

Prepared for

**Dynegy Midwest Generation, LLC**

Document type

**2019 Annual Groundwater Monitoring and Corrective Action Report**

Date

**January 31, 2020**

# **2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**

## **BALDWIN FLY ASH POND SYSTEM, BALDWIN ENERGY COMPLEX**



Bright ideas. Sustainable change.

**2019 ANNUAL GROUNDWATER MONITORING AND  
CORRECTIVE ACTION REPORT  
BALDWIN FLY ASH POND SYSTEM, BALDWIN ENERGY  
COMPLEX**

Project name **Baldwin Energy Complex**  
Project no. **72751**  
Recipient **Dynegy Midwest Generation, LLC**  
Document type **Annual Groundwater Monitoring and Corrective Action Report**  
Version **FINAL**  
Date **January 31, 2020**  
Prepared by **Kristen L. Theesfeld**  
Checked by **Jacob J. Walczak**  
Approved by **Eric J. Tlachac**  
Description **Annual Report in Support of the CCR Rule Groundwater Monitoring Program**

Ramboll  
234 W. Florida Street  
Fifth Floor  
Milwaukee, WI 53204  
USA

T 414-837-3607  
F 414-837-3608  
<https://ramboll.com>



---

**Kristen L. Theesfeld**  
Hydrogeologist



---

**Jacob J. Walczak, PG**  
Senior Hydrogeologist

## CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>3</b>
<b>1. Introduction</b>	<b>4</b>
<b>2. Monitoring and Corrective Action Program Status</b>	<b>5</b>
<b>3. Key Actions Completed in 2019</b>	<b>6</b>
<b>4. Problems Encountered and Actions to Resolve the Problems</b>	<b>8</b>
<b>5. Key Activities Planned for 2020</b>	<b>9</b>
<b>6. References</b>	<b>10</b>

## TABLES

Table A	2018-2019 Assessment Monitoring Program Summary (in text)
Table 1	2019 Analytical Results - Groundwater Elevation and Appendix III Parameters
Table 2	2019 Analytical Results - Appendix IV Parameters
Table 3	Statistical Background Values
Table 4	Groundwater Protection Standards

## FIGURES

Figure 1	Monitoring Well Location Map
----------	------------------------------

## APPENDICES

Appendix A	Corrective Measures Assessment Extension Demonstration
------------	--

Baldwin

## **ACRONYMS AND ABBREVIATIONS**

CCR	Coal Combustion Residuals
CMA	Corrective Measures Assessment
FAPS	Fly Ash Pond System
GWPS	Groundwater Protection Standard
SAP	Sampling and Analysis Plan
SSL	Statistically Significant Level

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.

No changes were made to the monitoring system in 2019 (no wells were installed or decommissioned). Existing monitoring well MW-350 was used to delineate the extent of impact 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:

- Lithium at wells MW-375 and MW-391

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.

Baldwin

## 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 the 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 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 Baldwin FAPS for calendar year 2019.

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

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

Baldwin

### 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. In general, one groundwater sample was collected from each background and downgradient monitoring system well during each monitoring event. Existing monitoring well MW-350 located downgradient of Baldwin FAPS was sampled on June 25, 2019 to delineate the extent of impact. 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 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).



**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 26-27, 2018	August 22, 2018	Appendix III Appendix IV	NA	NA	NA
September 25-26, 2018	November 6, 2018	Appendix III Appendix IV Detected <sup>1</sup>	Lithium (MW-375, MW-391)	January 7, 2019	May 8, 2019
March 19-20, 2019	April 30, 2019	Appendix III Appendix IV	Lithium (MW-375, MW-391)	July 29, 2019	NA
September 24-25, 2019	October 24, 2019	Appendix III Appendix IV Detected <sup>1</sup>	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**

No problems were encountered with the Groundwater Monitoring Program during 2019. Groundwater samples were collected and analyzed in accordance with the SAP (NRT/OBG, 2017a), and all data were accepted.

Baldwin

## 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 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).

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, 2019. Corrective Measures Assessment, Baldwin Fly Ash Pond System (FAPS), Baldwin Energy Complex, 10901 Baldwin Road, Baldwin, Illinois, Dynegy Midwest Generation, LLC, September 5, 2019, .

