2022 ANNUAL CONSOLIDATED REPORT
POWERTON GENERATING STATION

ASH SURGE BASIN – W1798010008-01
BYPASS BASIN – W1798010008-04
METAL CLEANING BASIN – W1798010008-03
FORMER ASH BASIN – W1798010008-05

ATTACHMENT A – ANNUAL CCR FUGITIVE DUST CONTROL REPORT
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- ATTACHMENT B.1 – HAZARD POTENTIAL CLASSIFICATION ASSESSMENT CERTIFICATION
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ATTACHMENT A
2022 ANNUAL CCR FUGITIVE DUST CONTROL REPORT

Annual CCR Fugitive Dust Control Report
Powerton Generating Station
13082 East Manito Road, Pekin, Illinois

1.0 Introduction

On April 15, 2021, the Illinois Pollution Control Board adopted a new part of its waste disposal regulations creating state-wide standards for the disposal of coal combustion residuals (CCR) in surface impoundments, created by the generation of electricity by coal-fired power plants (the IL CCR Rule). These requirements include air criteria specified in Title 35 of the Illinois Administrative Code, §845.500, to address the potential pollution caused by windblown dust from CCR units.

The Powerton Generating Station, operated by Midwest Generation, LLC (MWG), is a coal-fired power plant located 13082 East Manito Road, Pekin, Tazewell County, Illinois. The facility is a coal-fired electric power generating station occupying approximately 1,710 acres. Units 5 and 6 began operating in 1972 and 1975, respectively. Electrical power is transmitted from the site to the area grid through overhead transmission power lines. The Rule applies to this facility due to the management of CCR that is generated from the combustion of coal. CCR units associated with the station include the Ash Surge Basin, Bypass Basin, Metal Cleaning Basin, and Former Ash Basin.

According to the IL CCR Rule, owners or operators of CCR units must adopt measures that will effectively minimize CCR from becoming airborne at the facility by developing and operating in accordance with a Fugitive Dust Control Plan (Plan) with adequate dust control measures. In this regard, a Plan was prepared that complies with the requirements as specified in §845.500(b)(1-7) of the IL CCR Rule and placed in the Powerton facility's operating record on October 31, 2021 per §845.800(d)(7). As required, the Plan was also posted to the publicly accessible internet site per §845.810(e).

In addition to the above and per §845.500(c), an Annual Fugitive Dust Control Report (Annual Report) must be completed that includes the following:

- Description of actions taken to control CCR fugitive dust and
- The four quarterly fugitive dust complaint reports submitted under subsection (b)(2)(B)

The Annual Report must be submitted as part of the annual consolidated report required by §845.550. This document represents the 2022 Annual Report for Powerton and will also be appropriately placed in the facility's operating record per §845.800(d)(7) and posted to the publicly accessible internet site per §845.810(e).

2.0 Actions Taken to Control CCR Fugitive Dust

As detailed in the CCR Fugitive Dust Control Plan (Plan) and reiterated below, the station has established procedures and inspection requirements which are implemented to minimize/eliminate airborne emissions from the potential fugitive dust sources. The results from inspections conducted and associated observations made during CCR handling activities are documented on logs maintained in the station's Environmental Department.

2.1 Bottom Ash and Slag Distribution System

Bottom ash and slag are in a liquid mixture within a closed system until the point of discharge at the dewatering bins. A significant portion of the piping system is contained within a building, which eliminates the potential for dust emissions to the outside environment. Also, the bottom ash and slag have sufficient moisture to preclude this material from becoming airborne. An assessment of the exterior distribution system is performed on a quarterly basis to verify the integrity of the system or when a breach in the system is detected. If a leak is noted, the affected area is restored to original conditions and repair of the pipe will be performed as soon as feasible. The ash is then sent off site to a mine reclamation site.

2.2 Dewatering Bins

The bottom ash and slag are drop loaded from the dewatering bins in a wet state and into trucks positioned beneath the bins. The bottom ash and slag have sufficient moisture to preclude this material from becoming airborne during loading. An assessment of the dewatering bin loading operations is performed on a quarterly basis to verify if there has been an equipment malfunction resulting in an accumulation of released material. Should there be a malfunction in the dewatering equipment, repair of any malfunctioning equipment and clean up and transfer of the material to the concrete storage pit is performed as soon as feasible.

2.3 Ash Surge Basin, Bypass Basin, and Metal Cleaning Basin

During normal operations, the Ash Surge Basin and Bypass Basin are filled with water thereby suppressing any potential fugitive dust emissions. The Metal Cleaning Basin has recently been emptied and cleaned thereby suppressing any potential fugitive dust emissions. Infrequently, the basins need to be dewatered and the sediment removed for proper off-site disposition. While the bottom ash and slag residue is drying, there is the potential for this material to become airborne especially during excessively dry and windy conditions. Loading of this material under these conditions also has the potential for generating fugitive dust. Dewatered basins are assessed on a quarterly basis or more frequently during excessively dry and windy conditions. To minimize fugitive dust emissions from exposed dry bottom ash and slag, the height of the staged material

is minimized and the material piles are either sprayed with water or covered. Loading activities are also limited during such occasions. If necessary, haul trucks are covered with tarps once they have been loaded.

2.4 Former Ash Basin

The Former Ash Basin was used for the disposal of bottom ash and slag in the past; however, this procedure is no longer occurring. The previously deposited material is completely submerged within the basin with the typical water level at approximately 10-15 feet below grade, thereby, making the bottom ash and slag not readily susceptible to wind erosion and generation of potential fugitive dust emissions.

2.5 Concrete Storage Area

The concrete storage area contains ash and slag and other ash-related materials generated from routine plant maintenance activities. These materials are in a wet state but are allowed to partially dry to facilitate removal. When sufficiently dry, the material is removed off site. The concrete area is assessed on a quarterly basis or more frequently during excessively dry and windy conditions. To minimize fugitive dust emissions from exposed dry bottom ash and slag and other ash-related materials, the material is kept wet.

2.6 Fly Ash Equipment

Fly ash from the mechanical separators is sent to the silos within an enclosed structure. The fly ash is drop loaded through a telescopic pipe contained within a drop chute into an opening within the tarp covering the truck trailer. This loading mechanism minimizes the potential for fly ash to become airborne during the loading process. The loading of trucks also occurs within a partial enclosure. At the completion of loading but prior to leaving the enclosure, the top, sides and rear of each truck trailer is sprayed with water. During times when temperatures are below freezing, the tarps are broom swept at the truck stand to remove any accumulated fly ash. Accumulated ash is promptly transferred to the concrete storage pad. Occasionally, the fly ash silos are required to be emptied so that fly ash does not harden inside the silo. In order to empty a silo, a vacuum truck is used to pull material out of the silo and into the truck.

This process is covered by the facility's fugitive dust operating program. Under the program, the facility must maintain control measures, including enclosures, covers and dust collection devices. Additionally, the facility is required to conduct weekly inspections of the process to confirm compliance. A record of the inspections is maintained at the facility.

2.7 Ash Transport Roadways

Truck drivers are instructed on the proper procedure for cleaning trucks and a vehicle speed limit is enforced at the facility. Ash material that may not have been adequately removed from the trucks has the potential to become airborne and ultimately be deposited on haul roads. To minimize fugitive dust emissions, these roads are assessed on a quarterly basis and any observed accumulated ash material is promptly cleaned up and collected for off-site removal.

3.0 Fugitive CCR Dust Assessments

Pursuant to §845.500(b)(3), assessments of the potential fugitive dust emission sources identified in the Powerton facility's CCR Fugitive Dust Control Plan (Plan) are conducted to assess the effectiveness of the Plan. The assessment includes observation of ash removal from ponds, temporary storage and transport activities at the facility to confirm the adequacy of the control measures. The assessments are conducted on a quarterly basis by an individual designated by the contact identified below. Observations made during each assessment are recorded on a form similar to the one included in Appendix B of the Powerton facility's CCR Fugitive Dust Control Plan.

If the results of the assessment determine that ash-related equipment has malfunctioned or the integrity of the equipment has been compromised, the necessary repairs or replacement are performed as soon as feasible. If the assessment finds that the Plan does not effectively minimize the CCR from becoming airborne, the Plan is amended to include additional control measures. No issues were identified during this Annual Report's period of record covering January through December 2022.

Owner Representative/Responsible Person Contact Information:

Mr. Todd Mundorf
Plant Manager
309-477-5212

4.0 Record of Citizen Complaints

Per the Rule, the Annual Report must include copies of the four quarterly fugitive dust complaint reports submitted under §845.500(b)(2)(B). The quarterly fugitive dust complaint reports contain a record of all citizen complaints that were received by the Powerton station with regard to fugitive dust emission incidents. In line with established protocols and within 24 hours of

receipt, the station's environmental coordinator enters the citizen complaint into MWG's Environmental Management Information System (EMIS) database. The EMIS database then automatically forwards notice of the complaint to the station manager and MWG's corporate environmental department. Following initial evaluation of the complaint, MWG then conducts a thorough investigation to confirm the reported incident/conditions and implement corrective actions as may be warranted.

No complaints regarding CCR fugitive dust emissions at the facility were registered during this Annual Report's period of record covering January through December 2022. On August 6, 2022, a member of the public notified Powerton Station about a small amount of CCR (approximately two (2) cubic feet) that was found on a public roadway off Station property. The material was immediately cleaned up and the trucking company was reminded on the importance of cleaning residual CCR off the trucks prior to leaving the Station.

5.0 Summary of Corrective Actions Taken

For the January through December 2022 period of record and based on continued monitoring and inspections as outlined in Section 2.0 and 3.0 and as required under the CCR rules, the currently established control measures remain effective in minimizing potential fugitive dust emissions. Moreover, this assertion is further validated by the lack of citizen complaints logged over this same period. Accordingly, no corrective actions were required during the past year, but additional preventative measures as discussed in Section 4.0 were undertaken to ensure minimization of potential fugitive dust emissions.

QUARTERLY FUGITIVE DUST COMPLAINT REPORTS

MWG
Midwest Generation, LLC

Midwest Generation, LLC
Powerton Generating Station
13082 E. Manito Road
Pekin, Illinois 60087

April 11, 2022

Illinois Environmental Protection Agency
DWPC – Permits Section (MC 15)
Attn: Part 845 Coal Combustion Residual Rule Submittal
1021 North Grand Avenue East
Springfield, IL 62702

Re: Midwest Generation, LLC – Powerton Generating Station
Account No. W1798010008
Pond IDs: W1798010008-01, W1798010008-03, W1798010008-04, W1798010008-05
CCR Surface Impoundment Quarterly Fugitive Dust Complaint Report

Dear Sir or Madam:

In accordance with the requirements of Title 35 of the Illinois Administrative Code ("35 IAC") Section 845.500(b)(2)(B), this letter serves as the fugitive dust complaint report for First Quarter 2022 at Powerton Generating Station. There were no complaints received from members of the public during the period January 1, 2022 through March 31, 2022.

If you have any questions or require additional information regarding this submittal, please contact Jill Buckley at Jill.Buckley@nrg.com.

Sincerely,

Todd Mundorf
Plant Manager, Powerton Generating Station

MWG
Midwest Generation, LLC

Midwest Generation, LLC
Powerton Generating Station
13082 E. Manito Road
Pekin, Illinois 60087

July 11, 2022

Illinois Environmental Protection Agency
DWPC – Permits Section (MC 15)
Attn: Part 845 Coal Combustion Residual Rule Submittal
1021 North Grand Avenue East
Springfield, IL 62702

Re: Midwest Generation, LLC – Powerton Generating Station
Account No. W1798010008
Pond IDs: W1798010008-01, W1798010008-03, W1798010008-04, W1798010008-05
CCR Surface Impoundment Quarterly Fugitive Dust Complaint Report

Dear Sir or Madam:

In accordance with the requirements of Title 35 of the Illinois Administrative Code ("35 IAC") Section 845.500(b)(2)(B), this letter serves as the fugitive dust complaint report for Second Quarter 2022 at Powerton Generating Station. There were no complaints received from members of the public during the period April 1, 2022 through June 30, 2022.

If you have any questions or require additional information regarding this submittal, please contact Jill Buckley at Jill.Buckley@nrg.com.

Sincerely,

Todd Mundorf
Plant Manager, Powerton Generating Station

MWG
Midwest Generation, LLC

Midwest Generation, LLC
Powerton Generating Station
13082 E. Manito Road
Pekin, Illinois 60087

October 12, 2022

Illinois Environmental Protection Agency
DWPC – Permits Section (MC 15)
Attn: Part 845 Coal Combustion Residual Rule Submittal
1021 North Grand Avenue East
Springfield, IL 62702

Re: Midwest Generation, LLC – Powerton Generating Station
Account No. W1798010008
Pond IDs: W1798010008-01, W1798010008-03, W1798010008-04, W1798010008-05
CCR Surface Impoundment Quarterly Fugitive Dust Complaint Report

Dear Sir or Madam:

In accordance with the requirements of Title 35 of the Illinois Administrative Code ("35 IAC") Section 845.500(b)(2)(B), this letter serves as the fugitive dust complaint report for Third Quarter 2022 at Powerton Generating Station. There were no complaints received from members of the public during the period July 1, 2022 through September 30, 2022 for CCR fugitive dust events at the facility. On August 6, 2022, a member of the public notified Powerton Station about a small amount of CCR (approximately two (2) cubic feet) that was found on a public roadway off Station property. The material was immediately cleaned up and the trucking company was reminded on the importance of following all operating procedures. Though included here, this event is not subject to the logging or reporting requirements of 35 IAC 845.500(b)(2).

If you have any questions or require additional information regarding this submittal, please contact Jill Buckley at Jill.Buckley@nrg.com.

Sincerely,

Todd Mundorf
Plant Manager, Powerton Generating Station

MWG
Midwest Generation, LLC

Midwest Generation, LLC
Powerton Generating Station
13082 E. Manito Road
Pekin, Illinois 60087

January 4, 2023

Illinois Environmental Protection Agency
DWPC – Permits Section (MC 15)
Attn: Part 845 Coal Combustion Residual Rule Submittal
1021 North Grand Avenue East
Springfield, IL 62702

Re: Midwest Generation, LLC – Powerton Generating Station
Account No. W1798010008
Pond IDs: W1798010008-01, W1798010008-03, W1798010008-04, W1798010008-05
CCR Surface Impoundment Quarterly Fugitive Dust Complaint Report

Dear Sir or Madam:

In accordance with the requirements of Title 35 of the Illinois Administrative Code ("35 IAC") Section 845.500(b)(2)(B), this letter serves as the fugitive dust complaint report for Fourth Quarter 2022 at Powerton Generating Station. There were no complaints received from members of the public during the period October 1, 2022 through December 31, 2022.

If you have any questions or require additional information regarding this submittal, please contact Jill Buckley at Jill.Buckley@nrg.com.

Sincerely,

Todd Mundorf
Plant Manager, Powerton Generating Station

ATTACHMENT B
2022 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION REPORT
ASH SURGE BASIN AND ASH BYPASS BASIN
POWERTON STATION
OCTOBER 2022

This annual inspection report has been prepared pursuant to both Title 35 of the Illinois Administrative Code (35 IAC) Part 845, Subpart E, Section 845.540(b) and Title 40 of the Code of Federal Regulations (40 CFR) Part 257.83(b) for the Ash Surge Basin (ASB) and Ash Bypass Basin (ABB) at Powerton Station (Station) in Pekin, Illinois. The purpose of this project is to perform the annual inspection of the ASB and ABB by a licensed professional engineer to ensure that the design, construction, operation, and maintenance of the coal combustion residuals (CCR) unit is consistent with recognized and generally accepted good engineering standards. Civil & Environmental Consultants, Inc. (CEC) completed the following scope of services in preparing this annual inspection report:

- CEC reviewed the weekly and monthly inspection reports completed by qualified station personnel and the previous annual inspection report.

- CEC performed the annual inspection in accordance with the requirements of 35 IAC Part 845.540 and 40 CFR Part 257.83(b) including observations pertaining to the following:

    - Changes in Geometry: Observations of changes in the geometry of the ASB and ABB since the previous annual inspection.

    - Instrumentation: Inspection of the location and type of existing instrumentation and documentation of the maximum recorded readings of each instrument since the previous annual inspection from records provided by the Station.

    - Capacity and Impounded Volume: Inspection observations for the approximate minimum, maximum, and present depth and elevation of the impounded water and CCR; storage capacity of the impounding structure at the time of the inspection; and the approximate volume of the impounded water and CCR at the time of the inspection.

    - Structural/Operational Observations: Inspection for actual or potential structural weakness of the CCR surface impoundment, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR surface impoundment and appurtenant structures.

- Other Changes: Inspection including change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

The ASB and ABB are both active surface impoundments. The basins are approximately 7.5 acres and 1 acre in size, respectively. On October 4, 2022, CEC inspected both the ASB and ABB and our observations showed no signs of distress that would suggest the stability or operation of the impounding structure is compromised.

1.0 CHANGES IN GEOMETRY

At the time of inspection, both the ASB and ABB geometry was observed to be unchanged since the October 2021 inspection.

2.0 INSTRUMENTATION

Since the 2021 inspection, water level gauges were installed in both basins. Other instrumentation associated with ASB and ABB includes a water level monitoring device in the outlet structure for the ASB. Our interview of Station personnel and review of weekly and monthly inspection reports indicates that the water level monitor is operating properly. The monthly inspections report the pumps, polymer system, and free board measuring device in the ASB are in good condition. Instrumentation associated with the other hydraulic structures, impoundment embankments, and/or slope performance were not observed.

3.0 CAPACITY AND IMPOUNDED VOLUME

Capacity and impounded volume of the ASB and ABB and estimated depth of impounded water and CCR are represented in Table 1 and 2, attached. The volume of CCR in the ABB remained unchanged from the previous inspection. Volumes and depths were determined through direction by station personnel and by reviewing inspection reports and construction drawings.

4.0 STRUCTURAL/OPERATIONAL OBSERVATIONS

Both the ASB and ABB were inspected for signs of distress that would have the potential to disrupt operation and safety of each basin. Prior to performing the inspection, the previous annual inspection reports were reviewed, which did not identify conditions that indicate an actual or potential structural weakness. Weekly and monthly inspection reports were also reviewed and did not indicate an actual or potential structural weakness.

5.0 OTHER CHANGES

Both the ASB and ABB were inspected for signs of other changes or distress that would have the potential to disrupt operation and safety of each basin. Our inspection showed no distresses that would affect the operation and/or stability of the ASB and ABB.

6.0 LIMITATIONS AND CERTIFICATION

This CCR annual inspection report was prepared to meet the requirements of 35 IAC Part 845.540(b) and 40 CFR Part 257.83(b) and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:

Signature: _____

Name: M. Dean Jones, P.E.

Date of Certification: October 25, 2022

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

Table 1: Inspection Summary - Ash Surge Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	§845.450(b)(2)(A) §257.83(b)(2)(i)	None	None
Instrumentation	§845.450(b)(2)(B) §257.83(b)(2)(ii)	None	None
Water Depth	§845.450(b)(2)(C) §257.83(b)(2)(iii)	3.0 feet, minimum 3.0 feet, at inspection 5.1 feet, maximum	None
CCR Depth	§845.450(b)(2)(C) §257.83(b)(2)(iii)	8 feet	None
Estimated Storage Capacity	§845.450(b)(2)(D) §257.83(b)(2)(iv)	85 Acre Feet	None
Impounded Water Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	16 Acre Feet	None
Impounded CCR Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	69 Acre Feet	None
Structural/Operational Observations	§845.450(b)(2)(F) §257.83(b)(2)(vi)	None	None
Other Changes	§845.450(b)(2)(G) §257.83(b)(2)(vii)	None	None

Table 2: Inspection Summary - Ash Bypass Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	§845.450(b)(2)(A) §257.83(b)(2)(i)	None	None
Instrumentation	§845.450(b)(2)(B) §257.83(b)(2)(ii)	None	None
Water Depth	§845.450(b)(2)(C) §257.83(b)(2)(iii)	0 feet, minimum 1.15 feet, at inspection 1.5 feet, maximum	None
CCR Depth	§845.450(b)(2)(C) §257.83(b)(2)(iii)	Less than 1 foot	None
Estimated Storage Capacity	§845.450(b)(2)(D) §257.83(b)(2)(iv)	5.1 Acre Feet	None
Impounded Water Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	0.3 Acre Feet	None
Impounded CCR Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	Less than 0.1 Acre Feet	None
Structural/Operational Observations	§845.450(b)(2)(F) §257.83(b)(2)(vi)	None	None
Other Changes	§845.450(b)(2)(G) §257.83(b)(2)(vii)	None	None

ANNUAL INSPECTION REPORT
POWERTON STATION - FORMER ASH BASIN
JULY 2022

This annual inspection report has been prepared pursuant to both Section 845.540(b) of the Illinois Pollution Control Board's Standards for the Disposal of Coal Combustion Residuals in CCR Surface Impoundments (Illinois CCR Rule) and Part 257.83(b) of the United States Environmental Protection Agency's Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments (Federal CCR Rule) for Midwest Generation, LLC (MWG) at Powerton Station (Station) in Pekin, Illinois. The purpose of this project is to perform the annual inspection of the Former Ash Basin (FAB) by a licensed professional engineer to ensure that the design, construction, operation, and maintenance of the coal combustion residuals (CCR) surface impoundment is consistent with recognized and generally accepted good engineering standards. The inspection includes:

1. Review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information, previous structural stability assessments, the results of inspections by a qualified person, and results of previous annual inspections);
2. Visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures;
3. Visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation; and
4. Review of annual hazard potential classification certification, annual structural stability assessment certification, annual safety factor assessment certification, and inflow design flood control system plan certification.

Civil & Environmental Consultants, Inc. (CEC) completed the following scope of services in preparing this annual inspection report:

- Reviewed weekly and monthly inspection reports by a qualified person employed by MWG, and the previous annual inspection report.
- Performed the annual inspection in accordance with the requirements of Section 845.540(b) and Part 257.83(b) including observations pertaining to the following:
    - Observations of changes in the FAB geometry since the previous annual inspection were documented;

- Location and type of existing instrumentation was inspected and the maximum recorded readings of each instrument since the previous annual inspection were documented from the records provided by MWG;
- Approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;
- Storage capacity of the impounding structure at the time of the inspection;
- Approximate volume of the impounded water and CCR at the time of the inspection;
- Any appearances of an actual or potential structural weakness of the CCR surface impoundment, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR surface impoundment and appurtenant structures; and
- Any other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection.

The FAB is an inactive surface impoundment that is scheduled for closure. Approximately 30 acres in size, the FAB does not receive bottom ash or ash slag. The FAB is sectioned into a North Pond and South Pond and the geometry has remained unchanged since the previous inspection. On July 12, 2022, CEC inspected the North and South FAB. Our observations showed no signs of distress that would suggest the stability or operation of the impounding structure is compromised.

1.0 CHANGES IN GEOMETRY

At the time of inspection, the FAB geometry was observed to be unchanged since the July 2021 inspection.

2.0 INSTRUMENTATION

Instrumentation associated with the hydraulic structures, impoundment embankments, and/or slope performance do not exist.

3.0 CAPACITY AND IMPOUNDED VOLUME

Capacity and impounded volume of the FAB and estimated depth of impounded water and CCR are represented in Table 1, attached. The volume of CCR remains unchanged from the previous investigations. FAB water volume fluctuates with the groundwater table and the surface water elevation of the nearby Illinois River. Volumes and depths were determined by reviewing inspection reports and construction drawings.

4.0 STRUCTURAL/OPERATIONAL OBSERVATIONS

CEC inspected the FAB for signs of distress that would have the potential to disrupt operation and safety. Both the North and South Ponds are partially incised minimizing the potential of a release of CCR. CCR is primarily located within the incised area of both ponds. Our observations showed minor signs of distress however, none of which currently suggest the safety, stability, or operation of the impounding structure is compromised.

Items noted during the inspection included minor erosion, animal borrows, and vegetation, again, none of which suggest the safety, stability, or operation of the impounding structure is compromised. Review of weekly inspection records show the Station has maintained the berm and access road by removing fallen trees, filling potholes and erosion areas. Based on the extent of these findings, there are no corrective actions or remedy required.

5.0 OTHER CHANGES

CEC inspected the basin for signs of other changes or distress that would have the potential to disrupt operation and safety of the basin. Our inspection showed no distresses that would affect the operation and/or stability of the FAB.

6.0 LIMITATIONS AND CERTIFICATION

This annual inspection report was prepared to meet the requirements of both Section 845.540(b) and Part 257.83(b) and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:

Signature: _____

Name: M. Dean Jones, P.E.

Date of Certification: July 13,2022

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

Table 1: Inspection Summary - Former Ash Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	845.450(b)(2)(A) 257.83(b)(2)(i)	None	None
Instrumentation	845.450(b)(2)(B) 257.83(b)(2)(ii)	None	None
Water Depth	845.450(b)(2)(C) 257.83(b)(2)(iii)	2.0 feet, minimum 2.0 feet, at inspection 7.6 feet, maximum	None
CCR Depth	845.450(b)(2)(C) 257.83(b)(2)(iii)	10 feet	None
Estimated Storage Capacity	845.450(b)(2)(D) 257.83(b)(2)(iv)	500,000 CY	None
Impounded Water Volume	845.450(b)(2)(E) 257.83(b)(2)(v)	20 acre-feet	None
Impounded CCR Volume	845.450(b)(2)(E) 257.83(b)(2)(v)	310 acre-feet	None
Structural/Operational Observations	845.450(b)(2)(F) 257.83(b)(2)(vi)	Minor erosion, burrows, and vegetative cover	Continue to monitor
Other Changes	845.450(b)(2)(G) 257.83(b)(2)(vii)	None	None

Groundwater Elevation 446.0

ANNUAL COAL COMBUSTION RESIDUALS SURFACE IMPOUNDMENT INSPECTION REPORT
POWERTON STATION - METAL CLEANING BASIN
JUNE 2022

This annual coal combustion residuals (CCR) surface impoundment inspection report has been prepared pursuant to Section 845.540(b) of Title 35 Subtitle G, Chapter I, Subchapter j - Coal Combustion Waste Surface Impoundments for Midwest Generation, LLC (MWG) at Powerton Station (Station) in Pekin, Illinois. The purpose of this project is to perform the annual inspection of the Metal Cleaning Basin (MCB) by a licensed professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection includes:

A) Review of available information regarding the status and condition of the CCR surface impoundment, including files available in the operating record (e.g., CCR surface impoundment design and construction information required by Sections 845.220(a)(1) and 845.230(d)(2)(A), previous structural stability assessments required under Section 845.450, the results of inspections by a qualified person, and results of previous annual inspections);
B) Visual inspection of the CCR surface impoundment to identify signs of distress or malfunction of the CCR surface impoundment and appurtenant structures;
C) Visual inspection of any hydraulic structures underlying the base of the CCR surface impoundment or passing through the dike of the CCR surface impoundment for structural integrity and continued safe and reliable operation;
D) The annual hazard potential classification certification, (Section 845.440);
E) The annual structural stability assessment certification, (Section 845.450);
F) The annual safety factor assessment certification, (Section 845.460); and
G) The inflow design flood control system plan certification (Section 845.510(c)).

1.0 SITE DESCRIPTION

The MCB (IEPA ID Number W1798010008-03) is located at Powerton Station in Pekin, Illinois situated northeast of the main power building, south of the Wastewater Building and between the Ash Surge Basin and former Cooling Water Intake Canal (see Figure 1). Measuring 450 feet long and 225 feet wide, approximately 2.3 acres in size, the MCB is lined with a 60 mil high-density polyethylene (HDPE) liner. Gravel access roads are located along the north, east, and west sides.

The MCB was constructed in the late 1970s or early 1980s, and has not undergone significant changes in the geometry. The original operation was designed to receive bottom ash and, twice a year, boiler wash via sluicing with wastewater treated in the wastewater treatment plant. Operation of the MCB has changed to also receive bottom ash and fly ash by end dumping. Wastewater is

periodically pumped from the MCB, treated to remove elevated metal concentrations, and discharged into the Ash Surge Basin. The MCB is inspected weekly by the Environmental Specialist including checking the water level in the basin.

2.0 ANNUAL INSPECTION

Civil & Environmental Consultants, Inc. (CEC) inspected the MCB on May 26, 2022. The following tasks were completed in preparing this annual inspection report:

- Reviewed the weekly and monthly inspection reports completed by a qualified person, annual hazard potential classification certification, annual structural stability assessment certification, annual safety factor assessment certification, the inflow design flood control system plan certification, and previous inspection reports prepared by a qualified professional engineer.
- Performed the annual inspection in accordance with the requirements of Section 845.540(b) including observations pertaining to the following:
    - Changes in Geometry - 845.540(b)(2)(A): changes in geometry of the impounding structure since the previous annual inspection;
    - Instrumentation - 845.540(b)(2)(B): location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;
    - Capacity and Impounded Volume - 845.540(b)(2)(C): approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection;
    - Storage Capacity - 845.540(b)(2)(D): storage capacity of the impounding structure at the time of the inspection;
    - Volume of the Impounded Water and CCR - 845.540(b)(2)(E): Estimate the approximate volume of the impounded water and CCR at the time of the inspection.
    - Structural/Operational Observations - 845.540(b)(2)(F): appearances of an actual or potential structural weakness of the CCR surface impoundment, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR surface impoundment and appurtenant structures; and
    - Other Changes 845.540(b)(2)(G): Any other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection.

Results of our 2022 surface impoundment inspection report are provided in the following section.

2.1 Changes in Geometry - 845.540(b)(2)(A)

At the time of inspection, the MCB geometry was observed to be unchanged from previous inspection reports and assessments. Available online aerial photographs were also reviewed as far back as 1995 that showed no change in geometry.

2.2 Instrumentation - 845.540(b)(2)(B)

Instrumentation associated with the hydraulic structures, impoundment embankments, and/or slope performance were not observed. Since the last inspection, a water level gauge was installed.

2.3 Capacity and Impounded Volume - 845.540(b)(2)(C-E)

The approximate minimum, maximum, and present depth and elevation of the impounded water and CCR since the previous annual inspection are represented in Table 1, attached. The volume of CCR is less than reported from the 2021 annual inspection. Wastewater is periodically pumped from the MCB, treated, and discharged into the Ash Surge Basin. The MCB is inspected weekly by the environmental specialist including checking the water level in the basin.

2.4 Structural/Operational Observations - 845.540(B)(2)(F)

CEC inspected the basin for signs of distress that would have the potential to disrupt operation and safety of the MCB. The MCB is partially incised minimizing the potential of a release of CCR. Our observations showed no signs of distress which currently suggest the safety, stability, or operation of the impounding structure is compromised.

2.5 Other Changes - 845.540(B)(2)(G)

CEC inspected the MCB for signs of other changes that may have affected the stability or operation of the impounding structure since the previous annual inspection. Our inspection showed no distresses that would affect the operation and/or stability.

3.0 CONCLUSIONS

Our assessments and inspection of the MCB showed no signs of distress that would suggest the stability or operation of the impounding structure is compromised.

4.0 LIMITATIONS AND CERTIFICATION

This CCR surface impoundment inspection was prepared to meet the requirements of Section 845.540(b) and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:

Signature: _____

Name: M. Dean Jones, P.E.

Date of Certification: June 22, 2022

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

Table 1: Inspection Summary - Metal Cleaning Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	845.540(b)(2)	None	None
Instrumentation	845.540(b)(2)	Added water gauge	None
Water Depth	845.540b)(2)	0.9 feet, minimum 1.5 feet, at inspection 6.0 feet, maximum	None
CCR Depth	845.540(b)(2)	Less than 1 foot	None
Estimated Storage Capacity	845.540(b)(2)	17 Acre Feet	None
Impounded Water Volume	845.540(b)(2)	0.5 Acre Feet	None
Impounded CCR Volume	845.540(b)(2)	1.0 Acre Feet	None
Structural/Operational Observations	845.540(b)(2)	None	None
Other Changes	845.540(b)(2)	None	None

ATTACHMENT B.1
2022 ANNUAL HAZARD POTENTIAL CLASSIFICATION CERTIFICATION

last six years that would necessitate changing any of the basins' initial federal hazard potential classifications. Therefore, because the 2021 Illinois hazard potential classifications for all three basins were based on their 2016 federal hazard potential classifications, the 2021 Illinois hazard potential classifications assigned to the Ash Surge, Bypass, and Former Ash Basins and the bases for these assignments remain valid for 2022.

Table 6-1 presents the 2022 hazard potential classifications assigned to the Ash Surge, Bypass, and Former Ash Basins at Powerton in accordance with 35 Ill. Adm. Code 845.440(a)(1).

Table 6-1 – 2022 Illinois Hazard Potential Classification for the Ash Surge Basin, Bypass Basin, & Former Ash Basin at the Powerton Generating Station

CCR Surface Impoundment	2022 Illinois Hazard Potential Classification
Ash Surge Basin	Class 2
Bypass Basin	Class 2
Former Ash Basin	Class 2

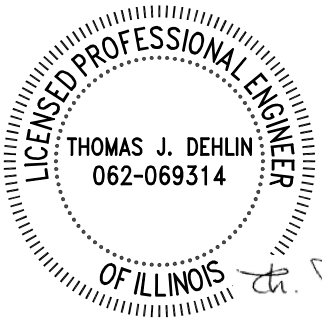
7.0 CERTIFICATION

I certify that:

- This hazard potential classification assessment was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code 845.440.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2022

Seal:



Thomas Dehlin
2022.10.14
08:32:10-05'00'
License Expires
2023.11.30

3.0 HAZARD POTENTIAL CLASSIFICATION ASSESSMENT

Based on our assessment of the MCB and surrounding site features, the MCB remains classified as a Class 2 CCR surface impoundment. Potential downstream inundation areas that could be impacted by a failure or mis-operation the MCB have no buildings and are only occasionally accessed for mowing and inspection purposes that result in no probable loss of human life. Potential economic loss, environmental damage, disruption of lifeline facilities, and impact other concerns are allowed under this classification.

4.0 LIMITATIONS AND CERTIFICATION

This Annual Hazard Potential Classification Assessment Report has been prepared pursuant to the CCR rule codified in Title 35 of the Illinois Administrative Code, Section 845.440(a) and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:

Signature: _____

Name: M. Dean Jones, P.E.

Date of Certification: August 18, 2022

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

Enclosure: Figure 1 - Site Plan

ATTACHMENT B.2
2022 ANNUAL STRUCTURAL STABILITY ASSESSMENT CERTIFICATION

3.0 RECOMMENDED CORRECTIVE MEASURES

(35 Ill. Adm. Code 845.450(b)(1))

Based on the findings documented in this 2022 structural stability assessment, the following corrective measures are recommended for the Ash Surge and Bypass Basins:

- Mow or otherwise cut vegetation that is greater than 12-inches tall along the Bypass Basin's crest,
- Place rock fill in areas along the Ash Surge Basin's downstream slopes where erosion is present and continue monitoring performance,
- Conduct a visual surveillance program to verify that the Bypass Basin's discharge pipes are in good, working condition and are free of significant material defects that could compromise the pipes' integrities during retrofit construction activities for the Bypass Basin, and
- Conduct a visual surveillance program to verify that the Ash Surge Basin's discharge pipes are in good, working condition and are free of significant material defects that could compromise the pipes' integrities prior to retrofitting the basin or repurposing it as a new low volume waste basin.

Given the lack of necessary information due to the construction age of the Former Ash Basin, a full structural stability assessment meeting the requirements of 35 Ill. Adm. Code 845.450(a) could not be performed. Consequently, it is recommended that the Station continue with its plans to close the Former Ash Basin in accordance with the closure criteria promulgated by the Illinois CCR Rule.

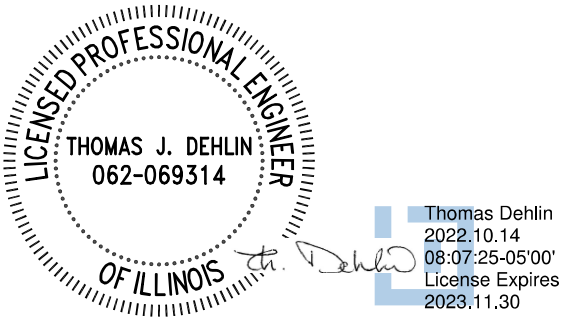
4.0 CERTIFICATION

I certify that:

- This structural stability assessment was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code 845.450.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2022

Seal:



3.2.1 Slope Stability Methodology

The assessment included review of the initial safety factor assessment. The purpose of reviewing the initial 2021 assessment was to confirm the methodology, assumptions and inputs used to complete the safety factor assessment remain relevant. The methodology used for the slope stability analysis reported in the initial safety factor assessment is consistent with Section 845.460 and, considering results of the 2022 CCR surface impoundment inspection showed no modification to either the configuration or condition of the MCB, nor were structural deficiencies observed, the assumptions and inputs used to complete each of the slope stability cases analyzed remain relevant.

3.2.2 Conclusion - 2022 Safety Factor Assessment

The initial safety factor assessment and annual inspections were reviewed and confirm the factors of safety for the 2022 safety factor of assessment are valid. We have concluded that the initial safety factor assessment from June 2021 is valid and that the calculated factors of safety for the MCB achieve the minimum safety factors specified for the critical cross section of the embankment

4.0 LIMITATIONS AND CERTIFICATION

The annual structural stability and factor of safety assessment was prepared to meet the requirements of Parts 845.450 and 845.460 of Title 35 Subtitle G, Chapter I, Subchapter j - Coal Combustion Waste Surface Impoundments, and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:

Signature: _____

Name: M. Dean Jones, P.E.

Date of Certification: June 22, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

ATTACHMENT B.3
2022 ANNUAL SAFETY FACTOR ASSESSMENT CERTIFICATION

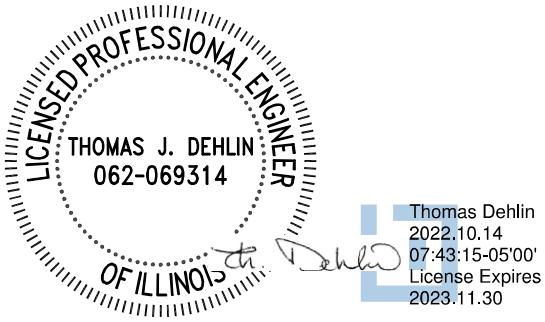
7.0 CERTIFICATION

I certify that:

- This safety factor assessment was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code 845.460.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2022

Seal:



3.2.1 Slope Stability Methodology

The assessment included review of the initial safety factor assessment. The purpose of reviewing the initial 2021 assessment was to confirm the methodology, assumptions and inputs used to complete the safety factor assessment remain relevant. The methodology used for the slope stability analysis reported in the initial safety factor assessment is consistent with Section 845.460 and, considering results of the 2022 CCR surface impoundment inspection showed no modification to either the configuration or condition of the MCB, nor were structural deficiencies observed, the assumptions and inputs used to complete each of the slope stability cases analyzed remain relevant.

3.2.2 Conclusion - 2022 Safety Factor Assessment

The initial safety factor assessment and annual inspections were reviewed and confirm the factors of safety for the 2022 safety factor of assessment are valid. We have concluded that the initial safety factor assessment from June 2021 is valid and that the calculated factors of safety for the MCB achieve the minimum safety factors specified for the critical cross section of the embankment

4.0 LIMITATIONS AND CERTIFICATION

The annual structural stability and factor of safety assessment was prepared to meet the requirements of Parts 845.450 and 845.460 of Title 35 Subtitle G, Chapter I, Subchapter j - Coal Combustion Waste Surface Impoundments, and was prepared under the direction of Mr. M. Dean Jones, P.E.

By affixing my seal to this, I do hereby certify to the best of my knowledge, information, and belief that the information contained in this report is true and correct. I further certify I am licensed to practice in the State of Illinois and that it is within my professional expertise to verify the correctness of the information. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Seal:

Signature: _____

Name: M. Dean Jones, P.E.

Date of Certification: June 22, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2023

ATTACHMENT B.4
2022 ANNUAL INFLOW DESIGN FLOOD CONTROL SYSTEM PLAN CERTIFICATION

7.0 CERTIFICATION

I certify that:

- This inflow design flood control system plan was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code 845.510.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2022

Seal:

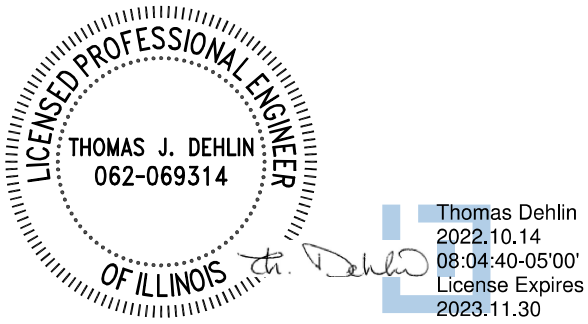


Table 4-1 – Summary of Hydrologic & Hydraulic Assessment Results for the Metal Cleaning Basin

CCR Surface Impoundment	Illinois Hazard Potential Classification	Inflow Design Flood	Maximum Surface Water Elevation	Basin Crest Elevation
Metal Cleaning Basin	Class 2	1,000 Year	463.15 feet	467.00 feet

5.0 CONCLUSIONS

Based on the hydrologic and hydraulic calculations performed for the Metal Cleaning Basin (Ref. 8), the basin has adequate hydraulic capacity to retain the 1000-year flood event without water overtopping the surrounding dikes. Therefore, the Metal Cleaning Basin is able to collect and control the inflow design flood event specified in 35 Ill. Adm. Code 845.510(a)(3).

6.0 CERTIFICATION

I certify that:

- This inflow design flood control system plan was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code 845.510.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas Dehlin, P.E. Date: 03-29-2022

Seal:

ATTACHMENT C
2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT

K P R G

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ILLINOIS CCR COMPLIANCE
ASH SURGE BASIN/ASH BY-PASS BASIN
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2022

Midwest Generation, LLC
Powerton Station
13082 E. Manito Road
Pekin, Illinois 61554

Prepared By: KPRG and Associates, Inc.
14665 West Lisbon Road, Suite 1A
Brookfield, WI 53005

January 30, 2023

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3 – Proposed Statistical Background Concentrations and Site-Specific Groundwater Protection Standards
4 – Summary of Groundwater Elevation Measurements
5 – Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate
6 – Groundwater Sample Collection Summary

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2 – Areal Distribution of Concentrations Above Proposed GWPSs

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1 – Monthly Potentiometric Maps

1.0 INTRODUCTION and OVERVIEW

Groundwater monitoring requirements in accordance with the Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments dated April 15, 2021 (State CCR Rule) and subsequent amendments, have been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Powerton Generating Station. The wells sampled were selected to meet the monitoring requirements of the State CCR Rule for the Ash Surge Basin (ASB) and Ash By-pass Basin (ABB). The CCR monitoring well network around these ponds consists of nine monitoring wells (MW-01, MW-08, MW-09, MW-11, MW-12, MW-15, MW-17, MW-18 and MW-19). Wells MW-01, MW-09 and MW-19 are upgradient wells as shown on Figure 1. All CCR groundwater monitoring data available to date, which includes data from previous groundwater monitoring under the Federal CCR Rule, are provided in Tables 1 and 2. As part of the Application for Initial Operating Permit – Powerton Generating Station submitted on October 31, 2021 (Application), *proposed* statistical background concentration calculations along with *proposed* site specific Groundwater Protection Standards (GWPSs) were submitted for Illinois Environmental Protection Agency (Agency) review/approval. Table 3 summarizes the *proposed* background statistical concentrations for each parameter along with the site-specific *Proposed* GWPSs in accordance with Section 845.600(a)(2). These are currently still under review by the Agency and, therefore, are not finalized. However, for the purposes of evaluations required for the annual report, data comparisons will be presented relative to the "*proposed*" values for statistical background concentrations and site specific GWPSs.

This overview of the 2022 groundwater monitoring period is provided in accordance with Section 845.610(e)(4). Each required item is discussed separately below.

