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2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

WESTON UNITS 3 & 4 BOTTOM ASH BASINS

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2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON UNITS 3 & 4 BOTTOM ASH BASINS

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ACRONYMS AND ABBREVIATIONS

ASD	Alternate Source Demonstration
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
F	Fluoride
mg/L	milligrams per liter
NRT	Natural Resource Technology, an OBG Company
OBG	O'Brien & Gere Engineers, Inc.
Ramboll	Ramboll Americas Engineering Solutions, Inc
SSI	Statistically Significant Increase
TBD	To be Determined
TDS	Total Dissolved Solids
Weston	Weston Generating Station
WPSC	Wisconsin Public Service Corporation

2020 MONITORING PROGRAM SUMMARY

The Weston Generating Station (Weston) Units 3 & 4 Bottom Ash Basins operated in the Detection Monitoring Program in accordance with Title 40 of the Code of Federal Regulations (40 CFR) 257.94 for the calendar year 2020. In 2020, groundwater analytical data was evaluated for statistically significant increases (SSIs) over background concentrations for Appendix III constituents in groundwater monitoring wells at the Weston Units 3 & 4 Bottom Ash Basins. The following constituents and wells had SSIs detected in 2020:

- Boron – OW-45

Alternate Source Demonstrations (ASDs) prepared in 2020 or in prior years provide justification that the SSIs observed during the Detection Monitoring Program were not due to a release from the CCR unit but were from either laboratory variability in detection limits and statistical evaluation of non-detect data, naturally occurring conditions (e.g. natural variation in groundwater quality), or potential anthropogenic impacts in the area upgradient of the Weston Units 3 & 4 Bottom Ash Basins.

The Weston Units 3 & 4 Bottom Ash Basins remain in the Detection Monitoring Program in accordance with 40 CFR 257.94.

1. INTRODUCTION

This report has been prepared on behalf of Wisconsin Public Service Corporation (WPSC) by Ramboll Americas Engineering Solutions, Inc. (Ramboll) to provide the information required by Title 40 of the Code of Federal Regulations (40 CFR) 257.90(e) for the Weston Generating Station (Weston) Units 3 & 4 Bottom Ash Basins located in Rothschild, Wisconsin.

In accordance with 40 CFR 257.90(e), the owner or operator of an existing coal combustion residual (CCR) unit must prepare an annual groundwater monitoring and corrective action report (Annual Report) for the preceding calendar year. The Annual Report must document the status of the groundwater monitoring and corrective action program for the CCR unit and summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project 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 40 CFR 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 over background levels); and
5. Other information required to be included in the annual report as specified in 40 CFR 257.90 through 257.98.

This report provides the required information for the Weston Units 3 & 4 Bottom Ash Basins for calendar year 2020.

2. MONITORING AND CORRECTIVE ACTION PROGRAM STATUS

The Weston Units 3 & 4 Bottom Ash Basins remained in Detection Monitoring (40 CFR 257.94) during 2020. Detection Monitoring Program sampling dates and parameters collected are provided in Table 1. Analytical results from the two sampling rounds collected and those statistically analyzed in 2020 are included in Table 2.

In accordance with 40 CFR 257.93(h)(2), the *Statistical Analysis Plan, Weston Units 3 & 4 Bottom Ash Basins* (Natural Resource Technology, an OBG Company, 2017), and within 90 days of completing sampling and analysis (receipt of data); analytical data was evaluated for statistically significant increases (SSIs) over background concentrations for Appendix III constituents in groundwater monitoring wells at the Weston Units 3 & 4 Bottom Ash Basins. SSIs and the SSI determination dates are provided in Table 1.

40 CFR 257.94(e)(2) allows 90 days to demonstrate that a SSI was caused by a source other than the CCR unit or resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality (i.e., an alternate source demonstration). Alternate source demonstrations (ASDs) were completed for the Weston Units 3 & 4 Bottom Ash Basins on the dates provided in Table 1. The ASD document for data collected and statistically analyzed in 2020 is provided in Appendix A.

Table 1. Detection Monitoring Program Summary

Detection Round	Sampling Date	Parameters Collected	Data Received	SSI Determination Date	SSI Parameters	Resample Date	ASD Date
5	12/19/19	Appendix III	1/16/20	4/15/20	None	NA	NA
6	6/24/20	Appendix III	7/28/20	10/26/20	B	NA	1/24/21
7	12/9/20	Appendix III	1/8/20	TBD Before 4/8/21	TBD	TBD	TBD

B – Boron

NA – Not applicable

TBD – To Be Determined

The Weston Units 3 & 4 Bottom Ash Basins remain in the Detection Monitoring Program in accordance with 40 CFR 257.94.

3. KEY ACTIONS COMPLETED IN 2020

Two groundwater sampling events were completed in 2020 as part of the Detection Monitoring Program, Rounds 6 and 7. One groundwater sample was collected from each background and downgradient well in the monitoring system during each event. Sampling dates are summarized in Table 1. All samples were collected and analyzed in accordance with the *Sampling and Analysis Plan, Weston Units 3 & 4 Bottom Ash Basins* (Natural Resource Technology, an OBG Company, 2017). All monitoring data obtained under 40 CFR 257.90 through 257.98 (as applicable) in 2020 are presented in Table 2.