Baldwin

## TABLES

Baldwin

**TABLE 1.**  
**2019 ANALYTICAL RESULTS - GROUNDWATER ELEVATION AND APPENDIX III PARAMETERS**  
**2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**  
BALDWIN ENERGY COMPLEX  
UNIT ID 605 - BALDWIN FLY ASH POND SYSTEM  
BALDWIN, ILLINOIS  
ASSESSMENT MONITORING PROGRAM

Well Identification Number	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Date & Time Sampled	Depth to Groundwater (ft) <sup>1</sup>	Groundwater Elevation (ft NAVD88)	40 C.F.R. Part 257 Appendix III						
						Boron, total (mg/L)	Calcium, total (mg/L)	Chloride, total (mg/L)	Fluoride, total (mg/L)	pH (field) (S.U.)	Sulfate, total (mg/L)	Total Dissolved Solids (mg/L)
						6020A <sup>2</sup>	6020A <sup>2</sup>	9251 <sup>2</sup>	9214 <sup>2</sup>	SM 4500 H+B <sup>2</sup>	9036 <sup>2</sup>	SM 2540C <sup>2</sup>
<b>Background / Upgradient Monitoring Wells</b>												
MW-304	38.188332	-89.853441	3/20/2019 15:03	9.33	446.16	1.82	13.7	148	1.88	7.7	177	1390
			9/25/2019 13:11	9.30	446.19	1.84	18.4	152	1.74	7.9	169	1350
MW-306	38.201117	-89.846747	3/20/2019 14:16	16.98	436.19	0.174	50.4	62	0.65	11.4	32	330
			9/25/2019 14:22	18.10	435.07	0.166	46.0	62	0.59	11.0	37	318
<b>Downgradient Monitoring Wells</b>												
MW-366	38.192191	-89.872345	3/19/2019 14:01	8.43	416.65	1.37	146	43	0.51	7.0	397	1030
			9/25/2019 9:59	20.35	404.73	1.50	166	47	0.56	6.7	464	1130
MW-375	38.189045	-89.873514	3/20/2019 10:58	30.91	392.14	1.38	21.0	95	2.57	7.8	184	1040
			9/25/2019 11:43	30.10	392.95	1.39	20.7	97	2.44	7.8	163	1010
MW-377	38.188386	-89.869742	3/20/2019 11:33	3.50	417.86	1.73	68.1	90	1.24	7.2	38	614
			9/25/2019 12:21	5.47	415.89	1.77	57.8	93	1.24	7.0	39	626
MW-383	38.194913	-89.858286	3/20/2019 9:23	15.11	444.38	1.43	18.4	39	0.78	7.5	166	920
			9/24/2019 12:46	17.25	442.24	1.39	19.2	41	0.77	7.5	169	922
MW-384	38.191789	-89.860699	3/20/2019 10:14	10.81	448.14	1.44	21.5	216	1.79	7.5	94	1180
			9/24/2019 13:19	13.69	445.26	1.36	19.8	197	1.76	8.0	102	1120
MW-390	38.192953	-89.869792	3/19/2019 13:25	3.70	424.36	0.178	89.2	67	0.52	7.2	114	646
			9/24/2019 14:43	9.02	419.04	0.288	90.9	116	0.64	7.1	171	800
MW-391	38.190869	-89.874758	3/19/2019 14:51	27.86	398.77	6.77	44.7	182	2.64	7.6	1340	3110
			9/25/2019 10:49	26.76	399.87	6.16	35.5	194	2.57	7.6	1450	2980
<b>Delineation Monitoring Wells</b>												
MW-350	38.189417	-89.854856	6/25/2019 14:59 <sup>3</sup>	NM	NM	NA	NA	NA	NA	NA	NA	NA

[O: RAB 12/23/19, C: KLT 12/23/19][U: KLT 1/24/20, C: RAB 1/29/2020]

**Notes:**  
40 C.F.R. = Title 40 of the Code of Federal Regulations  
ft = foot/feet  
mg/L = milligrams per liter  
NA = Not Analyzed  
NAVD88 = North American Vertical Datum of 1988  
NM = Not Measured  
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.  
<sup>1</sup>All depths to groundwater were measured on the first day of the sampling event.  
<sup>2</sup>4-digit numbers represent SW-846 analytical methods.  
<sup>3</sup>Only the SSL parameter was analyzed during this sampling event to delineate the extent of impact.