- Section 845.610(e)(4)(A and B) – Proposed statistical background concentration calculations (see Table 3) were submitted to the Agency as part of the Application for Initial Operating. This Application is currently still under Agency review. However, assuming that the Agency accepts the proposed background calculations, the groundwater monitoring since the enactment of the State CCR Rule in April 2021 has identified the following constituents with potential statistically significant increases (SSIs) above the *proposed* background concentrations. It is noted that other than those constituents identified in the next bullet, none of these potential SSI concentrations are above *proposed* site-specific Groundwater Protection Standards (GWPSs). The constituents and associated wells are:

    - Arsenic: MW-12 (3rd and 4th quarter).
    - Barium: MW-08 and MW-11 (1st through 4th quarters), MW-18 (1st, 3rd and 4th quarters), MW-19 (3rd quarter).
    - Calcium: MW-08 and MW-19 (3rd quarter) and MW-15 and MW-17 (1st through 4th quarters).

- Chloride: MW-08, MW-11, MW-12, MW-15, MW-17, and MW-18 (1st through 4th quarters), MW-19 (3rd quarter).
- Fluoride: MW-08, MW-11, MW-12, MW-15, MW-17 and MW-18 (1st through 4th quarters), MW-19 (3rd quarter).
- Lithium: MW-08, MW-15 and MW-17 (1st through 4th quarters), MW-12 (3rd and 4th quarters), MW-18 (1st, 3rd, and 4th quarters), MW-19 (3rd quarter).
- pH: MW-18 (2nd quarter).
- Combined Radium: MW-11 (3rd quarter), MW-18 (1st and 4th quarter).
- Selenium: MW-15 (1st through 3rd quarters).
- Sulfate: MW-09, MW-11. MW-12, MW-15, MW-17 and MW-18 (1st through 4th quarters), MW-19 (1st, 2nd and 4th quarters).
- Total Dissolved Solids: MW-12, MW-15, MW-17 and MW-18 (1st through 4th quarters), MW-08 (2nd through 4th quarters), MW-11 (1st through 3rd quarters), MW-19 (3rd quarter).

Wells MW-01, MW-09 and MW-19 are background monitoring wells.

- Section 845.610(e)(4)(C and D) – Proposed GWPSs in accordance with Section 845.600(a)(2) (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under review by the Agency. However, assuming that the Agency accepts the proposed GWPSs, the groundwater monitoring since the enactment of the State CCR Rule in April 2021 has identified the following constituents above the proposed GWPSs:

  - Arsenic: MW-12 (3rd and 4th quarters).
  - Calcium: MW-08 and MW-19 (3rd quarter) and MW-15 and MW-17 (1st through 4th quarters).
  - Chloride: MW-08 (3rd quarter), MW-15 (2nd through 4th quarter).
  - Selenium: MW-15 (2nd quarter).
  - Sulfate: MW-15 (2nd through 4th quarter), MW-17 (1st through 4th quarters).
  - Total Dissolved Solids: MW-15 (2nd through 4th quarters), MW-17 (1st, 2nd and 4th quarters), MW-18 (3rd Quarter).

  Wells MW-01, MW-09 and MW-19 are background monitoring wells.

- Section 845.610(e)(4)(E though H) – The ABB and ASB are currently not in corrective action.

2.0 ANNUAL STATUS SUMMARY

As discussed in Section 1.0, the CCR monitoring well network around the ABB and ASB consists of nine monitoring wells (MW-01, MW-08, MW-09, MW-11, MW-12, MW-15, MW-17, MW-18 and MW-19). Wells MW-01, MW-09 and MW-19 are upgradient wells as shown on Figure 1. All CCR groundwater monitoring data available to date, which includes data from previous groundwater monitoring under the Federal CCR Rule, are provided in Tables 1 and 2. The backup

analytical packages have been previously provided as part of the 60-day submittal requirements. Table 3 summarizes the proposed background statistical concentrations for each parameter along with the site specific Proposed GWPSs in accordance with Section 845.600(a)(2). These are included as part of the Initial Operating Permit Application referenced above. They are currently still under review by the Agency and, therefore, have not been finalized. However, for the purposes of evaluations required for this annual report, data comparisons will be presented relative to the "*proposed*" values for statistical background concentrations and site specific GWPSs.

This section provides the information specified under Section 845.610(e) (2-3).

2.1 Summary of Actions and Submittals (Section 845.610(e)(2))

The following key actions have been completed during the 2022 reporting period:

- Quarterly sampling of all parameters specified in Section 845.600(a) plus calcium and turbidity was completed and the associated 60-day data summary submittals were placed in the facilities operating record in accordance with Section 845.610(b)(3)(D).

- Water level gauges were installed within the regulated units. Water levels were recorded monthly for the specified CCR monitoring wells and pond water levels were concurrently recorded as pond gauges were established.

- An Application for Initial Construction Permit – Ash By-pass Basin was submitted to the Agency on July 18, 2022. The application is currently under review.

Key activities for the upcoming year include:

- Receipt of an approved Application for Initial Operating Permit which will facilitate finalization of the proposed statistical background concentrations and the proposed site specific GWPSs. Once these are accepted/finalized by the Agency, formal groundwater data comparisons and evaluations can be made based on quarterly monitoring results relative to these comparison criteria.

- Receipt of an approved Application for Initial Construction Permit – Ash By-pass Basin after which time plans for retro-fitting the Ash By-pass basin can proceed.

- Submittal of the Application for Initial Construction Permit – Ash Surge Basin - Midwest Generation Powerton Station.

- Continued quarterly groundwater monitoring/reporting.

2.2 Groundwater Data Summary (Section 845.610(e)(3)(A-F)

Identification of monitoring wells and associated constituent concentrations above the proposed site specific GWPSs was included in Section 1.0 above. A map showing these wells and constituent concentrations is provided on Figure 2.

There were no monitoring wells installed or decommissioned during this reporting period.

Monthly water levels were recorded from the specified CCR monitoring wells. The water levels are summarized in Table 4. Potentiometric surface maps for each round of water levels collected since the effective date of the new State CCR Rule are provided in Attachment 1. It is noted that CCR monitoring wells MW-08, MW-12, MW-15 and MW-17 are screened within a shallow, localized, saturated clay/silt unit which is underlain by a more extensive sand unit. The remaining monitoring wells have deeper screens, within the more extensive sand unit with the exception of MW-18 which appears to be in a transitional zone between the two units. The water levels from wells screened in the clay/silt unit and the water levels from monitoring wells screened within the sand unit were evaluated separately and used to generate potentiometric surface maps for each unit. Groundwater flow beneath the ABB and ASB within the clay/silt unit is consistently in a westerly direction while flow within the sand unit is consistently in a northerly direction with some divergent flow to the northeast and northwest. When monthly water levels are taken concurrently with a quarterly groundwater sampling event, groundwater elevations from non-CCR wells may be used to assist in developing the groundwater flow maps. In accordance with Section 845.640(c)(2), groundwater flow direction and seepage velocity estimates for each round of water levels are provided in Table 5.

A summary of the number of groundwater samples collected for analysis for each CCR monitoring well along with sample dates is provided in Table 6.

Proposed statistical background concentration calculations (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under Agency review. However, assuming that the Agency accepts the *proposed* background calculations, the groundwater monitoring for the 2022 reporting period has identified the following constituents with potential statistically significant increases (SSIs) above the proposed background concentrations:

- Arsenic: MW-12 (3rd and 4th quarter).
- Barium: MW-08 and MW-11 (1st through 4th quarters), MW-18 (1st, 3rd and 4th quarters), MW-19 (3rd quarter).
- Calcium: MW-08 and MW-19 (3rd quarter) and MW-15 and MW-17 (1st through 4th quarters).
- Chloride: MW-08, MW-11, MW-12, MW-15, MW-17, and MW-18 (1st through 4th quarters), MW-19 (3rd quarter).
- Fluoride: MW-08, MW-11, MW-12, MW-15, MW-17 and MW-18 (1st through 4th quarters), MW-19 (3rd quarter).

- Lithium: MW-08, MW-15 and MW-17 (1st through 4th quarters), MW-12 (3rd and 4th quarters), MW-18 (1st, 3rd, and 4th quarters), MW-19 (3rd quarter).
- pH: MW-18 (2nd quarter).
- Combined Radium: MW-11 (3rd quarter), MW-18 (1st and 4th quarter).
- Selenium: MW-15 (1st through 3rd quarters).
- Sulfate: MW-09, MW-11. MW-12, MW-15, MW-17 and MW-18 (1st through 4th quarters), MW-19 (1st, 2nd and 4th quarters).

Total Dissolved Solids: MW-12, MW-15, MW-17 and MW-18 (1st through 4th quarters), MW-08 (2nd through 4th quarters), MW-11 (1st through 3rd quarters), MW-19 (3rd quarter).

Wells MW-01, MW-09 and MW-19 are background monitoring wells. As previously stated, other than those constituents identified in the second bullet in Section 1.0, none of these potential SSI concertations are above *proposed* site-specific GWPSs.

TABLES

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Powerton Station, Pekin, IL. Ash By-Pass Basin Ash Surge Basin.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-01 (S) up-gradient	11/16/2015	1.0	98	44	0.17	7.07	93	530	< 0.003	< 0.001	0.057	^ < 0.001	< 0.0005	< 0.005	< 0.001	* < 0.0005	< 0.01	< 0.0002	< 0.0050	0.744	< 0.0025	* < 0.002
	2/25/2016	0.2	110	42	0.16	7.23	54	460	< 0.003	0.0025	0.053	< 0.001	< 0.0005	< 0.005	0.0014	0.0019	< 0.01	< 0.0002	< 0.005	< 0.722	0.0029	< 0.002
	5/20/2016	0.34	100	44	0.17	6.95	65	430	< 0.003	0.0081	0.062	< 0.001	< 0.0005	0.007	0.0053	0.011	< 0.01	< 0.0002	< 0.005	< 0.953	< 0.0025	< 0.002
	8/17/2016	0.27	78	39	0.25	7.16	50	530	< 0.003	0.0014	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.0014	< 0.010	< 0.0002	0.0057	< 0.491	< 0.0025	< 0.002
	11/16/2016	0.18	97	39	0.21	7.22	32	500	< 0.003	0.0051	0.056	< 0.001	< 0.0005	< 0.005	0.0044	0.0082	< 0.01	< 0.0002	0.0059	< 0.618	< 0.0025	< 0.002
	2/14/2017	0.18	120	55	0.17	7.30	60	550	< 0.003	0.0041	0.056	< 0.001	< 0.0005	< 0.005	0.0045	0.0076	< 0.01	< 0.0002	0.0056	< 0.837	< 0.0025	< 0.002
	5/3/2017	0.19	86	66	0.16	7.41	45	460	< 0.003	0.0015	0.045	< 0.001	< 0.0005	< 0.005	0.0033	0.0067	< 0.01	< 0.0002	< 0.005	0.574	< 0.0025	< 0.002
	6/21/2017	0.18	85	58	0.18	7.60	47	540	< 0.003	< 0.001	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0061	< 0.418	< 0.0025	< 0.002
	8/25/2017	0.56	86	41	0.18	7.41	63	490	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0059	0.775	< 0.0025	< 0.002
	11/8/2017	0.57	130	38	0.12	6.69	61	640	< 0.003	< 0.001	0.083	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.343	< 0.0025	< 0.002
	5/17/2018	0.15	88	50	0.12	6.7	48	540	< 0.003	< 0.001	0.045	< 0.001	< 0.0005	< 0.005	< 0.001	0.00068	< 0.01	< 0.0002	< 0.005	< 0.396	< 0.0025	< 0.002
	8/8/2018	0.14	86	48	0.13	6.8	43	430	< 0.003	< 0.001	0.051	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.579	< 0.0025	< 0.002
	4/30/2019	0.07	78	54	0.17	7.2	27	450	< 0.003	0.0014	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	0.0017	< 0.01	< 0.0002	< 0.005	< 0.656	< 0.0025	< 0.002
	11/13/2019	0.52	95	47	0.18	7.51	41	390	NA	0.029	0.091	NA	0.00085	NA	0.016	0.034	0.012	< 0.0002	0.0079	0.884	< 0.0025	< 0.002
	12/26/2019	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0021	0.0041	NA	NA	NA	NA	NA	NA
	4/28/2020	0.33	110	46	0.19	7.17	41	470	NA	< 0.001	0.051	NA	< 0.0005	NA	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.628	< 0.0025	< 0.002
	12/7/2020	0.6	100	54	0.25	7.22	55	490	NA	< 0.001	0.058	NA	< 0.0005	NA	< 0.001	0.00055	<^ 0.01	< 0.0002	0.0051	0.724	< 0.0025	< 0.002
	5/11/2021	0.23	84	53	0.2	7.52	38	450	< 0.003	< 0.001	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.01	< 0.523	< 0.0025	< 0.002
	8/24/2021	0.26	98	40	0.18	7.19	56	450	< 0.003	< 0.001	0.06	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0069	1.08	< 0.0025	< 0.002
	11/30/2021	0.33	97	42	0.2	7.14	^- 28	410	< 0.003	< 0.001	0.06	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.005	< 0.0002	0.0072	1.1	0.0026	< 0.002
	2/9/2022	0.18	95	47	0.17	7.33	47	520	< 0.003	0.0013	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	0.00089	0.0026	< 0.0002	0.0075	< 0.628	< 0.0025	< 0.002
	6/7/2022	0.23	82	51	0.15	7.62	27	440	< 0.003	< 0.001	0.041	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0057	0.386	< 0.0025	< 0.002
	8/30/2022	0.59	100	44	0.13	7.1	66	700	< 0.003	< 0.001	0.076	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.628	< 0.0025	< 0.002
	11/15/2022	0.71	110	45	0.1	7.15	44	520	< 0.003	< 0.001	0.088	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.446	< 0.0025	< 0.002
MW-09 (S) up-gradient	11/18/2015	2.0	63	H 31	H 0.19	7.15	H 110	H 440	< 0.003	< 0.001	0.027	^ < 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	H < 0.0002	0.043	< 0.655	< 0.0025	< 0.002
	2/25/2016	2.3	77	36	0.19	7.34	120	500	< 0.003	0.0042	0.036	< 0.001	< 0.0005	< 0.005	0.0011	< 0.0005	< 0.01	< 0.0002	0.053	< 0.361	< 0.0025	< 0.002
	5/19/2016	2.0	73	38	0.17	7.30	100	520	< 0.003	< 0.001	0.029	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.042	< 0.394	0.0032	< 0.002
	8/17/2016	2.7	74	39	0.15	7.32	120	750	< 0.003	< 0.001	0.031	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.036	< 0.498	< 0.0025	< 0.002
	11/17/2016	4.5	85	38	0.13	7.37	110	630	< 0.003	0.0038	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.036	0.646	0.0025	< 0.002
	2/15/2017	4.1	84	38	0.13	6.94	160	620	< 0.003	0.0032	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.035	< 0.377	0.0062	< 0.002
	5/3/2017	3.5	85	38	0.17	7.48	170	680	< 0.003	0.0012	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.034	< 0.445	0.011	< 0.002
	6/21/2017	3.3	82	38	0.14	7.63	180	760	< 0.003	< 0.001	0.037	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.033	< 0.380	0.0072	< 0.002
	8/25/2017	3.8	85	36	0.14	7.30	150	630	< 0.003	< 0.001	0.044	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.028	< 0.160	0.0043	< 0.002
	11/8/2017	4	89	37	0.13	6.92	190	650	< 0.003	0.0012	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.026	0.344	< 0.0025	< 0.002
	5/16/2018	4.1	89	36	0.15	7.83	180	550	< 0.003	< 0.001	0.038	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	0.00029	0.031	< 0.424	0.006	< 0.002
	8/8/2018	4.3	86	39	0.14	7.31	180	690	< 0.003	< 0.001	0.037	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.032	0.44	0.0078	< 0.002
	5/1/2019	4.6	79	37	0.17	7.11	170	640	< 0.003	< 0.001	0.038	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.031	< 0.66	0.0036	< 0.002
	11/14/2019	2.5	85	36	0.18	7.49	82	500	NA	0.0056	0.057	NA	< 0.0005	NA	0.0032	0.00076	< 0.010	< 0.0002	0.026	< 0.457	< 0.0025	< 0.002
	4/29/2020	2	71	34	0.2	7.19	140	510	NA	0.0012	0.031	NA	< 0.0005	NA	< 0.001	< 0.0005	< 0.010	< 0.0002	0.028	0.698	< 0.0025	< 0.002
	12/8/2020	2.6	65	34	0.22	7.29	63	400	NA	0.0013	0.042	NA	< 0.0005	NA	< 0.001	< 0.0005	< 0.010	< 0.0002	0.025	< 0.479	< 0.0025	< 0.002
	5/13/2021	2	74	33	0.2	7.33	120	410	< 0.003	< 0.001	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.025	< 0.612	< 0.0025	< 0.002
	8/25/2021	2.2	80	32	0.17	7.11	130	420	< 0.003	< 0.001	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.022	< 0.579	< 0.0025	< 0.002
	12/1/2021	3.2	79	32	0.2	7.22	^- 100	570	< 0.003	< 0.001	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.002	< 0.0002	0.028	< 0.365	< 0.0025	< 0.002
	2/10/2022	3.5	79	33	0.23	7.12	120	510	< 0.003	0.0019	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.003	< 0.0002	0.03	< 0.393	< 0.0025	< 0.002
	6/8/2022	3.2	70	31	0.21	7.52	150	510	< 0.003	0.002	0.042	< 0.001	< 0.0005	< 0.005	0.0011	< 0.0005	< 0.010	< 0.0002	0.028	< 0.548	< 0.0025	< 0.002
	8/31/2022	3.2	79	30	0.18	7.18	140	530	< 0.003	< 0.001	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.010	< 0.0002	0.024	< 0.458	< 0.0025	< 0.002
	11/15/2022	3.7	77	32	0.25	7.39	130	490	< 0.003	< 0.001	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.031	< 0.448	< 0.0025	< 0.002
MW-19^ (S) up-gradient	11/18/2016	3.8	89	38	0.13	7.34	120	670	< 0.003	< 0.001	0.084	< 0.001	< 0.0005	< 0.005	0.001	0.00068	< 0.01	< 0.0002	0.035	< 0.476	0.0043	< 0.002
	2/15/2017	4.7	88	37	0.13	7.50	180	630	< 0.003	< 0.001	0.088	< 0.001	< 0.0005	< 0.005	< 0.001	0.00061	< 0.01	< 0.0002	0.046	< 0.482	0.0063	< 0.002
	5/5/2017	3.3	88	38	0.14	7.51	160	640	< 0.003	< 0.001	0.076	< 0.001	< 0.0005	< 0.005	0.0013	0.0012	< 0.01	< 0.0002	0.035	0.923	0.0068	< 0.002
	6/21/2017	2.3	110	35	0.12	7.30	170	690	< 0.003	< 0.001	0.089	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.024	< 0.334	0.0028	< 0.002
	8/28/2017	3.5	97	36	0.16	7.20	160	700	< 0.003	< 0.001	0.073	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.041	0.370	0.0035	< 0.002
	11/6/2017	4.5	86	35	0.17	7.26	190	640	< 0.003	< 0.001	0.071	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.042	0.360	< 0.0025	< 0.002
	5/14/2018	4.1	96	35	0.16	7.92	180	820	< 0.003	< 0.001	0.079	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.043	0.562	0.0044	< 0.002
	8/6/2018	3.8	100	37	0.13	7.57	170	720	< 0.003	< 0.001	0.078	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.032	0.835	0.0052	< 0.002
	5/2/2019	3.7	100	39	0.13	6.86	160	700	< 0.003	< 0.001	0.076	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.03	< 0.431	0.0035	< 0.002
	11/13/2019	2.5	130	53	0.15	7.51	140	740	NA	0.0014	0.100	NA	< 0.0005	NA	< 0.001	0.00056	< 0.01	< 0.0002	0.04	< 0.447	< 0.0025	< 0.002
	4/27/2020	2.3	100	43	0.17	6.87	110	570	NA	< 0.001	0.077	NA	< 0.0005	NA	< 0.001	< 0.0005	< 0.01	< 0.0002	0.04	0.630	< 0.0025	< 0.002
	12/7/2020	3.3	74	34	0.19	7.30	F1 76	420	NA	< 0.001	0.062	NA	< 0.0005	NA	< 0.001	< 0.0005	<^ 0.01	< 0.0002	0.05	< 0.509	< 0.0025	< 0.002
	5/10/2021	2.3	68	33	0.17	7.36	110	420	< 0.003	< 0.001	0.060	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.05	< 0.524	< 0.0025	< 0.002
	8/26/2021	2.1	85	32	0.11	7.12	130	320	< 0.003	< 0.001	0.066	< 0.001	< 0.0005	< 0.0005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.028	< 0.543	< 0.0025	< 0.002
	12/1/2021	3.5	89	31	0.17	7.25	^- 120	620	< 0.003	< 0.001	0.07	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0038	< 0.0002	0.05	1.18	< 0.0025	< 0.002
	2/7/2022	3.9	77	34	0.17	7.18	140	600	< 0.003	< 0.001	0.074	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.003	< 0.0002	0.043	0.881	< 0.0025	< 0.002
	6/6/2022	2.7	92	33	0.12	7.08	130	560	< 0.003	< 0.001	0.082	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.03	< 0.419	< 0.0025	< 0.002
	8/30/2022	0.7	140	200	0.32	7.29	45	1100	< 0.003	0.0027	0.15	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.023	< 0.0002	0.0082	0.44	< 0.0025	< 0.002
	11/16/2022	4.3	80	34	0.22	7.27	160	580	< 0.003	< 0.001	0.064	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.041	0.746	0.0029	< 0.002
MW-08 (CL) down-gradient	11/18/2015	1.5	160	H 170	H 0.44	7.61	H 470	H 1300	< 0.003	0.0029	0.15	^ < 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.028	H < 0.0002	0.01	< 0.559	< 0.0025	< 0.002
	2/25/2016	1.7	160	200	0.30	7.00	280	1100	< 0.003	0.0018	0.11	< 0.001	0.00052	< 0.005	< 0.001	0.00072	0.015	< 0.0002	0.02	0.535	< 0.0025	< 0.002
	5/18/2016	1.7	160	140	0.34	7.67	300	1200	< 0.003	0.0029	0.16	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.036	< 0.0002	0.0069	0.417	< 0.0025	< 0.002
	8/17/2016	1.0	150	230	0.35	7.33	360	1400	< 0.003	0.0032	0.15	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.023	< 0.0002	0.013	< 0.519	< 0.0025	< 0.002
	11/15/2016	1.2	140	290	0.33	6.90	230	1300	< 0.003	0.0012	0.076	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.016	0.583	< 0.0025	< 0.002
	2/16/2017	1.5	150	460	0.28	7.00	230	1500	< 0.003	0.003	0.086	< 0.001	< 0.0005	< 0.005	< 0.001	0.00087	< 0.01	< 0.0002	0.026	< 0.375	< 0.0025	< 0.002
	5/2/2017	0.55	140	300	0.33	7.30	320	1300	< 0.003	0.0029	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.022	< 0.0002	0.0083	< 0.480	< 0.0025	< 0.002
	6/21/2017	1.2	160	490	0.30	7.27	350	1700	< 0.003	0.0045	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.031	< 0.439	< 0.0025	< 0.002
	8/29/2017	1.2	150	360	0.47	7.29	300	1500	< 0.003	0.0011	0.062	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.034	0.699	< 0.0025	< 0.002
	11/8/2017	0.68	130	260	0.45	7.27	270	1200	< 0.003	0.0027	0.10	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.019	< 0.0002	0.014	0.806	< 0.0025	< 0.002
	5/17/2018	1.2	130	200	0.37	6.79	170	1000	< 0.003	0.003	0.07	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.024	0.655	< 0.0025	< 0.002
	8/8/2018	1.1	140	270	0.32	6.93	190	1200	< 0.003	0.0055	0.07	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.019	< 0.410	< 0.0025	< 0.002
	5/1/2019	0.54	95	73	0.35	7.60	85	600	< 0.003	0.0018	0.07	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.021	< 0.0002	0.0069	0.892	< 0.0025	< 0.002
	11/13/2019	0.98	110	92	0.33	7.66	110	640	NA	0.0025	0.087	NA	< 0.0005	NA	< 0.001	0.00094	0.022	< 0.0002	0.013	< 0.498	< 0.0025	< 0.002
	4/28/2020	0.74	110	120	0.38	7.58	58	660	NA	0.0026	0.095	NA	< 0.0005	NA	< 0.001	< 0.0005	0.026	< 0.0002	0.011	< 0.450	< 0.0025	< 0.002
	12/14/2020	0.73	120	150	0.38	7.40	92	530	NA	0.0024	0.110	NA	< 0.0005	NA	< 0.001	0.00093	0.03	< 0.0002	0.012	1.310	< 0.0025	< 0.002
	5/11/2021	0.54	97	120	0.39	7.64	110	680	< 0.003	0.002	0.092	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.021	< 0.0002	0.011	< 0.695	< 0.0025	< 0.002
	8/25/2021	0.6	100	110	0.35	7.28	100	550	< 0.003	0.0015	0.059	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.018	< 0.0002	0.011	< 0.494	< 0.0025	< 0.002
	12/1/2021	0.64	110	97	0.36	7.50	^- 66	690	< 0.003	0.0025	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.023	< 0.0002	0.011	1.02	< 0.0025	< 0.002
	2/10/2022	0.81	110	130	0.37	7.54	55	670	< 0.003	0.0029	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.023	< 0.0002	0.0092	0.935	< 0.0025	< 0.002
	6/8/2022	0.73	130	180	0.3	7.71	53	790	< 0.003	0.0024	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.022	< 0.0002	0.0086	< 0.52	< 0.0025	< 0.002
	8/30/2022	0.7	140	210	0.32	7.37	50	1200	< 0.003	0.0027	0.15	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.023	< 0.0002	0.0083	0.859	< 0.0025	< 0.002
	11/15/2022	0.68	130	200	0.45	7.67	41	780	< 0.003	0.003	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.023	< 0.0002	0.0083	0.451	< 0.0025	< 0.002

Notes: All units are in mg/l except pH is in standard units.
F1 - MS and/or MSD Recovery outside of limits.
H - Sample was prepped or analyzed beyond the specified holding time.
V- Serial dilution exceeds control limits.

* - LCS or LCSD is outside acceptance limits.
^ - Denotes instrument related QC exceeds the control limits
(R) - Resample Event
NA - Not Analyzed

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Powerton Station, Pekin, IL. Ash By-Pass Basin Ash Surge Basin.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-11 (S) down-gradient	11/18/2015	1.7	110	H 54	H 0.55	7.06	H 160	H 670	< 0.003	0.017	0.18	^ < 0.001	< 0.0005	< 0.005	0.002	< 0.0005	< 0.01	H < 0.0002	0.0120	0.788	< 0.0025	< 0.002
	2/26/2016	1.5	140	120	0.55	7.25	220	850	< 0.003	0.023	0.23	< 0.001	< 0.0005	< 0.005	0.0023	< 0.0005	< 0.01	< 0.0002	0.013	0.562	< 0.0025	< 0.002
	5/20/2016	1.6	140	120	0.56	7.10	210	920	< 0.003	0.027	0.26	< 0.001	< 0.0005	< 0.005	0.0024	0.00076	< 0.01	< 0.0002	0.014	0.524	< 0.0025	< 0.002
	8/17/2016	1.0	130	93	0.67	7.08	180	910	< 0.003	F1 0.29	1.4	< 0.001	< 0.0005	< 0.005	0.0034	0.001	< 0.010	< 0.0002	0.011	1.130	< 0.0025	< 0.002
	11/17/2016	1.2	140	130	0.44	7.21	240	1100	< 0.003	0.071	0.44	< 0.001	< 0.0005	< 0.005	0.0037	0.0013	< 0.01	< 0.0002	0.0088	0.734	< 0.0025	< 0.002
	2/16/2017	1.6	140	110	0.40	6.62	260	910	< 0.003	0.04	0.3	< 0.001	< 0.0005	< 0.005	0.003	0.00094	< 0.01	< 0.0002	0.013	0.341	< 0.0025	< 0.002
	5/3/2017	1.3	160	160	0.42	7.36	440	1300	< 0.003	0.039	0.26	< 0.001	< 0.0005	< 0.005	0.0035	0.00093	< 0.01	< 0.0002	0.015	0.662	< 0.0025	< 0.002
	6/22/2017	1.2	140	120	0.60	7.21	260	1000	< 0.003	0.07	0.36	< 0.001	< 0.0005	< 0.005	0.0025	< 0.0005	< 0.01	< 0.0002	0.014	< 0.418	< 0.0025	< 0.002
	8/29/2017	2.2	130	83	0.52	7.23	310	1100	< 0.003	0.017	0.21	< 0.001	< 0.0005	< 0.005	0.0026	< 0.0005	< 0.01	< 0.0002	0.016	< 0.313	< 0.0025	< 0.002
	11/9/2017	1.5	140	100	0.59	6.96	230	970	< 0.003	0.092	0.54	< 0.001	< 0.0005	< 0.005	0.0034	< 0.0005	< 0.01	< 0.0002	0.014	1.24	< 0.0025	< 0.002
	5/16/2018	2.0	140	88	0.61	7.89	270	1000	< 0.003	0.089	0.47	< 0.001	< 0.0005	< 0.005	0.0041	< 0.0005	< 0.01	< 0.0002	0.014	1.12	< 0.0025	< 0.002
	8/9/2018	1.4	160	120	0.65	7.24	220	1000	< 0.003	0.68	3.0	<^ 0.0010	0.0008	< 0.005	0.0053	0.0012	< 0.01	< 0.0002	0.013	1.48	< 0.0025	< 0.002
	5/1/2019	2.3	110	60	0.62	7.08	200	730	< 0.003	0.11	0.6	< 0.001	< 0.0005	< 0.005	0.0026	0.0011	< 0.01	< 0.0002	0.014	1.59	< 0.0025	< 0.002
	11/14/2019	1.8	120	83	0.55	7.43	150	890	NA	0.14	0.72	NA	< 0.0005	NA	0.0041	0.0021	< 0.01	< 0.0002	0.02	2.64	< 0.0025	< 0.002
	4/29/2020	1.2	100	110	0.62	7.08	320	950	NA	0.019	0.21	NA	< 0.0005	NA	0.0019	< 0.0005	< 0.01	< 0.0002	0.024	0.47	< 0.0025	< 0.002
	12/8/2020	0.7	86	94	0.67	7.26	200	650	NA	0.027	0.26	NA	< 0.0005	NA	0.0021	< 0.0005	< 0.01	< 0.0002	0.03	< 0.523	< 0.0025	< 0.002
	5/11/2021	1.0	99	130	0.72	7.26	230	820	< 0.003	0.024	0.25	< 0.001	< 0.0005	< 0.005	0.0019	< 0.0005	0.012	< 0.0002	0.032	1.59	< 0.0025	< 0.002
	8/25/2021	0.9	100	100	0.65	7.03	210	800	< 0.003	0.015	0.16	< 0.001	< 0.0005	< 0.005	0.0016	< 0.0005	< 0.01	< 0.0002	0.03	< 0.472	< 0.0025	< 0.002
	12/1/2021	1.2	100	85	0.67	7.17	^- 160	850	< 0.003	0.0093	0.17	< 0.001	< 0.0005	< 0.005	0.0019	< 0.0005	0.0067	< 0.0002	0.032	1.3	< 0.0025	< 0.002
	2/10/2022	0.9	110	110	0.68	7.11	220	920	< 0.003	0.015	0.2	< 0.001	< 0.0005	< 0.005	0.0024	0.00059	0.007	< 0.0002	0.027	0.839	< 0.0025	< 0.002
	6/8/2022	1.7	110	75	0.64	7.35	150	710	< 0.003	0.028	0.2	< 0.001	0.00058	< 0.005	0.0018	< 0.0005	< 0.01	< 0.0002	0.021	0.786	< 0.0025	< 0.002
	8/31/2022	1.2	120	100	0.61	6.97	190	830	< 0.003	0.016	0.2	< 0.001	< 0.0005	< 0.005	0.0017	< 0.0005	< 0.01	< 0.0002	0.02	1.04	< 0.0025	< 0.002
	11/15/2022	2.2	110	61	0.84	7.21	110	690	< 0.003	0.015	0.16	< 0.001	< 0.0005	< 0.005	0.0017	< 0.0005	< 0.01	< 0.0002	0.016	0.785	< 0.0025	< 0.002
MW-12 (CL) down-gradient	11/19/2015	0.94	160	H 220	H 0.57	7.12	H 650	H 1400	< 0.003	0.10	0.180	^ < 0.001	0.00068	< 0.005	< 0.001	0.00063	0.023	H < 0.0002	0.0280	< 0.685	< 0.0025	< 0.002
	2/26/2016	0.42	130	200	0.40	7.96	530	1200	< 0.003	0.077	0.130	< 0.001	0.0016	< 0.005	< 0.001	0.0014	0.014	< 0.0002	0.0150	1.11	< 0.0025	< 0.002
	5/20/2016	0.65	150	200	0.49	7.28	550	1400	< 0.003	0.065	0.16	F1 < 0.001	0.00077	< 0.005	< 0.001	0.0016	0.013	< 0.0002	0.028	0.576	< 0.0025	< 0.002
	8/18/2016	0.69	170	200	0.49	7.06	620	1600	< 0.003	0.33	0.88	0.0013	0.007	< 0.005	0.001	0.0011	0.015	< 0.0002	0.011	3.68	< 0.0025	< 0.002
	11/18/2016	0.83	140	180	0.46	7.34	340	1300	< 0.003	0.23	0.67	< 0.001	0.0028	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	< 0.01	1.86	< 0.0025	< 0.002
	2/16/2017	0.48	140	190	0.37	7.54	630	1300	< 0.003	0.29	0.26	< 0.001	0.0057	< 0.005	0.0013	0.0042	0.010	< 0.0002	0.015	1.15	< 0.0025	< 0.002
	5/3/2017	0.49	120	190	0.37	7.47	500	1200	< 0.003	0.10	0.17	< 0.001	0.0022	< 0.005	< 0.001	0.0038	0.011	< 0.0002	0.017	0.518	< 0.0025	< 0.002
	6/22/2017	0.50	130	190	0.48	7.36	580	1400	< 0.003	0.025	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	0.00096	< 0.010	< 0.0002	0.028	0.376	< 0.0025	< 0.002
	8/29/2017	0.78	140	180	0.52	7.34	520	1400	< 0.003	0.02	0.095	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.024	0.529	< 0.0025	< 0.002
	11/10/2017	0.94	130	170	0.48	7.38	370	1200	< 0.003	0.50	0.45	< 0.001	0.0015	< 0.005	< 0.001	0.00097	0.018	< 0.0002	0.023	1.67	< 0.0025	< 0.002
	5/16/2018	0.46	100	180	0.47	8.12	720	1500	< 0.003	0.09	0.1	< 0.001	0.00052	< 0.005	< 0.001	0.00067	0.012	< 0.0002	0.021	0.741	< 0.0025	< 0.002
	8/9/2018	0.61	120	190	0.44	7.42	480	1300	< 0.003	0.12	0.15	<^ 0.001	0.00084	< 0.005	< 0.001	0.00072	< 0.010	< 0.0002	0.026	0.735	< 0.0025	< 0.002
	5/1/2019	0.4	100	170	0.38	7.68	330	1000	< 0.003	0.04	0.13	< 0.001	0.00054	< 0.005	< 0.001	0.0012	0.014	< 0.0002	0.011	0.666	< 0.0025	< 0.002
	11/14/2019	0.74	120	160	0.45	7.61	280	1100	NA	0.026	0.072	NA	< 0.0005	NA	< 0.001	< 0.0005	0.014	< 0.0002	0.027	0.568	< 0.0025	< 0.002
	4/29/2020	0.34	71	150	0.34	7.96	360	980	NA	0.003	0.034	NA	< 0.0005	NA	< 0.001	< 0.0005	0.012	< 0.0002	0.015	0.578	< 0.0025	< 0.002
	12/8/2020	0.61	92	160	0.56	7.36	320	990	NA	0.025	0.069	NA	< 0.0005	NA	< 0.001	< 0.0005	0.012	< 0.0002	0.027	< 0.476	< 0.0025	< 0.002
	5/13/2021	0.4	89	140	0.23	7.39	350	990	< 0.003	0.003	0.058	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.016	0.563	< 0.0025	< 0.002
	8/25/2021	0.5	82	130	0.46	7.43	220	740	< 0.003	0.0083	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.019	< 0.502	< 0.0025	< 0.002
	12/1/2021	0.53	72	130	0.52	7.38	^- 170	730	< 0.003	0.018	0.045	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.009	< 0.0002	0.017	0.623	< 0.0025	< 0.002
	2/10/2022	0.35	96	140	0.27	7.28	320	980	< 0.003	0.0072	0.059	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.017	0.602	< 0.0025	< 0.002
	6/8/2022	0.49	98	140	0.41	7.65	320	950	< 0.003	0.0079	0.064	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.02	0.495	< 0.0025	< 0.002
	8/31/2022	0.62	100	150	0.5	7.33	260	870	< 0.003	0.099	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.021	0.618	< 0.0025	< 0.002
	11/15/2022	0.58	90	150	0.74	7.66	220	810	< 0.003	0.032	0.072	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.02	< 0.622	< 0.0025	< 0.002
MW-15 (CL) down-gradient	11/18/2015	1.5	270	H 210	H 0.53	6.55	H 1400	H 2400	< 0.003	0.03	0.096	^ < 0.001	0.00061	< 0.005	< 0.001	< 0.0005	0.042	H < 0.0002	0.023	< 0.599	0.0065	< 0.002
	2/25/2016	2.0	240	110	0.61	6.84	640	1700	< 0.003	0.025	0.083	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.041	< 0.0002	0.035	0.870	0.045	< 0.002
	5/19/2016	2.7	320	240	0.53	6.83	1200	2800	< 0.003	0.04	0.097	< 0.001	0.00098	< 0.005	< 0.001	< 0.0005	0.044	< 0.0002	0.041	< 0.420	0.0067	< 0.002
	8/18/2016	1.5	200	F1 170	0.54	6.96	660	1900	< 0.003	0.13	0.11	< 0.001	0.0041	< 0.005	< 0.001	< 0.0005	0.028	< 0.0002	0.027	< 0.672	0.0061	< 0.002
	11/17/2016	1.3	120	180	0.47	6.91	560	1900	< 0.003	0.0033	0.031	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.016	< 0.0002	0.018	< 0.570	0.0078	< 0.002
	2/17/2017	1.9	200	190	0.43	7.24	670	1700	< 0.003	0.02	0.056	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.025	< 0.0002	0.027	< 0.392	0.0032	< 0.002
	5/4/2017	1.5	180	190	0.57	7.35	670	1700	< 0.003	0.011	0.049	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.023	< 0.0002	0.023	< 0.456	0.0034	< 0.002
	6/21/2017	1.6	180	200	0.56	7.30	530	1600	< 0.003	0.0093	0.054	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.027	< 0.0002	0.03	< 0.347	0.019	< 0.002
	8/29/2017	2.2	190	200	0.53	6.87	540	1800	< 0.003	0.0018	0.044	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.023	< 0.0002	0.032	0.377	0.0092	< 0.002
	11/10/2017	1.6	170	180	0.63	7.09	530	1500	< 0.003	0.0063	0.046	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.025	< 0.0002	0.02	< 0.313	0.016	< 0.002
	5/17/2018	2.3	200	160	0.5	6.75	680	1800	< 0.003	0.0081	0.05	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.029	< 0.0002	0.03	0.397	0.077	< 0.002
	8/9/2018	2.3	200	200	0.48	7.06	520	1700	< 0.003	0.0083	0.048	<^ 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.026	< 0.0002	0.033	0.566	0.06	< 0.002
	5/2/2019	1.5	180	200	0.52	6.89	420	1500	< 0.003	0.0045	0.052	< 0.001	< 0.0005	< 0.005	< 0.0010	< 0.0005	0.027	< 0.0002	0.023	< 0.424	< 0.0025	< 0.002
	11/14/2019	1.8	170	170	0.5	7.24	260	1300	NA	0.0044	0.053	NA	< 0.0005	NA	< 0.0010	< 0.0005	0.029	< 0.0002	0.025	< 0.475	< 0.0025	< 0.002
	4/29/2020	1.2	160	200	0.58	6.90	370	1300	NA	0.0036	0.06	NA	< 0.0005	NA	< 0.0010	< 0.0005	0.027	< 0.0002	0.023	0.578	< 0.0025	< 0.002
	12/8/2020	1.5	170	200	0.55	7.04	540	1400	NA	0.02	0.1	NA	0.00059	NA	0.0012	< 0.0005	0.035	< 0.0002	0.02	0.626	0.012	< 0.002
	5/12/2021	1.3	180	180	0.54	6.97	520	1500	< 0.003	0.0048	0.065	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.026	< 0.0002	0.014	< 0.648	0.0071	< 0.002
	8/23/2021	1.5	200	180	0.52	6.76	470	1500	< 0.003	0.0019	0.055	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.025	< 0.0002	0.024	0.465	0.015	< 0.002
	11/29/2021	1.9	220	250	0.48	6.71	480	1700	< 0.003	0.0022	0.075	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.024	< 0.0002	0.016	0.649	0.059	< 0.002
	2/9/2022	0.93	140	160	0.59	6.91	320	1200	< 0.003	0.008	0.055	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.024	< 0.0002	0.014	< 0.424	0.0034	< 0.002
	6/8/2022	2	330	240	0.43	6.87	980	2700	< 0.003	0.0032	0.088	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.027	< 0.0002	0.019	0.485	0.1	< 0.002
	8/31/2022	1.5	210	270	0.48	6.80	530	1800	< 0.003	0.0049	0.057	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.032	< 0.0002	0.021	< 0.55	0.0078	< 0.002
	11/16/2022	1.3	190	230	0.71	7.26	450	1500	< 0.003	0.0071	0.06	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.025	< 0.0002	0.055	0.49	< 0.0025	< 0.002
MW-17 (CL) down-gradient	11/19/2015	1.6	210	H 230	H 0.43	7.11	H 850	H 1800	< 0.003	0.0028	0.14	^ < 0.001	< 0.0005	< 0.005	0.0012	0.0012	0.019	H < 0.0002	0.035	< 0.790	< 0.0025	< 0.002
	2/22/2016	1.8	290	280	0.55	7.19	960	2100	< 0.003	0.021	0.051	< 0.001	< 0.0005	< 0.005	0.0012	< 0.0005	0.038	< 0.0002	0.093	1.07	< 0.0025	< 0.002
	5/18/2016	1.4	200	230	0.64	7.02	700	1800	< 0.003	0.32	0.12	< 0.001	0.0011	< 0.005	0.0015	< 0.0005	0.026	< 0.0002	0.12	8.27	< 0.0025	0.0028
	8/15/2016	1.1	220	220	0.60	7.08	860	2100	< 0.003	0.34	0.12	< 0.001	0.001	< 0.005	0.0016	< 0.0005	0.022	< 0.0002	0.1	0.606	< 0.0025	0.0031
	11/14/2016	1.5	200	210	0.56	7.26	560	2000	< 0.003	0.19	0.073	< 0.001	0.00051	< 0.005	0.0012	< 0.0005	0.022	< 0.0002	0.042	3.76	< 0.0025	0.0021
	2/13/2017	1.6	190	230	0.56	6.84	770	1600	< 0.003	0.35	0.16	< 0.001	0.00093	< 0.005	0.0014	0.00079	0.019	< 0.0002	0.088	2.08	< 0.0025	0.0025
	5/4/2017	1.2	170	210	0.61	7.29	720	1500	< 0.003	0.24	0.39	0.0013	0.0023	< 0.005	0.0023	0.00066	0.016	< 0.0002	0.036	1.91	< 0.0025	0.0065
	6/22/2017	0.95	150	230	0.72	7.38	580	1600	< 0.003	0.41	0.13	< 0.001	0.0007	< 0.005	0.0012	0.0011	0.022	< 0.0002	0.11	1.21	< 0.0025	0.0022
	8/29/2017	1.4	190	230	0.64	7.19	640	1900	< 0.003	0.24	0.092	< 0.001	< 0.0005	< 0.005	< 0.001	0.00058	0.021	< 0.0002	0.13	3.32	< 0.0025	0.0025
	11/6/2017	1.7	190	240	0.62	7.27	840	1800	< 0.003	0.17	0.38	< 0.001	0.0022	< 0.005	0.0015	< 0.0005	< 0.01	< 0.0002	0.019	2.54	< 0.0025	0.0075
	5/14/2018	1.6	170	220	0.6	7.79	800	1700	< 0.003	0.42	0.17	< 0.001	0.002	< 0.005	0.0029	0.0021	0.015	< 0.0002	0.13	2.03	< 0.0025	0.0068
	8/6/2018	1.3	170	230	0.6	7.12	620	1600	< 0.003	0.087	0.055	<^ 0.001	0.00094	< 0.005	0.0015	< 0.0005	0.019	< 0.0002	0.084	1.34	< 0.0025	0.0023
	4/29/2019	0.98	150	190	0.66	7.25	660	1500	< 0.003	0.042	0.04	< 0.001	0.00052	< 0.005	< 0.001	0.00069	0.015	< 0.0002	0.06	0.517	< 0.0025	< 0.002
	11/13/2019	1.9	230	600	0.55	7.16	730	2300	NA	0.088	0.1	NA	0.0015	NA	0.0011	0.00093	0.021	< 0.0002	0.058	0.643	< 0.0025	0.0029
	4/27/2020	1.2	150	170	0.79	7.27	520	1300	NA	0.026	0.036	NA	< 0.0005	NA	< 0.001	0.00081	0.021	< 0.0002	0.075	0.498	< 0.0025	< 0.002
	12/7/2020	1.3	140	160	0.8	7.22	430	1100	NA	0.08	0.05	NA	0.001	NA	< 0.001	0.0011	0.022	< 0.0002	0.056	< 0.438	< 0.0025	< 0.002
	5/12/2021	0.99	130	160	0.77	7.52	480	1200	< 0.003	0.0053	0.027	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.018	< 0.0002	0.049	< 0.478	< 0.0025	< 0.002
	8/23/2021	0.92	140	150	0.7	7.37	500	1100	< 0.003	0.0058	0.028	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.043	0.553	< 0.0025	< 0.002
	11/29/2021	1	140	150	0.76	7.30	430	1200	< 0.003	0.0039	0.025	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.04	0.892	< 0.0025	< 0.002
	2/7/2022	0.9	140	160	0.82	7.27	430	1300	< 0.003	0.0044	0.026	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.016	< 0.0002	0.038	0.693	< 0.0025	< 0.002
	6/8/2022	1.3	200	190	0.69	7.51	810	1900	< 0.003	0.0051	0.037	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.018	< 0.0002	0.052	< 0.601	< 0.0025	< 0.002
	8/31/2022	1.1	150	170	0.73	7.12	430	1200	< 0.003	0.003	0.031	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.016	< 0.0002	0.024	< 0.533	< 0.0025	< 0.002
	11/16/2022	1.1	150	170	0.98	7.56	530	1400	< 0.003	0.0058	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.028	0.512	< 0.0025	< 0.002
MW-18 (S) down-gradient	11/19/2015	0.80	140	H 220	H 0.66	7.62	H 310	H 1200	< 0.003	0.0014	0.14	^ < 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	H < 0.0002	0.0051	< 0.845	< 0.0025	< 0.002
	2/22/2016	0.76	150	220	0.68	7.06	310	1200	< 0.003	0.0012	0.15	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.022	< 0.0002	0.0055	1.88	< 0.0025	< 0.002
	5/18/2016	0.72	120	230	0.71	7.68	230	1200	< 0.003	< 0.001	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.0052	< 0.493	< 0.0025	< 0.002
	8/15/2016	0.67	130	210	0.64	7.52	330	1300	< 0.003	< 0.001	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0059	0.836	< 0.0025	< 0.002
	11/18/2016	0.94	130	200	0.58	7.69	250	1300	< 0.003	< 0.001	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0053	0.488	< 0.0025	< 0.002
	2/15/2017	0.56	140	190	0.50	7.81	340	1200	< 0.003	< 0.001	0.14	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.0058	< 0.347	< 0.0025	< 0.002
	5/5/2017	0.46	130	180	0.52	8.12	360	1100	< 0.003	0.0032	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	0.00057	0.01	< 0.0002	< 0.005	0.612	< 0.0025	< 0.002
	6/21/2017	0.53	120	190	0.51	8.10	320	1200	< 0.003	< 0.001	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.0051	0.629	< 0.0025	< 0.002
	8/28/2017	0.65	120	200	0.53	7.81	310	1200	< 0.003	< 0.001	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.005	0.498	< 0.0025	< 0.002
	11/6/2017	0.67	120	190	0.57	7.74	400	1200	< 0.003	< 0.001	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.011	< 0.0002	0.0057	0.755	< 0.0025	< 0.002
	5/14/2018	0.57	130	180	0.59	8.27	440	1200	< 0.003	< 0.001	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0052	0.641	< 0.0025	< 0.002
	8/6/2018	0.58	120	230	0.57	7.88	270	1100	< 0.003	< 0.001	0.12	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.0052	1.02	< 0.0025	< 0.002
	4/29/2019	0.54	120	180	0.61	7.77	170	1000	< 0.003	< 0.001	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	< 0.005	< 0.445	< 0.0025	< 0.002
	11/13/2019	0.79	130	180	0.56	8.26	210	1100	NA	0.0013	0.12	NA	< 0.0005	NA	< 0.001	< 0.0005	0.014	< 0.0002	< 0.005	< 0.49	< 0.0025	< 0.002
	4/27/2020	0.60	120	170	0.69	7.90	180	1000	NA	< 0.001	0.12	NA	< 0.0005	NA	< 0.001	< 0.0005	0.016	< 0.0002	< 0.005	< 0.526	< 0.0025	< 0.002
	12/7/2020	0.75	110	F1 150	0.70	7.70	160	910	NA	0.0032	0.11	NA	< 0.0005	NA	< 0.001	< 0.0005	0.014	< 0.0002	0.061	< 0.497	< 0.0025	< 0.002
	5/10/2021	0.66	130	140	0.66	8.02	350	880	< 0.003	< 0.001	0.12	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.005	< 0.544	< 0.0025	< 0.002
	8/26/2021	0.52	140	140	0.56	7.97	340	1000	< 0.003	0.0023	0.13	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.014	< 0.0002	0.03	0.633	< 0.0025	< 0.002
	12/1/2021	0.61	140	150	0.59	7.93	^- 310	1200	< 0.003	0.0036	0.15	< 0.001	< 0.005	< 0.0005	< 0.001	0.00062	0.015	< 0.0002	0.018	< 0.514	< 0.0025	< 0.002
	2/8/2022	0.55	130	150	0.60	7.81	270	1200	< 0.003	0.01	0.26	< 0.001	< 0.0005	0.01	0.0034	0.005	0.014	< 0.0002	0.013	1.6	< 0.0025	< 0.002
	6/6/2022	0.65	120	150	0.55	8.01	230	1000	< 0.003	< 0.001	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.012	< 0.0002	0.0067	0.832	< 0.0025	< 0.002
	8/30/2022	0.66	130	160	0.55	7.82	240	1400	< 0.003	0.0085	0.23	< 0.001	< 0.0005	0.0071	0.0027	0.0039	0.016	< 0.0002	0.0056	0.645	< 0.0025	< 0.002
	11/16/2022	0.54	110	160	0.63	7.90	220	1100	< 0.003	0.0069	0.28	< 0.001	< 0.0005	0.017	0.0056	0.0092	0.019	< 0.0002	0.007	4.93	< 0.0025	< 0.002