A map showing the groundwater monitoring system, including the CCR unit and all background (upgradient) and downgradient monitoring wells with well identification numbers, for Weston Units 3 & 4 Bottom Ash Basins is presented on Figure 1. There were no changes to the monitoring system in 2020.

Statistical evaluation, including SSI determinations, of analytical data from the Detection Monitoring Program for December 19, 2019 (Detection Monitoring Round 5) and June 24, 2020 (Detection Monitoring Round 6) were completed in 2020 and within 90 days of receipt of the analytical data. Statistical evaluation of analytical data was performed in accordance with the *Statistical Analysis Plan, Weston Units 3 & 4 Bottom Ash Basins* (Natural Resource Technology, an OBG Company, 2017).

An ASD for Detection Monitoring Round 6, dated January 24, 2021, was prepared for data collected and statistically analyzed in 2020 and is provided in Appendix A. The ASD was prepared in accordance with 40 CFR 257.94(e)(2) and provides a description, data, and pertinent information to support an alternate source for wells and parameters with SSIs at the Weston Units 3 & 4 Bottom Ash Basins. The ASD provides justification that the SSIs observed during the Detection Monitoring Program were not due to a release from the CCR unit but were from either naturally occurring conditions (e.g. natural variation in groundwater quality) or potential anthropogenic impacts in the area upgradient of the Bottom Ash Basins.

4. PROBLEMS ENCOUNTERED AND ACTIONS TO RESOLVE PROBLEMS

No problems were encountered during implementation of the Detection Monitoring Program during 2020. Groundwater samples were collected and analyzed in accordance with the *Sampling and Analysis Plan, Weston Units 3 & 4 Bottom Ash Basins* (Natural Resource Technology, and OBG Company, 2017), and all data was accepted.

5. KEY ACTIVITIES FOR 2021

The following key activities are planned for 2021:

- Continuation of the Detection Monitoring Program with semi-annual sampling scheduled for the 2nd and 4th quarters of 2021.
- Complete statistical evaluation of analytical data from the downgradient wells, using background data to determine whether a SSI over background concentrations has occurred for Appendix III parameters.
- If an SSI is identified, potential alternate sources (i.e., a source other than the CCR unit caused the SSI or that that SSI resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality) will be evaluated. If an alternate source is demonstrated to be the cause of the SSI, a written demonstration will be completed within 90 days of the SSI determination and will be included in the annual groundwater monitoring and corrective action report for 2021.
  - If an alternate source(s) is not identified to be the cause of the SSI, the applicable requirements of 40 CFR 257.94 through 257.98 (e.g., assessment monitoring) will apply in 2021, including associated recordkeeping/notifications required by 40 CFR 257.105 through 257.108.

6. REFERENCES

Natural Resource Technology, an OBG Company, 2017, *Sampling and Analysis Plan, Weston Units 3 & 4 Bottom Ash Basins, Rothschild, Wisconsin, October 2, 2017.*

Natural Resource Technology, an OBG Company, 2017, *Statistical Analysis Plan, Weston Units 3 & 4 Bottom Ash Basins, Rothschild, Wisconsin, October 17, 2017.*

TABLES

Weston Unit 3&4 Bottom Ash CCR
Table 2. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 12/01/2019 to 12/09/2020

Well Id	Date Sampled	Lab Id	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
OW-45	12/19/2019	AE42883	0.0610	22.0000	46.0	0.05	6.82	16.0
	6/24/2020	AE46669	0.0443	16.6000	32.0	<0.01	6.77	12.0
	12/9/2020	AE50231	0.0556	22.0000	66.0	0.05	6.60	19.0
OW-46	12/19/2019	AE42884	0.0360	23.0000	99.0	0.05	6.54	11.0
	6/24/2020	AE46670	0.0306	16.9000	70.0	<0.01	6.52	15.0
	12/9/2020	AE50232	0.0432	21.0000	100.0	0.04	6.23	10.0
OW-47R	12/19/2019	AE42885	0.2100	34.0000	57.0	0.03	6.23	78.0
	6/24/2020	AE46671	0.0905	30.0000	58.0	<0.01	6.20	58.0
	12/9/2020	AE50233	0.0871	24.1000	60.0	0.03	6.35	30.0
OW-48	12/19/2019	AE42886	0.3300	42.0000	68.0	0.07	6.18	97.0
	6/24/2020	AE46672	0.1960	32.6000	69.0	0.03	6.23	69.0
	12/9/2020	AE50234	0.2980	46.6000	82.0	0.06	6.11	100.0
OW-49	12/19/2019	AE42887	0.2900	46.0000	82.0	0.02	6.16	82.0
	6/24/2020	AE46673	0.2460	43.6000	76.0	<0.01	6.11	86.0
	12/9/2020	AE50235	0.2560	51.1000	78.0	0.02	5.99	110.0
OW-50	12/19/2019	AE42888	0.0370	23.0000	42.0	0.01	5.78	21.0
	6/24/2020	AE46674	0.0348	24.6000	46.0	<0.01	5.79	18.0
	12/9/2020	AE50236	0.0412	28.4000	60.0	0.02	5.61	16.0

Weston Unit 3&4 Bottom Ash CCR
Table 2. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 12/01/2019 to 12/09/2020