**TABLE 2.**  
**2019 ANALYTICAL RESULTS - APPENDIX IV PARAMETERS**  
**2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**

BALDWIN ENERGY COMPLEX  
UNIT ID 605 - BALDWIN FLY ASH POND SYSTEM  
BALDWIN, 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)	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, Combined (pCi/L)	Selenium, total (mg/L)	Thallium, total (mg/L)	
				6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>	7470A <sup>1</sup>	6020A <sup>1</sup>	903/904 <sup>1</sup>	6020A <sup>1</sup>	6020A <sup>1</sup>
<b>Background / Upgradient Monitoring Wells</b>																			
MW-304 <sup>2</sup>	38.188332	-89.853441	3/20/2019 15:03	<0.0010	0.0029	0.0214	<0.0010	<0.0010	<0.0015	<0.0010	1.88	<0.0010	0.0833	<0.00020	0.0019	0.55	<0.0010	<0.0020	
			9/25/2019 13:11 <sup>3</sup>	<0.0010	0.0017	0.0211	<0.0010	<0.0010	<0.0015	<0.0010	1.74	<0.0010	0.0836	<0.00020	0.0017	0.42	<0.0010	<0.0020	
MW-306 <sup>2</sup>	38.201117	-89.846747	3/20/2019 14:16	<0.0010	0.0030	0.0192	<0.0010	<0.0010	<0.0015	<0.0010	0.65	<0.0010	0.0143	<0.00020	0.0299	0.74	<0.0010	<0.0020	
			9/25/2019 14:22 <sup>3</sup>	<0.0010	0.0021	0.0150	<0.0010	<0.0010	<0.0015	<0.0010	0.59	<0.0010	0.0133	<0.00020	0.0267	0.36	<0.0010	<0.0020	
<b>Downgradient Monitoring Wells</b>																			
MW-366	38.192191	-89.872345	3/19/2019 14:01	<0.0010	<0.0010	0.0348	<0.0010	<0.0010	<0.0015	<0.0010	0.51	<0.0010	0.0101	<0.00020	0.0068	0.44	<0.0010	<0.0020	
			9/25/2019 9:59 <sup>3</sup>	<0.0010	<0.0010	0.0617	NA	NA	<0.0015	NA	0.56	NA	0.0177	NA	0.0047	0.91	<0.0010	NA	
MW-375	38.189045	-89.873514	3/20/2019 10:58	0.0014	0.0020	0.0271	<0.0010	<0.0010	<0.0015	<0.0010	2.57	<0.0010	0.0744	<0.00020	0.0291	0.72	<0.0010	<0.0020	
			9/25/2019 11:43 <sup>3</sup>	0.0017	0.0018	0.0263	NA	NA	<0.0015	NA	2.44	NA	0.0831	NA	0.0248	0.28	<0.0010	NA	
MW-377	38.188386	-89.869742	3/20/2019 11:33	<0.0010	<0.0010	0.0672	<0.0010	<0.0010	<0.0015	<0.0010	1.24	<0.0010	0.0603	<0.00020	<0.0015	0.06	<0.0010	<0.0020	
			9/25/2019 12:21 <sup>3</sup>	<0.0010	<0.0010	0.0630	NA	NA	<0.0015	NA	1.24	NA	0.0671	NA	<0.0015	0.71	<0.0010	NA	
MW-383	38.194913	-89.858286	3/20/2019 9:23	<0.0010	<0.0010	0.0414	<0.0010	<0.0010	<0.0015	<0.0010	0.78	<0.0010	0.0387	<0.00020	0.0104	0.50	<0.0010	<0.0020	
			9/24/2019 12:46 <sup>3</sup>	<0.0010	<0.0010	0.0410	NA	NA	<0.0015	NA	0.77	NA	0.0421	NA	0.0100	0.24	<0.0010	NA	
MW-384	38.191789	-89.860699	3/20/2019 10:14	<0.0010	<0.0010	0.0336	<0.0010	<0.0010	<0.0015	<0.0010	1.79	<0.0010	0.0433	<0.00020	0.0254	0.47	<0.0010	<0.0020	
			9/24/2019 13:19 <sup>3</sup>	<0.0010	<0.0010	0.0305	NA	NA	<0.0015	NA	1.76	NA	0.0451	NA	0.0198	0.35	<0.0010	NA	
MW-390	38.192953	-89.869792	3/19/2019 13:25	<0.0010	0.0015	0.0962	<0.0010	<0.0010	<0.0015	<0.0010	0.52	<0.0010	0.0153	<0.00020	0.0037	0.62	<0.0010	<0.0020	
			9/24/2019 14:43 <sup>3</sup>	<0.0010	0.0016	0.0830	NA	NA	<0.0015	NA	0.64	NA	0.0249	NA	0.0032	1.28	<0.0010	NA	
MW-391	38.190869	-89.874758	3/19/2019 14:51	0.0016	0.0020	0.0366	<0.0010	<0.0010	<0.0015	<0.0010	2.64	<0.0010	0.128	<0.00020	0.0394	0.96	0.0026	<0.0020	
			9/25/2019 10:49 <sup>3</sup>	0.0016	0.0015	0.0330	NA	NA	<0.0015	NA	2.57	NA	0.124	NA	0.0423	0.99	0.0020	NA	
<b>Delineation Monitoring Wells</b>																			
MW-350	38.189417	-89.854856	6/25/2019 14:59	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0788	NA	NA	NA	NA	NA	

