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**2020 ANNUAL GROUNDWATER
MONITORING AND CORRECTIVE
ACTION REPORT
BALDWIN FLY ASH POND SYSTEM, BALDWIN
ENERGY COMPLEX**

**2020 ANNUAL GROUNDWATER MONITORING AND
CORRECTIVE ACTION REPORT
BALDWIN FLY ASH POND SYSTEM, BALDWIN ENERGY
COMPLEX**

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ACRONYMS AND ABBREVIATIONS

40 C.F.R.	Title 40 of the Code of Federal Regulations
CCR	Coal Combustion Residuals
CMA	Corrective Measures Assessment
FAPS	Fly Ash Pond System
GWPS	Groundwater Protection Standard
IEPA	Illinois Environmental Protection Agency
MNA	Monitored Natural Attenuation
SSI	Statistically Significant Increase
SSL	Statistically Significant Level
USEPA	United States Environmental Protection Agency

Baldwin

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 Baldwin Fly Ash Pond System (FAPS) located at Baldwin Energy Complex near Baldwin, Illinois.

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

Background concentrations for 40 C.F.R. Part 257 Appendix III and IV parameters were updated in 2020 to reflect changes observed in background parameter concentrations since 2017.

The following Statistically Significant Levels (SSLs) of 40 C.F.R. Part 257 Appendix IV parameters were determined in 2020:

- Lithium at wells MW-375 and MW-391

As required by 40 C.F.R. § 257.95(g)(3)(i), a Corrective Measures Assessment (CMA) following the requirements of 40 C.F.R. § 257.96 was initiated on April 8, 2019 and completed on September 5, 2019 (OBG, 2019a). This CMA was revised on November 15, 2019 (OBG, 2019b) to address typographical errors, and November 30, 2020 (Ramboll, 2020) to include additional information related to site geology/hydrogeology and the potential groundwater corrective measures of monitored natural attenuation (MNA), permeable reactive barrier, and in-situ chemical treatment.

A public meeting was held on December 2, 2019 at the Red Bud High School Gymnasium in Red Bud, Illinois to discuss the results of the 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 Baldwin FAPS located at Baldwin Energy Complex near Baldwin, 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 Baldwin FAPS for calendar year 2020.

Baldwin

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

Groundwater is being monitored at Baldwin FAPS in accordance with the Assessment Monitoring Program requirements specified in 40 C.F.R. § 257.95. Assessment Monitoring was initiated at Baldwin FAPS on April 9, 2018. SSLs were determined for Baldwin FAPS 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 April 8, 2019 and completed on September 5, 2019. A public meeting was held on December 2, 2019 at the Red Bud High School Gymnasium in Red Bud, Illinois to discuss the results of the of the CMA in accordance with 40 C.F.R. § 257.96(e). This CMA was revised on November 15, 2019 to address typographical errors, and November 30, 2020 to include additional information related to site geology/hydrogeology and the potential groundwater corrective measures of MNA, permeable reactive barrier, and in-situ chemical treatment. Remedy selection is in progress and the associated semiannual reports required by 40 C.F.R. § 257.97(a) are being completed.

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

Baldwin

3. KEY ACTIONS COMPLETED IN 2020

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. In general, one groundwater sample was collected from each background and downgradient well during each monitoring event¹. All samples were collected and analyzed in accordance with the Sampling and Analysis Plan (NRT/OBG, 2017a). All monitoring data obtained under 40 C.F.R. §§ 257.90 through 257.98 (as applicable) in 2020, and analytical results for the September 2019 sampling event, 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 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. Background concentrations for 40 C.F.R. Part 257 Appendix III and IV parameters were updated in 2020 to reflect changes observed in background parameter concentrations since 2017.

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 8, 2019 and the required notification completed. The CMA was completed on September 5, 2019 and posted to the publicly accessible website, as required by 40 C.F.R. § 257.107(h)(8). This CMA was revised on November 15, 2019 to address typographical errors, and November 30, 2020 to include additional information related to site geology/hydrogeology and the potential groundwater corrective measures of MNA, permeable reactive barrier, and in-situ chemical treatment.