Well Id	Date Sampled	Lab Id	TDS, mg/L
OW-45	12/19/2019	AE42883	170.0
	6/24/2020	AE46669	140.0
	12/9/2020	AE50231	180.0
OW-46	12/19/2019	AE42884	240.0
	6/24/2020	AE46670	210.0
	12/9/2020	AE50232	230.0
OW-47R	12/19/2019	AE42885	260.0
	6/24/2020	AE46671	260.0
	12/9/2020	AE50233	160.0
OW-48	12/19/2019	AE42886	300.0
	6/24/2020	AE46672	270.0
	12/9/2020	AE50234	300.0
OW-49	12/19/2019	AE42887	330.0
	6/24/2020	AE46673	350.0
	12/9/2020	AE50235	240.0
OW-50	12/19/2019	AE42888	160.0
	6/24/2020	AE46674	200.0
	12/9/2020	AE50236	170.0

FIGURES

Y:\GIS\Projects\161\1660\MXD\2020Annual_GWM_CAR\Figure 1_GW Samp Well Loc_Weston_U34BAB.mxd

PROJECT: 71202 | DATED: 12/10/2020 | DESIGNER: STOLZSD

CCR RULE UPGRADIENT MONITORING WELL LOCATION

CCR RULE DOWNGRADIENT MONITORING WELL LOCATION

WESTON UNITS 3 & 4 BOTTOM ASH BASINS

0 100 200 Feet

GROUNDWATER SAMPLING WELL LOCATION MAP

2020 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT
WESTON GENERATING STATION UNITS 3 & 4 BOTTOM ASH BASINS
ROTHSCHILD, WISCONSIN

FIGURE 1

RAMBOLL AMERICAS
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APPENDIX A
ALTERNATE SOURCE DEMONSTRATION (ASD): *40 CFR SECTION 257.94(E)(2) ALTERNATE SOURCE DEMONSTRATION (ASD) DETECTION MONITORING ROUND 6, WISCONSIN PUBLIC SERVICE CORPORATION WESTON UNITS 3 & 4 BOTTOM ASH BASINS*

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ENVIRONMENT
& HEALTH

Mr. Eric Kovatch
WEC Business Services, LLC
333 W. Everett Street – A231
Milwaukee, WI 53203

RE: 40 CFR Section 257.94(e)(2) Alternate Source Demonstration (ASD) Detection Monitoring Round 6, Wisconsin Public Service Corporation Weston Units 3 & 4 Bottom Ash Basins

Dear Mr. Kovatch:

This document has been prepared by Ramboll Americas Engineering Solutions, Inc. (Ramboll) to provide pertinent information for an alternate source demonstration (ASD) as allowed by 40 CFR Section 257.94(e)(2) for the Weston Units 3 & 4 Bottom Ash Basins, located in Weston, Wisconsin.

Date January 24, 2021

Detection Monitoring Round 6 samples were collected on June 24, 2020 for which analytical data was received on July 28, 2020. Analytical data is presented in the attached Table 1. In accordance with 40 CFR Section 257.93(h)(2), statistical analysis of the data from Detection Monitoring Round 6 to identify statistically significant increases (SSIs) of 40 CFR Part 257 Subpart D Appendix III parameters over background concentrations was completed within 90 days of receipt of the analytical data (October 26, 2020). The statistical determination identified no SSIs at downgradient monitoring wells using intrawell methods as described in the *Alternate Source Demonstration Weston Units 3 & 4 Bottom Ash Basins* dated April 15, 2018 (2018 ASD). For Detection Monitoring Round 6, statistical analysis was also completed for upgradient wells OW-45 and OW-46 to evaluate potential changes in concentrations following the background monitoring events. The analysis indicated apparent SSIs for the following upgradient monitoring wells:

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- Boron above the background prediction interval at OW-45

The boron concentration detected in OW-45 during Detection Monitoring Round 6 (0.0443 mg/L) is consistent with results from previous sample events including Detection Monitoring Round 3 and 5. As discussed in the 2018 ASD, *"revised limits were calculated for downgradient wells using intrawell statistical analyses."* Limits were not calculated for upgradient wells because they do not provide evidence of impacts from the CCR unit. Statistical analysis of Detection Monitoring Round 6 was completed to evaluate changes in upgradient groundwater quality and determine whether it may be affecting the downgradient wells. As a result, the SSI for OW-45 was reported.

40 CFR Section 257.94(e)(2) allows 90 days to demonstrate that an SSI was caused by a source other than the CCR unit or resulted from an error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality. Accordingly, an alternate source demonstration for boron at well OW-45 was evaluated and completed within 90 days of the SSI determination, by January 24, 2021.

Evaluation of Boron at OW-45

Based on the October 26, 2020 statistical analysis using intrawell methods, boron concentrations from Detection Monitoring Round 6 at upgradient well OW-45 exceeded background. The boron concentration measured in OW-45 (0.0443 mg/L) slightly exceeded the background concentration (0.0442 mg/L). These concentrations are similar to those observed in upgradient well OW-46 (0.0306 mg/L, Figure A).