[O: RAB 12/23/19, C: KLT 12/23/19][U: KLT 1/24/20, C:]

**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.

<sup>1</sup>4-digit numbers represent SW-846 analytical methods and 3-digit numbers represent Clean Water Act analytical methods.

<sup>2</sup>Well is a shared background/upgradient monitoring well. Parameter results present that were not detected in downgradient monitoring wells at the Coal Combustion Residuals (CCR) unit were analyzed due to detection at another CCR unit.

<sup>3</sup>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**  
 BALDWIN ENERGY COMPLEX  
 UNIT ID 605 - BALDWIN FLY ASH POND SYSTEM  
 BALDWIN, ILLINOIS  
 ASSESSMENT MONITORING PROGRAM

Parameter	Statistical Background Value (UPL)
<b>40 C.F.R. Part 257 Appendix III</b>	
Boron (mg/L)	2.21
Calcium (mg/L)	35
Chloride (mg/L)	155
Fluoride (mg/L)	1.98
pH (S.U.)	7.8 / 11.2
Sulfate (mg/L)	200
Total Dissolved Solids (mg/L)	1360

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

**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

Baldwin



**TABLE 4.**  
**GROUNDWATER PROTECTION STANDARDS**  
**2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**  
 BALDWIN ENERGY COMPLEX  
 UNIT ID 605 - BALDWIN FLY ASH POND SYSTEM  
 BALDWIN, ILLINOIS  
 ASSESSMENT MONITORING PROGRAM

Parameter	Groundwater Protection Standard <sup>1</sup>
<b>40 C.F.R. Part 257 Appendix IV</b>	
Antimony (mg/L)	0.006
Arsenic (mg/L)	0.032
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)	0.069
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 12/23/19]