Notes: All units are in mg/l except pH is in standard units.
F1 - MS and/or MSD Recovery outside of limits.
H - Sample was prepped or analyzed beyond the specified holding time.
V- Serial dilution exceeds control limits.
* - LCS or LCSD is outside acceptance limits.
^ - Denotes instrument related QC exceeds the control limits
(R) - Resample Event
NA - Not Analyzed

Table 2. Groundwater Turbidity - Midwest Generation, LLC, Powerton Station, Pekin, IL. Ash Bypass Basin Ash Surge Basin.

Well	Date	Turbidity (NTU)
MW-01	2/23/2021	78.20
	4/9/2021	6.96
	5/11/2021	3.24
	6/2/2021	3.80
	6/28/2021	4.30
	7/19/2021	4.88
	8/24/2021	3.34
	9/30/2021	3.04
	11/30/2021	5.43
	2/9/2022	11.5
	6/7/2022	3.63
	8/30/2022	4.73
MW-09	2/24/2021	16.90
	4/9/2021	5.73
	5/13/2021	0.49
	6/2/2021	2.37
	6/29/2021	4.53
	7/19/2021	6.12
	8/25/2021	16.65
	9/30/2021	3.2
	12/1/2021	0.0
	2/10/2022	0.0
	6/8/2022	6.93
	8/31/2022	4.95
MW-19	2/22/2021	0.56
	4/9/2021	4.25
	5/10/2021	1.80
	6/2/2021	5.77
	6/29/2021	8.79
	7/19/2021	7.30
	8/26/2021	30.91
	9/30/2021	2.92
	12/1/2021	0.0
	2/7/2022	3.54
	6/6/2022	2.35
	8/30/2022	3.56
MW-08	2/23/2021	47.30
	4/9/2021	23.05
	5/11/2021	8.93
	6/3/2021	11.11
	6/29/2021	5.48
	7/19/2021	6.86
	8/25/2021	6.80
	9/30/2021	5.01
	12/1/2021	5.01
	2/10/2022	14.98
	6/8/2022	8.65
	8/30/2022	9.75

Table 2. Groundwater Turbidity - Midwest Generation, LLC, Powerton Station, Pekin, IL. Ash Bypass Basin Ash Surge Basin.

Well	Date	Turbidity (NTU)
MW-11	2/25/2021	35.10
	4/9/2021	41.53
	5/13/2021	14.70
	6/3/2021	14.92
	6/29/2021	40.48
	7/19/2021	25.73
	8/25/2021	55.39
	9/30/2021	4.06
	12/1/2021	2.48
	2/10/2022	9.29
	6/8/2022	77.21
	8/31/2022	66.8
MW-12	2/25/2021	26.50
	4/9/2021	66.11
	5/13/2021	5.17
	6/3/2021	106.47
	6/29/2021	21.40
	7/19/2021	22.70
	8/25/2021	12.62
	9/30/2021	18.66
	12/1/2021	29.27
	2/10/2022	7.08
	6/8/2022	57.5
	8/31/2022	703.1
MW-15	2/24/2021	64.90
	4/9/2021	16.80
	5/12/2021	16.45
	6/3/2021	7.85
	6/29/2021	6.58
	7/20/2021	5.82
	8/23/2021	4.28
	10/1/2021	13.13
	11/29/2021	12.35
	2/9/2022	9.38
	6/8/2022	10.32
	8/31/2022	28.7
MW-17	2/24/2021	42.00
	4/8/2021	17.10
	5/12/2021	10.90
	6/3/2021	38.15
	6/28/2021	29.15
	7/20/2021	16.38
	8/23/2021	26.51
	10/1/2021	21.26
	11/29/2021	8.86
	2/7/2022	11.19
	6/8/2022	41.49
	8/31/2022	22.58
MW-18	2/22/2021	3.40
	4/9/2021	4.62
	5/10/2021	2.28
	6/3/2021	2.38
	6/29/2021	3.96
	7/19/2021	5.19
	8/26/2021	7.96
	9/30/2021	37.94
	12/1/2021	5.88
	2/8/2022	39.3
	6/6/2022	2.73
	8/30/2022	5.66

Table 3. Proposed Site-Specific Groundwater Protection Standards - Powerton Ash By-pass Basin/Ash Surge Basin

Upgradient Well(s)	Parameter	Section 845.600 Standards	Interwell Background Prediction Limit	**Proposed GWPS**
MW-01, MW-09 & MW-19	Antimony	0.006	0.003	**0.006**
MW-01	Arsenic	0.01	0.029	**0.029**
MW-19	Barium	2	0.111	**2**
MW-01, MW-09 & MW-19	Beryllium	0.004	0.001	**0.004**
MW-09 & MW-19	Boron	2.0	4.7	**4.7**
MW-01, MW-09 & MW-19	Cadmium	0.005	0.00085	**0.005**
MW-09 & MW-19	Chloride	200	53	**200**
MW-01, MW-09 & MW-19	Chromium	0.1	0.025	**0.1**
MW-01, MW-09 & MW-19	Cobalt	0.006	0.016	**0.016**
MW-01 & MW-19	Combined Radium 226 + 228 (pCi/L)	5.0	0.953	**5.0**
MW-01 & MW-09	Fluoride	4.0	0.2526	**4.0**
MW-09 & MW-19	Lead	0.0075	0.0012	**0.0075**
MW-01, MW-09 & MW-19	Lithium	0.04	0.012	**0.040**
MW-01, MW-09 & MW-19	Mercury	0.002	0.00029	**0.002**
MW-19	Molybdenum	0.10	0.063	**0.10**
MW-01, MW-09 & MW-19	pH (standard units)	6.5-9.0	6.65-7.90	**6.5-9.0**
MW-01	Selenium	0.05	0.0029	**0.05**
MW-01	Sulfate	400	93.7	**400**
MW-01, MW-09 & MW-19	Thallium	0.002	0.002	**0.002**
MW-01	Total Dissolved Solids	1200	696	**1200**
MW-01 & MW-19	Calcium	NE	132.3	**132.3**
MW-01, MW-09 & MW-19	Turbidity	NE	83.3	**83.3**

All values are in mg/L (ppm) unless otherwise noted.
NE - Not Established
Bold - Site-specific Groundwater Protection Standard based on Section 845.600(a)(2)

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-01	11/16/2015	465.24	26.04	439.20
	2/22/2016	465.24	21.90	443.34
	5/16/2016	465.24	21.83	443.41
	8/15/2016	465.24	23.89	441.35
	11/14/2016	465.24	23.38	441.86
	2/13/2017	465.24	21.71	443.53
	5/1/2017	465.24	18.87	446.37
	6/20/2017	465.24	21.54	443.70
	8/25/2017	465.24	24.70	440.54
	11/8/2017	465.24	24.92	440.32
	5/17/2018	465.24	22.66	442.58
	8/8/2018	465.24	26.05	439.19
	10/30/2018	465.24	24.69	440.55
	4/29/2019	465.24	20.15	445.09
	11/11/2019	465.24	19.49	445.75
	4/27/2020	465.24	20.90	444.34
	12/7/2020	465.24	25.69	439.55
	2/22/2021	465.24	25.18	440.06
	4/7/2021	465.24	22.20	443.04
	5/10/2021	465.24	23.41	441.83
	6/2/2021	465.24	22.00	443.24
	6/28/2021	465.24	23.18	442.06
	7/19/2021	465.24	20.43	444.81
	8/23/2021	465.24	24.42	440.82
	9/30/2021	465.24	26.89	438.35
	10/27/2021	465.24	24.53	440.71
	11/29/2021	465.24	23.31	441.93
	12/30/2021	465.24	24.31	440.93
	1/6/2022	465.24	24.86	440.38
	2/7/2022	465.24	25.57	439.67
	3/1/2022	465.24	21.96	443.28
	4/22/2022	465.24	20.03	445.21
	5/24/2022	465.24	21.37	443.87
	6/6/2022	465.24	22.13	443.11
	7/25/2022	465.24	25.48	439.76
	8/29/2022	465.24	27.53	437.71
	9/28/2022	465.24	28.58	436.66
	10/26/2022	465.24	29.75	435.49
	11/14/2022	465.24	29.58	435.66
	12/28/2022	465.24	26.63	438.61
MW-08	11/16/2015	471.75	26.06	445.69
	2/22/2016	471.75	23.99	447.76
	5/16/2016	471.75	25.48	446.27
	8/15/2016	471.75	23.61	448.14
	11/14/2016	471.75	24.31	447.44
	2/13/2017	471.75	23.97	447.78
	5/1/2017	471.75	23.28	448.47
	6/20/2017	471.75	23.31	448.44
	8/29/2017	471.75	24.52	447.23
	11/8/2017	471.75	25.27	446.48
	5/17/2018	471.75	24.36	447.39
	8/8/2018	471.75	24.04	447.71
	10/31/2018	471.75	24.92	446.83
	4/29/2019	471.75	24.28	447.47
	11/11/2019	471.75	24.24	447.51
	4/27/2020	471.75	24.50	447.25
	12/7/2020	471.75	25.35	446.40
	2/22/2021	471.75	24.70	447.05
	4/7/2021	471.75	24.88	446.87
	5/10/2021	471.75	24.75	447.00
	6/2/2021	471.75	24.25	447.50
	6/28/2021	471.75	24.79	446.96
	7/19/2021	471.75	24.33	447.42
	8/23/2021	471.75	24.85	446.90
	9/30/2021	471.75	25.28	446.47
	10/25/2021	471.75	25.30	446.45
	11/29/2021	471.75	25.10	446.65
	12/30/2021	471.75	25.52	446.23
	1/6/2022	471.75	25.59	446.16
	2/7/2022	471.75	26.70	445.05
	3/1/2022	471.75	25.51	446.24
	4/22/2022	471.75	24.74	447.01
	5/24/2022	471.75	24.97	446.78
	6/6/2022	471.75	25.04	446.71
	7/25/2022	471.75	25.56	446.19
	8/29/2022	471.75	25.67	446.08
	9/28/2022	471.75	25.81	445.94
	10/26/2022	471.75	26.17	445.58
	11/14/2022	471.75	26.23	445.52
	12/28/2022	471.75	26.06	445.69

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-09	11/16/2015	469.14	26.07	443.07
	2/22/2016	469.14	22.83	446.31
	5/16/2016	469.14	23.06	446.08
	8/15/2016	469.14	24.50	444.64
	11/14/2016	469.14	24.33	444.81
	2/13/2017	469.14	23.43	445.71
	5/1/2017	469.14	20.77	448.37
	6/20/2017	469.14	22.15	446.99
	8/25/2017	469.14	24.79	444.35
	11/8/2017	469.14	25.74	443.40
	5/16/2018	469.14	23.89	445.25
	8/8/2018	469.14	25.49	443.65
	11/1/2018	469.14	26.02	443.12
	4/29/2019	469.14	21.30	447.84
	11/11/2019	469.14	21.31	447.83
	4/27/2020	469.14	21.80	447.34
	12/7/2020	469.14	26.19	442.95
	2/22/2021	469.14	26.08	443.06
	4/7/2021	469.14	23.75	445.39
	5/10/2021	469.14	24.55	444.59
	6/2/2021	469.14	23.31	445.83
	6/28/2021	469.14	24.18	444.96
	7/19/2021	469.14	22.20	446.94
	8/23/2021	469.14	24.75	444.39
	9/30/2021	469.14	26.28	442.86
	10/25/2021	469.14	25.42	443.72
	11/29/2021	469.14	24.50	444.64
	12/30/2021	469.14	25.35	443.79
	1/6/2022	469.14	28.11	441.03
	2/7/2022	469.14	26.15	442.99
	3/1/2022	469.14	23.88	445.26
	4/22/2022	469.14	21.75	447.39
	5/24/2022	469.14	22.40	446.74
	6/6/2022	469.14	22.95	446.19
	7/25/2022	469.14	25.51	443.63
	8/29/2022	469.14	26.56	442.58
	9/28/2022	469.14	27.52	441.62
	10/26/2022	469.14	28.38	440.76
	11/14/2022	469.14	28.44	440.70
	12/28/2022	469.14	27.96	441.18
MW-11	11/16/2015	471.62	31.67	439.95
	2/22/2016	471.62	28.34	443.28
	5/16/2016	471.62	27.11	444.51
	8/15/2016	471.62	29.64	441.98
	11/14/2016	471.62	29.19	442.43
	2/13/2017	471.62	27.49	444.13
	5/1/2017	471.62	24.34	447.28
	6/20/2017	471.62	26.94	444.68
	8/29/2017	471.62	30.42	441.20
	11/9/2017	471.62	30.27	441.35
	5/16/2018	471.62	28.58	443.04
	8/9/2018	471.62	31.04	440.58
	11/1/2018	471.62	30.82	440.80
	4/29/2019	471.62	25.38	446.24
	11/11/2019	471.62	24.88	446.74
	4/27/2020	471.62	26.35	445.27
	12/7/2020	471.62	31.35	440.27
	2/22/2021	471.62	30.78	440.84
	4/7/2021	471.62	27.85	443.77
	5/10/2021	471.62	29.19	442.43
	6/2/2021	471.62	27.57	444.05
	6/28/2021	471.62	28.84	442.78
	7/19/2021	471.62	25.82	445.80
	8/23/2021	471.62	30.10	441.52
	9/30/2021	471.62	31.78	439.84
	10/25/2021	471.62	30.12	441.50
	11/29/2021	471.62	29.40	442.22
	12/30/2021	471.62	30.22	441.40
	1/6/2022	471.62	30.09	441.53
	2/7/2022	471.62	31.19	440.43
	3/1/2022	471.62	26.92	444.70
	4/22/2022	471.62	25.43	446.19
	5/24/2022	471.62	26.69	444.93
	6/6/2022	471.62	27.55	444.07
	7/25/2022	471.62	30.77	440.85
	8/29/2022	471.62	31.95	439.67
	9/28/2022	471.62	32.99	438.63
	10/26/2022	471.62	33.86	437.76
	11/14/2022	471.62	33.79	437.83
	12/28/2022	471.62	32.41	439.21

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-12	11/16/2015	473.38	24.48	448.90
	2/22/2016	473.38	21.41	451.97
	5/16/2016	473.38	22.94	450.44
	8/15/2016	473.38	23.85	449.53
	11/14/2016	473.38	23.89	449.49
	2/13/2017	473.38	21.93	451.45
	5/1/2017	473.38	22.26	451.12
	6/20/2017	473.38	22.76	450.62
	8/26/2017	473.38	23.92	449.46
	11/10/2017	473.38	24.29	449.09
	5/16/2018	473.38	22.46	450.92
	8/9/2018	473.38	23.78	449.60
	11/1/2018	473.38	23.74	449.64
	4/29/2019	473.38	22.05	451.33
	11/11/2019	473.38	22.85	450.53
	4/27/2020	473.38	21.44	451.94
	12/7/2020	473.38	22.70	450.68
	2/22/2021	473.38	21.00	452.38
	4/7/2021	473.38	21.91	451.47
	5/10/2021	473.38	22.50	450.88
	6/2/2021	473.38	22.60	450.78
	6/28/2021	473.38	22.95	450.43
	7/19/2021	473.38	22.99	450.39
	8/23/2021	473.38	23.48	449.90
	9/30/2021	473.38	23.87	449.51
	10/27/2021	473.38	23.90	449.48
	11/29/2021	473.38	23.33	450.05
	12/30/2021	473.38	22.95	450.43
	1/6/2022	473.38	22.77	450.61
	2/7/2022	473.38	22.03	451.35
	3/1/2022	473.38	21.74	451.64
	4/22/2022	473.38	22.03	451.35
	5/24/2022	473.38	22.36	451.02
	6/6/2022	473.38	22.65	450.73
	7/25/2022	473.38	23.29	450.09
	8/29/2022	473.38	23.84	449.54
	9/28/2022	473.38	24.13	449.25
	10/26/2022	473.38	24.28	449.10
	11/14/2022	473.38	24.15	449.23
	12/28/2022	473.38	22.41	450.97
MW-15	11/16/2015	471.37	25.33	446.04
	2/22/2016	471.37	22.91	448.46
	5/16/2016	471.37	24.71	446.66
	8/15/2016	471.37	23.45	447.92
	11/14/2016	471.37	23.94	447.43
	2/13/2017	471.37	23.73	447.64
	5/1/2017	471.37	23.27	448.10
	6/20/2017	471.37	22.86	448.51
	8/29/2017	471.37	23.13	448.24
	11/10/2017	471.37	25.13	446.24
	5/17/2018	471.37	23.85	447.52
	8/9/2018	471.37	23.96	447.41
	10/31/2018	471.37	24.55	446.82
	4/29/2019	471.37	23.57	447.80
	11/11/2019	471.37	23.79	447.58
	4/27/2020	471.37	23.95	447.42
	12/7/2020	471.37	25.01	446.36
	2/22/2021	471.37	27.74	443.63
	4/7/2021	471.37	24.44	446.93
	5/10/2021	471.37	24.62	446.75
	6/2/2021	471.37	24.12	447.25
	6/28/2021	471.37	24.19	447.18
	7/19/2021	471.37	24.01	447.36
	8/23/2021	471.37	24.38	446.99
	9/30/2021	471.37	24.91	446.46
	10/25/2021	471.37	24.92	446.45
	11/29/2021	471.37	24.60	446.77
	12/30/2021	471.37	24.90	446.47
	1/6/2022	471.37	25.04	446.33
	2/7/2022	471.37	25.09	446.28
	3/1/2022	471.37	25.11	446.26
	4/22/2022	471.37	24.18	447.19
	5/24/2022	471.37	24.27	447.10
	6/6/2022	471.37	24.29	447.08
	7/25/2022	471.37	25.05	446.32
	8/29/2022	471.37	25.45	445.92
	9/28/2022	471.37	25.54	445.83
	10/26/2022	471.37	26.00	445.37
	11/14/2022	471.37	26.14	445.23
	12/28/2022	471.37	27.84	443.53

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-17	11/16/2015	467.75	26.92	440.83
	2/22/2016	467.75	19.86	447.89
	5/16/2016	467.75	20.42	447.33
	8/15/2016	467.75	21.61	446.14
	11/14/2016	467.75	21.39	446.36
	2/13/2017	467.75	19.66	448.09
	5/1/2017	467.75	18.78	448.97
	6/20/2017	467.75	19.42	448.33
	8/29/2017	467.75	22.68	445.07
	11/6/2017	467.75	24.66	443.09
	5/14/2018	467.75	19.79	447.96
	8/6/2018	467.75	21.03	446.72
	10/29/2018	467.75	21.98	445.77
	4/29/2019	467.75	18.75	449.00
	11/11/2019	467.75	19.60	448.15
	4/27/2020	467.75	19.15	448.60
	12/7/2020	467.75	24.12	443.63
	2/22/2021	467.75	20.22	447.53
	4/7/2021	467.75	19.69	448.06
	5/10/2021	467.75	20.00	447.75
	6/2/2021	467.75	19.65	448.10
	6/28/2021	467.75	19.98	447.77
	7/19/2021	467.75	19.57	448.18
	8/23/2021	467.75	20.15	447.60
	9/30/2021	467.75	23.25	444.50
	10/28/2021	467.75	23.35	444.40
	11/29/2021	467.75	20.64	447.11
	12/30/2021	467.75	22.61	445.14
	1/6/2022	467.75	23.19	444.56
	2/7/2022	467.75	22.03	445.72
	3/1/2022	467.75	19.97	447.78
	4/22/2022	467.75	19.36	448.39
	5/24/2022	467.75	19.38	448.37
	6/6/2022	467.75	19.45	448.30
	7/25/2022	467.75	20.39	447.36
	8/29/2022	467.75	23.75	444.00
	9/28/2022	467.75	25.38	442.37
	10/26/2022	467.75	27.49	440.26
	11/14/2022	467.75	27.73	440.02
	12/28/2022	467.75	27.47	440.28
MW-18	11/16/2015	469.28	28.42	440.86
	2/22/2016	469.28	27.96	441.32
	5/16/2016	469.28	25.57	443.71
	8/15/2016	469.28	27.86	441.42
	11/14/2016	469.28	27.39	441.89
	2/13/2017	469.28	25.06	444.22
	5/1/2017	469.28	22.49	446.79
	6/20/2017	469.28	24.97	444.31
	8/28/2017	469.28	27.30	441.98
	11/6/2017	469.28	26.33	442.95
	5/14/2018	469.28	24.65	444.63
	8/6/2018	469.28	25.67	443.61
	10/29/2018	469.28	25.79	443.49
	4/29/2019	469.28	23.00	446.28
	11/11/2019	469.28	23.94	445.34
	4/27/2020	469.28	23.97	445.31
	12/7/2020	469.28	27.82	441.46
	2/22/2021	469.28	26.69	442.59
	4/7/2021	469.28	24.94	444.34
	5/10/2021	469.28	25.96	443.32
	6/2/2021	469.28	24.70	444.58
	6/28/2021	469.28	25.60	443.68
	7/19/2021	469.28	23.50	445.78
	8/23/2021	469.28	27.35	441.93
	9/30/2021	469.28	29.70	439.58
	10/25/2021	469.28	27.35	441.93
	11/29/2021	469.28	26.81	442.47
	12/30/2021	469.28	27.14	442.14
	1/6/2022	469.28	26.57	442.71
	2/7/2022	469.28	27.83	441.45
	3/1/2022	469.28	24.45	444.83
	4/22/2022	469.28	23.77	445.51
	5/24/2022	469.28	25.04	444.24
	6/6/2022	469.28	25.71	443.57
	7/25/2022	469.28	28.62	440.66
	8/29/2022	469.28	28.66	440.62
	9/28/2022	469.28	32.19	437.09
	10/26/2022	469.28	33.26	436.02
	11/14/2022	469.28	32.95	436.33
	12/28/2022	469.28	28.44	440.84

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-19	11/14/2016	465.07	22.65	442.42
	2/13/2017	465.07	21.27	443.80
	5/1/2017	465.07	18.39	446.68
	6/20/2017	465.07	20.44	444.63
	8/28/2017	465.07	23.60	441.47
	11/9/2017	465.07	23.80	441.27
	5/14/2018	465.07	22.08	442.99
	8/6/2018	465.07	24.14	440.93
	10/29/2018	465.07	24.31	440.76
	4/29/2019	465.07	19.12	445.95
	11/11/2019	465.07	18.80	446.27
	4/27/2020	465.07	19.94	445.13
	12/7/2020	465.07	24.63	440.44
	2/22/2021	465.07	24.23	440.84
	4/7/2021	465.07	21.60	443.47
	5/10/2021	465.07	22.75	442.32
	6/2/2021	465.07	21.24	443.83
	6/28/2021	465.07	22.41	442.66
	7/19/2021	465.07	19.75	445.32
	8/23/2021	465.07	23.31	441.76
	9/30/2021	465.07	24.85	440.22
	10/27/2021	465.07	23.36	441.71
	11/29/2021	465.07	22.75	442.32
	12/30/2021	465.07	23.65	441.42
	1/6/2022	465.07	24.04	441.03
	2/7/2022	465.07	24.46	440.61
	3/1/2022	465.07	21.05	444.02
	4/22/2022	465.07	19.34	445.73
	5/24/2022	465.07	20.34	444.73
	6/6/2022	465.07	21.05	444.02
	7/25/2022	465.07	23.98	441.09
	8/29/2022	465.07	25.08	439.99
	9/28/2022	465.07	25.97	439.10
	10/26/2022	465.07	26.81	438.26
	11/14/2022	465.07	26.79	438.28
	12/28/2022	465.07	25.95	439.12

MSL - Mean Sea Level
TOC - Top of Casing

Table 5. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Powerton Generation Station ABB/ASB

DATE	Screened Unit	Groundwater Flow Direction	K_{avg} (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
1/6/2022	Silt/clay	Westerly	3.280E-07	0.0255	0.4	0.0018
1/6/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0031	0.35	1.06
2/7/2022	Silt/clay	Westerly	3.280E-07	0.0359	0.4	0.0025
2/7/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0039	0.35	1.34
3/1/2022	Silt/clay	Westerly	3.280E-07	0.0210	0.4	0.0015
3/1/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0022	0.35	0.75
4/22/2022	Silt/clay	Westerly	3.280E-07	0.0157	0.4	0.0011
4/22/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0017	0.35	0.58
5/24/2022	Silt/clay	Westerly	3.280E-07	0.0199	0.4	0.0014
5/24/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0030	0.35	1.03
6/6/2022	Silt/clay	Westerly	3.280E-07	0.0291	0.4	0.0021
6/6/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0026	0.35	0.89
7/25/2022	Silt/clay	Westerly	3.280E-07	0.0309	0.4	0.0022
7/25/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0045	0.35	1.54
8/29/2022	Silt/clay	Westerly	3.280E-07	0.0311	0.4	0.0022
8/29/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0043	0.35	1.48
9/28/2022	Silt/clay	Westerly	3.280E-07	0.0342	0.4	0.0024
9/28/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0053	0.35	1.82
10/26/2022	Silt/clay	Westerly	3.280E-07	0.0347	0.4	0.0025
10/26/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0043	0.35	1.48
11/14/2022	Silt/clay	Westerly	3.280E-07	0.0321	0.4	0.0023
11/14/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0041	0.35	1.41
12/28/2022	Silt/clay	Westerly	3.280E-07	0.0357	0.4	0.0025
12/28/2022	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0039	0.35	1.34

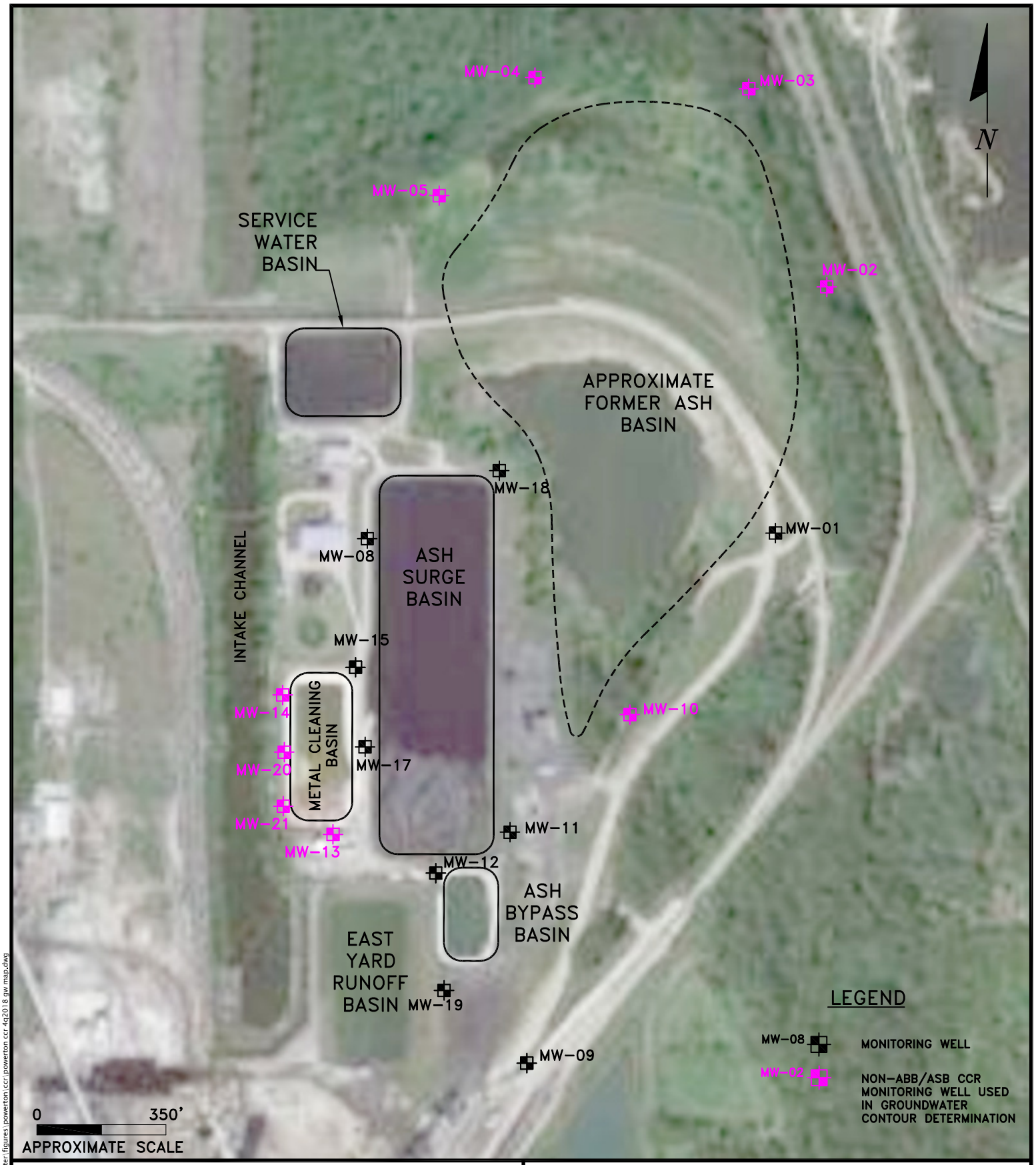
* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.
Average hydraulic conductivity for silt/clay unit (feet/second) from Groundwater, Freeze and Cherry, 1979.

** - Porosity estimates from Applied Hydrogeology, Fetter, 1980.

Table 6. CCR Groundwater Sample Collection Summary for 2022 - Powerton Generating Station Ash Bypass Basin & Ash Surge Basin

Well ID	Number of Groundwater Sampling Events	Dates of Groundwater Sampling Events
MW-01 (Upgradient)	4	2/9/2022
		6/7/2022
		8/30/2022
		11/15/2022
MW-09 (Upgradient)	4	2/10/2022
		6/8/2022
		8/31/2022
		11/15/2022
MW-19 (Upgradient)	4	2/7/2022
		6/6/2022
		8/30/2022
		11/16/2022
MW-08 (Downgradient)	4	2/10/2022
		6/8/2022
		8/30/2022
		11/15/2022
MW-11 (Downgradient)	4	2/10/2022
		6/8/2022
		8/31/2022
		11/15/2022
MW-12 (Downgradient)	4	2/10/2022
		6/8/2022
		8/31/2022
		11/15/2022
MW-15 (Downgradient)	4	2/9/2022
		6/8/2022
		8/31/2022
		11/16/2022
MW-17 (Downgradient)	4	2/7/2022
		6/8/2022
		8/31/2022
		11/16/2022
MW-18 (Downgradient)	4	2/8/2022
		6/6/2022
		8/30/2022
		11/16/2022

FIGURES



ENVIRONMENTAL CONSULTATION & REMEDIATION

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CCR MONITORING WELL SITE MAP

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: June 10, 2021

KPRG Project No. 12313.1 | FIGURE 1

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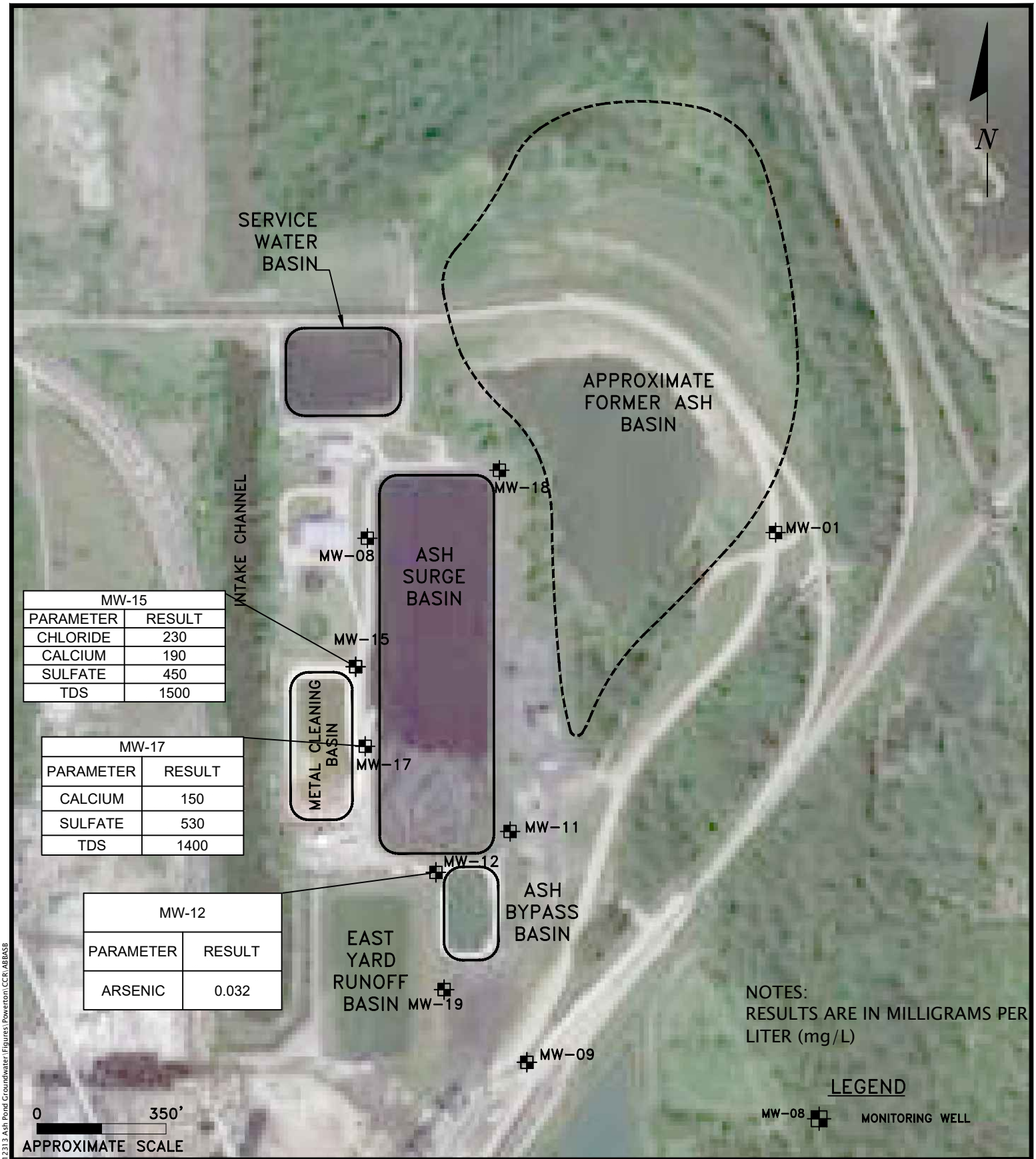

MW-15	
PARAMETER	RESULT
CHLORIDE	230
CALCIUM	190
SULFATE	450
TDS	1500

MW-17	
PARAMETER	RESULT
CALCIUM	150
SULFATE	530
TDS	1400

MW-12	
PARAMETER	RESULT
ARSENIC	0.032

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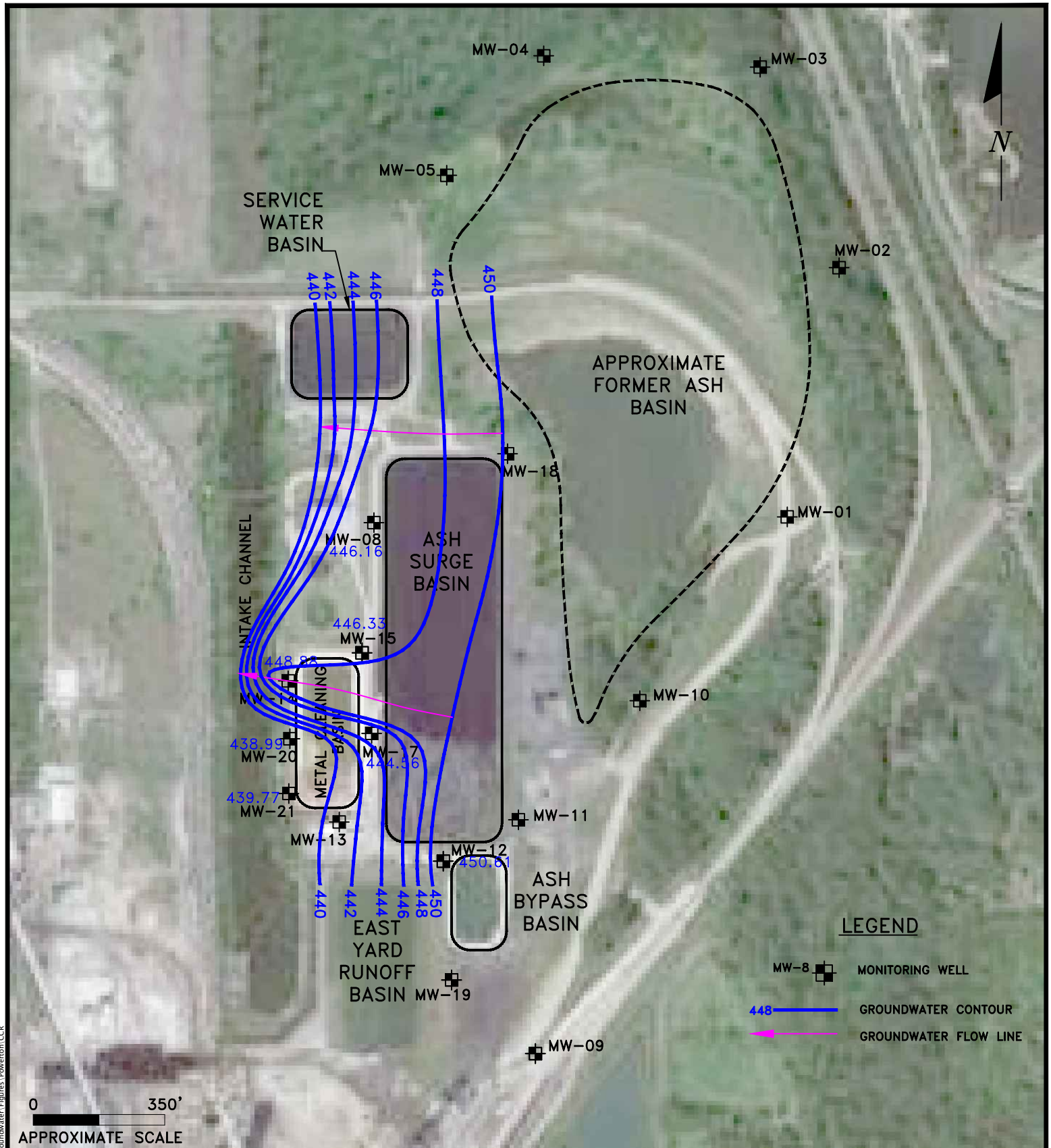
4Q2022 AREAL DISTRIBUTION MAP OF PARAMETERS ABOVE PROPOSED GWPSs