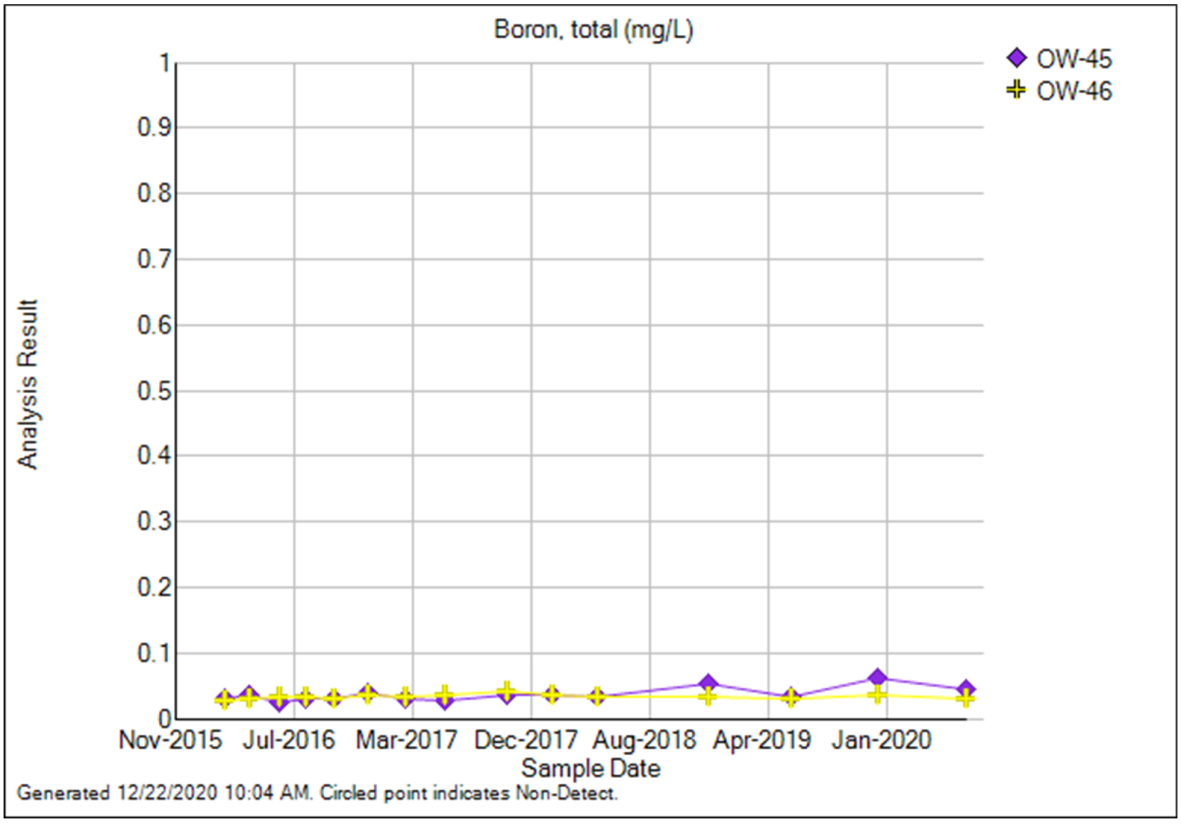


Figure A. Boron Concentrations in Upgradient Monitoring Wells OW-45 and OW-46.

The SSI reported in Detection Monitoring Round is not attributable to a release from the Bottom Ash Basins because well OW-45 is located hydraulically upgradient of the basins. Groundwater contour maps from June 2020 (Figure 1), and December 2019 (Figure 2) illustrate that the groundwater consistently flows to the northwest toward the Wisconsin River. This supports that the concentrations of boron in OW-45 are unrelated to the Bottom Ash Basins.

CONCLUSIONS AND CERTIFICATION

The presented lines of evidence demonstrate that a source other than the CCR unit contributed to the boron concentration reported above the background prediction interval in OW-45 during Detection Monitoring Round 6.

The preceding information serves as the ASD prepared in accordance with 40 CFR Section 257.94(e)(2) and supports the position that the SSI reported during Detection Monitoring Round 6 was not due to a release from the CCR unit but was from either naturally occurring conditions (e.g. natural variation in groundwater quality) or potential anthropogenic impacts in the area upgradient of the Bottom Ash Basins. Therefore, no further action (i.e. assessment monitoring) is warranted and the Weston Units 3 & 4 Bottom Ash Basins will remain in detection monitoring.

If you have any questions regarding this document, please do not hesitate to contact us.

Sincerely,

Glenn R. Luke, PE
Managing Engineer
Professional Engineer No. 42834-6
State of Wisconsin
Ramboll Americas Engineering Solutions, Inc.
Date: January 24, 2021

I, Glenn R. Luke, a qualified professional engineer in good standing in the State of Wisconsin, certify that enclosed information is accurate as of the date of my signature below. The content of this report is not to be used for other than its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Nathaniel R. Keller, PG
Senior Hydrogeologist
Professional Geologist No. 1283-013
State of Wisconsin
Ramboll Americas Engineering Solutions, Inc.
Date: January 24, 2021

I, Nathaniel R. Keller, a qualified professional geologist, certify that the enclosed information is accurate as of the date of my signature below. The content of this report is not to be used for other than its intended purpose and meaning, or for extrapolations beyond the interpretations contained herein.