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 2020.

¹ Sampling was limited to MW-350 during the December 2020 sampling event to confirm lithium concentrations initially detected at concentrations greater than the GWPS in the preceding sampling event, as allowed by the Statistical Analysis Plan.

Table A – 2019-2020 Assessment Monitoring Program Summary

Sampling Dates	Analytical Data Receipt Date	Parameters Collected	SSL(s)	SSL(s) Determination Date	CMA Initiated
September 24 - 25, 2019	October 24, 2019	Appendix III Appendix IV Detected ¹	Lithium (MW-375, MW-391)	January 22, 2020	NA
March 24 - 26, 2020	May 1, 2020	Appendix III Appendix IV	Lithium (MW-391)	July 30, 2020	NA
September 15 - 17, 2020	October 19, 2020	Appendix III Appendix IV Detected ¹	TBD	TBD	NA
December 17, 2020	December 23, 2020	Appendix IV Greater than the GWPS ²			

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).

2. Sampling was limited to MW-350 during the December 2020 sampling event to confirm lithium concentrations initially detected at concentrations greater than the GWPS in the preceding sampling event, as allowed by the Statistical Analysis Plan.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVED THE PROBLEMS

No problems were encountered with the Groundwater Monitoring Program during 2020. Groundwater samples were collected and analyzed in accordance with the Sampling and Analysis Plan (NRT/OBG, 2017a), and all data were accepted.

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5. KEY ACTIVITIES PLANNED FOR 2021

The following key activities are planned for 2021:

- Continuation of the Assessment Monitoring Program with semi-annual sampling scheduled for the first and third quarters of 2021.
- Complete evaluation of analytical data from the downgradient 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).

Baldwin

6. REFERENCES

Natural Resource Technology, an OBG Company (NRT/OBG), 2017a, Sampling and Analysis Plan, Baldwin Fly Ash Pond System, Baldwin Energy Complex, Baldwin, 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, 2019a. Corrective Measures Assessment, Baldwin Fly Ash Pond System (FAPS), Baldwin Energy Complex, 10901 Baldwin Road, Baldwin, Illinois, Dynegy Midwest Generation, LLC, September 5, 2019.

OBG, Part of Ramboll, 2019b. Corrective Measures Assessment Revision 1, Baldwin Fly Ash Pond System (FAPS), Baldwin Energy Complex, 10901 Baldwin Road, Baldwin, Illinois, Dynegy Midwest Generation, LLC, November 15, 2019.

Ramboll Americas Engineering Solutions, Inc. (Ramboll), 2020. Corrective Measures Assessment Revision 2, Baldwin Fly Ash Pond System (FAPS), Baldwin Energy Complex, 10901 Baldwin Road, Baldwin, Illinois, Dynegy Midwest Generation, LLC, November 30, 2020.

Baldwin

TABLES

Baldwin

TABLE 1.
ANALYTICAL RESULTS - GROUNDWATER ELEVATION AND APPENDIX III PARAMETERS
2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN ENERGY COMPLEX
605 - FLY ASH POND SYSTEM
BALDWIN, IL