POWERTON STATION–ABB/ASB
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 18, 2023

KPRG Project No. 12313.1 | FIGURE 2

ATTACHMENT 1
Monthly Potentiometric Maps



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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 01/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: April 13, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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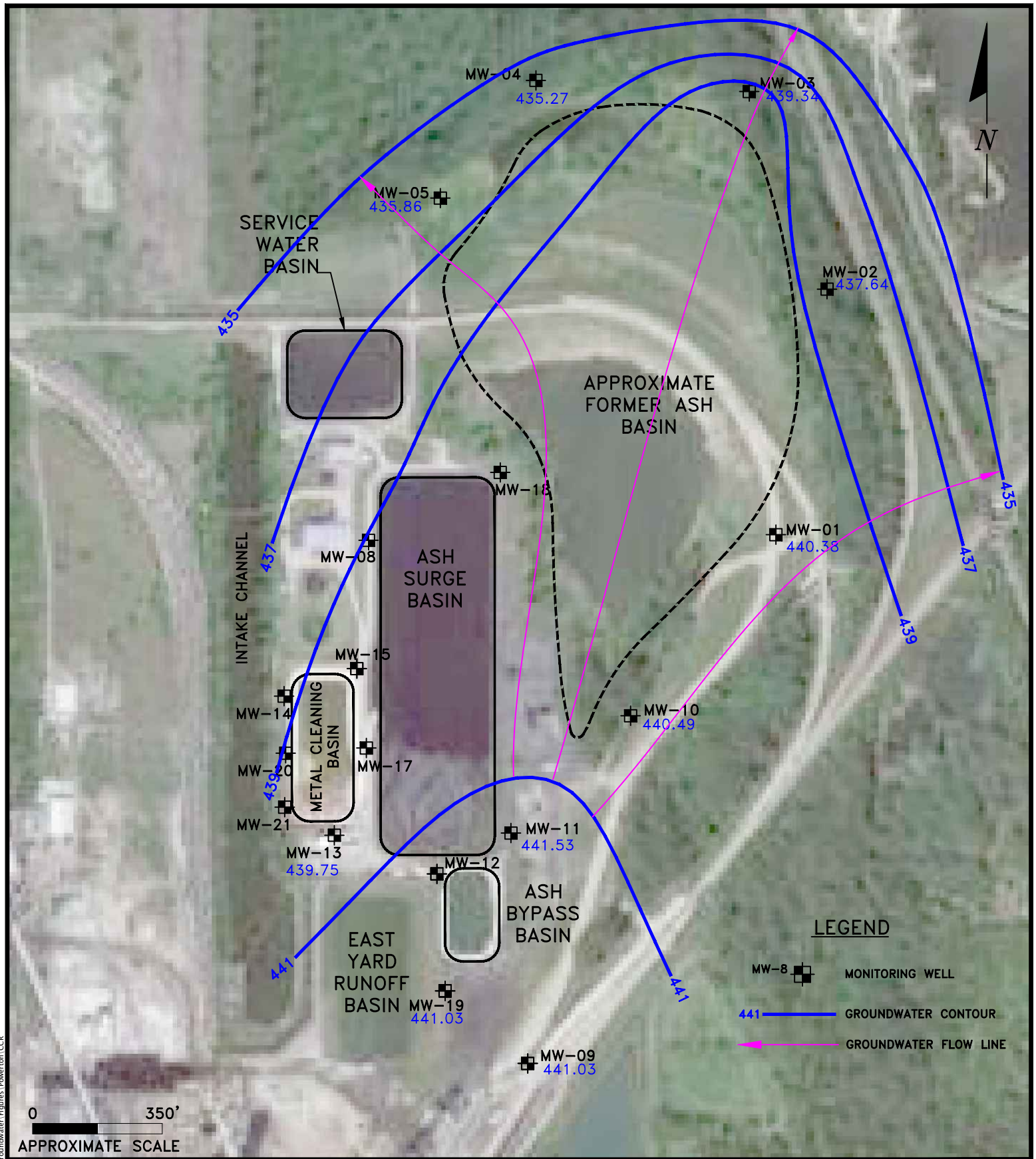

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 01/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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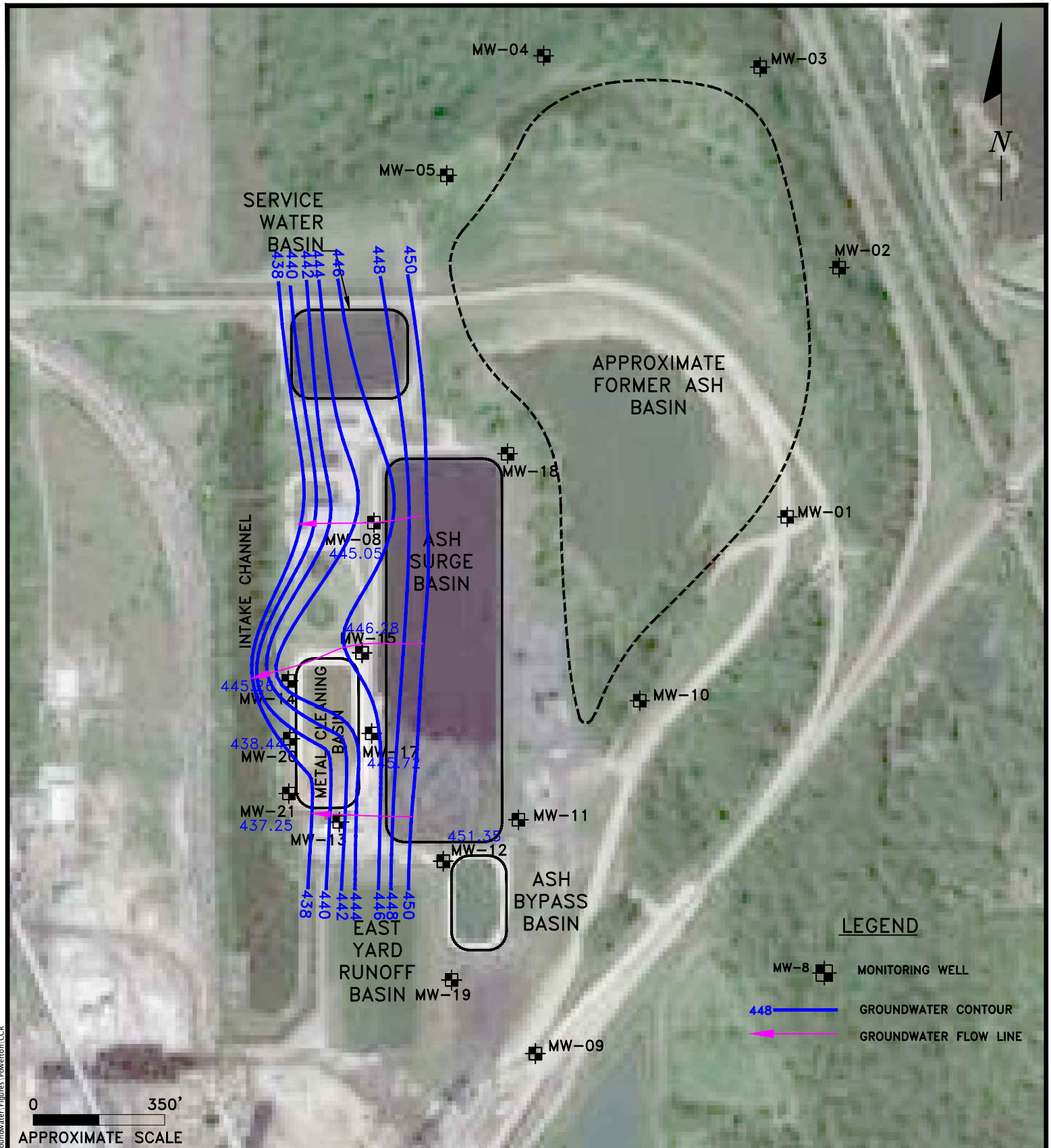

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 02/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: April 13, 2022

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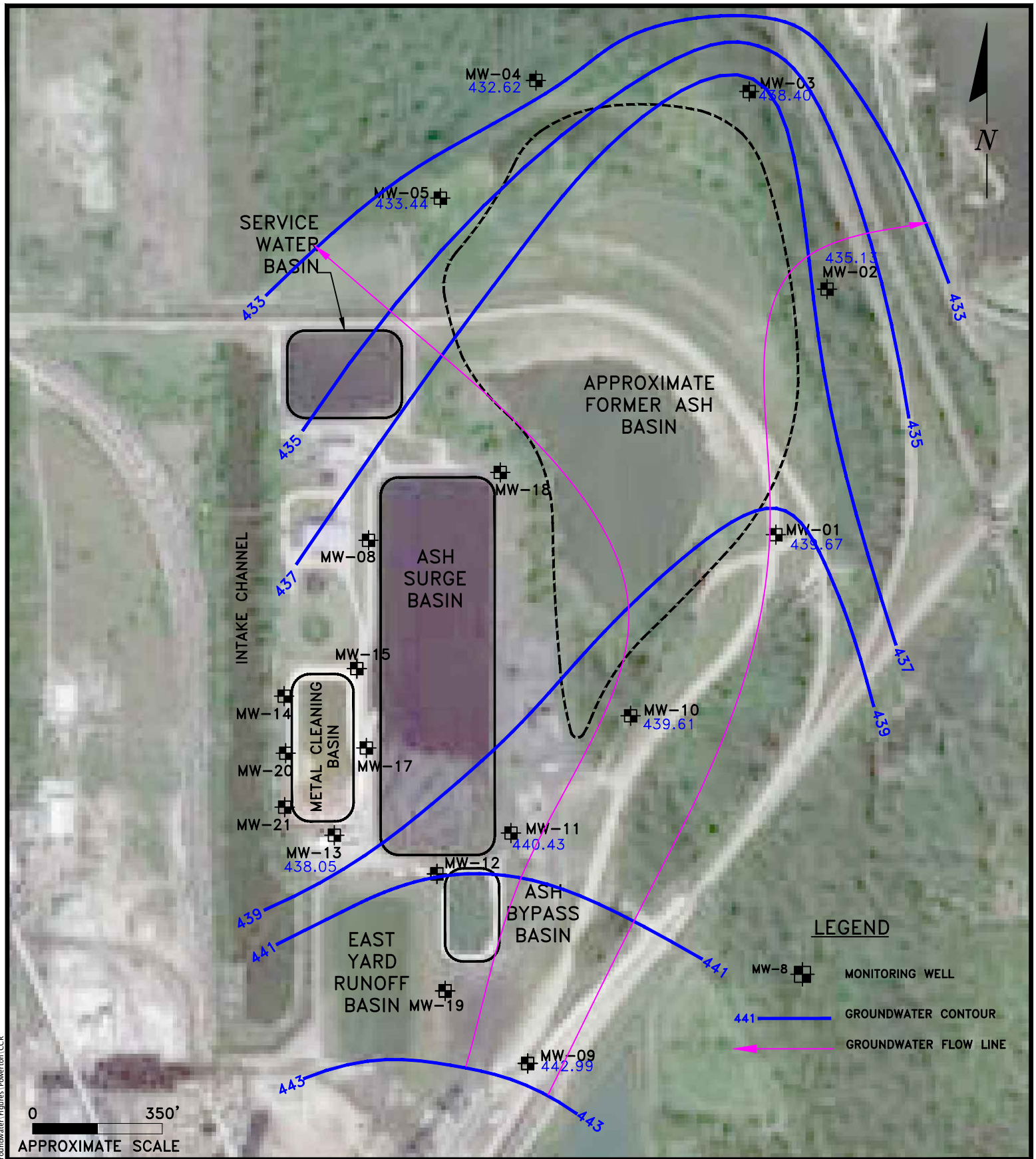

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 02/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

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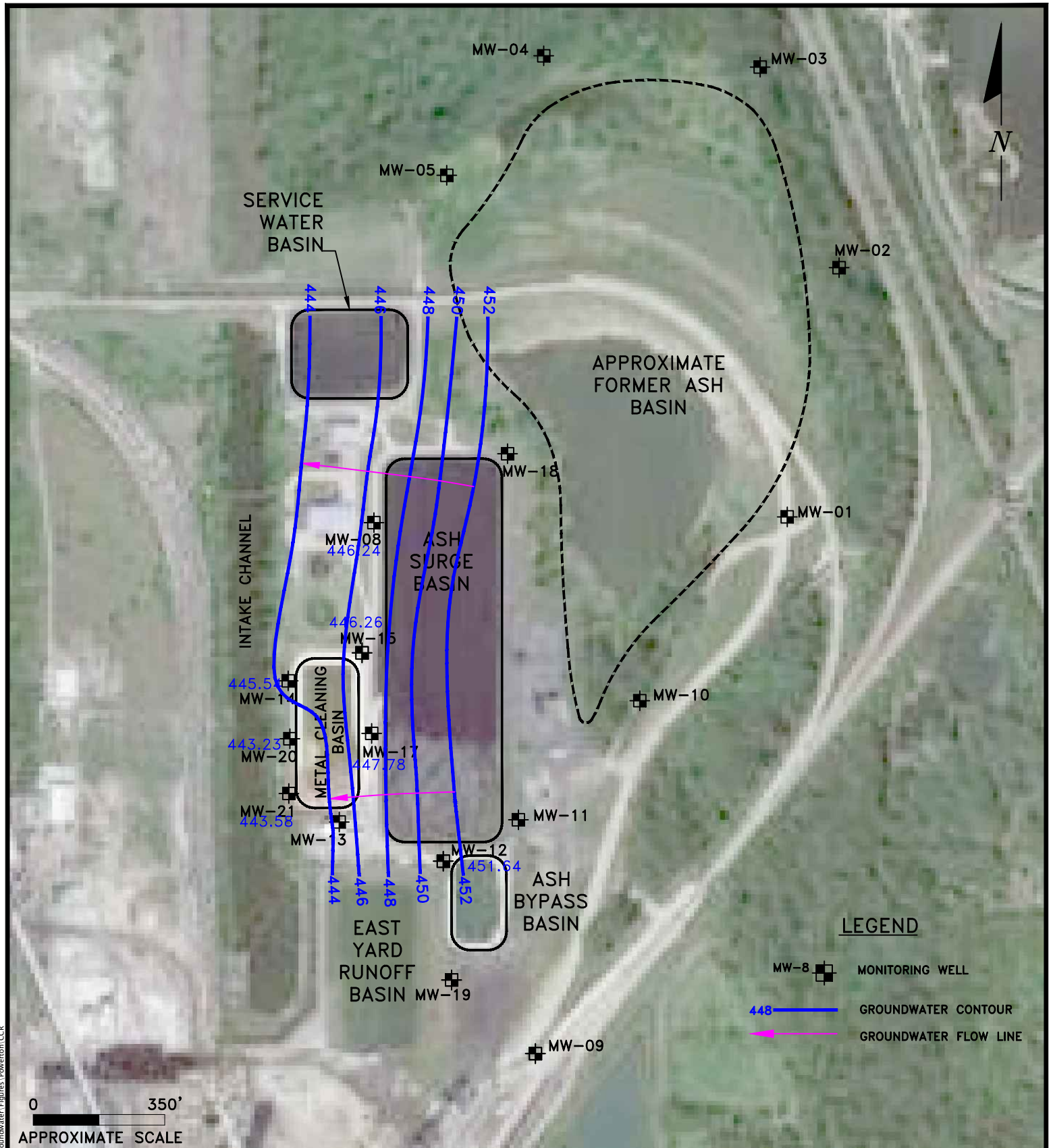

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 03/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: April 13, 2022

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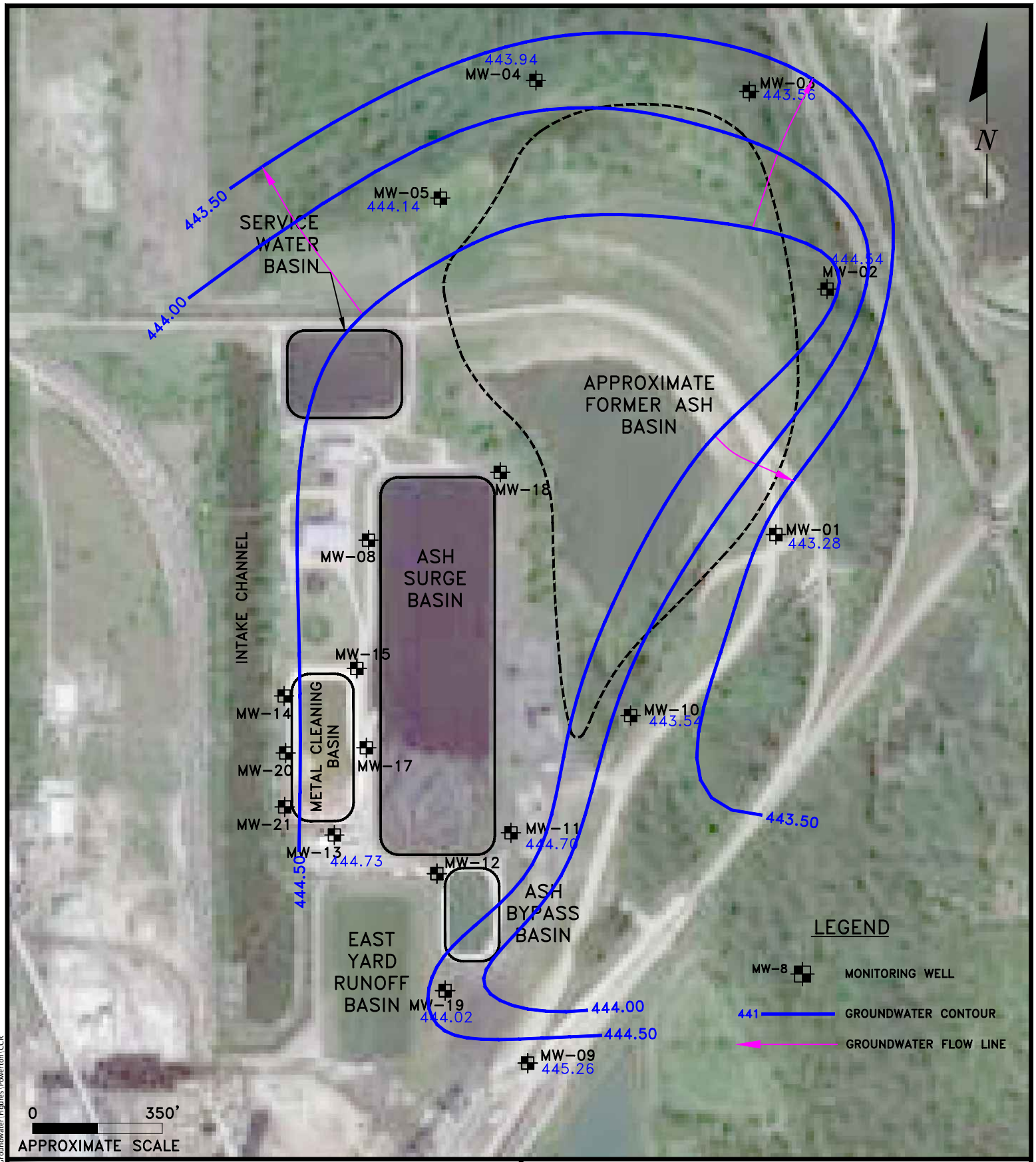

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 03/2022

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Scale: 1" = 350' | Date: January 16, 2023

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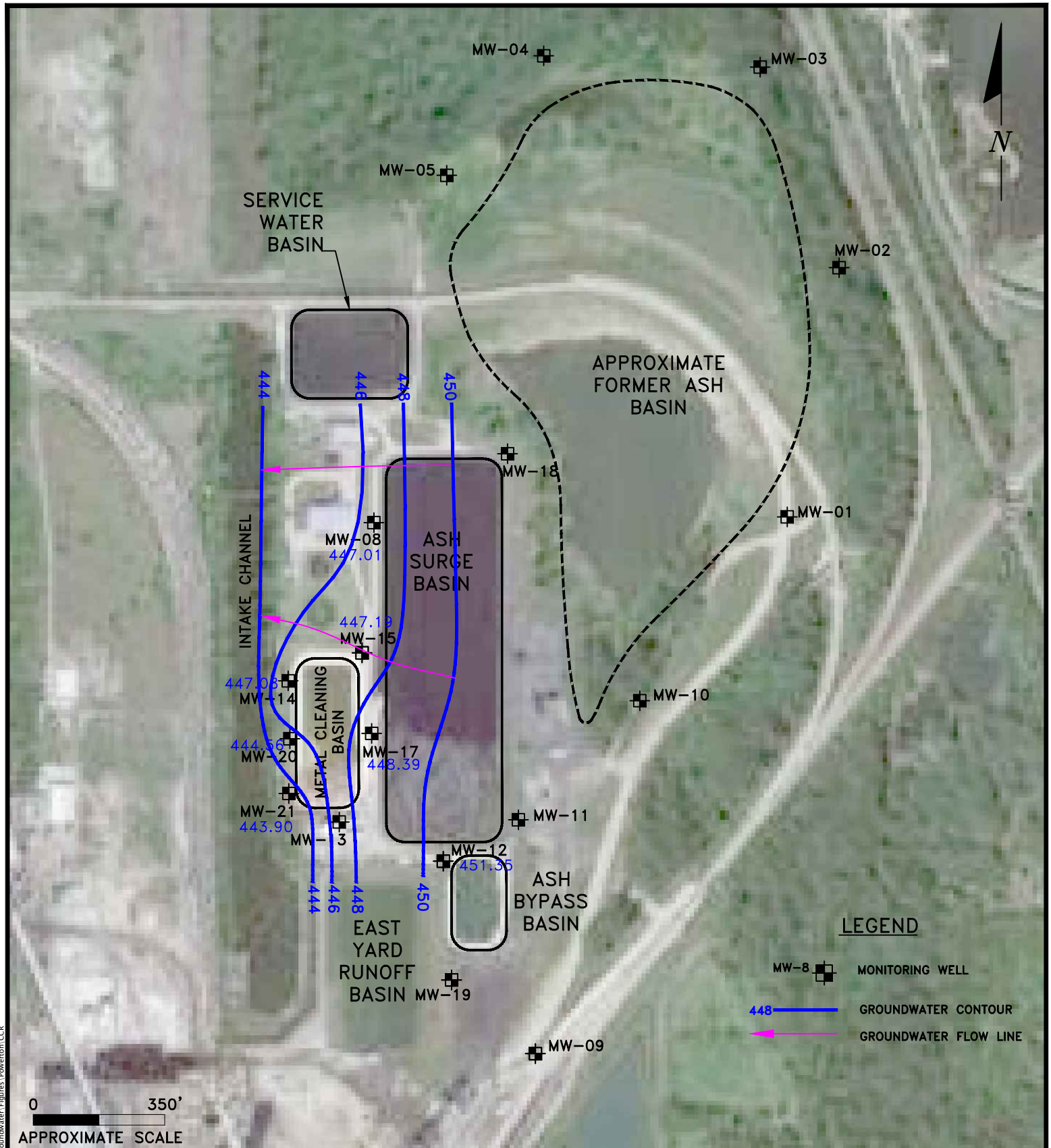

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POTENTIOMETRIC MAP
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POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: May 11, 2022

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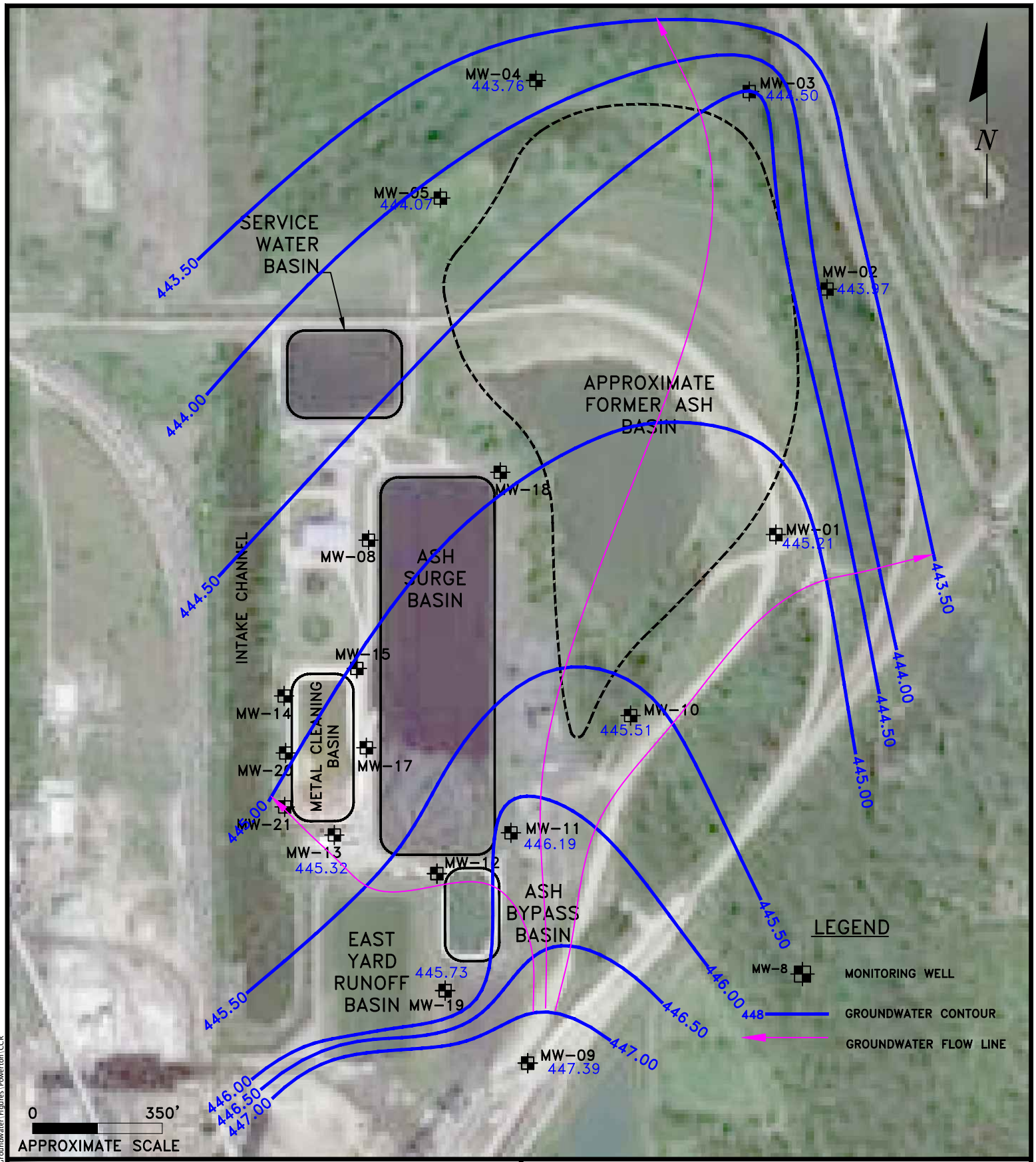

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 04/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 12, 2023

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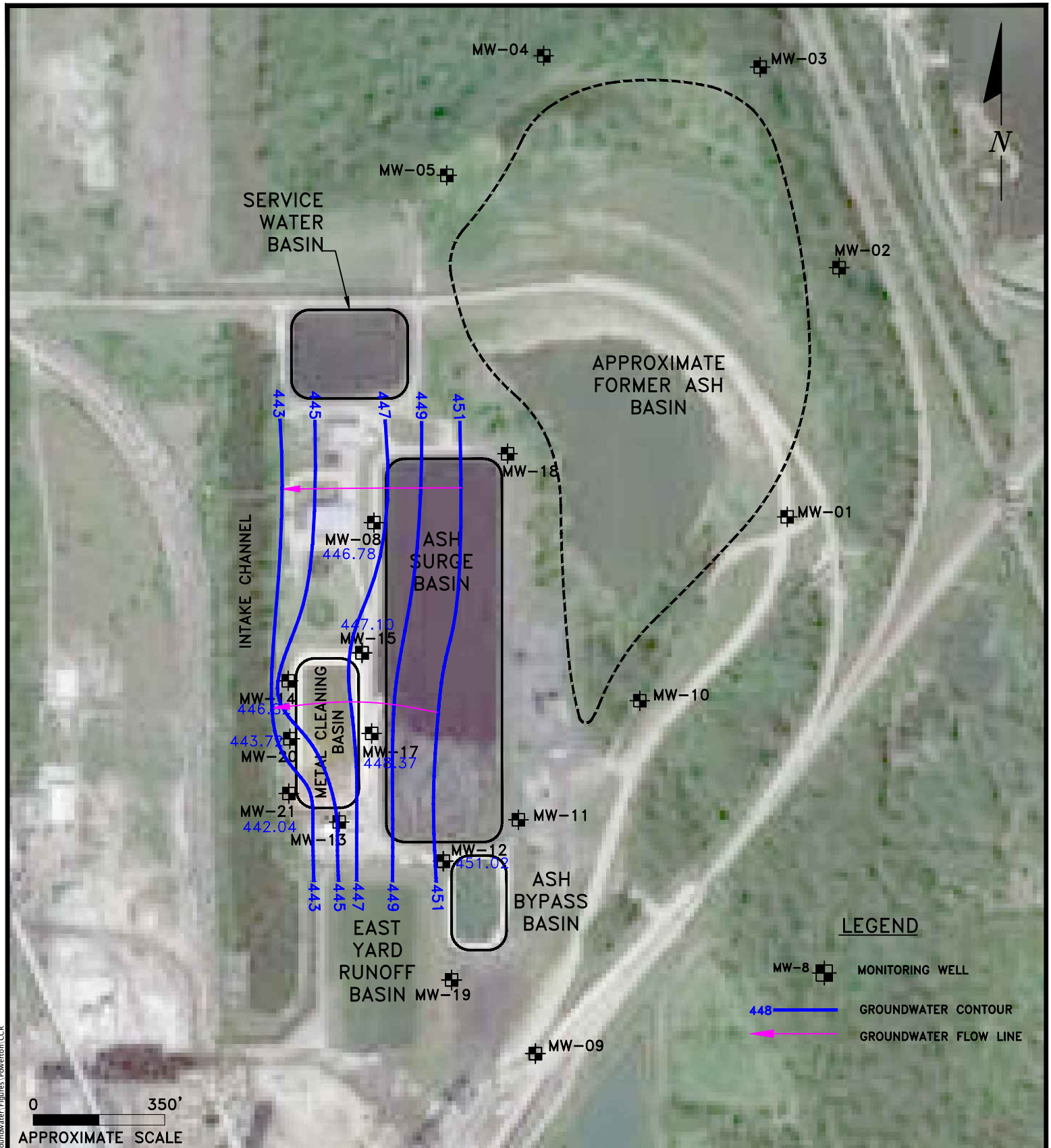

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 05/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: July 27, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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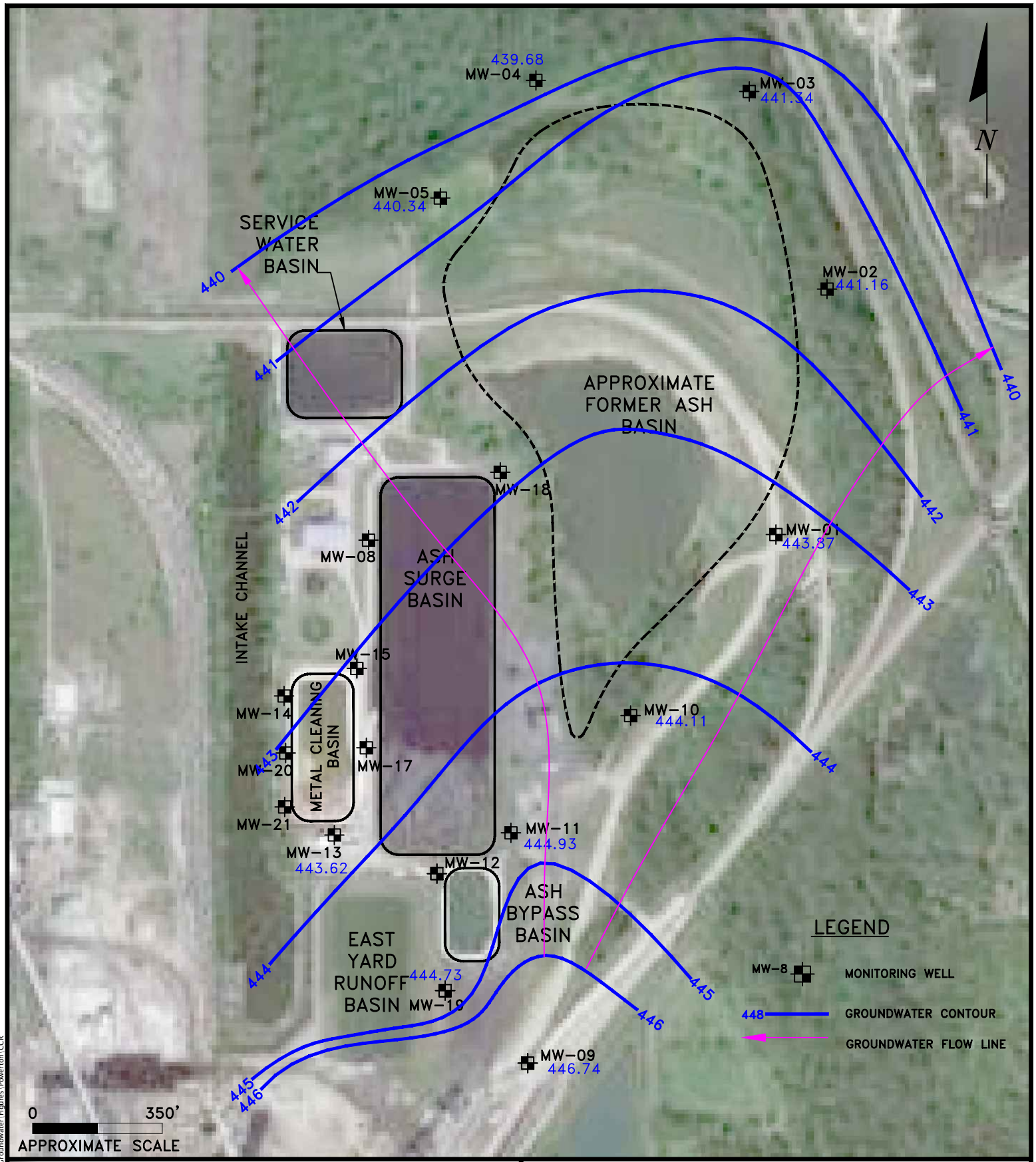

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 05/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 12, 2023

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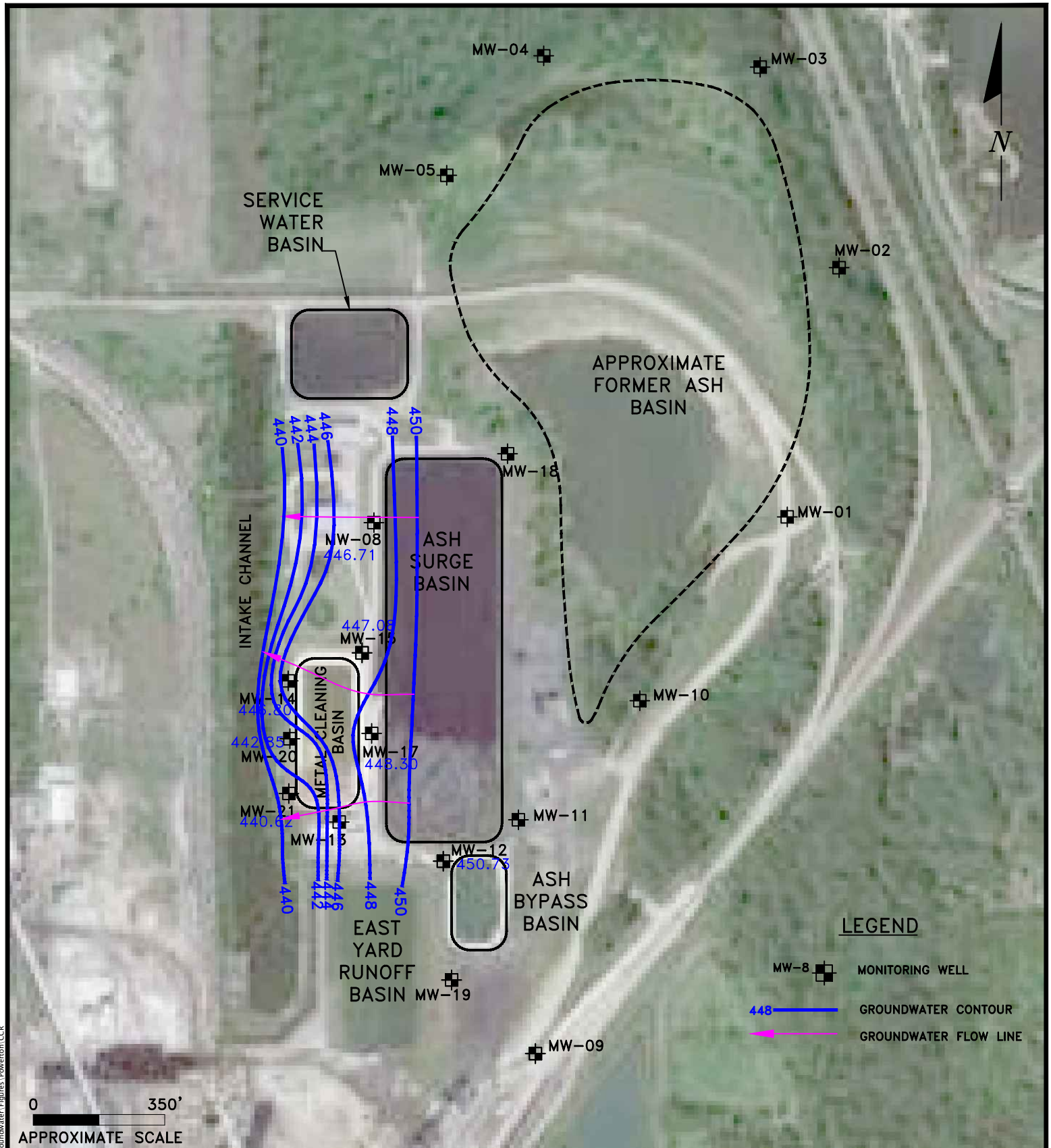

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 06/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: July 29, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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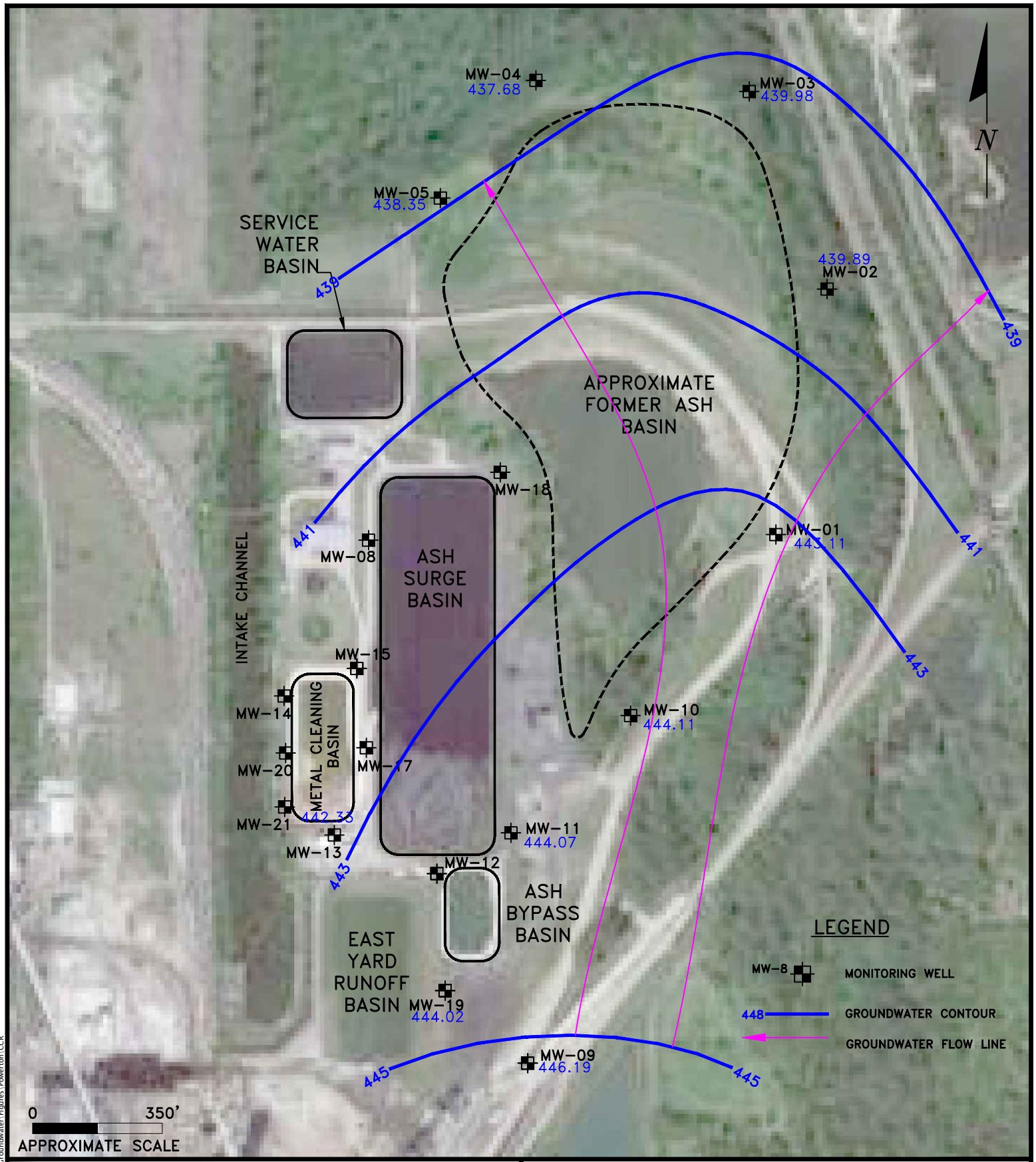

