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2019 Annual Groundwater Monitoring and Corrective Action Report

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2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO. 3) AND POLISHING POND, HENNEPIN POWER STATION

RAMBOLL Bright ideas. Sustainable change.

2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO. 3) AND POLISHING POND, HENNEPIN POWER STATION

Project name	**Hennepin Power Station**
Project no.	**72756**
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Version	**FINAL**
Date	**January 31, 2020**
Prepared by	**Kristen L. Theesfeld**
Checked by	**Staci L. Goetz**
Approved by	**Eric J. Tlachac**
Description	**Annual Report in Support of the CCR Rule Groundwater Monitoring Program**

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ACRONYMS AND ABBREVIATIONS

CCR	Coal Combustion Residuals
CMA	Corrective Measures Assessment
GWPS	Groundwater Protection Standard
SAP	Sampling and Analysis Plan
SSL	Statistically Significant Level
WAPS	Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond (West Ash Pond System)

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.) § 257.90(e) for the Hennepin Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond (West Ash Pond System [WAPS]) located at Hennepin Power Station near Hennepin, Illinois.

Groundwater is being monitored at Hennepin WAPS in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95.

Monitoring wells 21 and 24 were decommissioned for closure work and will be replaced in time for first quarter 2020 groundwater sampling. Delineation monitoring wells 22D and 50 were installed in August 2019 to delineate the extent of impacts for the Corrective Measures Assessment (CMA).

The following Statistically Significant Levels (SSLs) of 40 C.F.R. Part 257 Appendix IV parameters were determined during one or more sampling events in 2019:

- Arsenic at well 24
- Lithium at well 22
- Molybdenum at well 22

As required by 40 C.F.R. § 257.95(g)(3)(i), a CMA (OBG, 2019) in accordance with 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019, and remedy selection is in progress.

A public meeting to discuss the results of the of the CMA was held in December 2019.

1. INTRODUCTION

This report has been prepared by Ramboll on behalf of Dynegy Midwest Generation, LLC, to provide the information required by 40 C.F.R. § 257.90(e) for Hennepin WAPS located at Hennepin Power Station 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 relative to background levels).
5. Other information required to be included in the Annual Report as specified in §§ 257.90 through 257.98.

This report provides the required information for the Hennepin WAPS for calendar year 2019.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

SSLs were determined for Hennepin WAPS and alternate source evaluations were inconclusive. In accordance with 40 C.F.R. § 257.95(g)(5), a CMA meeting the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 and completed on September 5, 2019. Remedy selection is in progress. Hennepin WAPS remains in the Assessment Monitoring Program in accordance with 40 C.F.R. § 257.96(b).

3. KEY ACTIONS COMPLETED IN 2019

The Assessment Monitoring Program is summarized in Table A. The groundwater monitoring system, including the CCR unit and all background and downgradient monitoring wells, is presented in Figure 1. Monitoring wells 21 and 24 were removed for closure work and will be replaced in time for the first quarter 2020 sampling event. Delineation monitoring wells 22D and 50 were installed on August 7, 2019. Groundwater samples were collected and anayzed for Appendix III and Appendix IV parameters from both wells starting in September 2019. In general, one groundwater sample was collected from each background and downgradient monitoring system well during each monitoring event, and the delineation wells after their delineation. All samples were collected and analyzed in accordance with the Sampling and Analysis Plan (SAP) (NRT/OBG, 2017a). All monitoring data obtained under 40 C.F.R. §§ 257.90 through 257.98 (as applicable) in 2019 are presented in Tables 1 and 2. Analytical data were evaluated in accordance with the Statistical Analysis Plan (NRT/OBG, 2017b) to determine any SSLs of Appendix IV parameters over Groundwater Protection Standards (GWPSs). Notifications were completed in accordance with 40 C.F.R. § 257.95(g).

Statistical background values are provided in Table 3 and GWPSs in Table 4.

Analytical results for the June and September 2018 sampling events were provided in the 2018 Annual Groundwater Monitoring and Corrective Action Report.

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 meeting the requirements of 40 C.F.R. § 257.96 was initiated on May 8, 2019 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). The demonstration justifying the need for a 60-day extension to the 90-day completion deadline for the CMA required by 40 C.F.R. § 257.96(a) is provided in Appendix A.

