2020	18.45	449.03
				12/09/2020	20.34	447.14
				02/24/2021	52.39	415.09
				03/18/2021	20.38	447.10
				04/07/2021	20.09	447.39
				05/05/2021	19.10	448.38
				06/08/2021	19.16	448.32
				06/25/2021	18.51	448.97
				07/13/2021	16.50	450.98
				08/03/2021	18.55	448.93
				09/08/2021	19.80	447.68
				12/07/2021	20.13	447.35

**Notes:**  
 ATC = above top of casing (well under pressure)  
 BMP = below measuring point  
 ft = foot/feet  
 NAVD88 = North American Vertical Datum of 1988



**TABLE 2**  
**ANALYTICAL RESULTS - APPENDIX III PARAMETERS**  
 2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
 HENNEPIN POWER PLANT  
 802 - ASH POND NO. 2  
 HENNEPIN, IL

Well ID	Well Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Boron, total (mg/L)	Calcium, total (mg/L)	Chloride, total (mg/L)	Fluoride, total (mg/L)	pH (field) (SU)	Sulfate, total (mg/L)	Total Dissolved Solids (mg/L)
03R	Compliance	41.30458	-89.30869	09/03/2020	1.69	87.9	71	0.31	7.3	97	506
				03/18/2021	0.888	97	82	0.29	7.2	91	578
				09/10/2021	0.991	87.9	78	0.29	7.2	86	464
07	Background	41.29799	-89.30571	09/03/2020	0.0811	146	38	0.1	6.8	67	606
				03/18/2021	0.0714	135	58	0.11	6.9	78	712
				09/09/2021	0.0764	156	70	0.11	6.7	52	654
08	Background	41.30070	-89.30440	09/03/2020	0.119	202	168	<0.1	6.7	154	1010
				03/18/2021	0.124	215	273	<0.1	6.7	128	1200
				09/09/2021	0.111	188	152	<0.1	6.6	100	876
08D	Background	41.30080	-89.30452	09/03/2020	0.0942	226	222	0.11	6.7	213	1200
				03/18/2021	0.106	224	243	0.1	6.7	199	1250
				09/09/2021	0.0965	216	250	0.1	6.6	123	1090
				09/22/2021	--	--	--	--	6.6	--	--
18S	Compliance	41.30494	-89.30710	09/03/2020	4.43	106	66	0.16	7.5	160	578
				03/18/2021	3.15	113	69	0.16	7.3	156	612
				09/10/2021	2.91	108	73	0.16	7.2	147	548
18D	Compliance	41.30492	-89.30709	09/03/2020	1.54	96	80	0.18	7.3	106	492
				03/18/2021	1.54	103	76	0.16	7.2	103	540
				09/10/2021	1.35	105	81	0.15	7.0	103	528
45S	Compliance	41.30375	-89.31019	09/03/2020	0.344	88.9	73	0.31	7.2	68	462
				03/18/2021	0.315	104	88	0.29	7.1	82	560
				09/10/2021	0.251	86.6	73	0.29	7.2	61	452
				09/22/2021	--	--	--	--	7.1	--	--

**Notes:**  
 mg/L = milligrams per liter  
 SU = Standard Units  
 < = concentration is less than the concentration shown, which corresponds to the reporting limit for the method; estimated concentrations below the reporting limit and associated qualifiers are not provided since they are not utilized in statistics to determine Statistically Significant Increases (SSIs) over background  
 -- = not analyzed

**TABLE 3**  
**ANALYTICAL RESULTS - APPENDIX IV PARAMETERS**  
2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
HENNEPIN POWER PLANT  
802 - ASH POND NO. 2  
HENNEPIN, IL