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 06/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 12, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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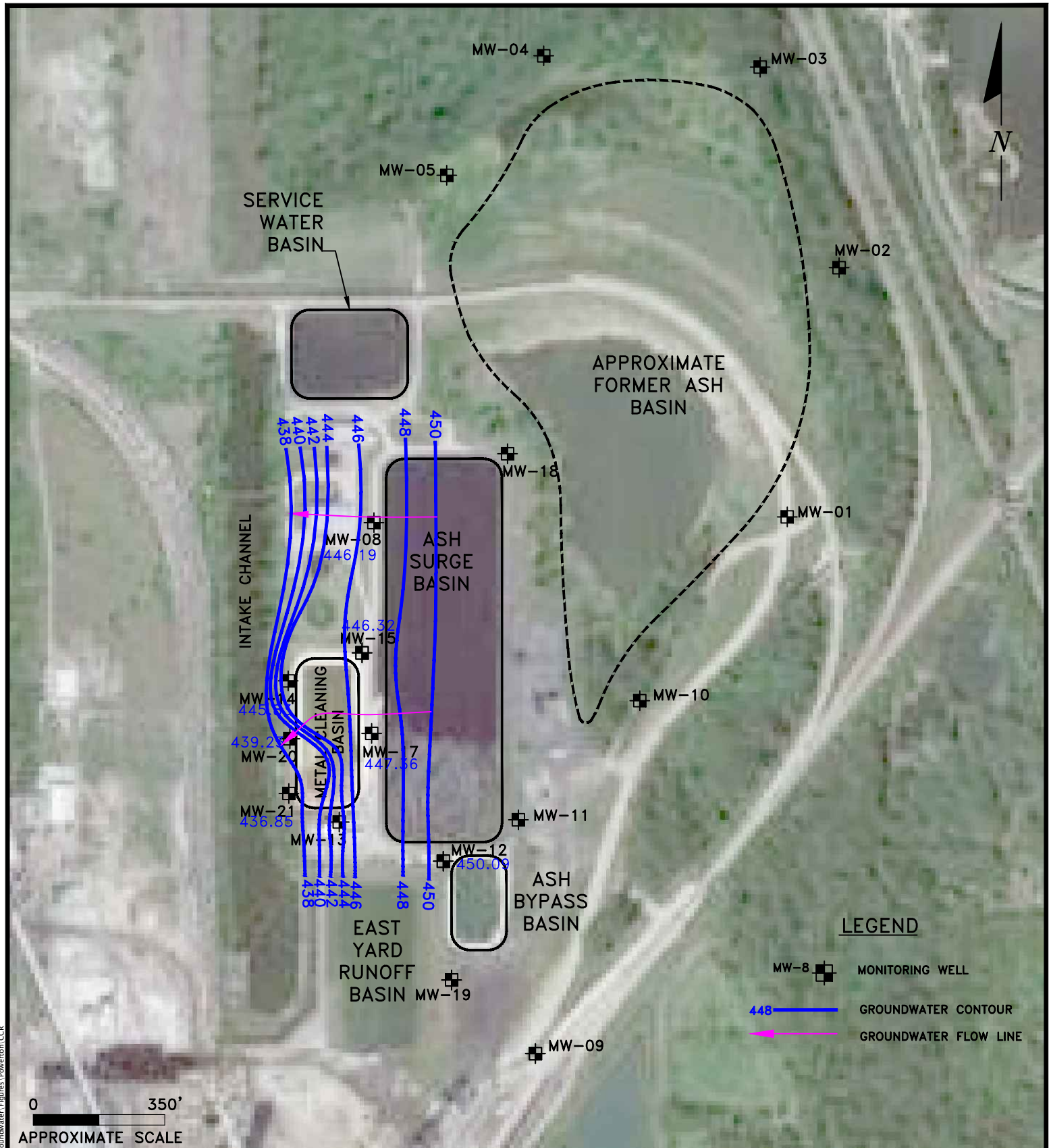

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 07/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: September 26, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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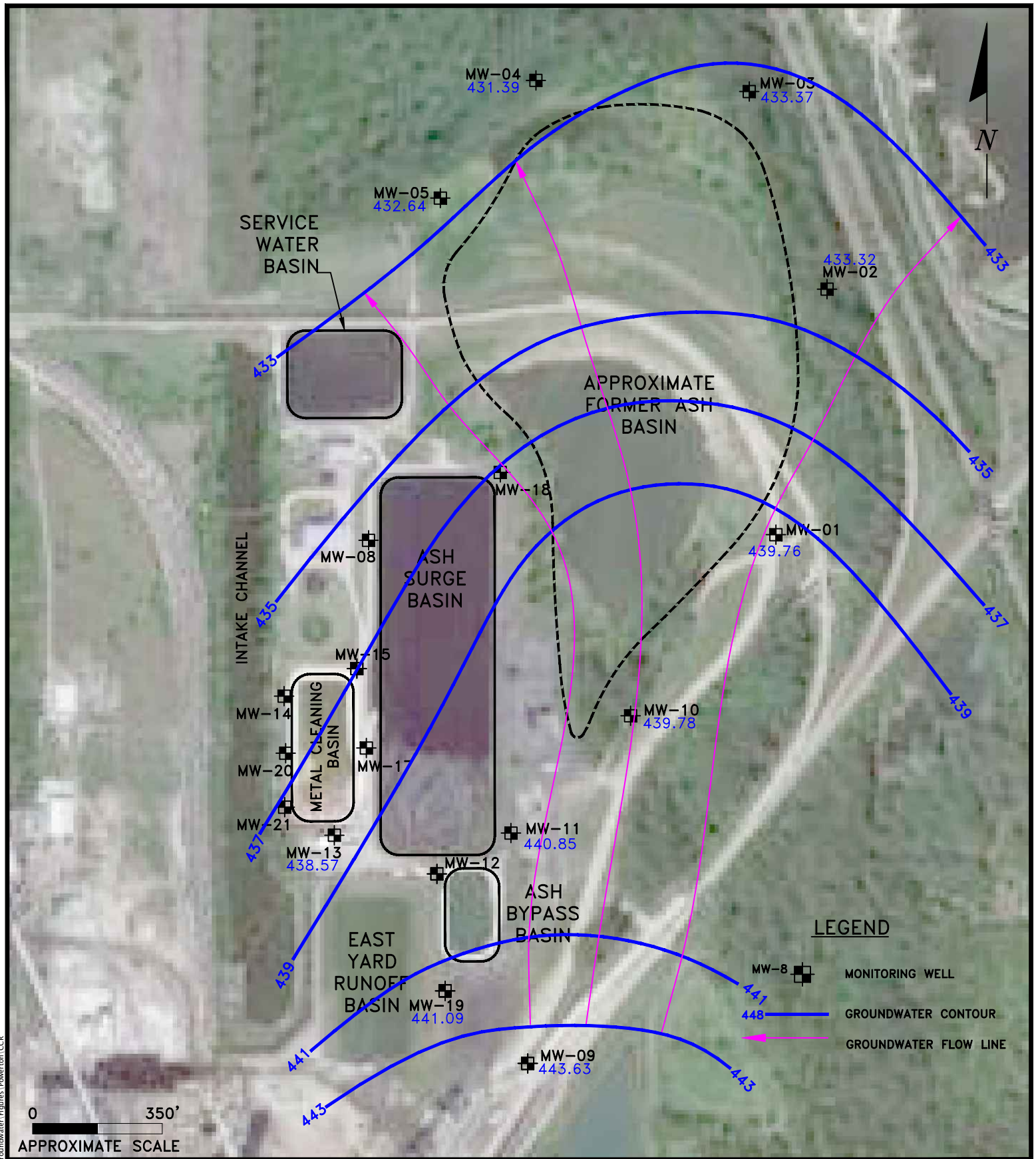

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 07/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 17, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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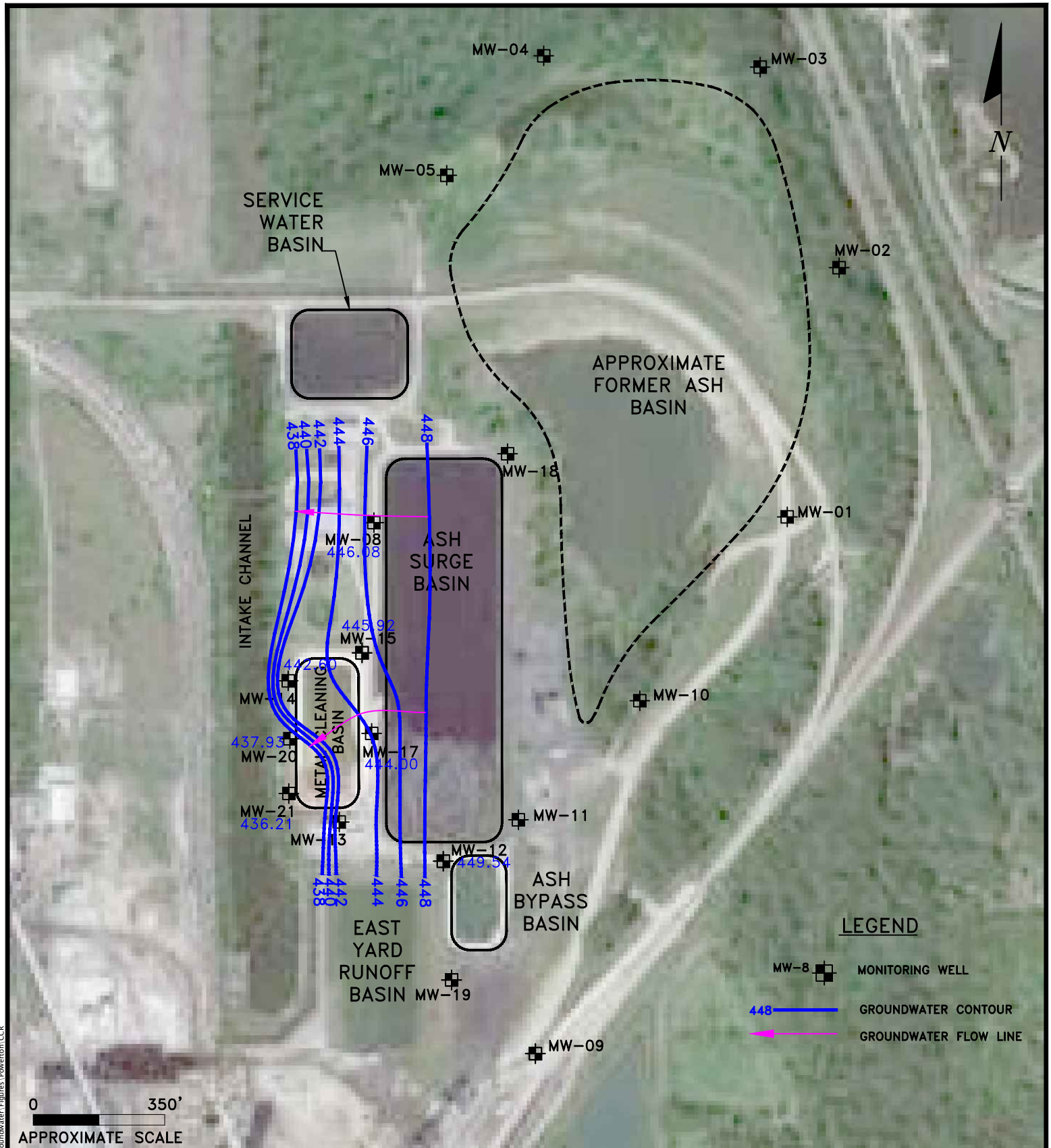

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 08/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: October 12, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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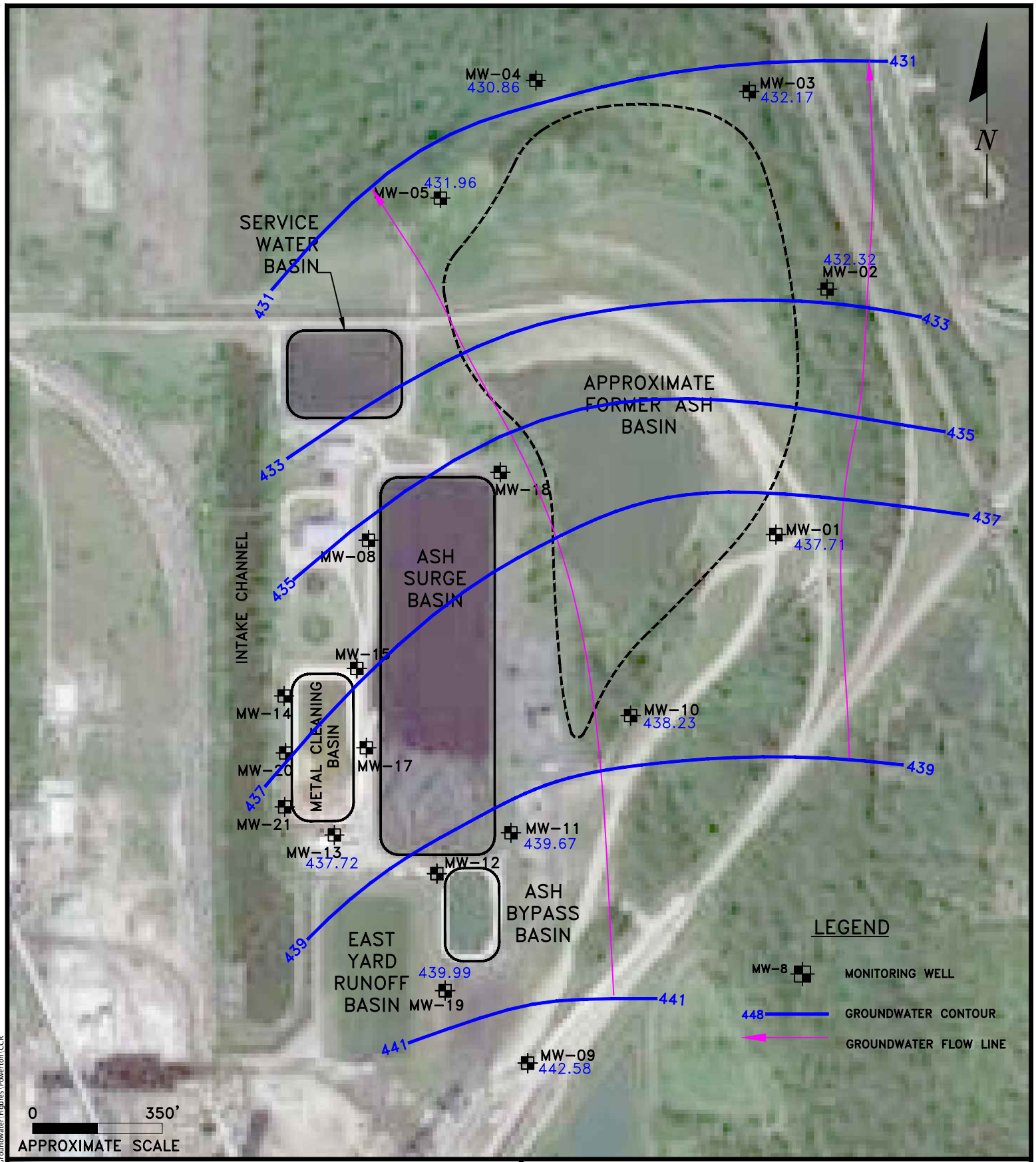

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 08/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: October 12, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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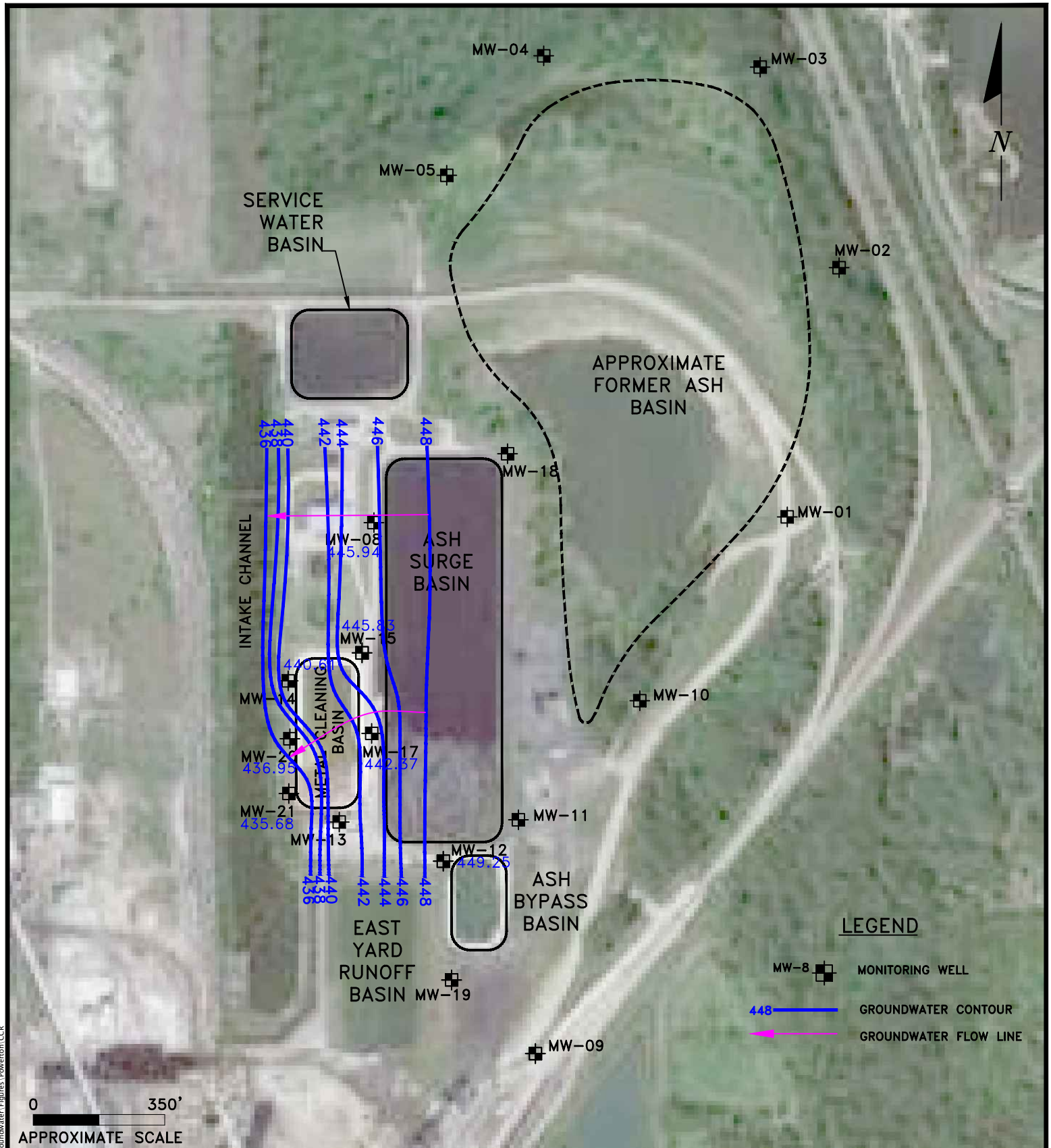

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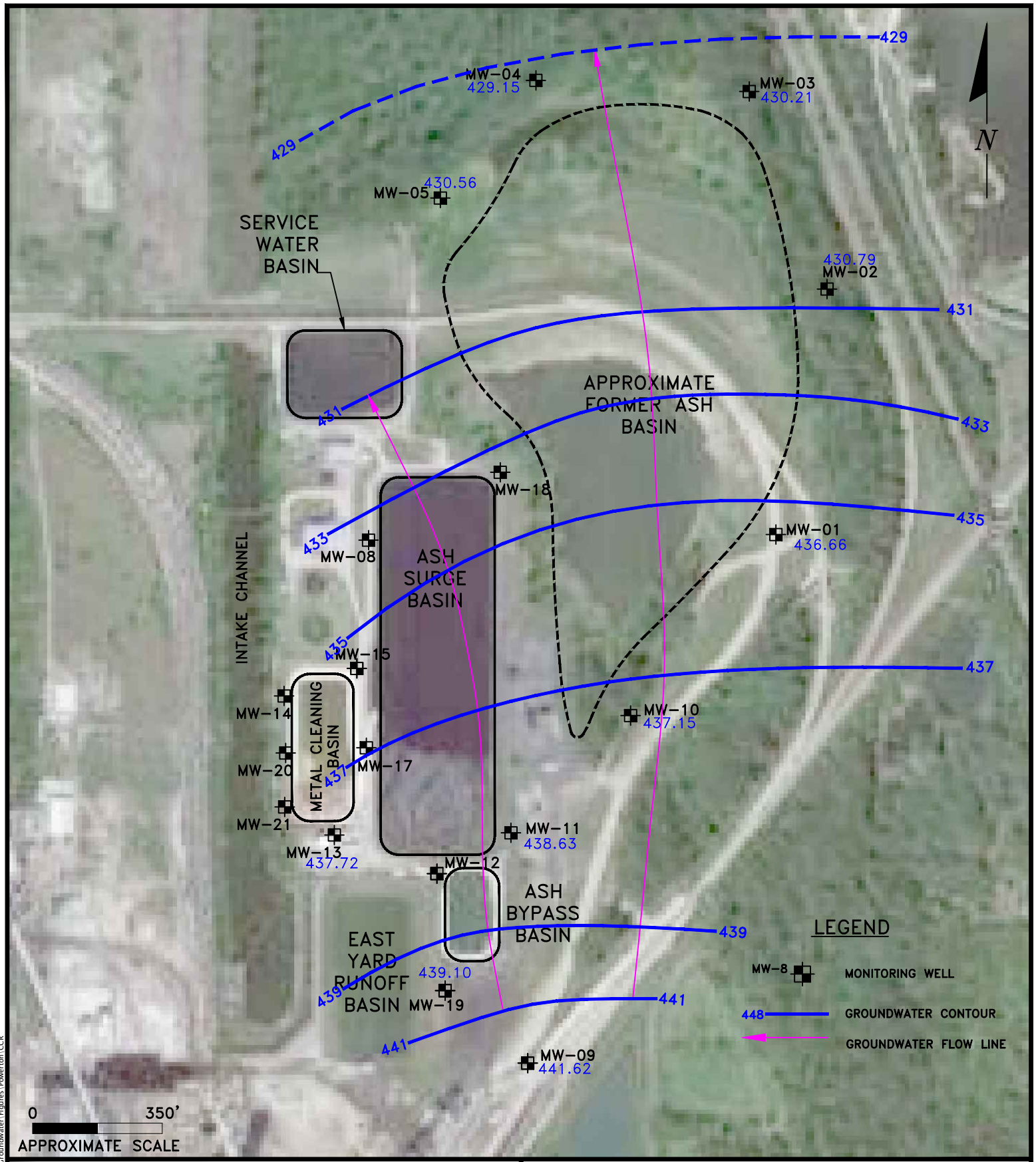
POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 09/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: October 21, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1



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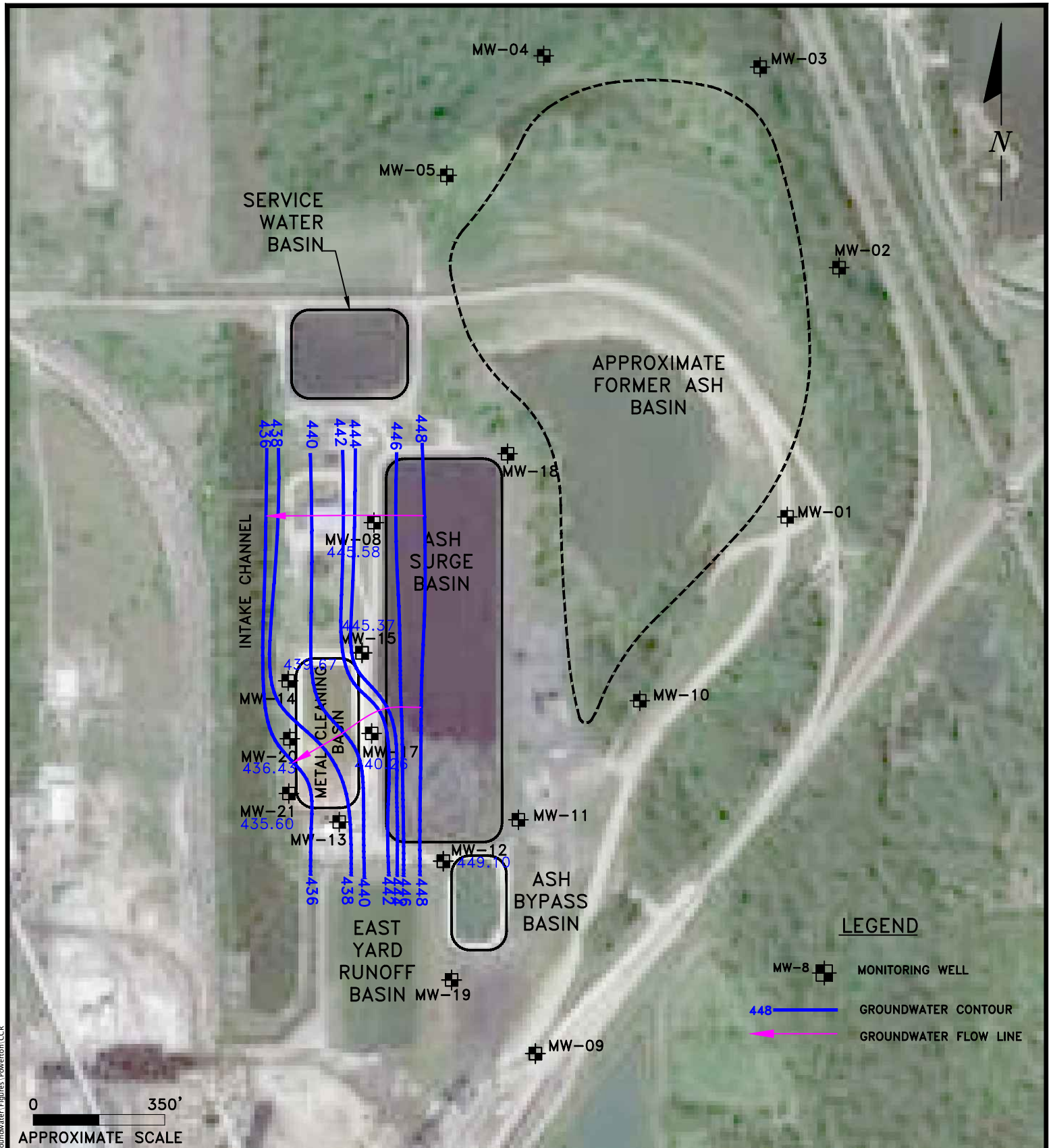
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 09/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: October 21, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 10/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: December 30, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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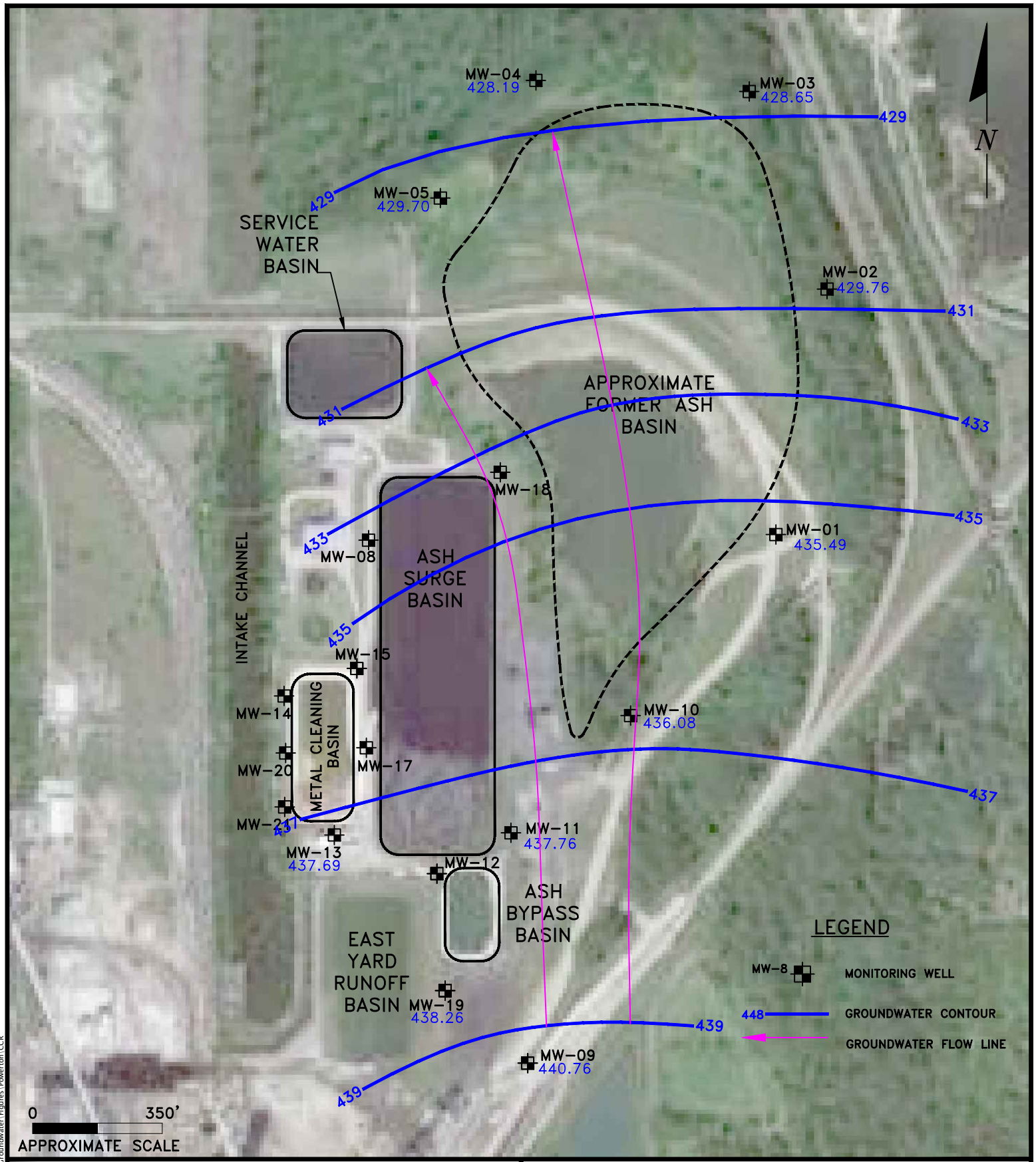

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 10/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: November 4, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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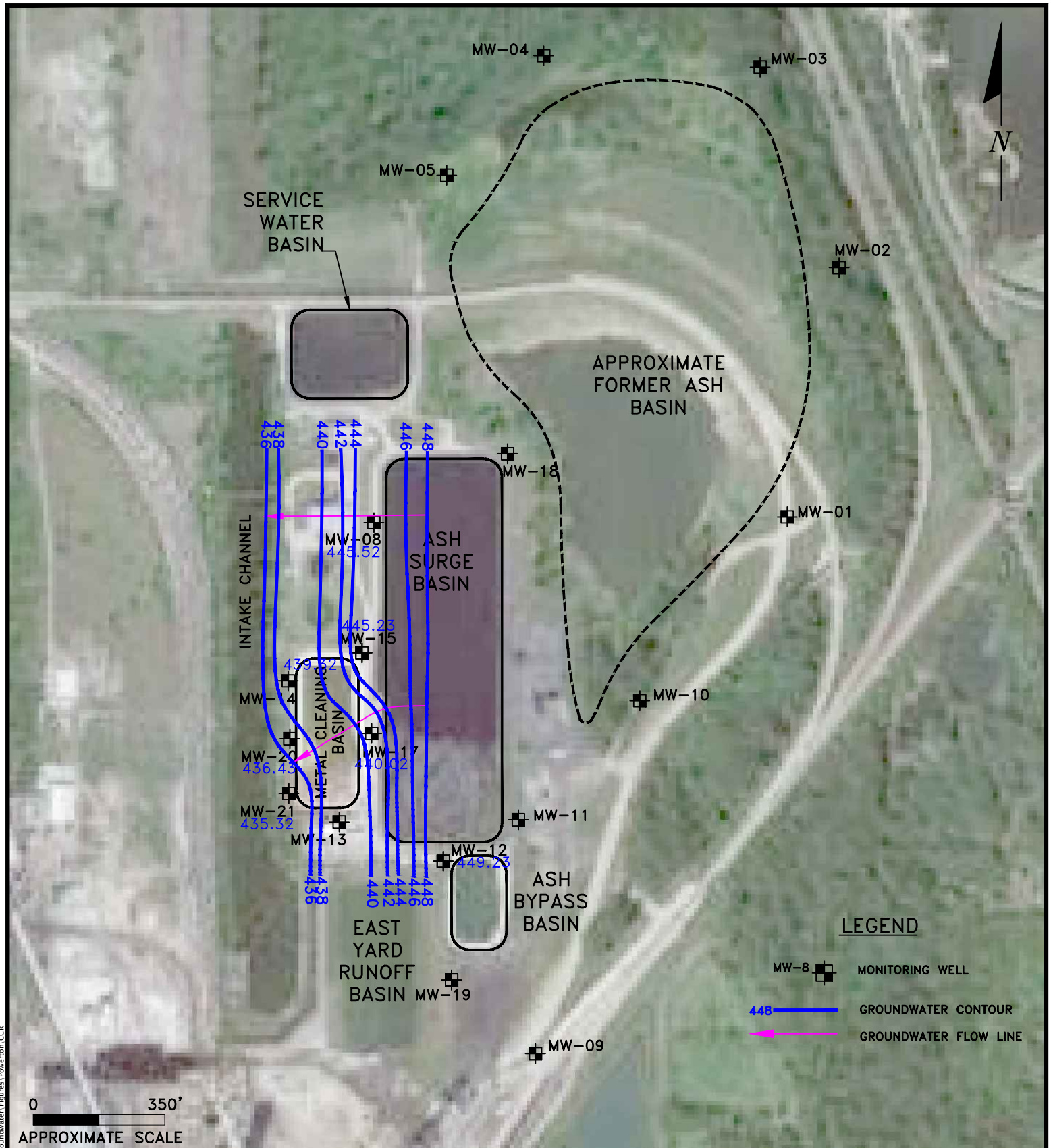

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 11/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: December 27, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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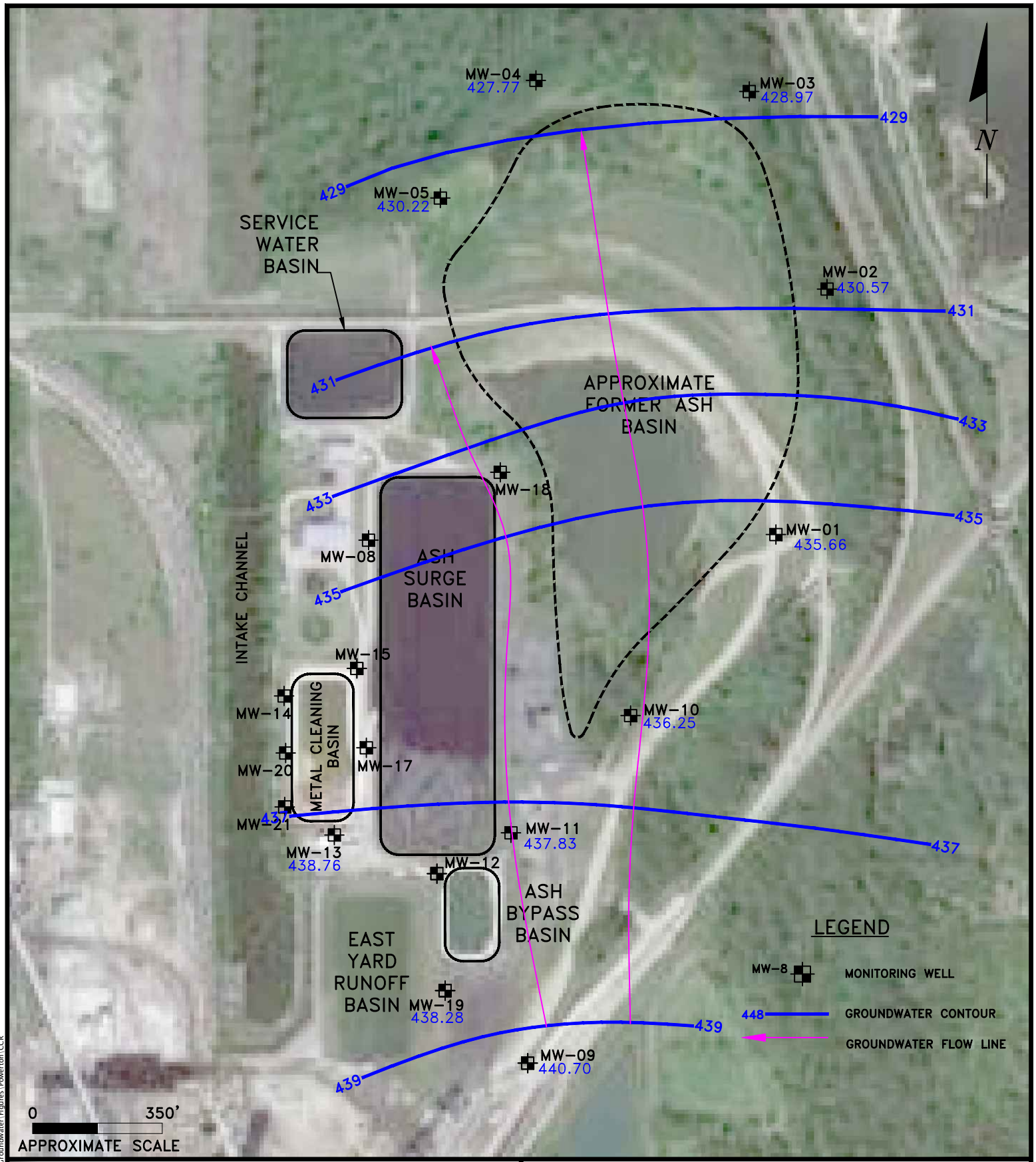

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POWERTON STATION
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Scale: 1" = 350' | Date: December 27, 2022

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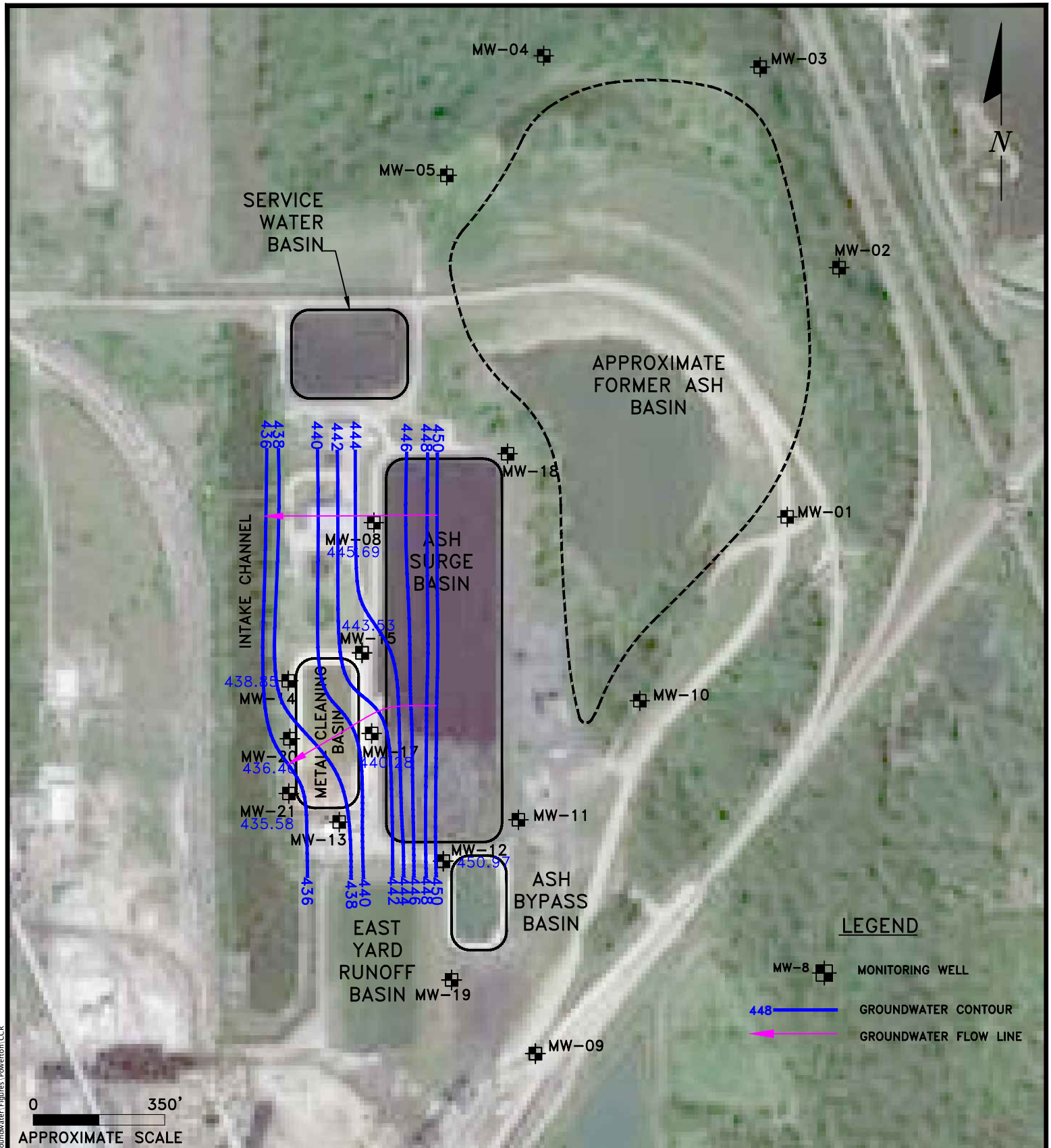

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 12/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 4, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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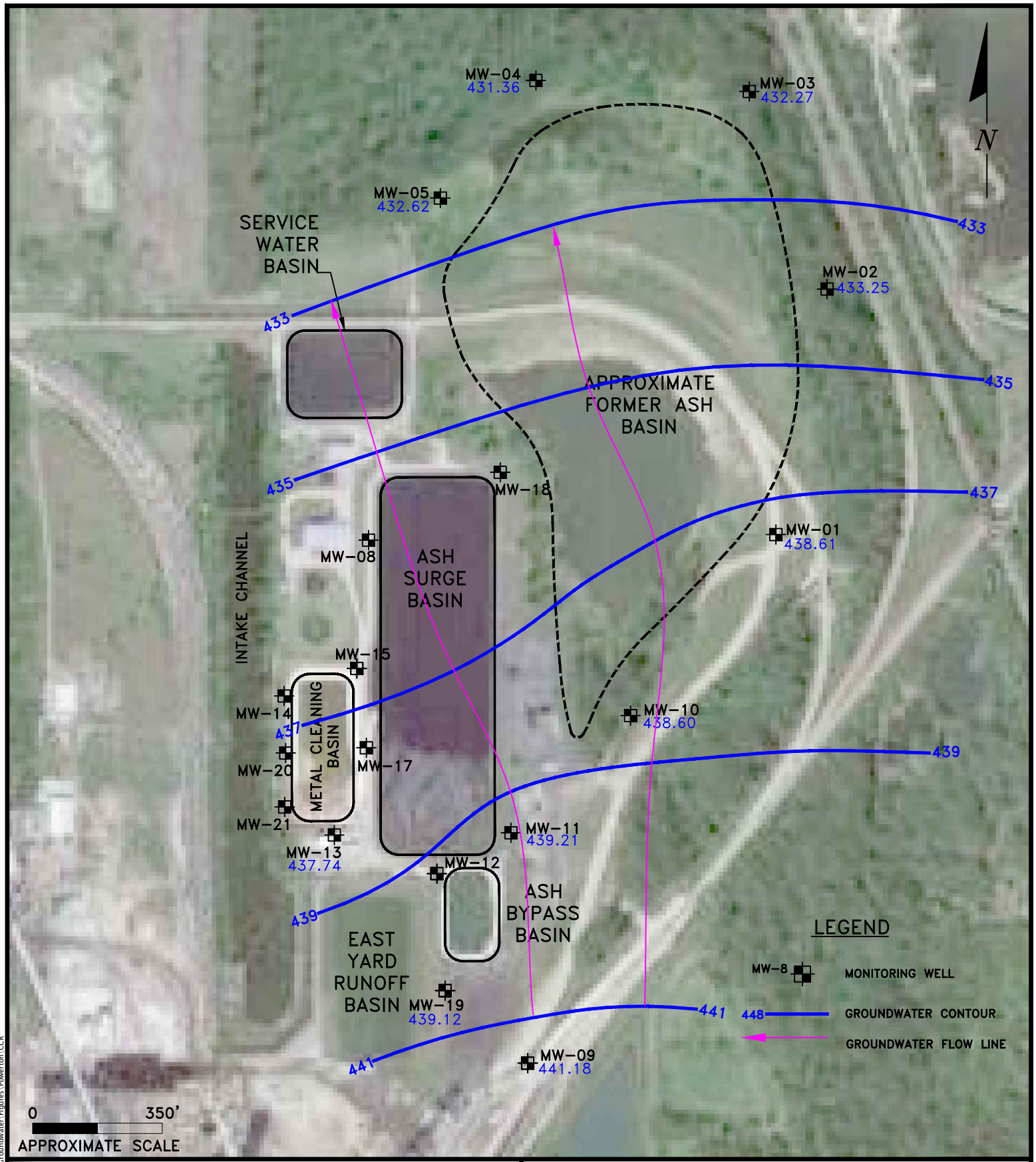

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POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 4, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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ILLINOIS CCR COMPLIANCE
FORMER ASH BASIN
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2022

Midwest Generation, LLC
Powerton Station
13082 E. Manito Road
Pekin, Illinois 61554

Prepared By: KPRG and Associates, Inc.
14665 West Lisbon Road, Suite 1A
Brookfield, WI 53005

January 30, 2023

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2 – Summary of Turbidity Measurements
3 – Proposed Statistical Background Concentrations and Site-Specific Groundwater Protection Standards
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5 – Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate
6 – Groundwater Sample Collection Summary

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1 – CCR Monitoring Network

ATTACHMENTS

1 – Monthly Potentiometric Maps

1.0 INTRODUCTION and OVERVIEW

Groundwater monitoring requirements in accordance with the Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments dated April 15, 2021 (State CCR Rule) have been completed for the ash pond monitoring wells located at the Midwest Generation, LLC (Midwest Generation) Powerton Generating Station. The wells sampled were selected to meet the monitoring requirements of the State CCR Rule for the Former Ash Basin (FAB). The CCR monitoring well network around this pond consists of six monitoring wells (MW-01 though MW-05 and MW-10). Wells MW-01 and MW-10 are upgradient wells as shown on Figure 1. All CCR groundwater monitoring data available to date, which includes data from previous groundwater monitoring under the Federal CCR Rule, are provided in Tables 1 and 2. As part of the Application for Initial Operating Permit – Powerton Generating Station submitted on October 31, 2021 (Application), *proposed* statistical background concentration calculations along with *proposed* site specific Groundwater Protection Standards (GWPSs) were submitted for Illinois Environmental Protection Agency (Agency) review/approval. Table 3 summarizes the *proposed* background statistical concentrations for each parameter along with the site specific *Proposed* GWPSs in accordance with Section 845.600(a)(2). These are currently still under review by the Agency and, therefore, are not finalized. However, for the purposes of evaluations required for the annual report, data comparisons will be presented relative to the "*proposed*" values for statistical background concentrations and site specific GWPSs.