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

Table A – 2018-2019 Assessment Monitoring Program Summary

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSL(s)	SSL(s) Determination Date	CMA Initiated
June 13, 2018	July 16, 2018	Appendix III Appendix IV	NA	NA	NA
September 12, 2018	October 10, 2018	Appendix III Appendix IV Detected [1]	Arsenic (24) Lithium (22) Molybdenum (22)	January 7, 2019	May 8, 2019
March 13, 2019	April 15, 2019	Appendix III Appendix IV	Arsenic (24) Lithium (22) Molybdenum (22)	July 15, 2019	NA
September 17-18, 2019	October 15, 2019	Appendix III Appendix IV Detected [1]	TBD	TBD	NA

Notes:

NA: Not Applicable
TBD: To Be Determined
1. Groundwater sample analysis was limited to Appendix IV parameters detected in previous events in accordance with 40 C.F.R. § 257.95(d)(1).

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE THE PROBLEMS

Monitoring wells 21 and 24 were abandoned during construction activities associated with unit closure. Replacement wells are scheduled for installation during first quarter 2020. Groundwater samples were collected and analyzed in accordance with the SAP (NRT/OBG, 2017a), and all data were accepted.

5. KEY ACTIVITIES PLANNED FOR 2020

The following key activities are planned for 2020:

- Continuation of the Assessment Monitoring Program with semi-annual sampling scheduled for the first and third quarters of 2020.
- 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 Old West Ash Pond (Pond No. 1 and Pond No. 3) and Hennepin Old West Polishing Pond, 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, 2019. Corrective Measures Assessment, Old West Ash Pond (Pond No. 1 and Pond No. 3) and Polishing Pond (WAPS), Hennepin Power Station, 13498 East 800th Street, Hennepin, Illinois, Dynegy Midwest Generation, LLC, September 5, 2019, .

TABLES

TABLE 1.
2019 ANALYTICAL RESULTS - GROUNDWATER ELEVATION AND APPENDIX III PARAMETERS
2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER STATION
UNIT ID 804 - HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO. 3)
AND HENNEPIN OLD WEST POLISHING POND
HENNEPIN, ILLINOIS
ASSESSMENT MONITORING PROGRAM

Well Identification Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date & Time Sampled	Depth to Groundwater (ft)[1]	Groundwater Elevation (ft NAVD88)	40 C.F.R. Part 257 Appendix III						
						Boron, total (mg/L) 6020A[2]	Calcium, total (mg/L) 6020A[2]	Chloride, total (mg/L) 9251[2]	Fluoride, total (mg/L) 9214[2]	pH (field) (S.U.) SM 4500 H+B[2]	Sulfate, total (mg/L) 9036[2]	Total Dissolved Solids (mg/L) SM 2540C[2]
Background / Upgradient Monitoring Wells												
32	41.292131	-89.328561	3/13/2019 10:13	2.59	448.79	0.115	104	61	0.13	7.2	51	506
			9/18/2019 11:34	2.95	448.43	0.150	95.9	56	0.16	7.1	37	492
34	41.299511	-89.332492	3/13/2019 11:45	2.10	447.29	0.158	165	78	0.16	7.2	81	748
			9/18/2019 12:20	5.70	443.69	0.153	165	72	0.18	6.8	68	756
Downgradient Monitoring Wells												
21	41.299867	-89.328906	3/13/2019 11:08	10.52	448.83	1.25	75.4	33	<0.10	7.5	51	338
			9/17/19 NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
22	41.302033	-89.321514	3/13/2019 12:53	16.11	448.65	5.75	116	86	0.16	7.7	179	710
			9/17/2019 10:10	16.78	447.98	5.37	125	84	0.17	7.5	204	732
23	41.300881	-89.325378	3/13/2019 12:21	14.31	449.08	7.49	91.9	58	0.16	7.6	382	862
			9/18/2019 13:13	14.35	449.04	9.35	125	56	0.19	7.5	475	980
24	41.300603	-89.327186	3/13/2019 12:05	13.50	447.38	2.44	143	95	0.15	7.5	101	690
			9/17/19 NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	41.299161	-89.324144	3/13/2019 10:40	5.75	449.08	4.98	157	38	0.23	7.2	255	708
			9/17/2019 12:11	5.87	448.96	12.5	241	53	0.20	7.0	470	1110
49	41.301189	-89.323336	3/13/2019 12:38	19.17	449.02	1.07	123	104	0.15	7.3	82	656
			9/18/2019 13:01	19.35	448.84	1	121	97	0.17	7.1	71	654
Delineation Monitoring Wells												
22D	41.302017	-89.321572	3/13/2019 NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			9/17/2019 10:46	17.18	448.25	2.68	130	71	0.14	7.2	109	660
50	41.302243	-89.320647	3/13/2019 NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			9/17/2019 9:52	16.40	447.54	0.815	128	91	<0.10	6.9	83	700