**Notes:**

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

mg/L = milligrams per liter

pCi/L = picoCuries per liter

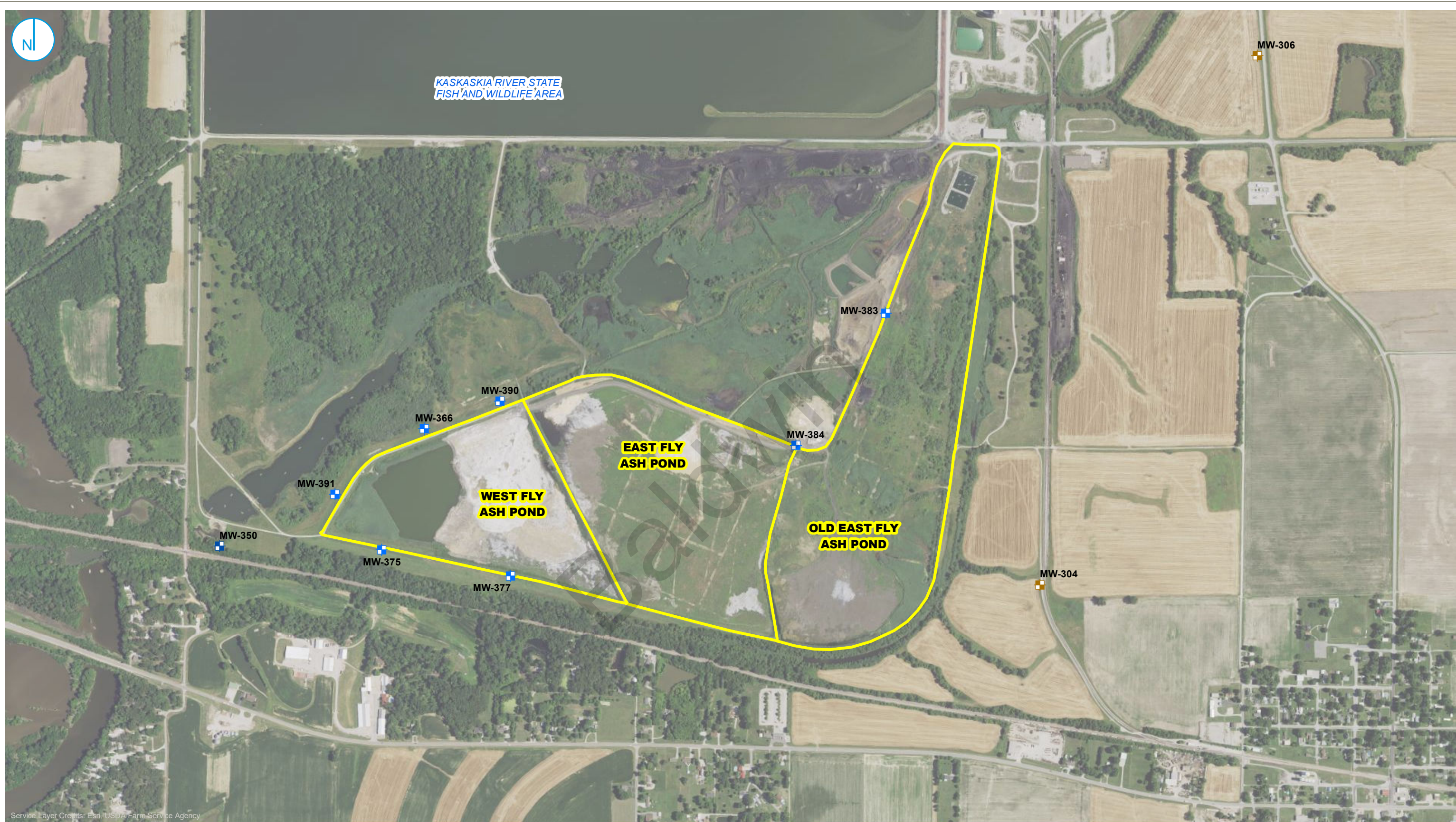
<sup>1</sup>Groundwater Protection Standard is the higher of the Maximum Contaminant Level / Health-Based Level or background.

Baldwin

## FIGURES

Baldwin





- CCR DELINEATION MONITORING WELL LOCATION
- DOWNGRAIDENT MONITORING WELL LOCATION
- UPGRADIENT MONITORING WELL LOCATION
- CCR MONITORED MULTI-UNIT



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

**2019 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT**  
VISTRA CCR RULE GROUNDWATER MONITORING  
BALDWIN ENERGY COMPLEX  
BALDWIN, ILLINOIS

**FIGURE 1**

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





**APPENDIX A**  
**CORRECTIVE MEASURES ASSESSMENT EXTENSION DEMONSTRATION**

Baldwin

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  
Baldwin Energy Complex Fly Ash Pond System – CCR Unit ID 605

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 Fly Ash Pond System coal combustion residuals (CCR) multi-unit at Baldwin Energy Complex, 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:

- Additional groundwater sampling and analysis to characterize the contaminant plume, as required by 40 C.F.R. § 257.95(g)(1), including the following
  - » Identify existing monitoring wells to be sampled to characterize the contaminant plume
  - » Mobilization to the site to sample the identified monitoring wells
  - » Laboratory analysis of groundwater samples collected from the monitoring wells
  - » Comparison of laboratory results to the groundwater protection standards

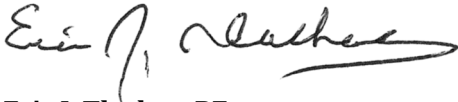
As used herein, the word “certification” or “certifying” shall mean an expression of the Engineer’s professional opinion to the best of his or her information, knowledge, and belief, and does not constitute a warranty or guarantee by the Engineer.



**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



Baldwin Fly Ash Pond System CMA Extension.docx

Baldwin