This overview of the 2022 groundwater monitoring period is provided in accordance with Section 845.610(e)(4). Each required item is discussed separately below.

- Section 845.610(e)(4)(A and B) – *Proposed* statistical background concentration calculations (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under Agency review. However, assuming that the Agency accepts the proposed background calculations, the groundwater monitoring since the enactment of the State CCR Rule in April 2021 has identified the following constituents with potential statistically significant increases (SSIs) above the *proposed* background concentrations. It is noted that other than those constituents identified in the next main bullet, none of these potential SSI concentrations are above *proposed* site-specific Groundwater Protection Standards (GWPSs). The constituents and associated wells are:

    - Barium: MW-01 (4th quarter), MW-02 (4th quarter), MW-03 (3rd and 4th quarters), MW-10 (1st through 4th quarters).
    - Boron: MW-02 (3rd and 4th quarters), MW-05 (4th quarter).
    - Chloride: MW-05 (1st, 3rd and 4th quarters).
    - Fluoride: MW-03 (4th quarter), MW-04 (1st and 2nd quarters), MW-05 (1st, 3rd and 4th quarters), MW-10 (4th quarter).
    - Combined Radium: MW-10 (1st and 3rd quarters).
    - Selenium: MW-04 (4th quarter).

- Sulfate: MW-05 (1st, 2nd and 4th quarters).
- Total Dissolved Solids: MW-01, MW-02, MW-03 and MW-04 (3rd quarter), MW-05 (1st through 3rd quarters).

Wells MW-01 and MW-10 are upgradient monitoring wells.

- Section 845.610(e)(4)(C and D) – *Proposed* GWPSs in accordance with Section 845.600(a)(2) (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under review by the Agency. However, assuming that the Agency accepts the *proposed* GWPSs, the groundwater monitoring for the 2022 reporting period only identified Combined Radium 226/228 at MW-10 from first quarter sampling above the *proposed* GWPS. However, a resample done within the first quarter time frame showed Combined Radium at MW-10 well below the *proposed* GWPS and more consistent with historical sampling results. Therefore, this did not confirm the initial elevated result. The initial first quarter sampling data and resample data are shown on Table 1.

- Section 845.610(e)(4)(E though H) – The FAB is not in corrective action.

2.0 ANNUAL STATUS SUMMARY

As discussed in Section 1.0 the CCR monitoring well network around the FAB consists of six monitoring wells (MW-01 though MW-05 and MW-10). Wells MW-01 and MW-10 are upgradient wells as shown on Figure 1. All CCR groundwater monitoring data available to date, which includes data from previous groundwater monitoring under the Federal CCR Rule, are provided in Tables 1 and 2. The backup analytical packages have been previously provided as part of the 60-day submittal requirements. Table 3 summarizes the proposed background statistical concentrations for each parameter along with the site specific *Proposed* GWPSs in accordance with Section 845.600(a)(2). These are included as part of the Initial Operating Permit Application referenced above, are currently still under review by the Agency and, therefore, are not finalized. However, for the purposes of evaluations required for this annual report, data comparisons will be presented relative to the "*proposed*" values for statistical background concentrations and site specific GWPSs. This section provides the information specified under Section 845.610(e) (2-3).

2.1 Summary of Actions and Submittals (Section 845.610(e)(2))

The following key actions have been completed during the 2022 reporting period:

- Quarterly sampling of all parameters specified in Section 845.600(a) plus calcium and turbidity was completed and the associated 60-day data summary submittals were placed in the facilities operating record in accordance with Section 845.610(b)(3)(D).

- Water level gauges were installed within the regulated unit. Water levels were recorded monthly for the specified CCR monitoring wells and pond water levels were concurrently recorded as pond gauges were established.

- An Application for Initial Construction Permit – Former Ash Basin Powerton Generating Station was submitted on October 26, 2022 to the Agency for review in accordance with Section 845.230. This was preceded in May 2022 by the required public meetings to present the various evaluated closure alternatives and the preferred alternative to obtain public input prior to the finalization and submittal of the Application. The application is currently under review by the Agency.

Key activities for the upcoming year include:

- Receipt of an approved Application for Initial Operating Permit which will facilitate finalization of the proposed statistical background concentrations and the proposed site specific GWPSs. Once these are accepted/finalized by the Agency, formal groundwater data comparisons and evaluations can be made based on quarterly monitoring results relative to these comparison criteria.

- Receipt of an approved Application for Construction Permit which will facilitate proceeding to formal closure of the regulated unit.

- Continued quarterly groundwater monitoring/reporting.

2.2 Groundwater Data Summary (Section 845.610(e)(3)(A-F)

Identification of monitoring wells and associated constituent concentrations above the proposed site specific GWPSs was included in Section 1.0 above. As noted in Section 1.0 above, groundwater monitoring during this period has not identified any constituents at any FAB CCR monitoring well detected above proposed GWPSs, therefore, there is no areal distribution map of impacts above a proposed GWPS included in this report.

There were no monitoring wells installed or decommissioned during this reporting period.

Monthly water levels were recorded from the specified CCR monitoring wells. The water levels are summarized in Table 4. Potentiometric surface maps for each round of water levels are provided in Attachment 1. Unlike the CCR monitoring network for the ABB/ASB which includes monitoring wells within both a shallow localized clay/silty clay unit and a deeper more extensive sand unit, all wells associated with the FAB monitoring are screened within the extensive sand unit which underlies the area (i.e., the localized shallow clay/silty clay unit does not extend beneath the FAB). Groundwater flow beneath the FAB is consistently in a northerly direction. In accordance with Section 845.640(c)(2), groundwater flow direction and seepage velocity estimates for each round of water levels are provided in Table 5.

A summary of the number of groundwater samples collected for analysis for each CCR monitoring well along with sample dates is provided in Table 6.

Proposed statistical background concentration calculations (see Table 3) were submitted to the Agency as part of the Application for Initial Operating. This Application is currently still under Agency review. However, assuming that the Agency accepts the *proposed* background calculations, the groundwater monitoring for the 2022 reporting period has identified the following constituents with potential statistically significant increases (SSIs) above the proposed background concentrations:

- Barium: MW-01 (4th quarter), MW-02 (4th quarter), MW-03 (3rd and 4th quarters), MW-10 (1st through 4th quarters).
- Boron: MW-02 (3rd and 4th quarters), MW-05 (4th quarter).
- Chloride: MW-05 (1st, 3rd and 4th quarters).
- Fluoride: MW-03 (4th quarter), MW-04 (1st and 2nd quarters), MW-05 (1st, 3rd and 4th quarters), MW-10 (4th quarter).
- Combined Radium: MW-10 (1st and 3rd quarters).
- Selenium: MW-04 (4th quarter).
- Sulfate: MW-05 (1st, 2nd and 4th quarters).
- Total Dissolved Solids: MW-01, MW-02, MW-03 and MW-04 (3rd quarter), MW-05 (1st through 3rd quarters).

Wells MW-01 and MW-10 are upgradient monitoring wells. As previously stated, other than those constituents identified in the second bullet in Section 1.0, none of these potential SSI concertations are above *proposed* site-specific GWPSs.

TABLES

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Powerton Station, Pekin, IL. Former Ash Basin.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-01 up-gradient	11/16/2015	1.0	98	44	0.17	7.07	93	530	< 0.003	< 0.001	0.057	^ < 0.001	< 0.0005	< 0.005	< 0.001	* < 0.0005	< 0.01	< 0.0002	< 0.0050	0.744	< 0.0025	* < 0.002
	2/25/2016	0.2	110	42	0.16	7.23	54	460	< 0.003	0.0025	0.053	< 0.001	< 0.0005	< 0.005	0.0014	0.0019	< 0.01	< 0.0002	< 0.005	< 0.722	0.0029	< 0.002
	5/20/2016	0.34	100	44	0.17	6.95	65	430	< 0.003	0.0081	0.062	< 0.001	< 0.0005	0.007	0.0053	0.011	< 0.01	< 0.0002	< 0.005	< 0.953	< 0.0025	< 0.002
	8/17/2016	0.27	78	39	0.25	7.16	50	530	< 0.003	0.0014	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	0.0014	< 0.01	< 0.0002	0.0057	< 0.491	< 0.0025	< 0.002
	11/16/2016	0.18	97	39	0.21	7.22	32	500	< 0.003	0.0051	0.056	< 0.001	< 0.0005	< 0.005	0.0044	0.0082	< 0.01	< 0.0002	0.0059	< 0.618	< 0.0025	< 0.002
	2/14/2017	0.18	120	55	0.17	7.30	60	550	< 0.003	0.0041	0.056	< 0.001	< 0.0005	< 0.005	0.0045	0.0076	< 0.01	< 0.0002	0.0056	< 0.837	< 0.0025	< 0.002
	5/3/2017	0.19	86	66	0.16	7.41	45	460	< 0.003	0.0015	0.045	< 0.001	< 0.0005	< 0.005	0.0033	0.0067	< 0.01	< 0.0002	< 0.005	0.574	< 0.0025	< 0.002
	6/21/2017	0.18	85	58	0.18	7.60	47	540	< 0.003	< 0.001	0.040	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0061	< 0.418	< 0.0025	< 0.002
	8/25/2017	0.56	86	41	0.18	7.41	63	490	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0059	0.775	< 0.0025	< 0.002
	11/8/2017	0.57	130	38	0.12	6.69	61	640	< 0.003	< 0.001	0.083	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.343	< 0.0025	< 0.002
	5/17/2018	0.15	88	50	0.12	6.70	48	540	< 0.003	< 0.001	0.045	< 0.001	< 0.0005	< 0.005	< 0.001	0.00068	< 0.01	< 0.0002	< 0.005	< 0.396	< 0.0025	< 0.002
	8/8/2018	0.14	86	48	0.13	6.80	43	430	< 0.003	< 0.001	0.051	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.579	< 0.0025	< 0.002
	4/30/2019	0.07	78	54	0.17	7.20	27	450	< 0.003	0.0014	0.039	< 0.001	< 0.0005	< 0.005	< 0.001	0.0017	< 0.01	< 0.0002	< 0.005	< 0.656	< 0.0025	< 0.002
	8/26/2019	0.57	100	39	0.13	7.15	71	550	< 0.003	< 0.001	0.053	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.802	< 0.0025	< 0.002
	2/24/2020	0.28	87	53	0.21	7.19	34	410	< 0.003	< 0.001	0.044	< ^ 0.001	< 0.0005	< 0.005	< 0.001	0.00057	< 0.01	< 0.0002	< 0.005	< 0.478	< 0.0025	< 0.002
	4/28/2020	0.33	110	46	0.19	7.17	41	470	NA	< 0.001	0.051	NA	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.628	< 0.0025	< 0.002
	12/7/2020	0.59	100	54	0.25	7.22	55	640	NA	< 0.001	0.058	NA	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0052	< 0.542	< 0.0025	< 0.002
	5/11/2021	0.21	85	51	0.21	7.52	37	450	< 0.003	< 0.001	0.043	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.01	0.521	< 0.0025	< 0.002
	8/24/2021	0.27	99	40	0.18	7.19	56	430	< 0.003	< 0.001	0.061	< 0.001	< 0.0005	< 0.005	< 0.001	0.00088	< 0.01	< 0.0002	0.007	< 0.463	< 0.0025	< 0.002
	11/30/2021	0.35	84	41	0.19	7.14	^- 28	410	< 0.003	< 0.001	0.06	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.005	< 0.0002	0.0072	< 0.434	0.0026	< 0.002
	2/9/2022	0.18	96	47	0.17	7.33	48	520	< 0.003	0.0017	0.052	< 0.001	< 0.0005	< 0.005	< 0.001	0.0012	0.003	< 0.0002	0.0074	< 0.527	< 0.0025	< 0.002
	6/7/2022	0.21	81	51	0.14	7.62	27	430	< 0.003	< 0.001	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0057	0.531	< 0.0025	< 0.002
	8/30/2022	0.59	92	44	0.15	7.10	66	810	< 0.003	< 0.001	0.073	< ^+ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< ^+ 0.01	< 0.0002	< 0.005	< 0.441	< 0.0025	< 0.002
	11/15/2022	0.74	110	47	0.1	7.15	45	530	< 0.003	< 0.001	0.086	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.659	< 0.0025	< 0.002
MW-10 up-gradient	6/22/2017	0.46	100	48	0.19	6.81	54	1.0	< 0.003	0.0023	0.250	< 0.001	< 0.0005	< 0.005	0.008	0.003	< 0.01	< 0.0002	< 0.005	0.408	0.0042	< 0.002
	8/24/2017	0.32	93	51	0.18	7.14	57	480	< 0.003	0.0020	0.220	< 0.001	< 0.0005	< 0.005	0.007	0.003	< 0.01	< 0.0002	< 0.005	0.564	0.0044	< 0.002
	11/9/2017	0.36	98	48	0.18	6.78	64	500	< 0.003	< 0.0010	0.220	< 0.001	< 0.0005	< 0.005	0.004	< 0.001	< 0.01	< 0.0002	< 0.005	1.020	0.0034	< 0.002
	5/16/2018	0.42	93	44	0.19	7.64	80	530	< 0.003	0.0010	0.220	< 0.001	< 0.0005	< 0.005	0.021	0.001	< 0.01	< 0.0002	< 0.005	1.550	0.0050	< 0.002
	8/8/2018	0.39	99	58	0.19	7.10	60	550	< 0.003	0.0012	0.220	<^ 0.001	< 0.0005	< 0.005	0.014	0.001	< 0.01	< 0.0002	< 0.005	< 0.551	0.0062	< 0.002
	10/30/2018	0.34	110	49	0.22	7.65	49	510	< 0.003	0.0110	0.410	< 0.001	0.0008	0.024	0.047	0.023	0.02	< 0.0002	< 0.005	3.00	0.0046	< 0.002
	2/26/2019	0.39	150	48	0.21	6.77	36	540	< 0.003	0.0220	0.590	< 0.005	0.0015	0.063	0.081	0.036	0.03	< 0.0002	0.007	4.130	0.0041	< 0.002
	5/1/2019	0.35	92	50	0.22	6.81	30	470	< 0.003	0.0023	0.270	< 0.001	< 0.0005	< 0.005	0.011	0.0028	< 0.01	< 0.0002	< 0.005	1.330	0.0037	< 0.002
	8/26/2019	0.30	84	48	0.19	7.09	30	410	< 0.003	0.0017	0.190	< 0.001	< 0.001	< 0.005	0.007	0.0016	< 0.01	< 0.0002	< 0.005	1.540	0.0050	< 0.002
	2/25/2020	1.40	110	45	0.23	6.82	59	500	< 0.003	0.0033	0.280	< ^ 0.001	< 0.0005	0.0086	0.011	0.0046	< 0.01	< 0.0002	< 0.005	1.07	0.0058	< 0.002
	4/28/2020	1.00	110	41	0.24	6.80	64	550	NA	0.0022	0.250	NA	NA	< 0.005	0.0065	0.0017	NA	NA	< 0.005	0.639	0.0054	NA
	12/8/2020	2.40	120	44	0.26	7.11	71	550	NA	0.0015	0.280	NA	NA	< 0.005	0.0089	0.0023	NA	< 0.0002	< 0.005	1.76	0.0031	NA
	5/11/2021	0.64	100	52	0.24	7.01	59	540	< 0.003	0.0011	0.260	< 0.001	< 0.0005	< 0.005	0.008	0.00085	< 0.01	< 0.0002	< 0.005	1.42	0.0049	< 0.002
	8/24/2021	0.42	98	53	0.21	6.87	46	420	< 0.003	0.0017	0.24	< 0.001	< 0.0005	< 0.005	0.0082	0.002	< 0.01	< 0.0002	< 0.005	0.638	0.0051	< 0.002
	11/30/2021	0.42	100	47	0.19	6.99	^- 36	530	< 0.003	0.0015	0.2	< 0.001	< 0.0005	< 0.005	0.0037	0.00051	0.0031	< 0.0002	< 0.005	1.39	< 0.0025	< 0.002
	2/9/2022	0.41	94	48	0.22	6.88	50	530	< 0.003	0.011	0.6	< 0.001	0.00064	0.026	0.054	0.021	0.011	< 0.0002	< 0.005	6.51	0.0045	< 0.002
	3/29/22 (R)	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.811	NS	NS
	6/7/2022	0.43	85	44	0.21	7.09	38	390	< 0.003	0.0011	0.18	< 0.001	< 0.0005	< 0.005	0.0028	< 0.0005	< 0.01	< 0.0002	< 0.005	0.687	0.0049	< 0.002
	8/30/2022	0.38	92	45	0.22	6.83	38	590	< 0.003	0.0012	0.24	< ^+ 0.001	< 0.0005	< 0.005	0.0086	0.00074	< ^+ 0.01	< 0.0002	< 0.005	1.4	< 0.0025	< 0.002
	11/15/2022	0.44	99	49	0.28	7.03	48	470	< 0.003	< 0.001	0.2	< 0.001	< 0.0005	< 0.005	0.0052	< 0.0005	< 0.01	< 0.0002	< 0.005	0.909	< 0.0025	< 0.002
MW-02 down-gradient	6/20/2017	0.33	90	55	0.19	7.01	47	500	< 0.003	0.0012	0.075	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.341	< 0.0025	< 0.002
	8/23/2017	V 1.30	86	49	0.19	7.40	61	440	< 0.003	< 0.001	0.062	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.833	< 0.0025	< 0.002
	11/7/2017	3.70	98	46	0.17	7.10	88	550	< 0.003	0.0014	0.091	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.309	0.0027	< 0.002
	5/15/2018	0.22	80	45	0.23	7.71	54	500	< 0.003	0.0013	0.065	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	0.0004	< 0.005	< 0.408	< 0.0025	< 0.002
	8/7/2018	1.50	89	54	0.15	7.09	51	530	< 0.003	0.0016	0.067	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.622	< 0.0025	< 0.002
	10/30/2018	0.23	86	43	0.17	7.83	34	480	< 0.003	0.0015	0.067	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.564	< 0.0025	< 0.002
	2/26/2019	0.07	69	49	0.16	7.82	23	400	< 0.003	0.0026	0.041	< 0.001	< 0.0005	< 0.005	< 0.001	0.0013	< 0.01	< 0.0002	< 0.005	< 0.425	< 0.0025	< 0.002
	4/30/2019	0.12	79	48	0.16	7.60	30	440	< 0.003	0.0013	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.441	< 0.0025	< 0.002
	8/26/2019	0.51	86	50	0.18	7.13	32	400	< 0.003	0.0011	0.065	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	1.180	< 0.0025	< 0.002
	2/24/2020	0.33	89	53	0.20	7.43	37	410	< 0.003	0.0011	0.061	< ^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.485	< 0.0025	< 0.002
	4/28/2020	0.33	90	50	0.20	7.32	41	430	NA	0.0016	0.06	NA	NA	< 0.005	< 0.001	< 0.0005	NA	NA	< 0.005	< 0.54	< 0.0025	NA
	12/9/2020	0.66	100	41	0.15	7.78	64	430	NA	< 0.001	0.076	NA	NA	< 0.005	< 0.001	< 0.0005	NA	< 0.0002	0.0059	< 0.471	< 0.0025	NA
	5/11/2021	0.23	79	51	0.21	7.70	37	370	< 0.003	0.0015	0.057	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0095	< 0.528	< 0.0025	< 0.002
	8/24/2021	0.63	94	47	0.17	7.31	56	340	< 0.003	0.0014	0.073	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.47	< 0.0025	< 0.002
	11/30/2021	0.22	87	41	0.14	7.39	^- 36	380	< 0.003	0.0017	0.065	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0045	< 0.0002	< 0.005	0.575	< 0.0025	< 0.002
	2/8/2022	0.27	95	47	0.2	7.69	49	550	< 0.003	0.0017	0.054	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0025	< 0.0002	0.0076	0.554	< 0.0025	< 0.002
	6/7/2022	0.23	86	49	0.16	7.73	32	440	< 0.003	0.0016	0.064	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.0100	< 0.0002	0.0063	0.665	< 0.0025	< 0.002
	8/30/2022	1.1	95	45	0.15	7.22	75	690	< 0.003	< 0.001	0.073	< ^+ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< ^+ 0.0100	< 0.0002	< 0.005	0.535	< 0.0025	< 0.002
	11/14/2022	1.6	96	49	0.21	7.14	63	480	< 0.003	< 0.001	0.083	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.587	< 0.0025	< 0.002

Notes: All units are in mg/l except pH is in standard units.
V- Serial dilution exceeds control limits.
H- Sample was prepped or analyzed beyond specified holding time
F1 - MS and/or MSD Recovery outside of limits.
* - LCS or LCSD is outside acceptance limits.
^ - Denotes instrument related QC exceeds the control limits
NA - Not Analyzed

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Powerton Station, Pekin, IL. Former Ash Basin.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228 Combined	Selenium	Thallium
MW-03 down-gradient	6/20/2017	0.4	76	54	0.29	7.26	49	480	< 0.003	0.0013	0.066	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.325	< 0.0025	< 0.002
	8/23/2017	0.40	79	52	0.28	7.44	52	430	< 0.003	0.0010	0.066	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	1.200	< 0.0025	< 0.002
	11/7/2017	0.31	79	62	0.26	7.04	61	460	< 0.003	0.0013	0.068	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.588	< 0.0025	< 0.002
	5/15/2018	0.35	87	66	0.27	7.53	77	520	< 0.003	0.0010	0.059	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.489	< 0.0025	< 0.002
	8/7/2018	0.40	82	67	0.22	6.60	49	500	< 0.003	0.0015	0.067	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.341	< 0.0025	< 0.002
	10/30/2018	0.20	74	44	0.25	7.84	26	400	< 0.003	0.0014	0.056	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.354	< 0.0025	< 0.002
	2/26/2019	0.06	74	56	0.24	7.49	25	410	< 0.003	0.0013	0.054	< 0.001	< 0.0005	< 0.005	< 0.001	0.0007	< 0.01	< 0.0002	< 0.005	< 0.399	< 0.0025	< 0.002
	4/30/2019	0.28	74	49	0.22	7.17	38	390	< 0.003	< 0.001	0.060	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.668	< 0.0025	< 0.002
	8/26/2019	0.31	75	50	0.26	7.17	14	380	< 0.003	0.0014	0.069	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.444	< 0.0025	< 0.002
	2/24/2020	0.33	87	53	0.22	7.10	65	470	< 0.003	< 0.001	0.066	< ^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.400	< 0.0025	< 0.002
	4/28/2020	0.24	86	46	0.22	7.03	79	410	NA	0.0013	0.066	NA	NA	< 0.005	< 0.001	< 0.0005	NA	NA	< 0.005	< 0.498	0.0036	NA
	12/9/2020	0.86	92	45	0.28	7.46	60	390	NA	< 0.001	0.086	NA	NA	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.432	< 0.0025	NA
	5/11/2021	0.22	75	49	0.21	7.33	38	390	< 0.003	< 0.001	0.07	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.519	< 0.0025	< 0.002
	8/24/2021	0.41	81	46	0.25	7.15	32	310	< 0.003	0.0012	0.072	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.444	< 0.0025	< 0.002
	11/30/2021	0.3	76	47	0.26	7.20	^- 23	350	< 0.003	0.0014	0.063	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.004	< 0.0002	< 0.005	< 0.436	< 0.0025	< 0.002
	2/8/2022	0.2	94	47	0.21	7.22	50	550	< 0.003	0.001	0.058	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.003	< 0.0002	< 0.005	0.593	< 0.0025	< 0.002
	6/7/2022	0.37	79	45	0.22	7.37	47	370	< 0.003	0.0012	0.064	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.851	< 0.0025	< 0.002
	8/30/2022	0.57	87	50	0.21	7.10	51	710	< 0.003	< 0.001	0.1	< ^+ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< ^+ 0.01	< 0.0002	< 0.005	0.589	< 0.0025	< 0.002
	11/14/2022	0.42	81	49	0.28	7.23	44	430	< 0.003	< 0.001	0.11	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.54	< 0.0025	< 0.002
MW-04 down-gradient	6/20/2017	0.5	77	55	0.29	7.45	53	480	< 0.003	< 0.001	0.0025	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.343	< 0.0025	< 0.002
	8/28/2017	V 0.73	90	89	0.33	7.13	110	680	< 0.003	< 0.001	0.028	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.013	< 0.246	< 0.0025	< 0.002
	11/7/2017	0.60	110	94	0.24	6.80	130	650	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.332	0.0092	< 0.002
	5/15/2018	0.68	87	66	0.27	7.63	100	630	< 0.003	< 0.001	0.037	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.661	< 0.0025	< 0.002
	8/7/2018	0.79	84	71	0.32	6.72	49	510	< 0.003	0.0011	0.031	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.006	< 0.334	< 0.0025	< 0.002
	10/30/2018	0.54	100	80	0.24	7.55	91	690	< 0.003	< 0.001	0.049	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.423	< 0.0025	< 0.002
	2/26/2019	0.38	79	55	0.25	7.18	52	490	< 0.003	0.0013	0.033	< 0.001	< 0.0005	< 0.005	0.001	0.0012	< 0.01	< 0.0002	< 0.005	0.366	< 0.0025	< 0.002
	4/30/2019	0.36	74	48	0.25	7.08	35	380	< 0.003	< 0.001	0.026	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.684	< 0.0025	< 0.002
	8/26/2019	0.64	91	60	0.24	7.08	14	490	< 0.003	< 0.001	0.032	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.008	1.090	< 0.0025	< 0.002
	2/24/2020	0.34	81	49	0.20	7.05	67	440	< 0.003	< 0.001	0.024	< ^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.595	< 0.0025	< 0.002
	4/28/2020	0.55	76	52	0.27	7.03	47	380	NA	< 0.001	0.025	NA	NA	< 0.005	< 0.001	< 0.0005	NA	NA	< 0.005	< 0.465	< 0.0025	NA
	12/9/2020	0.57	92	88	0.32	7.10	94	580	NA	< 0.001	0.034	NA	NA	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0076	< 0.411	< 0.0025	NA
	5/11/2021	0.61	77	44	0.33	7.22	76	410	< 0.003	< 0.001	0.025	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.533	< 0.0025	< 0.002
	8/24/2021	0.72	78	48	0.34	7.12	15	100	< 0.003	< 0.001	0.024	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.014	< 0.427	< 0.0025	< 0.002
	11/30/2021	0.51	99	56	0.25	6.95	^- 62	560	< 0.003	0.0012	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0035	< 0.0002	< 0.005	< 0.419	< 0.0025	< 0.002
	2/8/2022	0.47	88	59	0.29	7.15	52	580	< 0.003	< 0.001	0.03	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0038	< 0.0002	0.006	0.818	< 0.0025	< 0.002
	6/7/2022	0.48	73	43	0.3	7.31	30	320	< 0.003	< 0.001	0.025	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0051	< 0.473	< 0.0025	< 0.002
	8/30/2022	0.67	94	61	0.21	6.80	67	720	< 0.003	< 0.001	0.034	< ^+ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< ^+ 0.01	< 0.0002	< 0.005	< 0.546	< 0.0025	< 0.002
	11/14/2022	0.84	110	62	0.2	6.85	41	570	< 0.003	< 0.001	0.08	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.583	0.0074	< 0.002
MW-05 down-gradient	5/17/2016	0.70	100	85	0.35	7.08	120	660	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.373	< 0.0025	< 0.002
	8/16/2016	0.69	110	97	0.30	6.85	150	830	< 0.003	< 0.001	0.060	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.452	< 0.0025	< 0.002
	11/15/2016	0.93	94	66	0.23	6.96	77	620	< 0.003	< 0.001	0.051	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.449	< 0.0025	< 0.002
	2/14/2017	0.79	100	100	0.25	7.25	170	760	< 0.003	< 0.001	0.062	< 0.001	< 0.0005	< 0.005	< 0.001	0.00091	< 0.01	< 0.0002	< 0.005	< 0.359	< 0.0025	< 0.002
	5/1/2017	0.70	100	92	0.28	7.60	170	710	< 0.003	< 0.001	0.059	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0066	< 0.439	< 0.0025	< 0.002
	6/20/2017	0.64	89	63	0.28	7.32	78	550	< 0.003	< 0.001	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0061	< 0.365	< 0.0025	< 0.002
	8/28/2017	0.62	110	120	0.33	7.05	210	870	< 0.003	< 0.001	0.064	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0085	0.381	< 0.0025	< 0.002
	11/7/2017	0.51	99	110	0.31	6.87	160	990	< 0.003	< 0.001	0.058	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.341	< 0.0025	< 0.002
	5/15/2018	0.61	130	89	0.29	7.70	210	910	< 0.003	< 0.001	0.062	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.390	< 0.0025	< 0.002
	8/7/2018	0.49	110	120	0.32	6.56	180	890	< 0.003	< 0.001	0.054	<^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0069	0.523	< 0.0025	< 0.002
	4/30/2019	0.56	84	73	0.36	6.96	120	590	< 0.003	< 0.001	0.041	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0061	< 0.709	< 0.0025	< 0.002
	8/26/2019	0.57	110	75	0.29	7.01	110	660	< 0.003	< 0.001	0.050	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0067	0.651	< 0.0025	< 0.002
	2/24/2020	0.54	110	70	0.36	6.90	120	H 700	< 0.003	< 0.001	0.057	< ^ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0061	0.506	< 0.0025	< 0.002
	4/28/2020	0.49	110	56	0.37	6.87	130	620	NA	0.001	0.052	NA	NA	< 0.005	< 0.001	< 0.0005	NA	NA	0.0074	0.508	< 0.0025	NA
	12/9/2020	0.53	98	78	0.31	6.91	110	670	NA	< 0.001	0.05	NA	NA	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0072	0.569	< 0.0025	NA
	5/11/2021	0.50	83	52	0.38	7.20	100	530	< 0.003	< 0.001	0.04	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0062	< 0.525	< 0.0025	< 0.002
	8/24/2021	0.55	88	69	0.32	6.84	99	500	< 0.003	< 0.001	0.041	< 0.001	< 0.0005	0.007	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0073	0.863	< 0.0025	< 0.002
	11/30/2021	0.68	99	67	0.3	6.92	^- 92	620	< 0.003	0.0011	0.048	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0052	< 0.0002	0.0051	0.632	< 0.0025	< 0.002
	2/8/2022	0.56	88	68	0.36	6.95	91	650	< 0.003	< 0.001	0.043	< 0.001	0.00066	< 0.005	0.0023	0.0017	0.0051	< 0.0002	0.007	< 0.438	< 0.0025	< 0.002
	6/7/2022	0.59	110	58	0.27	7.15	120	650	< 0.003	< 0.001	0.052	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	0.00034	< 0.005	< 0.468	< 0.0025	< 0.002
	8/30/2022	0.69	79	73	0.38	6.94	86	720	< 0.003	< 0.001	0.029	< ^+ 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< ^+ 0.01	< 0.0002	0.0073	< 0.538	< 0.0025	< 0.002
	11/14/2022	1.1	96	64	0.29	6.87	93	600	< 0.003	< 0.001	0.072	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.0064	< 0.573	< 0.0025	< 0.002

Notes: All units are in mg/l except pH is in standard units.
V- Serial dilution exceeds control limits.
H- Sample was prepped or analyzed beyond specified holding time

F1 - MS and/or MSD Recovery outside of limits.
* - LCS or LCSD is outside acceptance limits.
^ - Denotes instrument related QC exceeds the control limits

NA - Not Analyzed

Table 2. Groundwater Turbidity - Midwest Generation, LLC, Powerton Station, Pekin, IL. Former Ash Basin.

Well	Date	Turbidity (NTU)
MW-01	2/23/2021	78.20
	4/9/2021	6.96
	5/10/2021	3.24
	6/2/2021	3.80
	6/28/2021	4.30
	7/19/2021	4.88
	8/24/2021	3.34
	9/30/2021	3.04
	11/30/2021	5.43
	2/9/2022	11.5
	6/7/2022	3.63
	8/30/2022	4.73
	11/15/2022	3.9
MW-10	2/23/2021	257.70
	4/9/2021	54.91
	5/11/2021	24.74
	6/2/2021	6.02
	6/28/2021	14.11
	7/19/2021	17.53
	8/24/2021	41.55
	9/30/2021	17.07
	11/30/2021	11.92
	2/9/2022	224.6
	6/7/2022	7.88
	8/30/2022	13.34
	11/15/2022	23.18
MW-02	2/22/2021	19.60
	4/8/2021	4.55
	5/11/2021	1.82
	6/2/2021	2.06
	6/28/2021	2.67
	7/19/2021	3.56
	8/24/2021	5.23
	10/1/2021	2.76
	11/30/2021	0.0
	2/8/2022	0.0
	6/7/2022	2.03
	8/30/2022	2.46
	11/14/2022	29.35
MW-03	2/22/2021	8.20
	4/8/2021	4.00
	5/11/2021	2.68
	6/2/2021	3.63
	6/28/2021	3.32
	7/19/2021	4.22
	8/24/2021	5.75
	10/1/2021	2.45
	11/30/2021	0.0
	2/8/2022	0.0
	6/7/2022	1.72
	8/30/2022	2.67
	11/14/2022	4.03
MW-04	2/22/2021	4.20
	4/8/2021	4.05
	5/11/2021	4.33
	6/2/2021	2.12
	6/28/2021	8.21
	7/19/2021	3.84
	8/24/2021	2.92
	10/1/2021	2.72
	11/30/2021	0.0
	2/8/2022	11.09
	6/7/2022	1.62
	8/30/2022	4.05
	11/14/2022	20.70
MW-05	2/22/2021	1.72
	4/8/2021	4.00
	5/11/2021	1.82
	6/2/2021	1.88
	6/28/2021	3.49
	7/19/2021	8.39
	8/24/2021	3.20
	10/1/2021	3.12
	11/30/2021	0.0
	2/8/2022	0.0
	6/7/2022	2.33
	8/30/2022	2.70
	11/14/2022	2.05

Table 3. Proposed Site-Specific Groundwater Protection Standards - Powerton Former Ash Basin

Upgradient Well(s)	Parameter	Section 845.600 Standards	Interwell Background Prediction Limit	**Proposed GWPS**
MW-01 & MW-10	Antimony	0.006	0.003	**0.006**
MW-10	Arsenic	0.01	0.04	**0.04**
MW-01	Barium	2	0.08	**2**
MW-01 & MW-10	Beryllium	0.004	0.001	**0.004**
MW-01	Boron	2.0	1.086	**2**
MW-01 & MW-10	Cadmium	0.005	0.0015	**0.005**
MW-01 & MW-10	Chloride	200	63.49	**200**
MW-01 & MW-10	Chromium	0.1	0.063	**0.1**
MW-10	Cobalt	0.006	0.143	**0.143**
MW-01	Combined Radium 226 + 228 (pCi/L)	5.0	0.953	**5.0**
MW-01	Fluoride	4.0	0.279	**4.0**
MW-10	Lead	0.0075	0.1164	**0.1164**
MW-01 & MW-10	Lithium	0.04	0.032	**0.04**
MW-01 & MW-10	Mercury	0.002	0.0002	**0.002**
MW-01 & MW-10	Molybdenum	0.10	0.01	**0.1**
MW-01 & MW-10	pH (standard units)	6.5-9.0	6.45 - 7.78	**6.5 - 9.0**
MW-10	Selenium	0.05	0.007	**0.05**
MW-01 & MW-10	Sulfate	400	89.86	**400**
MW-01 & MW-10	Thallium	0.002	0.002	**0.002**
MW-01 & MW-10	Total Dissolved Solids	1200	644.5	**1200**
MW-01 & MW-10	Calcium	NE	139	**139**
MW-10	Turbidity	NE	581.2	**581.2**

All values are in mg/L (ppm) unless otherwise noted.
NE - Not Established
Bold - Site-specific Groundwater Protection Standard based on Section 845.600(a)(2)
TBD - To be determined

Table 4. Groundwater Elevations for FAB Wells- Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-01	11/16/2015	465.24	26.04	439.20
	2/22/2016	465.24	21.90	443.34
	5/16/2016	465.24	21.83	443.41
	8/15/2016	465.24	23.89	441.35
	11/14/2016	465.24	23.38	441.86
	2/13/2017	465.24	21.71	443.53
	5/1/2017	465.24	18.87	446.37
	6/20/2017	465.24	21.54	443.70
	8/25/2017	465.24	24.70	440.54
	11/8/2017	465.24	24.92	440.32
	5/17/2018	465.24	22.66	442.58
	8/8/2018	465.24	26.05	439.19
	10/30/2018	465.24	24.69	440.55
	2/25/2019	465.24	19.44	445.80
	4/29/2019	465.24	20.15	445.09
	8/26/2019	465.24	23.85	441.39
	2/24/2020	465.24	20.71	444.53
	4/27/2020	465.24	20.90	444.34
	12/7/2020	465.24	25.69	439.55
	2/22/2021	465.24	25.18	440.06
	4/7/2021	465.24	22.20	443.04
	5/10/2021	465.24	23.41	441.83
	6/2/2021	465.24	22.00	443.24
	6/28/2021	465.24	23.18	442.06
	7/19/2021	465.24	20.43	444.81
	8/23/2021	465.24	24.42	440.82
	9/30/2021	465.24	26.89	438.35
	10/27/2021	465.24	24.53	440.71
	11/29/2021	465.24	23.31	441.93
	12/30/2021	465.24	24.31	440.93
	1/6/2022	465.24	24.86	440.38
	2/7/2022	465.24	25.57	439.67
	3/1/2022	465.24	21.96	443.28
	4/22/2022	465.24	20.03	445.21
	5/24/2022	465.24	21.37	443.87
	6/6/2022	465.24	22.13	443.11
	7/25/2022	465.24	25.48	439.76
	8/29/2022	465.24	27.53	437.71
	9/28/2022	465.24	28.58	436.66
	10/26/2022	465.24	29.75	435.49
	11/14/2022	465.24	29.58	435.66
	12/28/2022	465.24	26.63	438.61
MW-02	6/20/2017	462.60	22.04	440.56
	8/23/2017	462.60	28.42	434.18
	11/7/2017	462.60	26.08	436.52
	5/17/2018	462.60	23.26	439.34
	8/7/2018	462.60	29.70	432.90
	10/30/2018	462.60	26.77	435.83
	2/25/2019	462.60	17.02	445.58
	4/29/2019	462.60	19.26	443.34
	8/26/2019	462.60	27.45	435.15
	2/24/2020	462.60	20.35	442.25
	4/27/2020	462.60	20.51	442.09
	12/7/2020	462.60	28.71	433.89
	2/22/2021	462.60	25.90	436.70
	4/7/2021	462.60	21.95	440.65
	5/10/2021	462.60	23.01	439.59
	6/2/2021	462.60	21.74	440.86
	6/28/2021	462.60	22.24	440.36
	7/19/2021	462.60	18.66	443.94
	8/23/2021	462.60	27.95	434.65
	9/30/2021	462.60	30.44	432.16
	10/27/2021	462.60	22.74	439.86
	11/29/2021	462.60	25.57	437.03
	12/30/2021	462.60	25.11	437.49
	1/6/2022	462.60	24.96	437.64
	2/7/2022	462.60	27.47	435.13
	3/1/2022	462.60	18.06	444.54
	4/22/2022	462.60	18.63	443.97
	5/24/2022	462.60	21.44	441.16
	6/6/2022	462.60	21.14	441.46
	7/25/2022	462.60	29.28	433.32
	8/29/2022	462.60	30.28	432.32
	9/28/2022	462.60	31.81	430.79
	10/26/2022	462.60	32.84	429.76
	11/14/2022	462.60	32.03	430.57
	12/28/2022	462.60	29.35	433.25

Table 4. Groundwater Elevations for FAB Wells- Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-03	6/20/2017	462.48	22.31	440.17
	8/23/2017	462.48	28.18	434.30
	11/7/2017	462.48	25.38	437.10
	5/17/2018	462.48	22.62	439.86
	8/7/2018	462.48	29.17	433.31
	10/30/2018	462.48	24.71	437.77
	2/25/2019	462.48	17.20	445.28
	4/29/2019	462.48	18.85	443.63
	8/26/2019	462.48	27.65	434.83
	2/24/2020	462.48	20.18	442.30
	4/27/2020	462.48	20.43	442.05
	12/7/2020	462.48	28.61	433.87
	2/22/2021	462.48	23.48	439.00
	4/7/2021	462.48	21.73	440.75
	5/10/2021	462.48	22.98	439.50
	6/2/2021	462.48	21.53	440.95
	6/28/2021	462.48	21.98	440.50
	7/19/2021	462.48	18.35	444.13
	8/23/2021	462.48	27.85	434.63
	9/30/2021	462.48	30.32	432.16
	10/27/2021	462.48	22.34	440.14
	11/29/2021	462.48	22.86	439.62
	12/30/2021	462.48	23.14	439.34
	1/6/2022	462.48	23.13	439.34
	2/7/2022	462.48	24.08	438.40
	3/1/2022	462.48	18.92	443.56
	4/22/2022	462.48	17.98	444.50
	5/24/2022	462.48	21.14	441.34
	6/6/2022	462.48	22.50	439.98
	7/25/2022	462.48	29.11	433.37
	8/29/2022	462.48	30.31	432.17
	9/28/2022	462.48	32.27	430.21
	10/26/2022	462.48	33.83	428.65
	11/14/2022	462.48	33.51	428.97
	12/28/2022	462.48	30.21	432.27
MW-04	6/20/2017	460.57	22.15	438.42
	8/28/2017	460.57	28.49	432.08
	11/7/2017	460.57	25.62	434.95
	5/17/2018	460.57	24.13	436.44
	8/7/2018	460.57	29.23	431.34
	10/30/2018	460.57	26.58	433.99
	2/25/2019	460.57	15.45	445.12
	4/29/2019	460.57	15.88	444.69
	8/26/2019	460.57	27.35	433.22
	2/24/2020	460.57	19.81	440.76
	4/27/2020	460.57	19.76	440.81
	12/7/2020	460.57	28.50	432.07
	2/22/2021	460.57	26.44	434.13
	4/7/2021	460.57	21.90	438.67
	5/10/2021	460.57	23.92	436.65
	6/2/2021	460.57	21.41	439.16
	6/28/2021	460.57	22.40	438.17
	7/19/2021	460.57	17.22	443.35
	8/23/2021	460.57	27.81	432.76
	9/30/2021	460.57	30.01	430.56
	10/27/2021	460.57	22.29	438.28
	11/29/2021	460.57	25.83	434.74
	12/30/2021	460.57	25.79	434.78
	1/6/2022	460.57	25.30	435.27
	2/7/2022	460.57	27.95	432.62
	3/1/2022	460.57	16.63	443.94
	4/22/2022	460.57	16.81	443.76
	5/24/2022	460.57	20.89	439.68
	6/6/2022	460.57	22.89	437.68
	7/25/2022	460.57	29.18	431.39
	8/29/2022	460.57	29.71	430.86
	9/28/2022	460.57	31.42	429.15
	10/26/2022	460.57	32.38	428.19
	11/14/2022	460.57	32.80	427.77
	12/28/2022	460.57	29.21	431.36