Tables

Table 1 Weston Units 3 & 4 Bottom Ash Basins: Appendix III Analytical Results

Figures (Attached)

Figure 1 Groundwater Contour Map – December 2019
Figure 2 Groundwater Contour Map – June 2020

TABLES

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

Well Id	Date Sampled	Lab Id	B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
OW-45	2/17/2016	40128335001	0.0290	18.5000	59.5	<0.20		12.1
	4/7/2016	40130422001	0.0360	11.9000	42.8	<0.20	6.94	10.2
	6/14/2016	40133803001	0.0240	12.0000	33.2	<0.20	7.22	12.7
	8/9/2016	40136463001	0.0290	11.1000	12.7	0.84	7.42	23.9
	10/6/2016	40139739001	0.0310	15.0000	9.8	<0.10	7.80	3.0
	12/20/2016	40143714001	0.0390	16.3000	51.1	<0.10	7.71	16.3
	3/8/2017	40146663001	0.0310	17.6000	45.1	<0.10	7.86	17.8
	6/1/2017	40150932001	0.0280	13.6000	27.1	<0.10		15.5
	10/12/2017	40158567001	0.0351	19.6000	62.4	<0.10	6.84	14.6
	1/18/2018	40163679001	0.0373				7.00	
	4/25/2018	40168130001	0.0338	17.9000	32.2	<0.10	7.41	20.9
	12/20/2018	AE32672	0.0520	30.0000	100.0	0.09	6.40	11.0
	6/13/2019	AE38848	0.0340	15.0000	23.0	0.11	6.80	15.0
	12/19/2019	AE42883	0.0610	22.0000	46.0	0.05	6.82	16.0
	6/24/2020	AE46669	0.0443	16.6000	32.0	<0.01	6.77	12.0
OW-46	2/17/2016	40128335002	0.0270	10.2000	44.3	<0.20	6.89	17.3
	4/7/2016	40130422002	0.0290	12.7000	64.2	<0.20	6.93	12.4
	6/14/2016	40133803002	0.0340	22.3000	98.1	<0.20	7.15	17.7
	8/9/2016	40136463002	0.0330	14.9000	53.9	<0.20	7.46	18.5
	10/6/2016	40139739002	0.0300	14.4000	79.4	<0.50	7.82	93.6

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

			B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
OW-46	12/20/2016	40143714002	0.0350	15.2000	60.4	<0.10	8.03	13.2
	3/8/2017	40146663002	0.0320	19.0000	82.1	<0.10	5.95	14.6
	6/1/2017	40150932002	0.0350	15.8000	58.2	<0.10		17.3
	10/12/2017	40158567002	0.0406	12.6000	42.8	<0.10	6.56	15.8
	1/18/2018	40163679002	0.0345				7.62	
	4/25/2018	40168130002	0.0319	30.6000	122.0	<0.10	7.53	22.5
	12/20/2018	AE32673	0.0340	13.0000	56.0	0.10	6.60	12.0
	6/13/2019	AE38849	0.0300	22.0000	94.0	0.11	6.60	13.0
	12/19/2019	AE42884	0.0360	23.0000	99.0	0.05	6.54	11.0
	6/24/2020	AE46670	0.0306	16.9000	70.0	<0.01	6.52	15.0
OW-47/OW-47R	2/17/2016	40128335003	0.2600	58.1000	79.6	<0.20		84.1
	4/7/2016	40130422003	0.2700	65.9000	97.1	<0.20	6.29	115.0
	6/14/2016	40133803003	0.1700	42.9000	55.3	<0.20	6.58	75.0
	6/1/2017	40150932003	0.3100	71.4000	104.0	<0.10	8.01	130.0
	10/12/2017	40158567003	0.0818	21.5000	63.2	<0.10	6.90	27.7
	1/18/2018	40163679003	0.0862				7.39	
	4/25/2018	40168130003	0.0684	22.6000	59.3	<0.10	7.23	25.1
	12/20/2018	AE32674	0.0990	24.0000	68.0	0.09	6.10	35.0
	6/13/2019	AE38850	0.0400	24.0000	62.0	0.09	6.20	32.0
	12/19/2019	AE42885	0.2100	34.0000	57.0	0.03	6.23	78.0
	6/24/2020	AE46671	0.0905	30.0000	58.0	<0.01	6.20	58.0

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

			B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
OW-48	2/17/2016	40128335004	0.3700	76.6000	81.6	<0.20		119.0
	4/7/2016	40130422004	0.5600	80.3000	84.7	<0.20	6.48	126.0
	6/14/2016	40133803004	0.7300	84.5000	80.2	<0.20	6.71	135.0
	8/9/2016	40136463003	0.7100	57.2000	67.2	<0.20	7.08	114.0
	10/6/2016	40139739003	0.4600	52.4000	76.2	<0.50	7.49	47.0
	12/20/2016	40143714003	0.7900	80.0000	107.0	<0.10	7.74	135.0
	3/8/2017	40146663003	0.6900	67.9000	84.1	0.11	8.07	116.0
	6/1/2017	40150932004	0.5900	56.7000	70.9	<0.10	8.37	106.0
	10/12/2017	40158567004	0.4210	53.4000	86.4	<0.10	6.90	93.2
	1/18/2018	40163679004	0.5450				7.49	
	4/25/2018	40168130004	0.6240	72.6000	92.2	<0.10	7.51	144.0
	12/20/2018	AE32675	0.4800	63.0000	82.0	0.14	6.30	130.0
	4/17/2019	AE35531				0.13	6.62	
	6/13/2019	AE38851	0.0970	28.0000	72.0	0.13	6.20	28.0
	12/19/2019	AE42886	0.3300	42.0000	68.0	0.07	6.18	97.0
	6/24/2020	AE46672	0.1960	32.6000	69.0	0.03	6.23	69.0
OW-49	2/17/2016	40128335005	0.3800	41.4000	69.2	<0.20		75.7
	4/7/2016	40130422005	0.2500	31.2000	64.1	<0.20	6.48	58.2
	6/14/2016	40133803005	0.3600	49.0000	72.7	<0.20	6.71	89.7
	8/9/2016	40136463004	0.5300	59.4000	81.7	<0.20	6.94	109.0
	10/6/2016	40139739004	0.3200	35.3000	260.0	<0.50	7.54	64.5