[O: RAB 12/23/19, C: KLT 12/24/19]

Notes:
40 C.F.R. = Title 40 of the Code of Federal Regulations
ft = foot/feet
mg/L = milligrams per liter
NAVD88 = North American Vertical Datum of 1988
NS = Not Sampled
S.U. = 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 not utilized in statistics to determine Statistically Significant Increases (SSIs) over background.
[1]All depths to groundwater were measured on the first day of the sampling event.
[2]4-digit numbers represent SW-846 analytical methods.

TABLE 2.
2019 ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER STATION
UNIT ID 804 - HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO. 3)
AND HENNEPIN OLD WEST POLISHING POND
HENNEPIN, ILLINOIS
ASSESSMENT MONITORING PROGRAM

Well Identification Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date & Time Sampled	40 C.F.R. Part 257 Appendix IV														
				Antimony, total (mg/L) 6020A[1]	Arsenic, total (mg/L) 6020A[1]	Barium, total (mg/L) 6020A[1]	Beryllium, total (mg/L) 6020A[1]	Cadmium, total (mg/L) 6020A[1]	Chromium, total (mg/L) 6020A[1]	Cobalt, total (mg/L) 6020A[1]	Fluoride, total (mg/L) 6020A[1]	Lead, total (mg/L) 6020A[1]	Lithium, total (mg/L) 6020A[1]	Mercury, total (mg/L) 7470A[1]	Molybdenum, total (mg/L) 6020A[1]	Radium 226/228, Combined (pCi/L) 903/904[1]	Selenium, total (mg/L) 6020A[1]	Thallium, total (mg/L) 6020A[1]
Background / Upgradient Monitoring Wells																		
32	41.292131	-89.328561	3/13/2019 10:13	<0.0010	0.001	0.0420	<0.0010	<0.0010	<0.0015	0.0027	0.13	<0.0010	0.0040	<0.00020	<0.0015	0.43	<0.0010	<0.0020
			9/18/2019 11:34[2]	NA	<0.0010	0.0412	NA	<0.0010	NA	0.0010	0.16	NA	0.0045	NA	<0.0015	0.68	<0.0010	NA
34	41.299511	-89.332492	3/13/2019 11:45	<0.0010	0.002	0.120	<0.0010	<0.0010	<0.0015	<0.0010	0.16	<0.0010	0.0154	<0.00020	0.0019	0.64	<0.0010	<0.0020
			9/18/2019 12:20[2]	NA	<0.0010	0.102	NA	<0.0010	NA	<0.0010	0.18	NA	0.0138	NA	0.0017	0.55	<0.0010	NA
Downgradient Monitoring Wells																		
21	41.299867	-89.328906	3/13/2019 11:08	<0.0010	0.0046	0.129	<0.0010	<0.0010	<0.0015	<0.0010	<0.10	<0.0010	0.0064	<0.00020	0.0047	0.94	<0.0010	<0.0020
			9/17/19 NS[2]	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
22	41.302033	-89.321514	3/13/2019 12:53	<0.0010	0.0014	0.0669	<0.0010	0.0057	<0.0015	0.0026	0.16	<0.0010	0.0650	<0.00020	0.162	0.77	0.0063	<0.0020
			9/17/2019 10:10[2]	NA	<0.0010	0.0687	NA	0.0048	NA	0.0021	0.17	NA	0.0610	NA	0.146	0.36	0.0138	NA
23	41.300881	-89.325378	3/13/2019 12:21	<0.0010	<0.0010	0.0261	<0.0010	<0.0010	<0.0015	<0.0010	0.16	<0.0010	0.0048	<0.00020	0.0139	0.06	<0.0010	<0.0020
			9/18/2019 13:13[2]	NA	<0.0010	0.0347	NA	<0.0010	NA	<0.0010	0.19	NA	0.006	NA	0.0152	0.53	<0.0010	NA
24	41.300603	-89.327186	3/13/2019 12:05	<0.0010	0.038	0.0699	<0.0010	<0.0010	<0.0015	<0.0010	0.15	<0.0010	0.0270	<0.00020	0.0104	0.48	<0.0010	<0.0020
			9/17/19 NS[2]	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
35	41.299161	-89.324144	3/13/2019 10:40	<0.0010	0.0026	0.0310	<0.0010	<0.0010	<0.0015	0.0018	0.23	<0.0010	0.0183	<0.00020	0.0451	0.67	<0.0010	<0.0020
			9/17/2019 12:11[2]	NA	0.0017	0.0422	NA	<0.0010	NA	0.0021	0.20	NA	0.0371	NA	0.0679	0.44	<0.0010	NA
49	41.301189	-89.323336	3/13/2019 12:38	<0.0010	0.0011	0.0558	<0.0010	0.0014	<0.0015	0.0070	0.15	<0.0010	0.0297	<0.00020	0.0439	0.00	<0.0010	<0.0020
			9/18/2019 13:01[2]	NA	<0.0010	0.0538	NA	0.0015	NA	0.0054	0.17	NA	0.0268	NA	0.0372	0.31	<0.0010	NA
Delineation Monitoring Wells																		
22D	41.302017	-89.321572	3/13/2019 NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			9/17/2019 10:46[2]	NA	0.0014	0.0565	NA	<0.0010	NA	<0.0010	0.14	NA	0.0158	NA	0.0074	0.52	<0.0010	NA
50	41.302243	-89.320647	3/13/2019 NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
			9/17/2019 9:52[2]	NA	<0.0010	0.0969	NA	0.0012	NA	0.0061	<0.10	NA	0.0231	NA	0.0214	0.34	<0.0010	NA