Table 4. Groundwater Elevations for FAB Wells- Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-05	11/16/2015	458.58	26.39	432.19
	2/22/2016	458.66	21.12	437.54
	5/16/2016	458.66	16.58	442.08
	8/15/2016	458.66	23.59	435.07
	11/14/2016	458.66	22.72	435.94
	2/13/2017	458.66	19.13	439.53
	5/1/2017	458.66	13.09	445.57
	6/20/2017	458.66	19.43	439.15
	8/28/2017	458.66	25.38	433.20
	11/7/2017	458.66	22.91	435.67
	5/17/2018	458.66	21.54	437.04
	8/7/2018	458.66	26.17	432.41
	10/30/2018	458.66	23.97	434.61
	2/25/2019	458.66	13.21	445.45
	4/29/2019	458.66	15.40	443.26
	8/26/2019	458.66	24.35	434.31
	2/24/2020	458.66	17.25	441.41
	4/27/2020	458.66	17.41	441.25
	12/7/2020	458.66	25.65	433.01
	2/22/2021	458.66	23.82	434.84
	4/7/2021	458.66	19.40	439.26
	5/10/2021	458.66	21.38	437.28
	6/2/2021	458.66	18.99	439.67
	6/28/2021	458.66	22.20	436.46
	7/19/2021	458.66	14.98	443.68
	8/23/2021	458.66	24.85	433.81
	9/30/2021	458.66	26.98	431.68
	10/27/2021	458.66	20.00	438.66
	11/29/2021	458.66	23.13	435.53
	12/30/2021	458.66	23.20	435.46
	1/6/2022	458.66	22.80	435.86
	2/7/2022	458.66	25.22	433.44
	3/1/2022	458.66	14.52	444.14
	4/22/2022	458.66	14.59	444.07
	5/24/2022	458.66	18.32	440.34
	6/6/2022	458.66	17.06	441.60
	7/25/2022	458.66	26.02	432.64
	8/29/2022	458.66	26.70	431.96
	9/28/2022	458.66	28.10	430.56
	10/26/2022	458.66	28.96	429.70
	11/14/2022	458.66	28.44	430.22
	12/28/2022	458.66	26.04	432.62
MW-10	6/22/2017	457.31	13.46	443.85
	8/24/2017	457.31	16.39	440.92
	11/9/2017	457.31	16.86	440.45
	5/16/2018	457.31	14.88	442.43
	8/8/2018	457.31	17.88	439.43
	10/30/2018	457.31	17.04	440.27
	2/25/2019	457.31	11.28	446.03
	4/29/2019	457.31	11.88	445.43
	8/26/2019	457.31	15.89	441.42
	2/24/2020	457.31	12.64	444.67
	4/27/2020	457.31	12.75	444.56
	12/7/2020	457.31	17.80	439.51
	2/22/2021	457.31	17.25	440.06
	4/7/2021	457.31	14.21	443.10
	5/10/2021	457.31	15.58	441.73
	6/2/2021	457.31	13.98	443.33
	6/28/2021	457.31	15.28	442.03
	7/19/2021	457.31	12.30	445.01
	8/23/2021	457.31	16.61	440.70
	9/30/2021	457.31	18.67	438.64
	10/25/2021	457.31	16.23	441.08
	11/29/2021	457.31	15.52	441.79
	12/30/2021	457.31	16.50	440.81
	1/6/2022	457.31	16.82	440.49
	2/7/2022	457.31	17.70	439.61
	3/1/2022	457.31	13.77	443.54
	4/22/2022	457.31	11.80	445.51
	5/24/2022	457.31	13.20	444.11
	6/6/2022	457.31	14.07	443.24
	7/25/2022	457.31	17.53	439.78
	8/29/2022	457.31	19.08	438.23
	9/28/2022	457.31	20.16	437.15
	10/26/2022	457.31	21.23	436.08
	11/14/2022	457.31	21.06	436.25
	12/28/2022	457.31	18.71	438.60

MSL - Mean Sea Level
TOC - Top of Casing

Table 5. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Powerton Generation Station - Former Ash Basin

DATE	Screened Unit	Groundwater Flow Direction	K_{avg} (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
1/6/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0031	0.35	1.06
2/7/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0039	0.35	1.34
3/1/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0022	0.35	0.75
4/22/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0017	0.35	0.58
5/24/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0030	0.35	1.03
6/6/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0026	0.35	0.89
7/25/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0045	0.35	1.54
8/29/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0043	0.35	1.48
9/28/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0053	0.35	1.82
10/26/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0043	0.35	1.48
11/14/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0041	0.35	1.41
12/28/2022	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0039	0.35	1.34

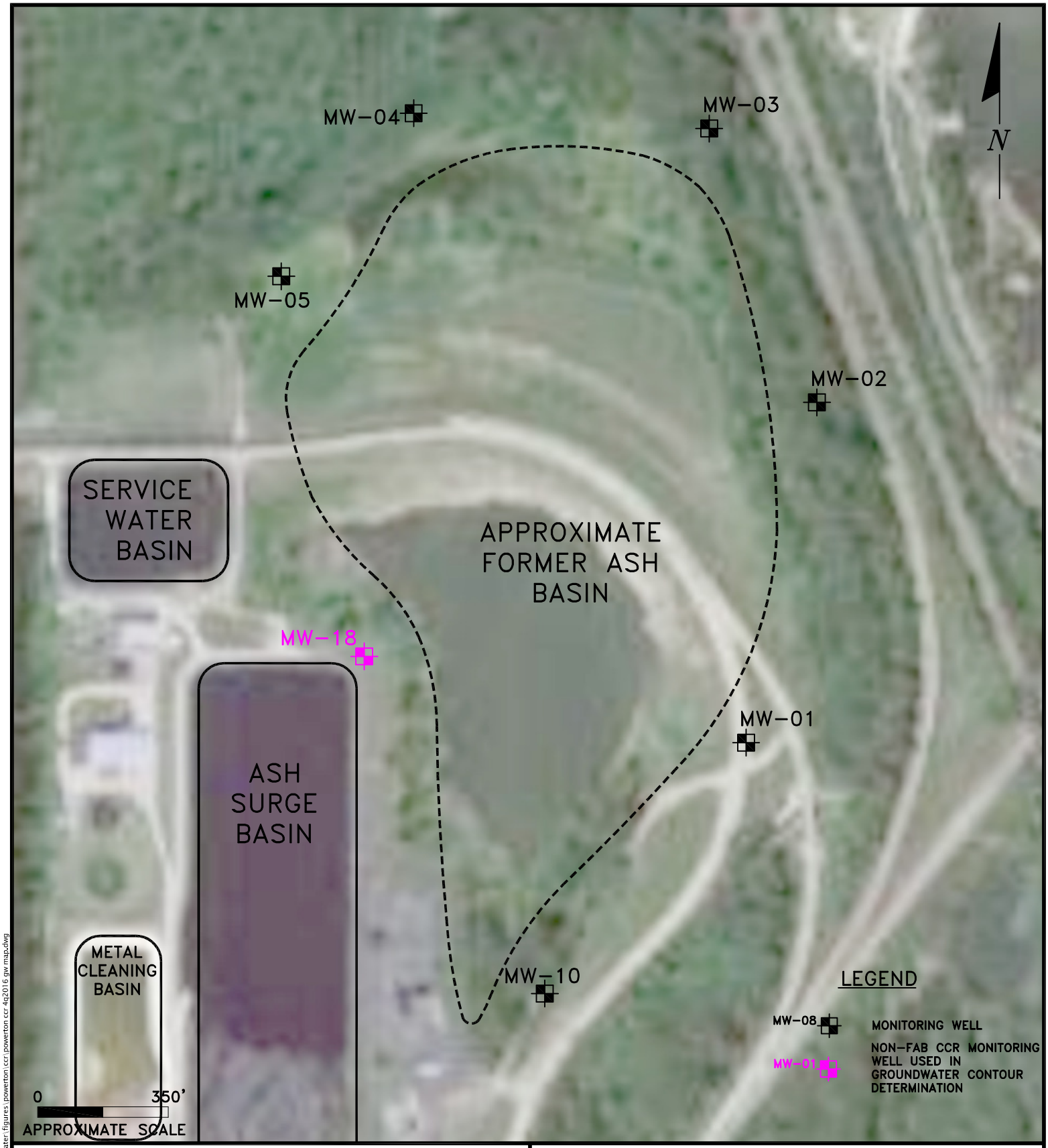
* Kavg - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.

** - Porosity estimates from Applied Hydrogeology, Fetter, 1980.

Table 6. CCR Groundwater Sample Collection Summary for 2022 - Powerton Generating Station Former Ash Basin

Well ID	Number of Groundwater Sampling Events	Dates of Groundwater Sampling Events
MW-01 (Upgradient)	4	2/9/2022
		6/7/2022
		8/30/2022
		11/15/2022
MW-10 (Upgradient)	4	2/9/2022
		6/7/2022
		8/30/2022
		11/15/2022
MW-02 (Downgradient)	4	2/8/2022
		6/7/2022
		8/30/2022
		11/14/2022
MW-03 (Downgradient)	4	2/8/2022
		6/7/2022
		8/30/2022
		11/14/2022
MW-04 (Downgradient)	4	2/8/2022
		6/7/2022
		8/30/2022
		11/14/2022
MW-05 (Downgradient)	4	2/8/2022
		6/7/2022
		8/30/2022
		11/14/2022

FIGURES



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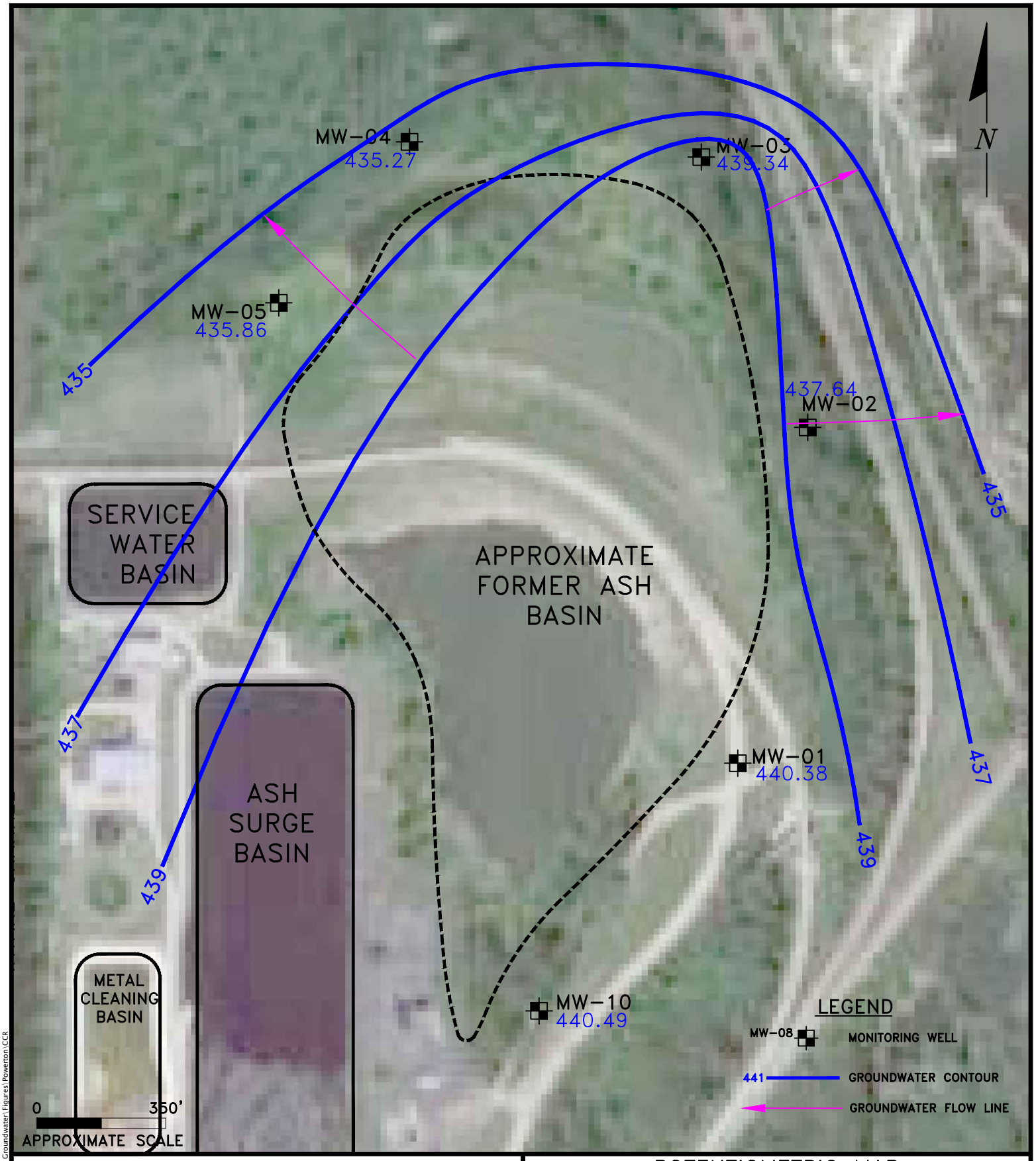
FORMER ASH BASIN CCR MONITORING WELL SITE MAP

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 07, 2019

KPRG Project No. 12313.1 | FIGURE 1

ATTACHMENT 1
Monthly Potentiometric Maps



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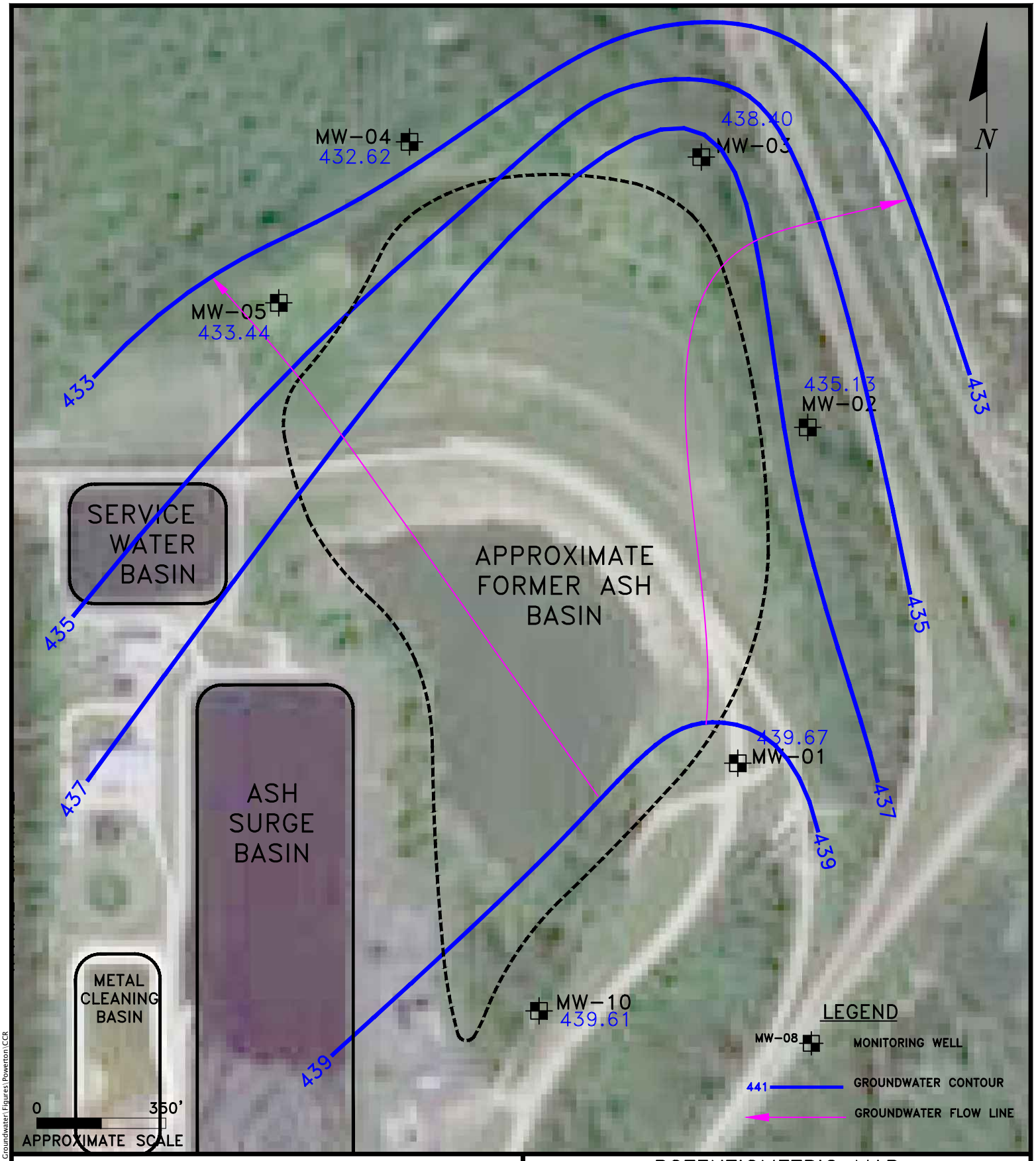
POTENTIOMETRIC MAP
FORMER ASH BASIN 01/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 02/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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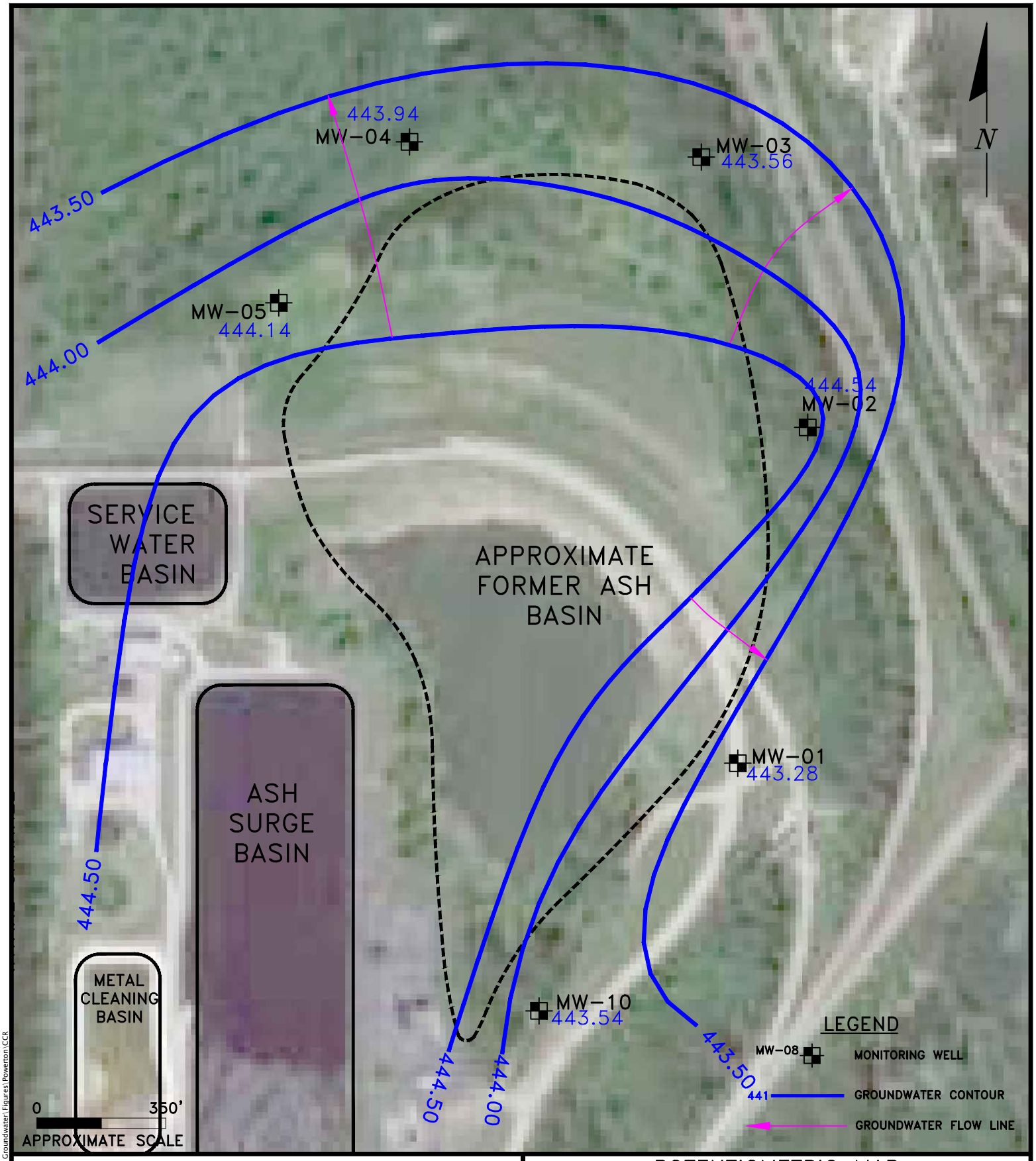

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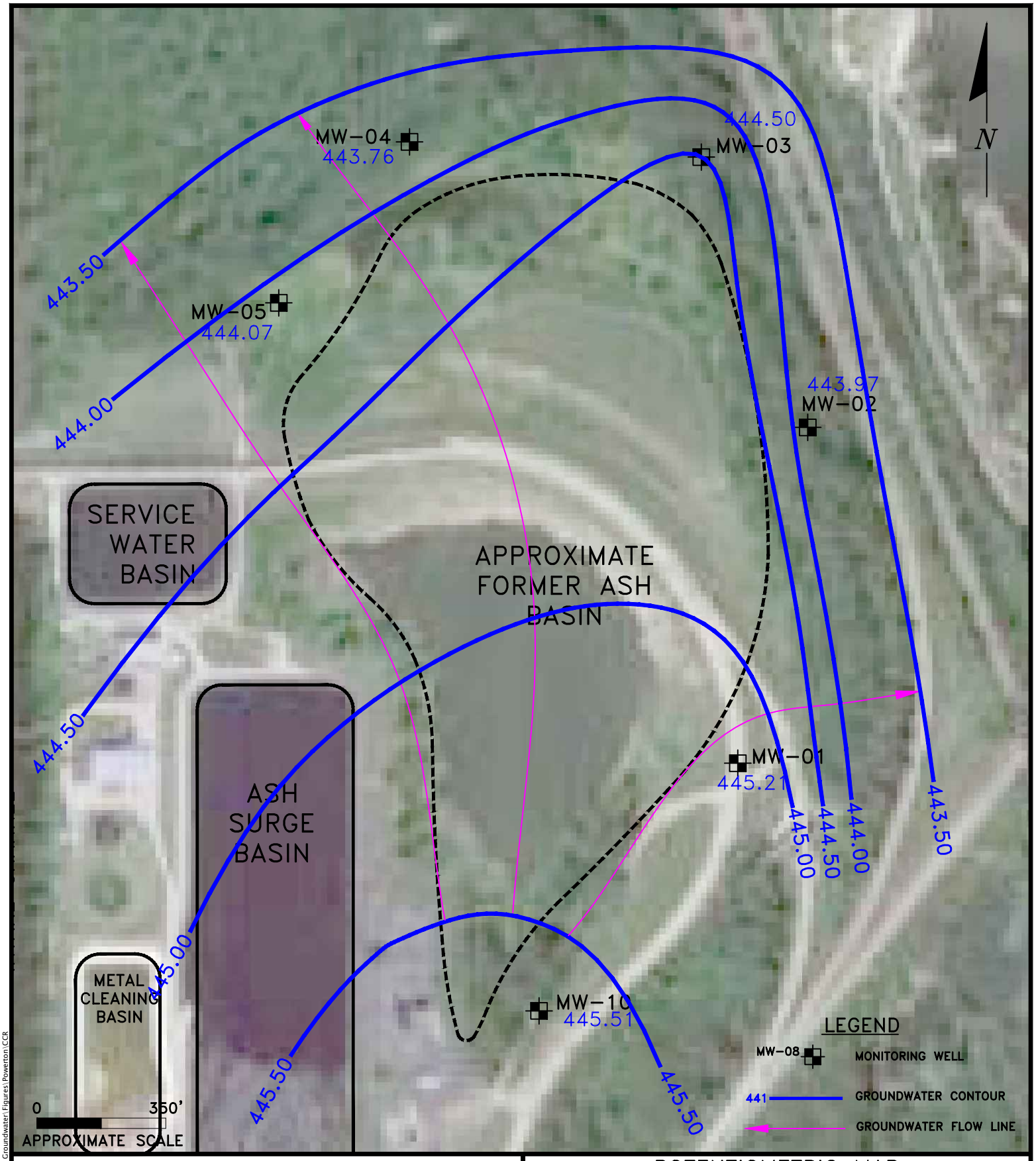
POTENTIOMETRIC MAP
FORMER ASH BASIN 03/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 04/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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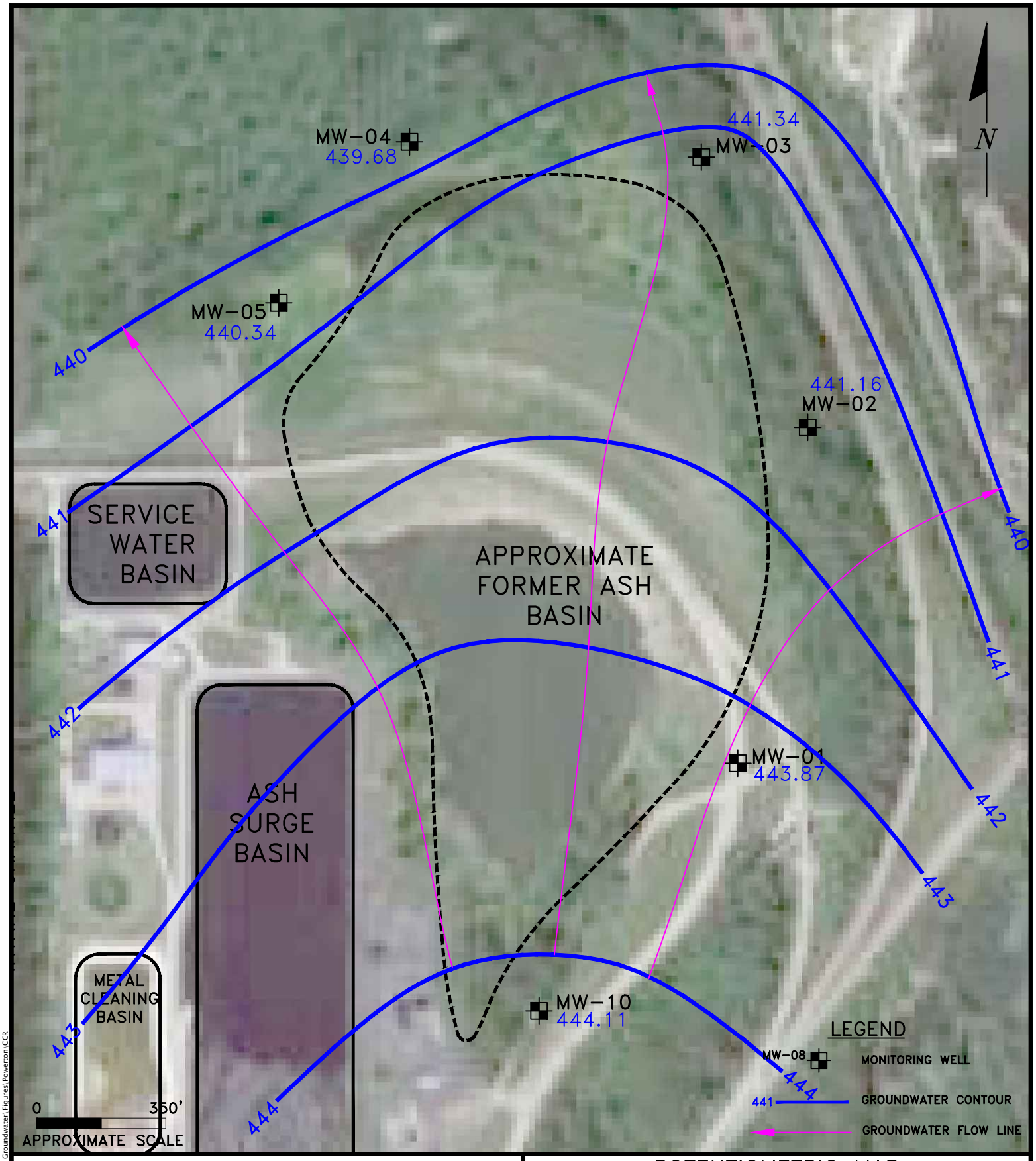

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POTENTIOMETRIC MAP
FORMER ASH BASIN 05/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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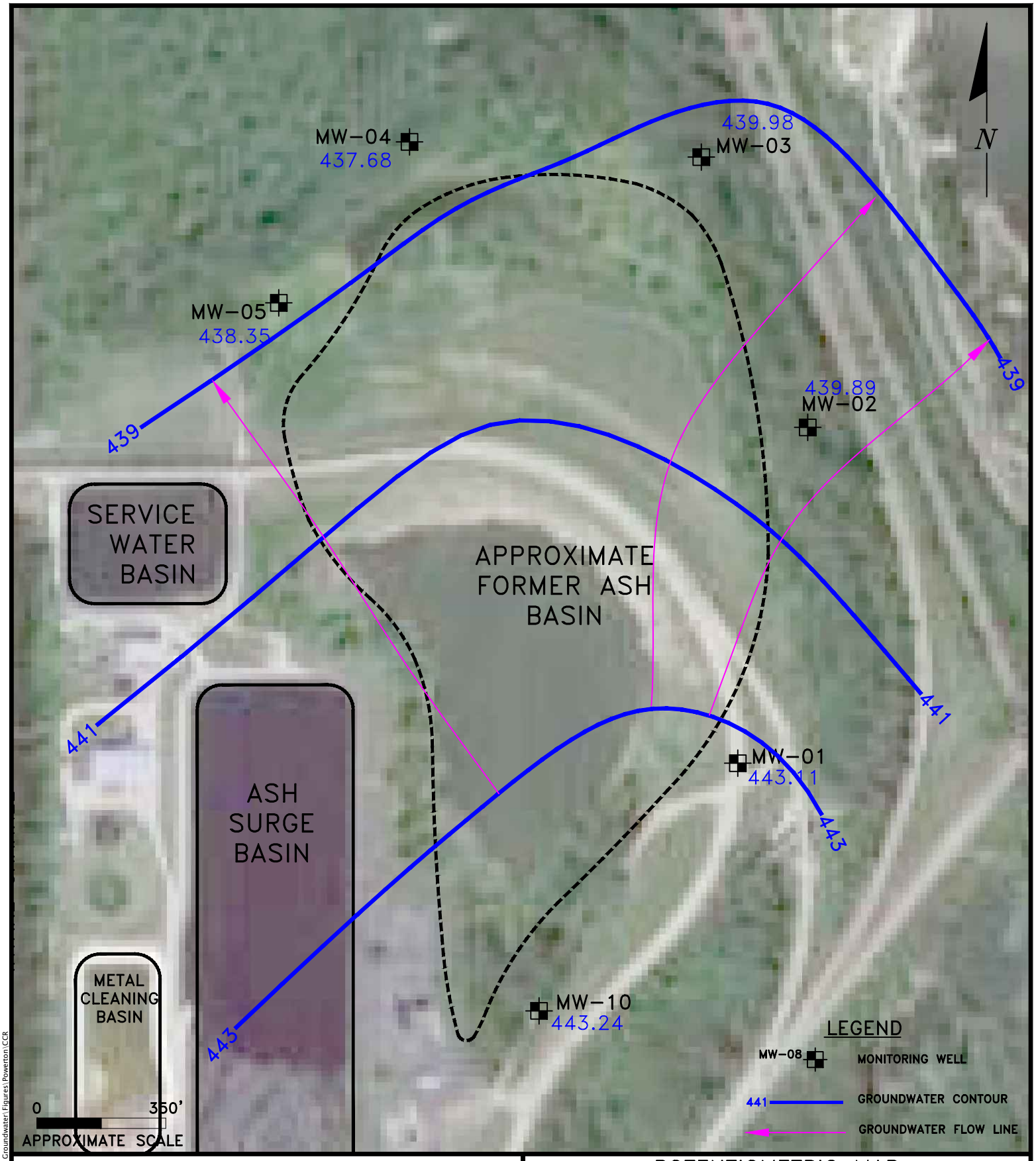

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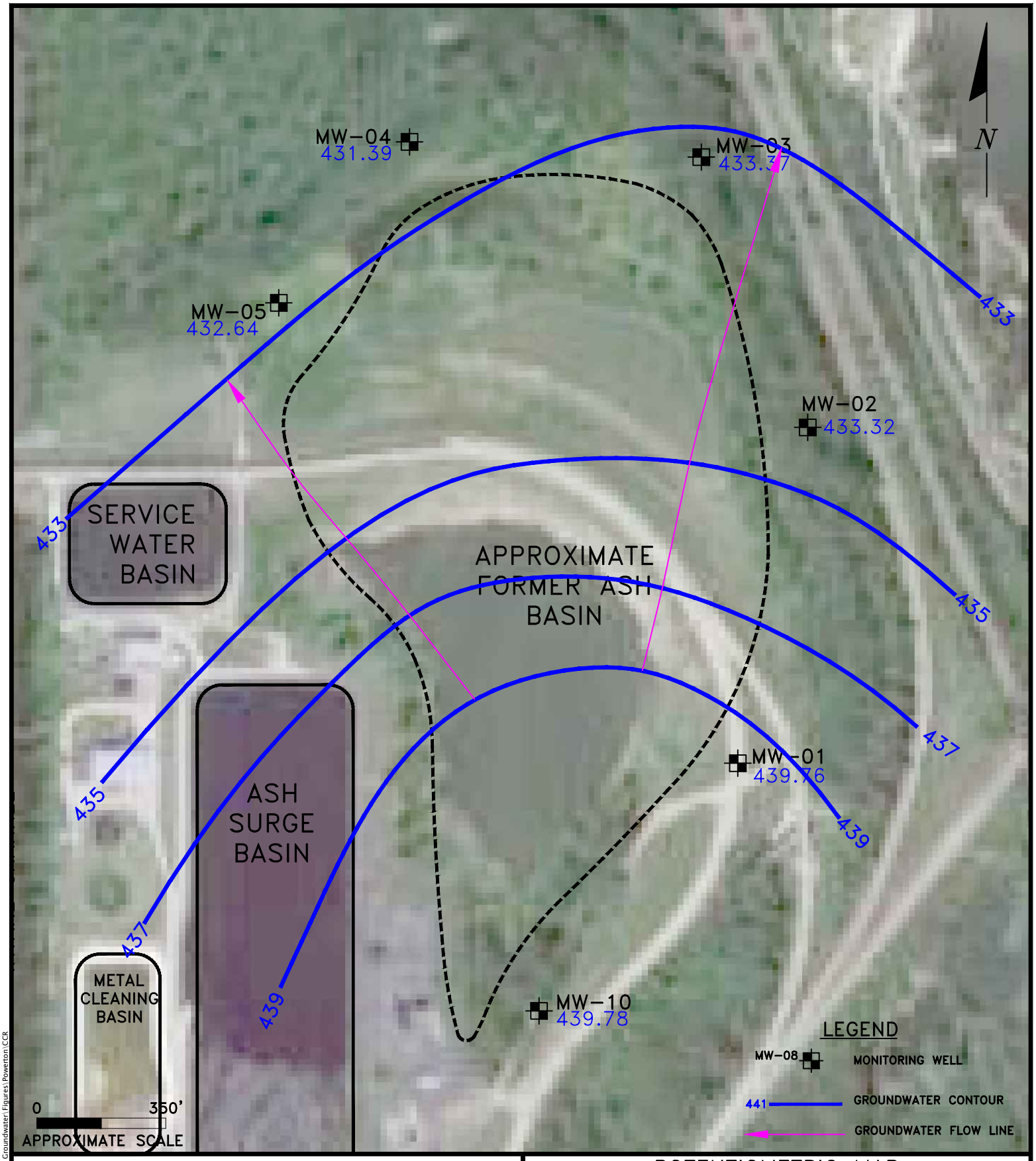
POTENTIOMETRIC MAP
FORMER ASH BASIN 06/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 07/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 16, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

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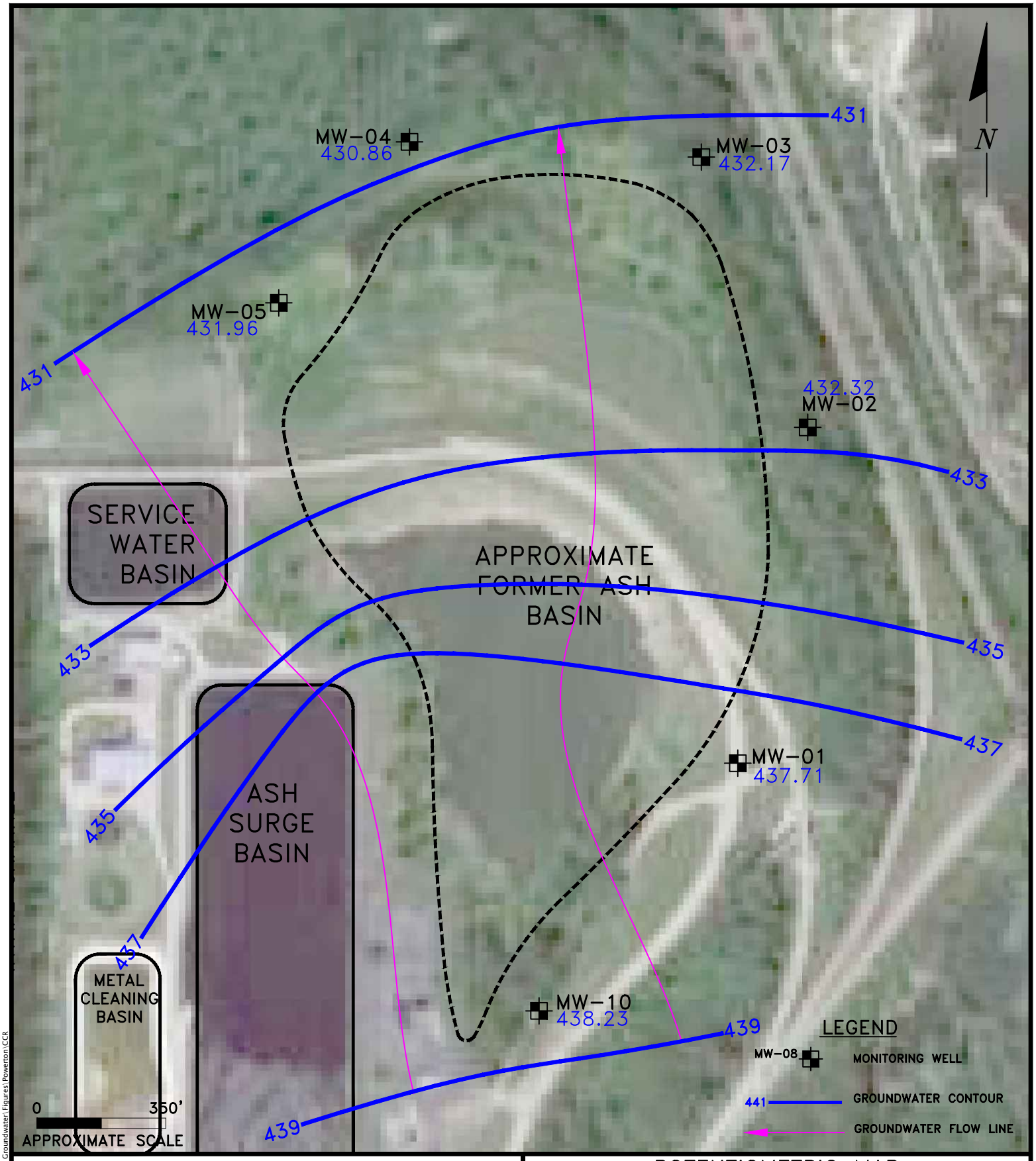

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POTENTIOMETRIC MAP
FORMER ASH BASIN 08/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: October 13, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1

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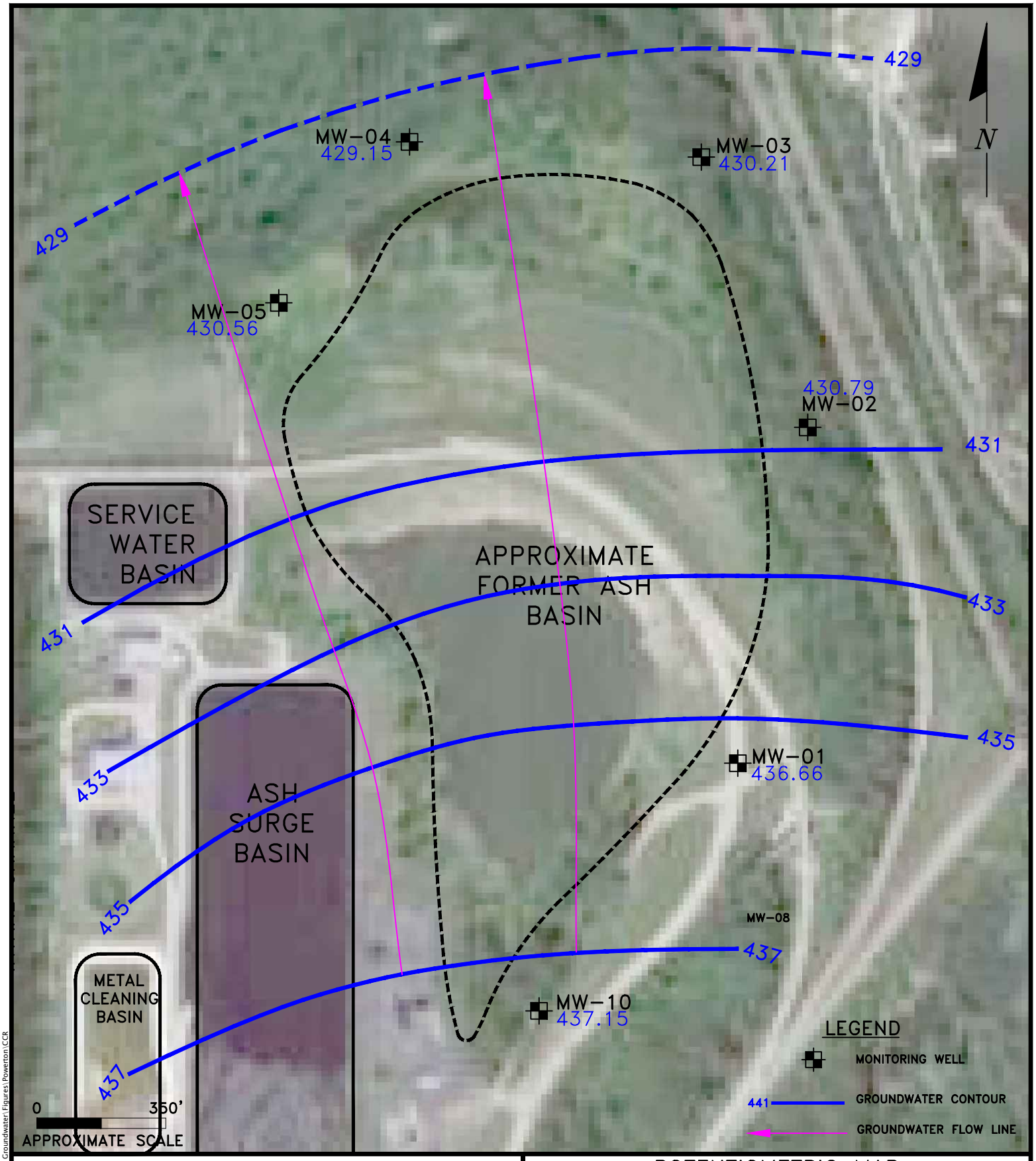