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

			B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
OW-49	12/20/2016	40143714004	0.5000	66.0000	91.6	<0.10	7.65	122.0
	3/8/2017	40146663004	0.5100	74.5000	109.0	<0.10	8.04	128.0
	6/1/2017	40150932005	0.4500	67.0000	83.5	<0.10	8.26	112.0
	10/12/2017	40158567005	0.4400	76.0000	103.0	<0.10	6.80	145.0
	1/18/2018	40163679005	0.4440				7.48	
	4/25/2018	40168130005	0.4140	63.9000	93.8	<0.10	7.37	110.0
	12/20/2018	AE32676	0.3800	65.0000	85.0	0.08	6.10	150.0
	6/13/2019	AE38852	0.2100	43.0000	81.0	0.08	6.20	71.0
	12/19/2019	AE42887	0.2900	46.0000	82.0	0.02	6.16	82.0
	6/24/2020	AE46673	0.2460	43.6000	76.0	<0.01	6.11	86.0
OW-50	2/17/2016	40128335006	0.0470	31.0000	50.9	<0.20		14.4
	4/7/2016	40130422006	0.0420	27.2000	52.2	<0.20	6.15	13.8
	6/14/2016	40133803006	0.0400	32.2000	52.1	<0.20	6.47	12.8
	8/9/2016	40136463005	0.0390	32.3000	55.4	<0.20	6.75	12.6
	10/6/2016	40139739005	0.0390	30.6000	49.6	<0.10	7.13	44.4
	12/20/2016	40143714005	0.0400	29.6000	52.7	<0.10	7.22	14.8
	3/8/2017	40146663005	0.0370	31.2000	58.3	<0.10	7.65	15.8
	6/1/2017	40150932006	0.0380	30.9000	58.7	<0.10	7.95	16.0
	10/12/2017	40158567006	0.0374	32.4000	74.3	<0.10	6.21	14.2
	4/25/2018	40168130006	0.0313	32.1000	73.1	<0.10	6.70	17.1
	12/20/2018	AE32677	0.0400	30.0000	60.0	0.08	5.70	21.0

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

			B, tot, mg/L	Ca, tot, mg/L	Cl, tot, mg/L	F, tot, mg/L	pH (field), STD	SO4, tot, mg/L
OW-50	6/13/2019	AE38853	0.0370	28.0000	60.0	0.08	5.80	19.0
	12/19/2019	AE42888	0.0370	23.0000	42.0	0.01	5.78	21.0
	6/24/2020	AE46674	0.0348	24.6000	46.0	<0.01	5.79	18.0

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

Well Id	Date Sampled	Lab Id	TDS, mg/L
OW-45	2/17/2016	40128335001	202.0
	4/7/2016	40130422001	164.0
	6/14/2016	40133803001	146.0
	8/9/2016	40136463001	136.0
	10/6/2016	40139739001	184.0
	12/20/2016	40143714001	180.0
	3/8/2017	40146663001	158.0
	6/1/2017	40150932001	130.0
	10/12/2017	40158567001	186.0
	4/25/2018	40168130001	154.0
	12/20/2018	AE32672	270.0
	6/13/2019	AE38848	120.0
	12/19/2019	AE42883	170.0
	6/24/2020	AE46669	140.0
OW-46	2/17/2016	40128335002	166.0
	4/7/2016	40130422002	186.0
	6/14/2016	40133803002	274.0
	8/9/2016	40136463002	184.0
	10/6/2016	40139739002	188.0
	12/20/2016	40143714002	174.0

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

			TDS, mg/L
OW-46	3/8/2017	40146663002	206.0
	6/1/2017	40150932002	170.0
	10/12/2017	40158567002	164.0
	4/25/2018	40168130002	304.0
	12/20/2018	AE32673	150.0
	6/13/2019	AE38849	240.0
	12/19/2019	AE42884	240.0
	6/24/2020	AE46670	210.0
OW-47/OW-47R	2/17/2016	40128335003	336.0
	4/7/2016	40130422003	462.0
	6/14/2016	40133803003	266.0
	6/1/2017	40150932003	452.0
	10/12/2017	40158567003	204.0
	4/25/2018	40168130003	206.0
	12/20/2018	AE32674	220.0
	6/13/2019	AE38850	210.0
	12/19/2019	AE42885	260.0
	6/24/2020	AE46671	260.0
OW-48	2/17/2016	40128335004	400.0
	4/7/2016	40130422004	414.0
	6/14/2016	40133803004	426.0