[O: RAB 12/23/19, C: KLT 12/24/19]

Notes:

40 C.F.R. = Title 40 of the Code of Federal Regulations

mg/L = milligrams per liter

NA = Not Analyzed

NS = Not Sampled

pCi/L = picoCuries per liter

< = concentration is less than concentration shown, which corresponds to the reporting limit for the method; estimated concentrations below the reporting limit and associated qualifiers are not provided since not utilized in statistics to determine Statistically Significant Levels (SSLs) over Groundwater Protection Standards.

[1]4-digit numbers represent SW-846 analytical methods and 3-digit numbers represent Clean Water Act analytical methods.

[2]Only the parameters detected during the previous sampling events were analyzed during this sampling event, in accordance with 40 C.F.R. § 257.95(d)(1).

TABLE 3.
STATISTICAL BACKGROUND VALUES
2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER STATION
UNIT ID 804 - HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO. 3)
AND HENNEPIN OLD WEST POLISHING POND
HENNEPIN, ILLINOIS
ASSESSMENT MONITORING PROGRAM

Parameter	Statistical Background Value (UPL)
40 C.F.R. Part 257 Appendix III	
Boron (mg/L)	0.19
Calcium (mg/L)	170
Chloride (mg/L)	108
Fluoride (mg/L)	0.17
pH (S.U.)	6.8 / 7.4
Sulfate (mg/L)	117
Total Dissolved Solids (mg/L)	830

[O: RAB 12/23/19, C: KLT 12/24/19]

Notes:
40 C.F.R. = Title 40 of the Code of Federal Regulations
mg/L = milligrams per liter
S.U. = Standard Units
UPL = Upper Prediction Limit