Well ID	Well Type	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Antimony, total (mg/L)	Arsenic, total (mg/L)	Barium, total (mg/L)	Beryllium, total (mg/L)	Cadmium, total (mg/L)	Chromium, total (mg/L)	Cobalt, total (mg/L)	Fluoride, total (mg/L)	Lead, total (mg/L)	Lithium, total (mg/L)	Mercury, total (mg/L)	Molybdenum, total (mg/L)	Radium 226+228, total (pCi/L)	Selenium, total (mg/L)	Thallium, total (mg/L)
03R	Compliance	41.30458	-89.30869	09/03/2020	--	--	0.0616	--	--	--	--	0.31	--	0.022	--	0.147	0.81	0.0044	--
				03/18/2021	<0.001	<0.001	0.0745	<0.001	<0.001	<0.0015	<0.001	0.29	<0.001	0.0349	<0.0002	0.181	1.22	0.0037	<0.002
				09/10/2021	<0.001	<0.001	0.0572	<0.001	<0.001	<0.0015	<0.001	0.29	<0.001	0.0159	<0.0002	0.144	0	0.0031	<0.002
07	Background	41.29799	-89.30571	09/03/2020	<0.001	<0.001	0.117	<0.001	<0.001	<0.0015	<0.001	0.1	<0.001	0.0086	<0.0002	<0.0015	0.49	<0.001	<0.002
				03/18/2021	<0.001	<0.001	0.133	<0.001	<0.001	<0.0015	0.129	0.11	<0.001	0.0107	<0.0002	<0.0015	1.21	<0.001	<0.002
				09/09/2021	<0.001	<0.001	0.131	<0.001	<0.001	<0.0015	0.0164	0.11	<0.001	0.01	<0.0002	<0.0015	1.14	<0.001	<0.002
08	Background	41.30070	-89.30440	09/03/2020	<0.001	<0.001	0.0918	<0.001	<0.001	<0.0015	0.0047	<0.1	<0.001	0.0116	<0.0002	<0.0015	0.88	<0.001	<0.002
				03/18/2021	<0.001	<0.001	0.0969	<0.001	<0.001	<0.0015	0.0045	<0.1	<0.001	0.013	<0.0002	<0.0015	0.54	<0.001	<0.002
				09/09/2021	<0.001	<0.001	0.0878	<0.001	<0.001	<0.0015	0.0049	<0.1	<0.001	0.013	<0.0002	<0.0015	0.295	<0.001	<0.002
08D	Background	41.30080	-89.30452	09/03/2020	<0.001	<0.001	0.131	<0.001	<0.001	<0.0015	0.0042	0.11	<0.001	0.013	<0.0002	<0.0015	0.55	<0.001	<0.002
				03/18/2021	<0.001	<0.001	0.128	<0.001	<0.001	<0.0015	0.0028	0.1	<0.001	0.0141	<0.0002	<0.0015	1.67	<0.001	<0.002
				09/09/2021	<0.001	<0.001	0.122	<0.001	<0.001	<0.0015	0.0032	0.1	<0.001	0.0137	<0.0002	<0.0015	--	<0.001	<0.002
				09/22/2021	--	--	--	--	--	--	--	--	--	--	--	--	1.67	--	--
18S	Compliance	41.30494	-89.30710	09/03/2020	--	--	0.0592	--	--	<0.0015	--	0.16	--	0.0731	--	0.203	1.41	0.0273	--
				03/18/2021	<0.001	<0.001	0.0717	<0.001	<0.001	0.003	<0.001	0.16	<0.001	0.0619	<0.0002	0.169	0.369	0.0277	<0.002
				09/10/2021	<0.001	<0.001	0.061	<0.001	<0.001	<0.0015	<0.001	0.16	<0.001	0.0526	<0.0002	0.155	0.93	0.0198	<0.002
18D	Compliance	41.30492	-89.30709	09/03/2020	--	--	0.077	--	--	--	0.0036	0.18	--	0.0266	--	0.0341	2.11	--	--
				03/18/2021	<0.001	<0.001	0.0789	<0.001	<0.001	<0.0015	0.0025	0.16	<0.001	0.027	<0.0002	0.0324	0.297	<0.001	<0.002
				09/10/2021	<0.001	<0.001	0.0723	<0.001	<0.001	<0.0015	0.0025	0.15	<0.001	0.0244	<0.0002	0.0342	0.833	<0.001	<0.002
45S	Compliance	41.30375	-89.31019	09/03/2020	--	--	0.0717	--	--	<0.0015	<0.001	0.31	--	0.012	--	0.0587	0.53	--	--
				03/18/2021	<0.001	<0.001	0.0895	<0.001	<0.001	<0.0015	0.0022	0.29	<0.001	0.0162	<0.0002	0.0584	0.346	<0.001	<0.002
				09/10/2021	<0.001	<0.001	0.0603	<0.001	<0.001	<0.0015	<0.001	0.29	<0.001	0.0101	<0.0002	0.0651	--	<0.001	<0.002
				09/22/2021	--	--	--	--	--	--	--	--	--	--	--	--	0.63	--	--

**Notes:**  
mg/L = milligrams per liter  
pCi/L = picoCuries per liter  
< = concentration is less than the concentration shown, which corresponds to the reporting limit for the method; estimated concentrations below the reporting limit and associated qualifiers are not provided since they are not utilized in statistics to determine Statistically Significant Levels (SSLs) over the groundwater protection standard.  
-- = not analyzed



**TABLE 4**  
**STATISTICAL BACKGROUND VALUES**  
2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
HENNEPIN POWER PLANT  
802 - ASH POND NO. 2  
HENNEPIN, IL

Parameter	Statistical Background Value (LPL/UPL)
40 C.F.R. Part 257 Appendix III	
Boron (mg/L)	0.153
Calcium (mg/L)	280
Chloride (mg/L)	396
Fluoride (mg/L)	0.120
pH (field) (SU)	6.6/7.5
Sulfate (mg/L)	200
Total Dissolved Solids (mg/L)	1520

**Notes:**  
40 C.F.R. = Title 40 of the Code of Federal Regulations  
LPL = Lower Prediction Limit (applicable for pH only)  
mg/L = milligrams per liter  
SU = Standard Units  
UPL = Upper Prediction Limit

**TABLE 5**  
**GROUNDWATER PROTECTION STANDARDS**  
2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT  
HENNEPIN POWER PLANT  
802 - ASH POND NO. 2  
HENNEPIN, IL

Parameter	Groundwater Protection Standard*
40 C.F.R. Part 257 Appendix IV	
Antimony (mg/L)	0.006
Arsenic (mg/L)	0.010
Barium (mg/L)	2
Beryllium (mg/L)	0.004
Cadmium (mg/L)	0.005
Chromium (mg/L)	0.1
Cobalt (mg/L)	0.038
Fluoride (mg/L)	4.0
Lead (mg/L)	0.015
Lithium (mg/L)	0.04
Mercury (mg/L)	0.002
Molybdenum (mg/L)	0.1
Radium-226 + Radium 228 (pCi/L)	5
Selenium (mg/L)	0.05
Thallium (mg/L)	0.002

**Notes:**  
\* Groundwater Protection Standard is the higher of the Maximum Contaminant Level/Health-Based Level or background.  
40 C.F.R. = Title 40 of the Code of Federal Regulations  
mg/L = milligrams per liter  
pCi/L = picoCuries per liter

## FIGURES





- BACKGROUND WELL
- COMPLIANCE WELL
- MONITORING WELL
- PART 257 REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY

0 175 350  
Feet

MONITORING WELL LOCATION  
MAP

2021 ANNUAL GROUNDWATER MONITORING  
AND CORRECTIVE ACTION REPORT  
ASH POND NO. 2  
HENNEPIN POWER PLANT  
HENNEPIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS  
ENGINEERING SOLUTIONS, INC.