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

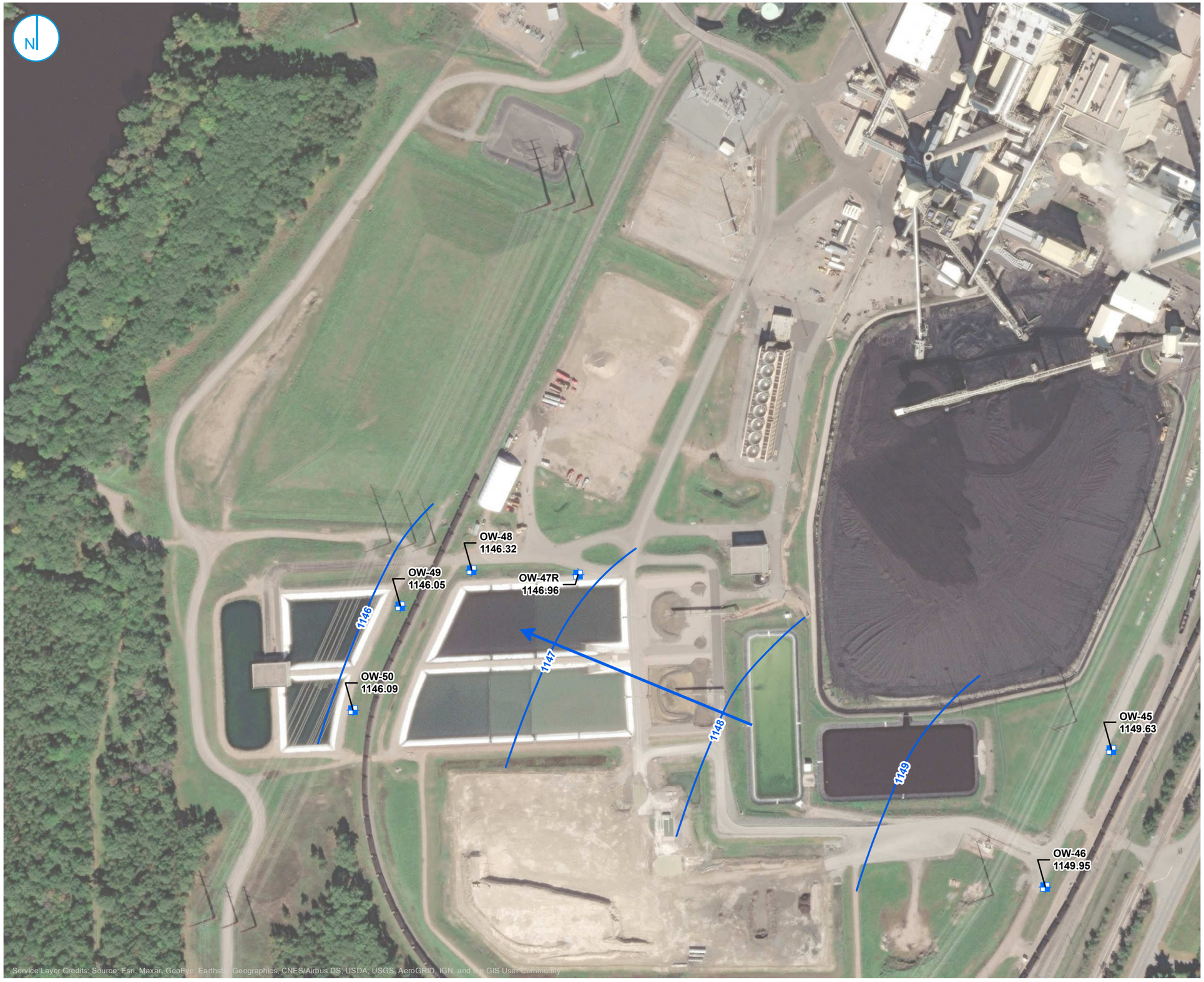
			TDS, mg/L
OW-48	8/9/2016	40136463003	374.0
	10/6/2016	40139739003	342.0
	12/20/2016	40143714003	460.0
	3/8/2017	40146663003	362.0
	6/1/2017	40150932004	330.0
	10/12/2017	40158567004	332.0
	4/25/2018	40168130004	434.0
	12/20/2018	AE32675	400.0
	6/13/2019	AE38851	200.0
	12/19/2019	AE42886	300.0
	6/24/2020	AE46672	270.0
OW-49	2/17/2016	40128335005	296.0
	4/7/2016	40130422005	276.0
	6/14/2016	40133803005	334.0
	8/9/2016	40136463004	400.0
	10/6/2016	40139739004	282.0
	12/20/2016	40143714004	410.0
	3/8/2017	40146663004	456.0
	6/1/2017	40150932005	404.0
	10/12/2017	40158567005	466.0
	4/25/2018	40168130005	396.0

Weston Unit 3&4 Bottom Ash CCR
Table 1. Weston Units 3 &4 Bottom Ash Basins: Appendix III Analytical Results

Date Range: 02/16/2016 to 06/24/2020

			TDS, mg/L
OW-49	12/20/2018	AE32676	430.0
	6/13/2019	AE38852	310.0
	12/19/2019	AE42887	330.0
	6/24/2020	AE46673	350.0
OW-50	2/17/2016	40128335006	210.0
	4/7/2016	40130422006	198.0
	6/14/2016	40133803006	212.0
	8/9/2016	40136463005	248.0
	10/6/2016	40139739005	226.0
	12/20/2016	40143714005	178.0
	3/8/2017	40146663005	190.0
	6/1/2017	40150932006	238.0
	10/12/2017	40158567006	246.0
	4/25/2018	40168130006	266.0
	12/20/2018	AE32677	220.0
	6/13/2019	AE38853	210.0
	12/19/2019	AE42888	160.0
	6/24/2020	AE46674	200.0