TABLE 4.
GROUNDWATER PROTECTION STANDARDS
2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
HENNEPIN POWER STATION
UNIT ID 804 - HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO. 3)
AND HENNEPIN OLD WEST POLISHING POND
HENNEPIN, ILLINOIS
ASSESSMENT MONITORING PROGRAM

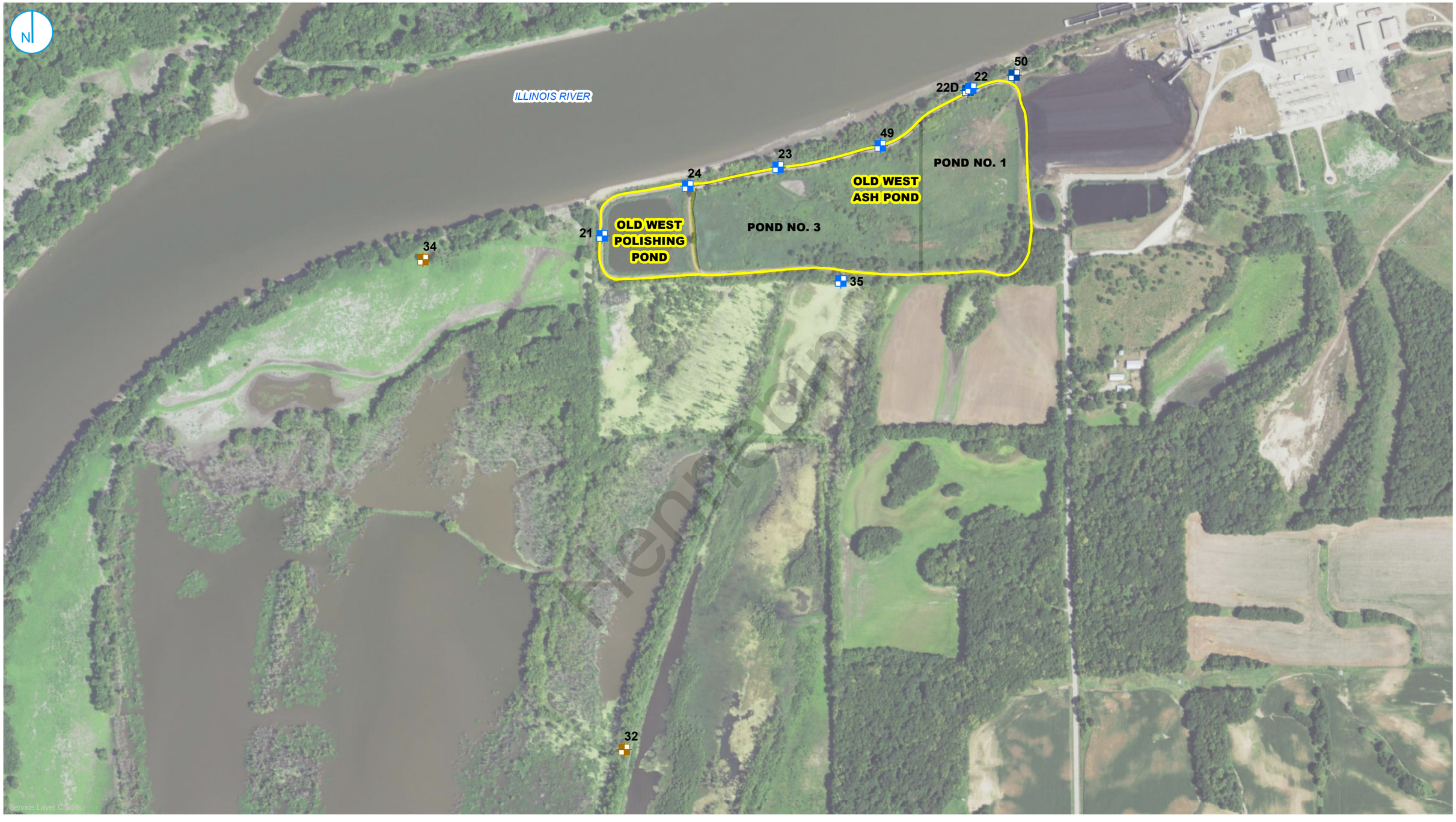
Parameter	Groundwater Protection Standard[1]
40 C.F.R. Part 257 Appendix IV	
Antimony (mg/L)	0.006
Arsenic (mg/L)	0.010
Barium (mg/L)	2
Beryllium (mg/L)	0.004
Cadmium (mg/L)	0.005
Chromium (mg/L)	0.10
Cobalt (mg/L)	0.006
Fluoride (mg/L)	4
Lead (mg/L)	0.015
Lithium (mg/L)	0.04
Mercury (mg/L)	0.002
Molybdenum (mg/L)	0.10
Radium 226+228 (pCi/L)	5
Selenium (mg/L)	0.05
Thallium (mg/L)	0.002