Well ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft NAVD88)	Boron, total (mg/L)	Calcium, total (mg/L)	Chloride, total (mg/L)	Fluoride, total (mg/L)	pH (field) (STD)	Sulfate, total (mg/L)	Total Dissolved Solids (mg/L)
				6020A	6020A	6020A	6020A	9251	9214	SM4500 H+B	9036	SM 2540C
MW-304 Background	38.188332	-89.853441	9/25/2019	9.3	446.19	1.84	18.4	152	1.74	7.9	169	1350
			3/24/2020	9.56	445.93							
			3/26/2020			1.66	17.2	153	1.81	7.9	177	1320
			9/15/2020	9.97	445.52							
			9/17/2020			1.89	15.3	161	1.79	8.0	196	1320
MW-306 Background	38.20114	-89.846756	9/25/2019	18.1	435.07	0.166	46	62	0.59	11.0	37	318
			3/24/2020	17.31	435.86							
			3/26/2020			0.18	43.1	63	0.6	11.5	37	288
			9/15/2020	17.75	435.42							
			9/17/2020			0.174	26.9	58	0.56	10.5	37	224
MW-350 Downgradient	38.189417	-89.854856	3/24/2020	19.29	377.51							
			3/26/2020			0.635	52.9	52	0.17	11.7	71	344
			9/15/2020	23.41	373.39							
			9/16/2020			0.541	16.6	48	0.13	11.0	74	230
			12/17/2020	22.36	374.44					11.1		
MW-366 Downgradient	38.192191	-89.872345	9/25/2019	20.35	404.73	1.5	166	47	0.56	6.7	464	1130
			3/24/2020	12.99	412.09							
			3/26/2020			1.68	168	47	0.4	6.9	488	1090
			9/15/2020	15.11	409.97							
			9/16/2020			1.64	175	53	0.4	7.0	521	1100
MW-375 Downgradient	38.189045	-89.873514	9/25/2019	30.1	392.95	1.39	20.7	97	2.44	7.8	163	1010
			3/24/2020	30.93	392.12	1.5	24.7	105	2.44	7.8	209	1000
			9/15/2020	31.93	391.12							
			9/16/2020			1.44	13.8	111	2.4	7.8	202	1010
MW-377 Downgradient	38.188386	-89.869742	9/25/2019	5.47	415.89	1.77	57.8	93	1.24	7.0	39	626
			3/24/2020	4.39	416.97	1.79	54	99	1.28	7.2	37	580
			9/15/2020	4.63	416.73							
			9/16/2020			1.75	56.2	97	1.21	7.2	39	580
MW-383 Downgradient	38.194913	-89.858286	9/24/2019	17.25	442.24	1.39	19.2	41	0.77	7.5	169	922
			3/24/2020	17.93	441.56							
			3/25/2020			1.33	18.2	40	0.78	7.6	175	874
			9/15/2020	18.51	440.98	1.39	18.3	45	0.71	7.7	190	884
MW-384 Downgradient	38.191789	-89.860699	9/24/2019	13.69	445.26	1.36	19.8	197	1.76	8.0	102	1120
			3/24/2020	13.65	445.3							
			3/25/2020			1.43	19.4	229	1.91	8.1	110	1150
			9/15/2020	13.46	445.49	1.51	18.4	493	3.59	8.1	53	1520

TABLE 1.
ANALYTICAL RESULTS - GROUNDWATER ELEVATION AND APPENDIX III PARAMETERS
2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

BALDWIN ENERGY COMPLEX
 605 - FLY ASH POND SYSTEM
 BALDWIN, IL

Well ID	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft NAVD88)	Boron, total (mg/L)	Calcium, total (mg/L)	Chloride, total (mg/L)	Fluoride, total (mg/L)	pH (field) (STD)	Sulfate, total (mg/L)	Total Dissolved Solids (mg/L)
				6020A	6020A	6020A	6020A	9251	9214	SM4500 H+B	9036	SM 2540C
MW-390 Downgradient	38.192956	-89.869793	9/24/2019	9.02	419.04	0.288	90.9	116	0.64	7.1	171	800
			3/24/2020	3.65	424.41							
			3/26/2020			0.182	96.7	87	0.49	6.9	139	654
			9/15/2020	6.95	421.11							
			9/16/2020			0.247	91.8	71	0.82	7.2	132	644
MW-391 Downgradient	38.190869	-89.874759	9/25/2019	26.76	399.87	6.16	35.5	194	2.57	7.6	1450	2980
			3/24/2020	12.09	414.54	5.29	21.4	206	2.82	7.7	1320	2870
			9/15/2020	25.56	401.07							
			9/16/2020			4.35	24.7	186	2.78	7.8	1230	2630

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

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.