FIGURES



CCR RULE MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD 88)

GROUNDWATER FLOW DIRECTION

0 125 250 Feet

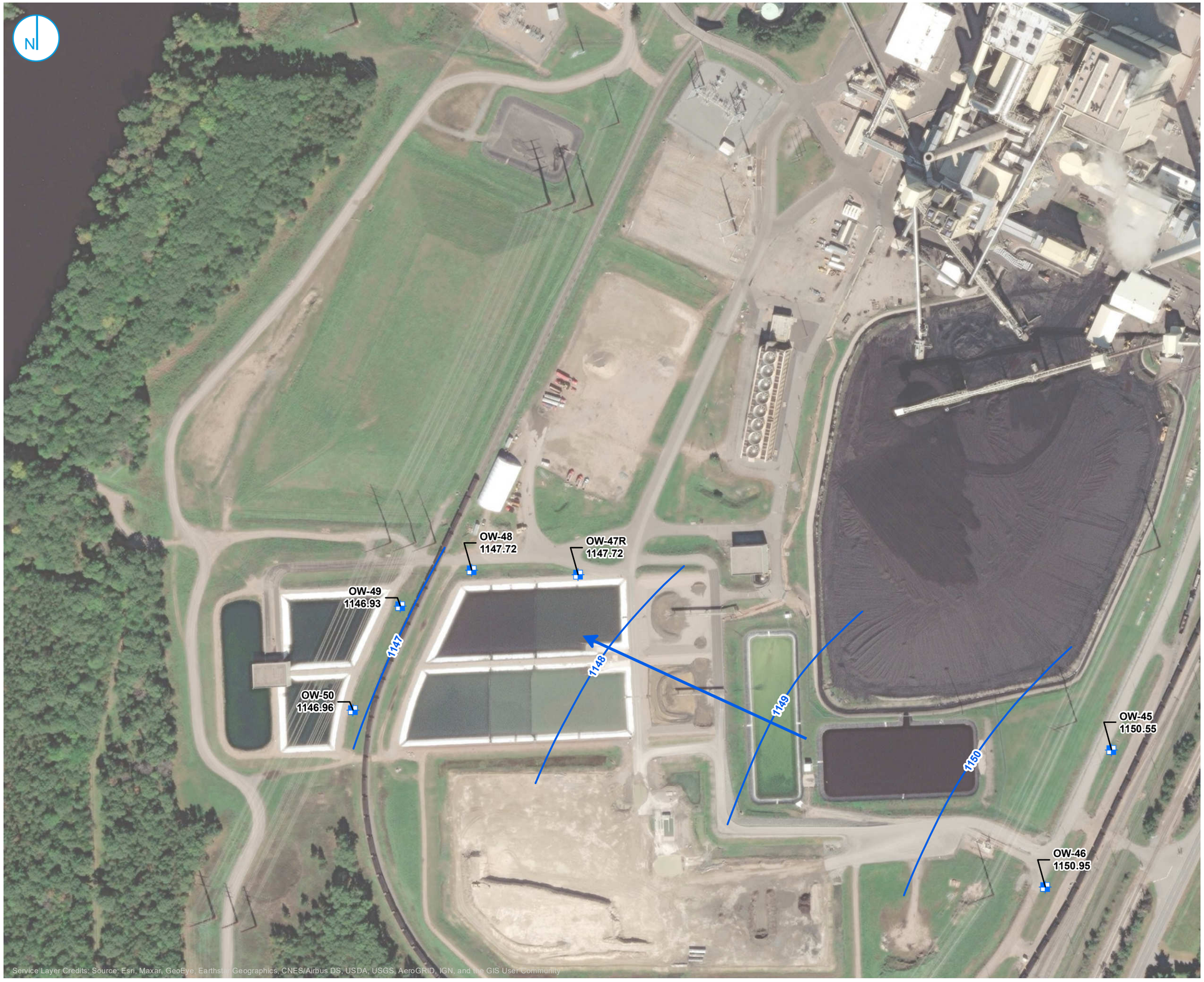
UPPERMOST AQUIFER UNIT
GROUNDWATER ELEVATION CONTOUR MAP
DETECTION MONITORING ROUND 5:
DECEMBER 19, 2019

WPSC CCR RULE
GROUNDWATER MONITORING
WESTON GENERATING STATION
UNITS 3 & 4 BOTTOM ASH BASINS
ROTHSCHILD, WISCONSIN

FIGURE 1

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL



CCR RULE MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (1-FT CONTOUR INTERVAL, NAVD 88)

GROUNDWATER FLOW DIRECTION

0 125 250 Feet

UPPERMOST AQUIFER UNIT
GROUNDWATER ELEVATION CONTOUR MAP
DETECTION MONITORING ROUND 6:
JUNE 24, 2020

WPSC CCR RULE
GROUNDWATER MONITORING
WESTON GENERATING STATION
UNITS 3 & 4 BOTTOM ASH BASINS
ROTHSCHILD, WISCONSIN

FIGURE 2

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

RAMBOLL

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