[O: RAB 12/23/19, C: KLT 12/24/19]

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

FIGURES

Y:\Mapping\Projects\222285\MXD\2019_AnnualGWM_CAR\Figure 1_GWS_WellLoc_HenWest.mxd



PROJECT: 169000XXXX | DATED: 1/28/2020 | DESIGNER: BARTELAB

- UPGRADIENT WELL LOCATION
- DOWNGRADIENT WELL LOCATION
- CCR DELINEATION MONITORING WELL LOCATION
- CCR MONITORED MULTI-UNIT
- CELL BOUNDARY

0 250 500 Feet

MONITORING WELL LOCATION MAP
HENNEPIN OLD WEST ASH POND (POND NO. 1 AND POND NO.3) AND HENNEPIN OLD WEST POLISHING POND
MULTI-UNIT ID:804

2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

VISTRA CCR RULE GROUNDWATER MONITORING
HENNEPIN POWER STATION
HENNEPIN, ILLINOIS

FIGURE 1

O'BRIEN & GERE ENGINEERS, INC.
A RAMBOLL COMPANY

APPENDIX A
CORRECTIVE MEASURES ASSESSMENT EXTENSION DEMONSTRATION

July 8, 2019

Brian Voelker
Vistra Energy
133 South 4th Street
Suite 306
Springfield, IL 62701

RE: Justification for Extension to Complete Corrective Measures Assessment Under 40 C.F.R. § 257.96
Hennepin Power Station Old West Ash Pond (Pond Nos. 1 and 3) and Polishing Pond – CCR Unit ID 804

Dear **Brian**,

O'Brien & Gere Engineers, Inc., a Ramboll Company, (OBG, Part of Ramboll) is providing Dynegy Midwest Generation, LLC with this letter certifying that, based on our knowledge of the status of the groundwater monitoring and corrective measures assessment (CMA) activities at the Old West Ash Pond (Pond Nos. 1 and 3) and Polishing Pond coal combustion residuals (CCR) multi-unit at Hennepin Power Station, a 60-day extension to complete the CMA is justified and valid.

OBG, Part of Ramboll understands the CMA was initiated on April 8, 2019, following identification of a groundwater protection standard exceedance under 40 C.F.R. § 257.95. CMA activities are ongoing, and due to site-specific circumstances, the CMA cannot be completed within 90 days. Accordingly, 60 additional days are warranted based on the following site-specific circumstances:

- Installation of additional groundwater monitoring wells and additional groundwater sampling and analysis to characterize the contaminant plume, as required by 40 C.F.R. § 257.95(g)(1), including the following:
  - Work plan development to identify locations, depths, and screen intervals for additional monitoring wells
  - Mobilization to the site to install, develop, and sample the additional monitoring wells
  - Laboratory analysis of groundwater samples collected from the new monitoring wells
  - Comparison of laboratory results to the groundwater protection standards

As used herein, the word "certification" or "certifying" shall mean an expression of the Engineer's professional opinion to the best of his or her information, knowledge, and belief, and does not constitute a warranty or guarantee by the Engineer.

PROFESSIONAL CERTIFICATION

I hereby certify that a 60-day extension to the 90-day completion timeframe for the corrective measures assessment is justified and valid pursuant to 40 C.F.R. § 257.96(a).

Very truly yours,
O'BRIEN & GERE ENGINEERS, INC., A RAMBOLL COMPANY

Eric J. Tlachac, PE
Managing Engineer

Hennepin-West CMA Extension.docx