4-digit numbers below parameter represent SW-846 analytical methods and alpha-numeric values that begin with SM represent Standard Methods for the Examination of Water and Wastewater.

Baldwin

TABLE 2.
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN ENERGY COMPLEX
605 - FLY ASH POND SYSTEM
BALDWIN, IL

Well ID	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 + Radium 228, total (pCi/L)	Selenium, total (mg/L)	Thallium, total (mg/L)
		6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	6020A	7470A	6020A	6020A	6020A
MW-304	9/25/2019	<0.001	0.0017	0.0211	<0.001	<0.001	<0.0015	<0.001	1.74	<0.001	0.0836	<0.0002	0.0017	0.42	<0.001	<0.002
	3/26/2020	<0.001	0.0016	0.0212	<0.001	<0.001	<0.0015	<0.001	1.81	<0.001	0.0782	<0.0002	0.0015	0.95	<0.001	<0.002
	9/17/2020	<0.001	0.0024	0.0192			<0.0015	<0.001	1.79	<0.001	0.091		0.0019	0.37	<0.001	
MW-306	9/25/2019	<0.001	0.0021	0.015	<0.001	<0.001	<0.0015	<0.001	0.59	<0.001	0.0133	<0.0002	0.0267	0.36	<0.001	<0.002
	3/26/2020	<0.001	0.0023	0.0163	<0.001	<0.001	<0.0015	<0.001	0.6	<0.001	0.0132	<0.0002	0.0269	1.08	<0.001	<0.002
	9/17/2020	<0.001	0.002	0.0124			<0.0015	<0.001	0.56	<0.001	0.0143		0.0262	1.59	<0.001	
MW-350	3/26/2020	0.003	<0.001	0.244	<0.001	<0.001	<0.0015	<0.001	0.17	<0.001	0.0787	<0.0002	0.002	0.83	<0.001	<0.002
	9/16/2020	0.0021	<0.001	0.165	<0.001	<0.001	<0.0015	<0.001	0.13	<0.001	0.0964	<0.0002	0.002	0.96	<0.001	<0.002
	12/17/2020										0.0857					
MW-366 Downgradient	9/25/2019	<0.001	<0.001	0.0617			<0.0015		0.56		0.0177		0.0047	0.91	<0.001	
	3/26/2020	<0.001	<0.001	0.0322	<0.001	<0.001	<0.0015	<0.001	0.4	<0.001	0.0094	<0.0002	0.0039	1.4	<0.001	<0.002
	9/16/2020	<0.001	<0.001	0.0391			<0.0015	0.0022	0.4		0.0121		0.0057	0.65	<0.001	
MW-375 Downgradient	9/25/2019	0.0017	0.0018	0.0263			<0.0015		2.44		0.0831		0.0248	0.28	<0.001	
	3/24/2020	0.0011	0.0015	0.0259	<0.001	<0.001	<0.0015	<0.001	2.44	<0.001	0.0772	<0.0002	0.0239	1.17	<0.001	<0.002
	9/16/2020	<0.001	0.0016	0.0238			<0.0015	<0.001	2.4		0.0916		0.0264	2.14	<0.001	
MW-377 Downgradient	9/25/2019	<0.001	<0.001	0.063			<0.0015		1.24		0.0671		<0.0015	0.71	<0.001	
	3/24/2020	<0.001	<0.001	0.0625	<0.001	<0.001	<0.0015	<0.001	1.28	<0.001	0.0637	<0.0002	<0.0015	0.29	<0.001	<0.002
	9/16/2020	<0.001	<0.001	0.0599			<0.0015	<0.001	1.21		0.069		<0.0015	0.77	<0.001	
MW-383 Downgradient	9/24/2019	<0.001	<0.001	0.041			<0.0015		0.77		0.0421		0.01	0.24	<0.001	
	3/25/2020	<0.001	<0.001	0.0421	<0.001	<0.001	<0.0015	<0.001	0.78	<0.001	0.0369	<0.0002	0.0097	2.34	<0.001	<0.002
	9/15/2020	<0.001	<0.001	0.0449			<0.0015	<0.001	0.71		0.0444		0.0092	0.85	<0.001	
MW-384 Downgradient	9/24/2019	<0.001	<0.001	0.0305			<0.0015		1.76		0.0451		0.0198	0.35	<0.001	
	3/25/2020	<0.001	<0.001	0.0322	<0.001	<0.001	<0.0015	<0.001	1.91	<0.001	0.0426	<0.0002	0.0247	3.71	<0.001	<0.002
	9/15/2020	<0.001	<0.001	0.0394			<0.0015	<0.001	3.59		0.0522		0.0566	0.56	<0.001	
MW-390 Downgradient	9/24/2019	<0.001	0.0016	0.083			<0.0015		0.64		0.0249		0.0032	1.28	<0.001	
	3/26/2020	<0.001	0.0014	0.0895	<0.001	<0.001	<0.0015	<0.001	0.49	<0.001	0.0161	<0.0002	0.003	1.24	<0.001	<0.002
	9/16/2020	<0.001	0.0013	0.0785			<0.0015	<0.001	0.82		0.0174		0.0029	1.68	<0.001	
MW-391 Downgradient	9/25/2019	0.0016	0.0015	0.033			<0.0015		2.57		0.124		0.0423	0.99	0.002	
	3/24/2020	0.0015	0.0015	0.0297	<0.001	<0.001	<0.0015	<0.001	2.82	<0.001	0.127	<0.0002	0.0366	1.51	0.0015	<0.002
	9/16/2020	0.0015	0.0018	0.0256			<0.0015	<0.001	2.78		0.129		0.0351	0.62	0.0011	

TABLE 2.
ANALYTICAL RESULTS - APPENDIX IV PARAMETERS
2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
BALDWIN ENERGY COMPLEX
605 - FLY ASH POND SYSTEM
BALDWIN, IL

Notes:

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

mg/L = milligrams per liter

NA = Not Analyzed

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.

4-digit numbers below parameter represent SW-846 analytical methods and 3-digit numbers represent Clean Water Act analytical methods.

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TABLE 3.
STATISTICAL BACKGROUND VALUES
2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BALDWIN ENERGY COMPLEX
 605 - FLY ASH POND SYSTEM
 BALDWIN, ILLINOIS
 ASSESSMENT MONITORING PROGRAM

Parameter	Statistical Background Value (UPL)
40 C.F.R. Part 257 Appendix III	
Boron (mg/L)	1.84
Calcium (mg/L)	64
Chloride (mg/L)	153
Fluoride (mg/L)	1.88
pH (S.U.)	7.4 / 11.5
Sulfate (mg/L)	208
Total Dissolved Solids (mg/L)	1420

[O: RAB 7/6/2020, C: MIK 9/9/2020]

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

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TABLE 4.
GROUNDWATER PROTECTION STANDARDS
2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
 BALDWIN ENERGY COMPLEX
 605 - FLY ASH POND SYSTEM
 BALDWIN, 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)	0.0958
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 7/6/2020, C: MIK 9/9/2020]

Notes:

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

mg/L = milligrams per liter

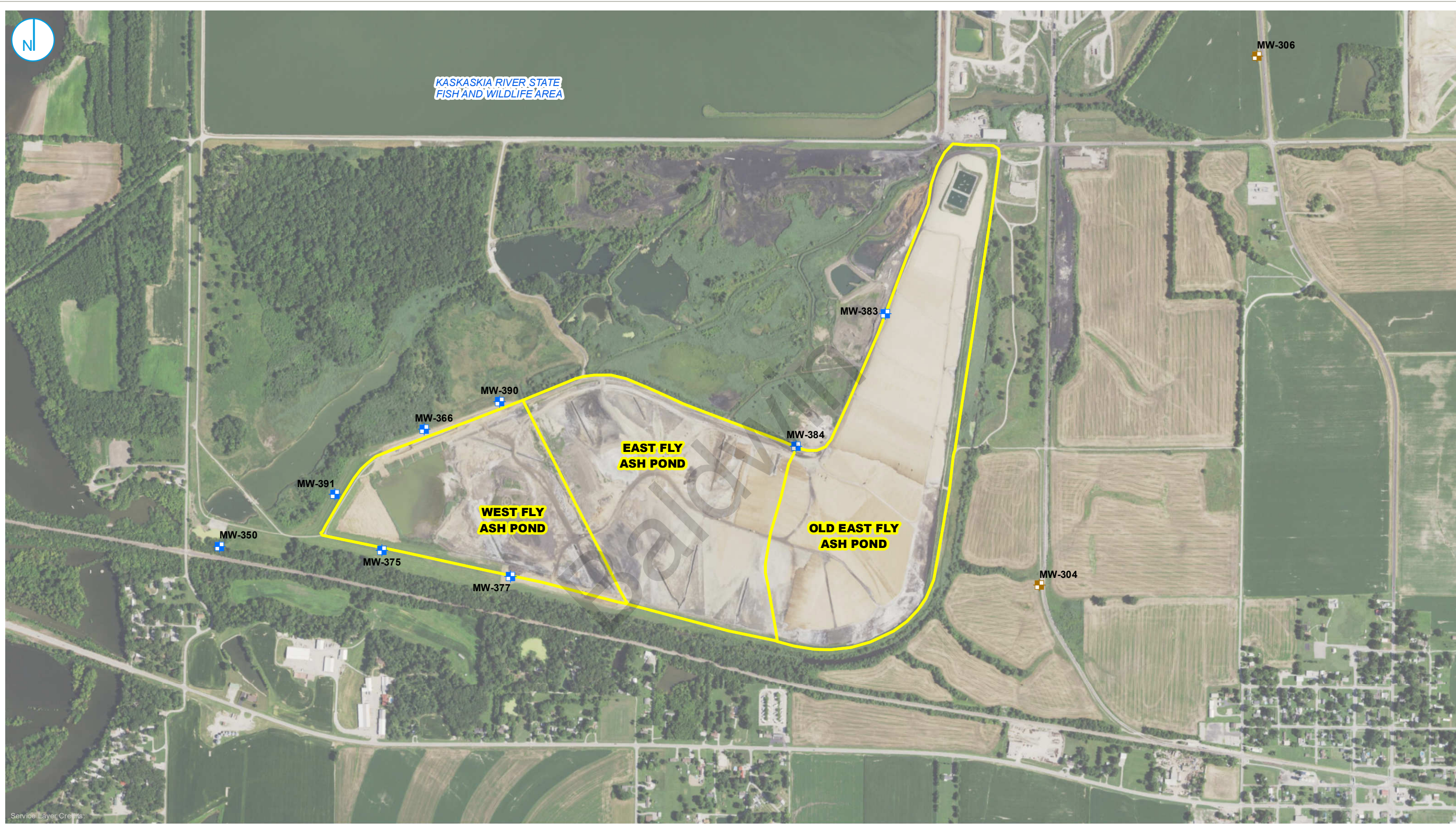
pCi/L = picoCuries per liter

¹Groundwater Protection Standard is the higher of the Maximum Contaminant Level / Health-Based Level or background.

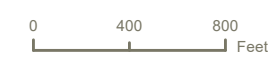
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FIGURES

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- DOWNGRADIENT MONITORING WELL LOCATION
- BACKGROUND MONITORING WELL LOCATION
- CCR MONITORED MULTI-UNIT



**MONITORING WELL LOCATION MAP
BALDWIN FLY ASH POND SYSTEM
MULTI-UNIT ID:605**

2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
VISTRA CCR RULE GROUNDWATER MONITORING
BALDWIN ENERGY COMPLEX
BALDWIN, ILLINOIS

FIGURE 1

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