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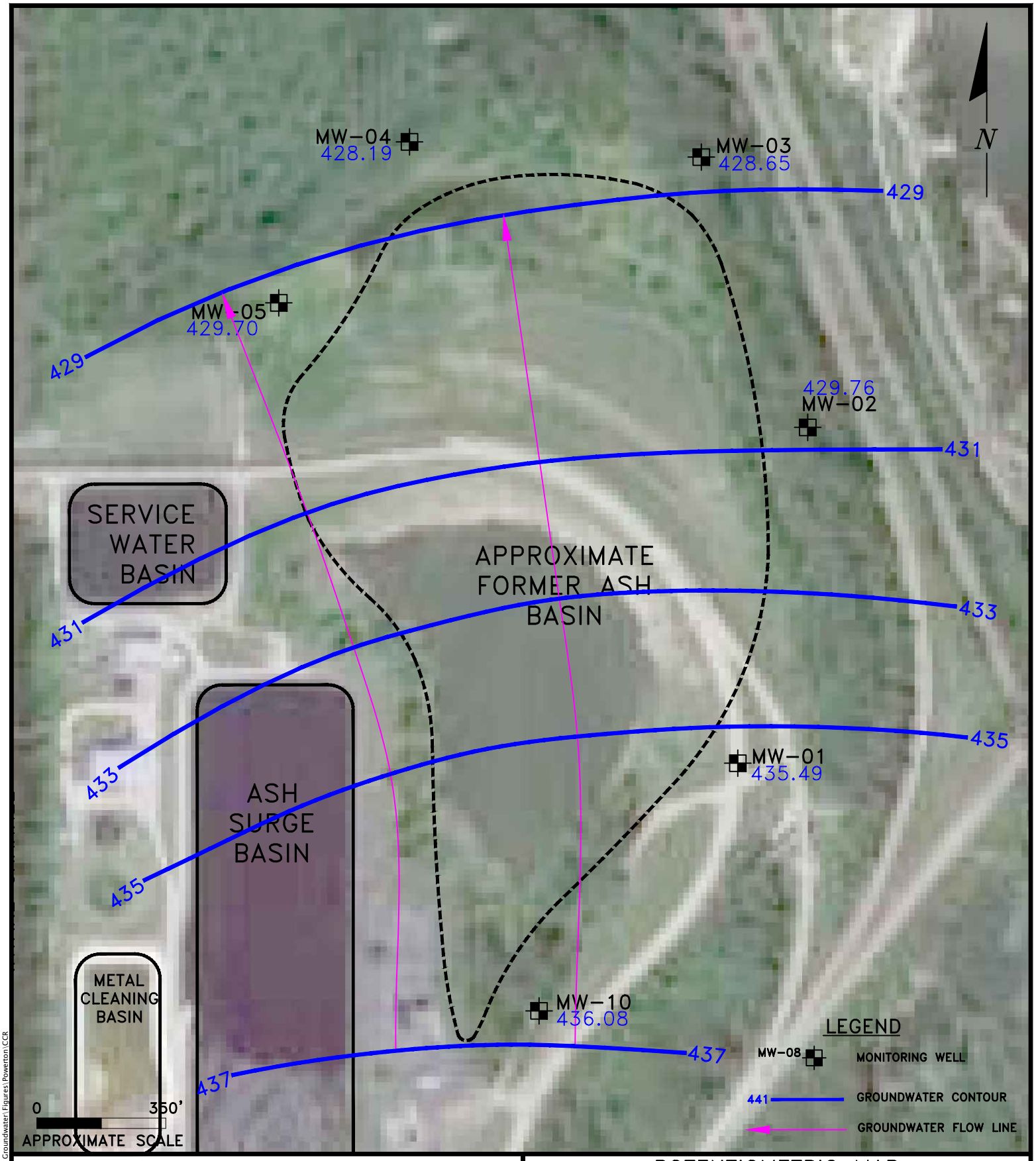
POTENTIOMETRIC MAP
FORMER ASH BASIN 09/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: November 1, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1



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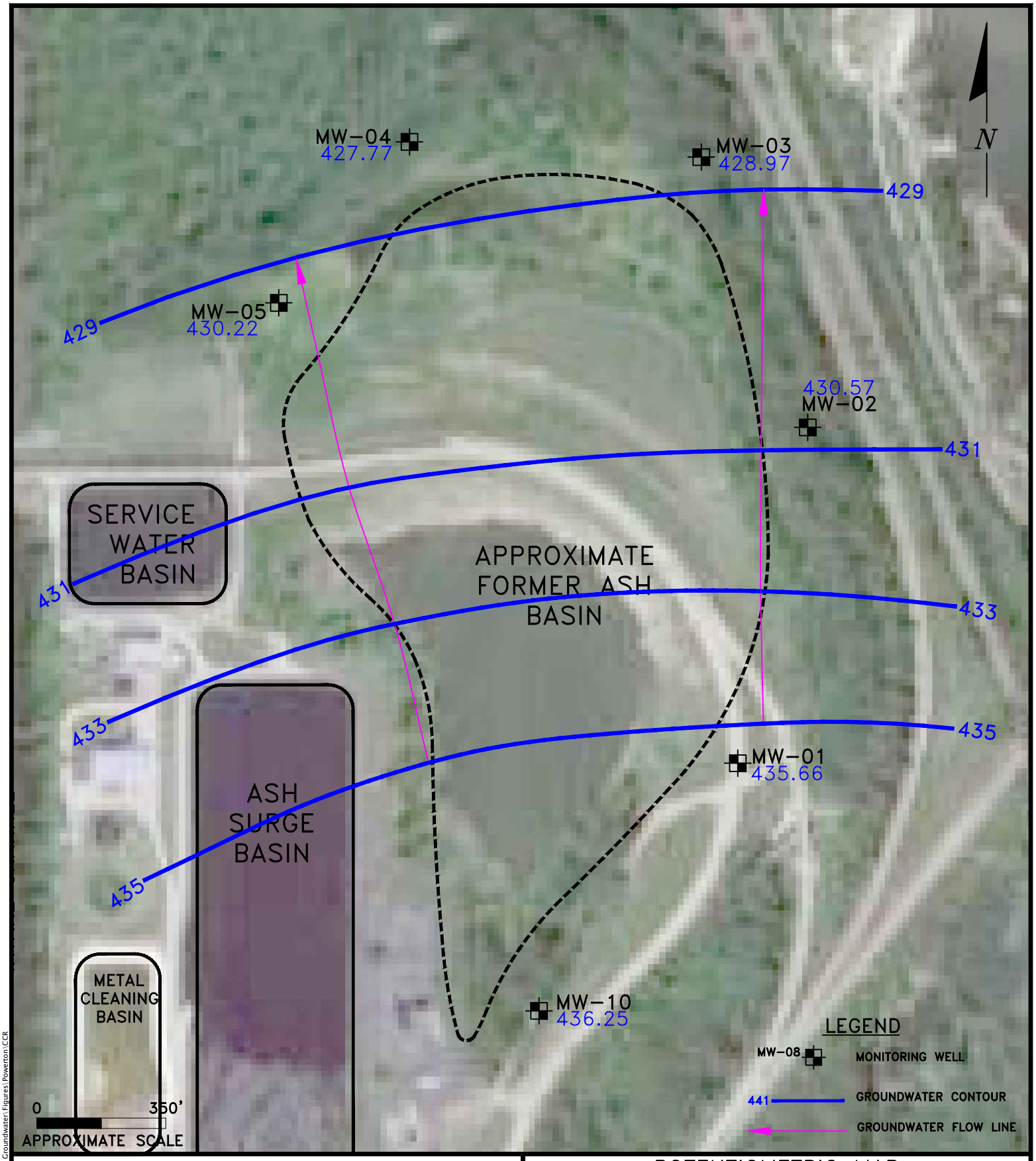
POTENTIOMETRIC MAP
FORMER ASH BASIN 10/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: December 30, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1



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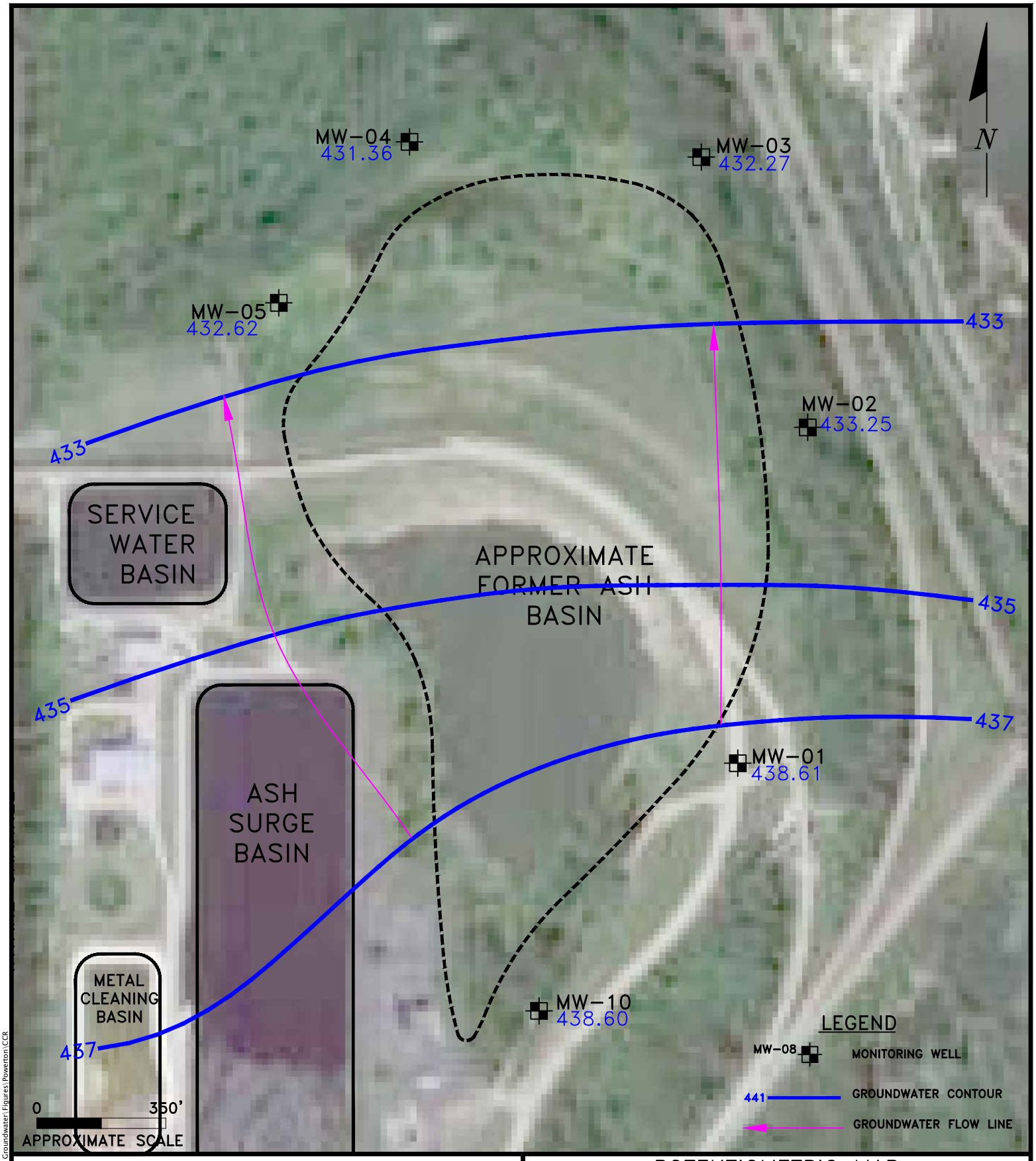
POTENTIOMETRIC MAP
FORMER ASH BASIN 11/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: December 30, 2022

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 12/2022

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350' | Date: January 4, 2023

KPRG Project No. 12313.1 | ATTACHMENT 1

K P R G

ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ILLINOIS CCR COMPLIANCE
METAL CLEANING BASIN
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2022

Midwest Generation, LLC
Powerton Station
13082 E. Manito Road
Pekin, Illinois 61554

Prepared By: KPRG and Associates, Inc.
14665 West Lisbon Road, Suite 1A
Brookfield, WI 53005

January 30, 2023

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1.0 INTRODUCTION and OVERVIEW

Groundwater monitoring requirements in accordance with the Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments dated April 15, 2021 (State CCR Rule), have been completed for the monitoring wells associated with the Metal Cleaning Basin (MCB) located at the Midwest Generation, LLC (Midwest Generation) Powerton Generating Station. The wells sampled were selected to meet the monitoring requirements of the State CCR Rule for the MCB. The CCR monitoring well network around this basin consists of six monitoring wells (MW-13, MW-14, MW-15, MW-17, MW-20 and MW-21) as shown on Figure 1. Wells MW-13, MW-15 and MW-17 are upgradient (background) monitoring points. All CCR groundwater monitoring data available to date are provided in Tables 1 and 2. Since this basin was not regulated under the Federal CCR Rule, additional monitoring wells were needed to be installed in 2021, and groundwater sampling for establishing statistical background needed to be completed to meet the new State CCR Rule requirements. A variance petition to extend the schedule for submittal of the Application for Initial Operating Permit (Application) for this basin was filed and granted by the Illinois Pollution Control Board (IPCB). The Application was submitted on March 31, 2022.

This overview of the 2022 groundwater monitoring period is provided in accordance with Section 845.610(e)(4). Each required item is discussed separately below.

- Section 845.610(e)(4)(A and B) – *Proposed* statistical background concentration calculations (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under Agency review. However, assuming that the Agency accepts the proposed background calculations, for the 2022 reporting period, the following constituents with potential statistically significant increases (SSIs) above the *proposed* background concentrations. It is noted that other than those constituents identified in the next main bullet, none of these potential SSI concentrations are above *proposed* site-specific GWPSs. The constituents and associated wells are:

    - Arsenic: MW-13 (1st and 4th quarters) and MW-21 (1st and 2nd quarters).
    - Barium: MW-13 (1st through 4th quarters), MW-20 (1st and 3rd quarters), MW-21 (1st and 2nd quarters).
    - Boron: MW-13 (1st through 3rd quarters).
    - Calcium: MW-13 (1st through 4th quarters), MW-15 (2nd through 4th quarters), MW-14 (2nd quarter), MW-20 (1st through 3rd quarters) and MW-21 (1st quarter).
    - Chloride: MW-15 (3rd quarter).
    - Cobalt: MW-20 and MW-21 (1st and 2nd quarters).
    - Fluoride: MW-13 and MW-15 (4th quarter), MW-14 (1st through 3rd quarters) and MW-17 (1st through 4th quarters).
    - Lead: MW-13 and MW-20 (1st quarter)
    - pH: MW-13 (1st through 4th quarters), MW-17 (2nd and 4th quarters) and MW-20 (3rd quarter).

- Combined Radium: MW-13 (1st and 4th quarters), MW-17 (4th quarter) and MW-21 (1st and 2nd quarters).
- Selenium: MW-15 (2nd quarter).
- Sulfate: MW-13 (1st through 4th quarters) and MW-14, MW-15 and MW-17 (2nd quarter).
- Thallium: MW-14 (1st and 2nd quarters).
- Total Dissolved Solids (TDS): MW-13 (1st through 4th quarters), MW-15 (2nd through 4th quarters), MW-14 and MW-20 (1st through 3rd quarters) and MW-17 (2nd and 4th quarters).

Wells MW-13, MW-15 and MW-17 are background monitoring points.

- Section 845.610(e)(4)(C and D) – *Proposed* GWPSs in accordance with Section 845.600(a)(2) (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under review by the Agency. However, assuming that the Agency accepts the *proposed* GWPSs, for the 2022 reporting period, the following constituents above the *proposed* GWPSs:

  - Arsenic: MW-13 (1st and 4th quarters) and MW-21 (1st and 2nd quarters).
  - Boron: MW-13 (1st through 3rd quarters).
  - Calcium: MW-13 (1st through 4th quarters), MW-15 (2nd through 4th quarters), MW-14 (2nd quarter), MW-20 (1st through 3rd quarters) and MW-21 (1st quarter).
  - Chloride: MW-15 (3rd quarter).
  - Cobalt: MW-21 (1st quarter).
  - Selenium: MW-15 (2nd quarter).
  - Sulfate: MW-13 (1st through 4th quarters) and MW-14, MW-15 and MW-17 (2nd quarter).
  - Thallium: MW-14 (1st and 2nd quarters).
  - Total Dissolved Solids (TDS): MW-13 (1st through 4th quarters), MW-15 (2nd through 4th quarters), MW-14 and MW-20 (1st through 3rd quarters) and MW-17 (2nd and 4th quarters).

  Wells MW-13, MW-15 and MW-17 are upgradient background monitoring points.

- Section 845.610(e)(4)(E though H) – The MCB is currently not in corrective action.

2.0 ANNUAL STATUS SUMMARY

As discussed in Section 1.0 the CCR monitoring well network around the MCB consists of six monitoring wells (MW-13, MW-14, MW-15, MW-17, MW-20 and MW-21) as shown on Figure 1. Wells MW-13, MW-15 and MW-17 are upgradient (background) monitoring points. All CCR groundwater monitoring data available to date are provided in Tables 1 and 2. The backup analytical packages have been previously provided as part of the 60-day submittal requirements.

This section provides the information specified under Section 845.610(e) (2-3).

2.1 Summary of Actions and Submittals (Section 845.610(e)(2))

The following key actions have been completed during the 2022 reporting period:

- Continued quarter groundwater monitoring. The 60-day data summary submittals for all rounds collected have been placed in the facilities operating record in accordance with Section 845.610(b)(3)(D).

- Water levels were recorded monthly for the specified CCR monitoring wells and pond water levels were concurrently recorded.

- Submittal of the Application for Initial Operating Permit on March 31, 2022

Key activities for the upcoming year include:

- Submittal of an Application for Initial Construction Permit – Metal Cleaning Basin Powerton Generating Station which will include public input from pre-submittal required public meetings.

- Receipt of an approved Application for Initial Operating permit which will facilitate finalization of the proposed statistical background concentrations and the proposed site-specific GWPSs. Once these are accepted/finalized by the Agency, formal groundwater data comparisons and evaluations can be made based on quarterly monitoring results relative to these comparison criteria.

- Continued quarterly groundwater monitoring/reporting.

2.2 Groundwater Data Summary (Section 845.610(e)(3)(A-F)

Identification of monitoring wells and associated constituent concentration above the proposed site-specific GWPSs was included in section 1.0 above. A map showing these wells and constituent concentrations for the most recent round of groundwater sampling (2^{nd} quarter 2022) is provided on Figure 2. The second quarter data was used for this map due to insufficient water for sampling in well MW-21 during the third quarter as well as in wells MW-14, MW-20 and MW-21 in the fourth quarter due to drought conditions as discussed further below. The second quarter included sampling from all wells providing for the most recent complete data set.

There were no monitoring wells installed or decommissioned during this reporting period.

Water levels were recorded from the specified CCR monitoring wells on a monthly basis. The water levels are summarized in Table 4. Potentiometric surface maps for each round of water levels are provided in Attachment 1. Groundwater flow beneath the MCB is in a westerly direction. In accordance with Section 845.640(c)(2), groundwater flow direction and seepage velocity estimates for each round of water levels are provided in Table 5.

As previously noted, low water levels in several monitoring wells precluded collection of groundwater samples for chemical analysis due to insufficient water volume within the well. Specifically, well MW-21 did not have sufficient water volume in the third and fourth quarters of 2022 and well MW-14 and MW-20 did not have sufficient water volume in the fourth quarter 2022. The drop in water levels is directly related to the dry conditions experienced in this area as documented in the supporting documentation provided in Figures 2-1 through 2-5 in Attachment 2. Figure 2-1 provides a summary of the "normal" precipitation recorded for the Peoria area with average precipitation for September, October and November being 3.48, 3.17 and 2.7 inches, respectively. The figure also provides the 2022 precipitation data for those months in 2022 as being 0.79, 2.67 and 1.95 inches, respectively. Figure 2-2 in Attachment 2 is a Drought Monitor Map showing the Powerton Station being located with a designated "Moderate Drought" area which covers approximately 72.95% of Tazewell County. Figure 2-3 is a stream gage hydrograph for the Kingston Mines, Illinois gage on the Illinois River, approximately 5 miles downstream of the Powerton Station (nearest stream gage). The figure illustrates that the Illinois River in this area was approximately 10 feet lower in elevation than for the same time in 2021. Figures 2-4 illustrates the associated drop in water levels within the silt/clay unit monitoring wells in 2022 and Figure 2-5 focuses on those wells associated with the MCB. The bottom of well elevations for monitoring wells MW-14, MW-20 and MW-21 are approximately 438', 436' and 435', respectively. Combined, this documentation shows the direct correlation between the drop in water levels within well MW-14, MW-20 and MW-21 and the Illinois River which resulted in the insufficient quantity of water within these wells for sampling.

A summary of the number of groundwater samples collected for analysis for each CCR monitoring well along with sample dates is provided in Table 6. As discussed above, wells MW-14, MW-20 and MW-21 were not sampled all four quarters during the 2022 monitoring period. Wells MW-14 and MW-20 were not sampled in fourth quarter and MW-21 was not sampled in the third and fourth quarters. These wells were unable to be sampled due to an insufficient water column within the well to allow for sample collection. This was due to the dry conditions experienced in the area as discussed above.

Proposed statistical background concentration calculations (see Table 3) were submitted to the Agency as part of the Application for Initial Operating Permit. This Application is currently still under Agency review. However, assuming that the Agency accepts the *proposed* background calculations, the groundwater monitoring over the 2022 reporting period has identified the following constituents with potential statistically significant increases (SSIs) above the *proposed* background concentrations:

- Arsenic: MW-13 (1st and 4th quarters) and MW-21 (1st and 2nd quarters).
- Barium: MW-13 (1st through 4th quarters), MW-20 (1st and 3rd quarters), MW-21 (1st and 2nd quarters).
- Boron: MW-13 (1st through 3rd quarters).
- Calcium: MW-13 (1st through 4th quarters), MW-15 (2nd through 4th quarters), MW-14 (2nd quarter), MW-20 (1st through 3rd quarters) and MW-21 (1st quarter).
- Chloride: MW-15 (3rd quarter).
- Cobalt: MW-20 and MW-21 (1st and 2nd quarters).
- Fluoride: MW-13 and MW-15 (4th quarter), MW-14 (1st through 3rd quarters) and MW-17 (1st through 4th quarters).
- Lead: MW-13 and MW-20 (1st quarter)
- pH: MW-13 (1st through 4th quarters), MW-17 (2nd and 4th quarters) and MW-20 (3rd quarter).
- Combined Radium: MW-13 (1st and 4th quarters), MW-17 (4th quarter) and MW-21 (1st and 2nd quarters).
- Selenium: MW-15 (2nd quarter).
- Sulfate: MW-13 (1st through 4th quarters) and MW-14, MW-15 and MW-17 (2nd quarter).
- Thallium: MW-14 (1st and 2nd quarters).
- Total Dissolved Solids (TDS): MW-13 (1st through 4th quarters), MW-15 (2nd through 4th quarters), MW-14 and MW-20 (1st through 3rd quarters) and MW-17 (2nd and 4th quarters).

Wells MW-13, MW-15 and MW-17 are upgradient monitoring points. As previously stated, other than those constituents identified in the second bullet in Section 1, none of these potential SSI concentrations are above *proposed* site-specific GWPSs.

TABLES

Table 1. Groundwater Analytical Results - Midwest Generation, LLC, Powerton Station, Pekin, IL. Metals Cleaning Basin.

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved Solids	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	Selenium	Thallium
MW-13 (S) up-gradient	4/8/2021	2.6	380	130	0.4	8.08	1500	2700	< 0.003	0.021	0.21	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.025	0.77	< 0.0025	< 0.002
	5/13/2021	2.6	340	130	0.39	7.86	1400	2500	< 0.003	0.023	0.23	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.022	0.84	< 0.0025	< 0.002
	6/3/2021	3.2	370	150	0.41	7.63	1500	2600	< 0.003	0.025	0.22	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.026	0.79	< 0.0025	< 0.002
	8/23/2021	3	340	110	0.36	7.72	980	2000	< 0.003	0.021	0.19	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.022	0.9	< 0.0025	< 0.002
	10/1/2021	2.8	320	120	0.36	7.78	1300	2500	< 0.003	0.025	0.25	< 0.001	< 0.0005	< 0.005	< 0.001	0.00065	< ^1+ 0.01	< 0.0002	0.023	< 0.577	< 0.0025	< 0.002
	11/30/2021	3.1	330	120	0.36	7.79	^- 1000	2100	< 0.003	0.024	0.19	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.021	0.635	< 0.0025	< 0.002
	1/6/2022	3.1	280	120	0.4	7.77	950	2000	< 0.003	0.028	0.25	< 0.001	< 0.0005	< 0.005	< 0.001	0.00055	< 0.002	< 0.0002	0.022	1.57	< 0.0025	< 0.002
	2/9/2022	2.8	310	120	0.41	7.67	1000	2200	< 0.003	0.026	0.25	< 0.001	< 0.0005	< 0.005	< 0.001	0.00061	< 0.002	< 0.0002	0.02	1.34	< 0.0025	< 0.002
	6/8/2022	3.2	240	100	0.37	7.96	860	1800	< 0.003	0.021	0.17	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.002	< 0.0002	0.021	< 0.502	< 0.0025	< 0.002
	8/31/2022	2.9	B 250	110	0.39	7.64	F1 790	1900	< 0.003	0.022	0.19	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.019	0.819	< 0.0025	< 0.002
	11/16/2022	2.6	250	120	0.83	7.97	910	1800	< 0.003	0.029	0.21	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	0.018	3.04	< 0.0025	< 0.002
MW-15 (CL) down-gradient	11/18/2015	1.5	270	H 210	H 0.53	6.55	H 1400	H 2400	< 0.003	0.03	0.096	^ < 0.001	0.00061	< 0.005	< 0.001	< 0.0005	0.042	H < 0.0002	0.023	< 0.599	0.0065	< 0.002
	2/25/2016	2.0	240	110	0.61	6.84	640	1700	< 0.003	0.025	0.083	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.041	< 0.0002	0.035	0.870	0.045	< 0.002
	5/19/2016	2.7	320	240	0.53	6.83	1200	2800	< 0.003	0.04	0.097	< 0.001	0.00098	< 0.005	< 0.001	< 0.0005	0.044	< 0.0002	0.041	< 0.420	0.0067	< 0.002
	8/18/2016	1.5	200	F1 170	0.54	6.96	660	1900	< 0.003	0.13	0.11	< 0.001	0.0041	< 0.005	< 0.001	< 0.0005	0.028	< 0.0002	0.027	< 0.672	0.0061	< 0.002
	11/17/2016	1.3	120	180	0.47	6.91	560	1900	< 0.003	0.0033	0.031	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.016	< 0.0002	0.018	< 0.570	0.0078	< 0.002
	2/17/2017	1.9	200	190	0.43	7.24	670	1700	< 0.003	0.02	0.056	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.025	< 0.0002	0.027	< 0.392	0.0032	< 0.002
	5/4/2017	1.5	180	190	0.57	7.35	670	1700	< 0.003	0.011	0.049	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.023	< 0.0002	0.023	< 0.456	0.0034	< 0.002
	6/21/2017	1.6	180	200	0.56	7.30	530	1600	< 0.003	0.0093	0.054	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.027	< 0.0002	0.03	< 0.347	0.019	< 0.002
	8/29/2017	2.2	190	200	0.53	6.87	540	1800	< 0.003	0.0018	0.044	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.023	< 0.0002	0.032	0.377	0.0092	< 0.002
	11/10/2017	1.6	170	180	0.63	7.09	530	1500	< 0.003	0.0063	0.046	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.025	< 0.0002	0.02	< 0.313	0.016	< 0.002
	5/17/2018	2.3	200	160	0.5	6.75	680	1800	< 0.003	0.0081	0.05	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.029	< 0.0002	0.03	0.397	0.077	< 0.002
	8/9/2018	2.3	200	200	0.48	7.06	520	1700	< 0.003	0.0083	0.048	<^ 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.026	< 0.0002	0.033	0.566	0.06	< 0.002
	5/2/2019	1.5	180	200	0.52	6.89	420	1500	< 0.003	0.0045	0.052	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.027	< 0.0002	0.023	< 0.424	< 0.0025	< 0.002
	11/14/2019	1.8	170	170	0.5	7.24	260	1300	< 0.003	0.0044	0.053	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.029	< 0.0002	0.025	< 0.475	< 0.0025	< 0.002
	4/29/2020	1.2	160	200	0.58	6.90	370	1300	NA	0.0036	0.06	NA	< 0.0005	NA	< 0.0010	< 0.0005	0.027	< 0.0002	0.023	0.578	< 0.0025	< 0.002
	12/8/2020	1.5	170	200	0.55	7.04	540	1400	NA	0.02	0.10	NA	0.00059	NA	0.0012	< 0.0005	0.035	< 0.0002	0.02	0.626	0.012	< 0.002
	5/12/2021	1.3	180	180	0.54	6.97	520	1500	< 0.003	0.0048	0.065	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.026	< 0.0002	0.014	< 0.648	0.0071	< 0.002
	7/20/2021	1.5	190	180	0.49	6.80	440	1500	< 0.003	0.0027	0.057	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.028	< 0.0002	0.02	< 0.398	< 0.0025	< 0.002
	8/23/2021	1.6	200	180	0.52	6.76	440	1500	< 0.003	0.0019	0.052	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.026	< 0.0002	0.024	< 0.794	0.012	< 0.002
	10/1/2021	1.2	180	180	0.53	6.97	430	1400	< 0.003	0.0087	0.065	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	^1+ 0.028	< 0.0002	0.018	< 0.511	0.009	< 0.002
	11/29/2021	1.9	230	240	0.5	6.71	^- 450	1700	< 0.003	0.0031	0.074	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.024	< 0.0002	0.016	< 0.353	0.055	< 0.002
	2/9/2022	0.84	140	160	0.58	6.91	320	1200	< 0.003	0.0075	0.054	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.023	< 0.0002	0.014	< 0.51	0.0025	< 0.002
	6/8/2022	2	310	230	0.43	6.87	970	2600	< 0.003	0.004	0.09	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.027	< 0.0002	0.019	< 0.612	0.12	< 0.002
	8/31/2022	1.5	B 210	270	0.5	6.80	550	1900	< 0.003	0.0054	0.057	< 0.001	< 0.0005	< 0.0050	< 0.0010	< 0.0005	0.03	< 0.0002	0.022	0.548	0.008	< 0.002
	11/16/2022	1.3	210	220	0.81	7.26	400	1500	< 0.003	0.012	0.068	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.026	< 0.0002	0.05	0.851	< 0.0025	< 0.002
MW-17 (CL) up-gradient	11/19/2015	1.6	210	H 230	H 0.43	7.11	H 850	H 1800	< 0.003	0.0028	0.14	^ < 0.001	< 0.0005	< 0.005	0.0012	0.0012	0.019	H < 0.0002	0.035	< 0.790	< 0.0025	< 0.002
	2/22/2016	1.8	290	280	0.55	7.19	960	2100	< 0.003	0.021	0.051	< 0.001	< 0.0005	< 0.005	0.0012	< 0.0005	0.038	< 0.0002	0.093	1.07	< 0.0025	< 0.002
	5/18/2016	1.4	200	230	0.64	7.02	700	1800	< 0.003	0.32	0.12	< 0.001	0.0011	< 0.005	0.0015	< 0.0005	0.026	< 0.0002	0.12	8.27	< 0.0025	0.0028
	8/15/2016	1.1	220	220	0.60	7.08	860	2100	< 0.003	0.34	0.12	< 0.001	0.001	< 0.005	0.0016	< 0.0005	0.022	< 0.0002	0.1	0.606	< 0.0025	0.0031
	11/14/2016	1.5	200	210	0.56	7.26	560	2000	< 0.003	0.19	0.073	< 0.001	0.00051	< 0.005	0.0012	< 0.0005	0.022	< 0.0002	0.042	3.76	< 0.0025	0.0021
	2/13/2017	1.6	190	230	0.56	6.84	770	1600	< 0.003	0.35	0.16	< 0.001	0.00093	< 0.005	0.0014	0.00079	0.019	< 0.0002	0.088	2.08	< 0.0025	0.0025
	5/4/2017	1.2	170	210	0.61	7.29	720	1500	< 0.003	0.24	0.39	0.0013	0.0023	< 0.005	0.0023	0.00066	0.016	< 0.0002	0.036	1.91	< 0.0025	0.0065
	6/22/2017	0.95	150	230	0.72	7.38	580	1600	< 0.003	0.41	0.13	< 0.001	0.0007	< 0.005	0.0012	0.0011	0.022	< 0.0002	0.11	1.21	< 0.0025	0.0022
	8/29/2017	1.4	190	230	0.64	7.19	640	1900	< 0.003	0.24	0.092	< 0.001	< 0.0005	< 0.005	< 0.001	0.00058	0.021	< 0.0002	0.13	3.32	< 0.0025	0.0025
	11/6/2017	1.7	190	240	0.62	7.27	840	1800	< 0.003	0.17	0.38	< 0.001	0.0022	< 0.005	0.0015	< 0.0005	< 0.01	< 0.0002	0.019	2.54	< 0.0025	0.0075
	5/14/2018	1.6	170	220	0.6	7.79	800	1700	< 0.003	0.42	0.17	< 0.001	0.002	< 0.005	0.0029	0.0021	0.015	< 0.0002	0.13	2.03	< 0.0025	0.0068
	8/6/2018	1.3	170	230	0.6	7.12	620	1600	< 0.003	0.087	0.055	<^ 0.001	0.00094	< 0.005	0.0015	< 0.0005	0.019	< 0.0002	0.084	1.34	< 0.0025	0.0023
	4/29/2019	0.98	150	190	0.66	7.25	660	1500	< 0.003	0.042	0.04	< 0.001	0.00052	< 0.005	< 0.001	0.00069	0.015	< 0.0002	0.06	0.517	< 0.0025	< 0.002
	11/13/2019	1.9	230	600	0.55	7.16	730	2300	< 0.003	0.088	0.10	< 0.001	0.0015	< 0.005	0.0011	0.00093	0.021	< 0.0002	0.058	0.643	< 0.0025	0.0029
	4/27/2020	1.2	150	170	0.79	7.27	520	1300	NA	0.026	0.036	NA	< 0.0005	NA	< 0.001	0.00081	0.021	< 0.0002	0.075	0.498	< 0.0025	< 0.002
	12/7/2020	1.3	140	160	0.8	7.22	430	1100	NA	0.08	0.05	NA	0.001	NA	< 0.001	0.0011	0.022	< 0.0002	0.056	< 0.438	< 0.0025	< 0.002
	4/8/2021	1.1	140	160	0.71	7.75	480	1200	< 0.003	0.0061	0.028	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.019	< 0.0002	0.057	< 0.485	< 0.0025	< 0.002
	5/12/2021	1.1	130	160	0.75	7.52	470	1100	< 0.003	0.0042	0.027	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.051	< 0.398	< 0.0025	< 0.002
	6/3/2021	0.4	150	96	0.74	7.27	500	1300	< 0.003	0.011	0.029	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.055	< 0.463	< 0.0025	< 0.002
	6/28/2021	B 1.1	150	150	0.69	7.34	500	1200	^+ < 0.003	0.018	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.018	< 0.0002	0.050	1.20	< 0.0025	< 0.002
	7/20/2021	0.94	180	150	0.67	7.31	450	1200	< 0.003	0.0074	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.029	< 0.0002	0.028	< 0.43	0.051	0.0031
	8/23/2021	0.93	140	150	0.7	7.37	470	1300	< 0.003	0.0083	0.029	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.043	< 0.55	< 0.0025	< 0.002
	10/1/2021	0.85	130	140	0.7	7.26	430	1100	< 0.003	0.0052	0.028	< 0.001	< 0.0005	< 0.005	< 0.001	0.00056	^1+ 0.022	< 0.0002	0.028	< 0.44	< 0.0025	< 0.002
	11/29/2021	0.97	140	150	0.72	7.30	^- 400	1100	< 0.003	0.0065	0.025	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.038	< 0.39	< 0.0025	< 0.002
	2/7/2022	0.99	140	160	0.78	7.27	450	1300	< 0.003	0.0079	0.027	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.016	< 0.0002	0.037	0.53	< 0.0025	< 0.002
	6/8/2022	1.3	190	190	0.69	7.51	820	1900	< 0.003	0.0071	0.038	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.053	< 0.42	< 0.0025	< 0.002
	8/31/2022	0.89	B 140	170	0.71	7.12	440	1300	< 0.003	0.0042	0.029	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.022	0.71	< 0.0025	< 0.002
	11/16/2022	1.1	160	170	1.2	7.56	600	1500	< 0.003	0.0031	0.031	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.013	< 0.0002	0.026	1	< 0.0025	< 0.002
MW-14 (CL) down-gradient	4/8/2021	2.1	200	98	1.1	7.33	630	1600	< 0.003	0.0028	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.028	< 0.0002	0.035	< 0.605	0.029	0.0022
	5/12/2021	2.6	210	100	1.1	7.13	640	1700	< 0.003	0.0047	0.038	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.028	< 0.0002	0.034	< 0.43	0.0039	0.0028
	6/3/2021	2.1	200	26	1.0	6.79	590	1600	< 0.003	0.0025	0.036	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.025	< 0.0002	0.028	< 0.357	0.094	0.0025
	6/28/2021	B 2.0	210	93	0.99	6.90	570	1700	^+ < 0.003	0.0014	0.034	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.028	< 0.0002	0.03	0.758	0.034	0.0023
	7/20/2021	2.0	190	81	0.89	6.88	500	1700	< 0.003	0.0025	0.057	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.027	< 0.0002	0.021	< 0.434	< 0.0025	< 0.002
	8/23/2021	2.1	210	91	0.96	6.91	560	1800	< 0.003	0.0022	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.03	< 0.0002	0.031	0.515	0.01	0.0021
	10/1/2021	1.9	200	100	0.95	7.06	640	1700	< 0.003	0.0045	0.039	< 0.001	0.0005	< 0.005	< 0.001	0.00065	^1+ 0.034	< 0.0002	0.037	< 0.581	< 0.0025	0.002
	11/29/2021	2.0	180	94	1.10	7.01	^- 480	1400	< 0.003	0.0025	0.032	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.026	< 0.0002	0.033	< 0.442	0.01	< 0.002
	2/9/2022	1.9	180	67	1.10	6.91	430	1500	< 0.003	0.013	0.046	< 0.001	0.00056	< 0.005	< 0.001	< 0.0005	0.026	< 0.0002	0.03	0.724	< 0.0025	0.0022
	6/8/2022	2.2	220	87	0.96	7.12	810	2100	< 0.003	0.0041	0.057	< 0.001	0.00056	< 0.005	< 0.001	< 0.0005	0.022	< 0.0002	0.038	< 0.429	0.013	0.0033
	8/31/2022	2.2	B 200	120	0.86	6.74	610	1800	< 0.003	0.004	0.056	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.027	< 0.0002	0.024	0.743	< 0.0025	< 0.002
	11/17/2022	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-20 (CL) down-gradient	4/8/2021	2.2	310	150	0.20	7.18	850	2200	< 0.003	0.0027	0.19	< 0.001	< 0.0005	< 0.005	0.0015	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.673	< 0.0025	< 0.002
	5/12/2021	0.43	130	150	0.19	6.90	850	2200	< 0.003	0.019	0.21	< 0.001	< 0.0005	< 0.005	0.0039	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.79	< 0.0025	< 0.002
	6/3/2021	1.5	260	26	0.12	6.35	500	1500	< 0.003	< 0.001	0.085	< 0.001	< 0.0005	< 0.005	0.0039	< 0.0005	< 0.01	< 0.0002	< 0.005	0.708	< 0.0025	< 0.002
	6/28/2021	B 1.8	270	96	0.14	6.49	570	1800	^+ < 0.003	0.002	0.13	< 0.001	< 0.0005	< 0.005	0.0025	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.453	< 0.0025	< 0.002
	7/20/2021	1.5	230	64	0.13	6.43	440	1600	< 0.003	0.0025	0.1	< 0.001	< 0.0005	< 0.005	0.0022	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.484	< 0.0025	< 0.002
	8/23/2021	1.5	220	54	0.12	6.66	170	1400	< 0.003	0.0014	0.12	< 0.001	< 0.0005	< 0.005	0.0017	< 0.0005	< 0.01	< 0.0002	< 0.005	0.792	< 0.0025	< 0.002
	10/1/2021	1.7	210	80	0.13	6.74	180	1600	< 0.003	0.0029	0.13	< 0.001	< 0.0005	< 0.005	0.0016	< 0.0005	< ^1+ 0.01	< 0.0002	< 0.005	0.763	< 0.0025	< 0.002
	11/29/2021	1.7	250	120	0.16	6.73	^- 550	1900	< 0.003	0.0071	0.16	< 0.001	< 0.0005	< 0.005	0.0019	0.0024	< 0.01	< 0.0002	< 0.005	< 0.639	< 0.0025	< 0.002
	2/8/2022	1.9	220	110	0.17	6.67	440	1700	< 0.003	0.0098	0.16	< 0.001	< 0.0005	< 0.005	0.0013	0.00089	< 0.002	< 0.0002	< 0.005	< 0.607	< 0.0025	< 0.002
	6/9/2022	1.5	230	65	0.13	6.73	400	1600	< 0.003	0.0024	0.1	< 0.001	< 0.0005	< 0.005	0.0018	< 0.0005	< 0.01	< 0.0002	< 0.005	0.636	< 0.0025	< 0.002
	9/1/2022	2	B 230	110	0.15	6.28	370	2100	< 0.003	0.0013	0.12	< 0.001	< 0.0005	< 0.005	0.0012	< 0.0005	< 0.01	< 0.0002	< 0.005	0.596	< 0.0025	< 0.002
	11/17/2022	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-21 (CL) down-gradient	4/8/2021	0.48	140	34	0.25	7.08	26	770	< 0.003	0.025	0.34	< 0.001	< 0.0005	< 0.005	0.0042	< 0.0005	< 0.01	< 0.0002	< 0.005	1.18	< 0.0025	< 0.002
	5/12/2021	0.42	66	22	0.16	6.72	57	680	< 0.003	0.0023	0.19	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	< 0.01	< 0.0002	< 0.005	0.708	< 0.0025	< 0.002
	6/3/2021	0.39	130	23	0.17	6.58	41	690	< 0.003	0.0069	0.25	< 0.001	< 0.0005	< 0.005	0.002	< 0.0005	< 0.01	< 0.0002	< 0.005	1.01	< 0.0025	< 0.002
	6/28/2021	0.60	140	17	0.16	6.55	6.9	660	^+ < 0.003	0.025	0.35	< 0.001	< 0.0005	< 0.005	0.002	< 0.0005	< 0.01	< 0.0002	< 0.005	0.487	< 0.0025	< 0.002
	7/20/2021	0.38	130	28	0.15	6.49	32	650	< 0.003	0.017	0.35	< 0.001	< 0.0005	< 0.005	0.0083	0.001	< 0.01	< 0.0002	< 0.005	0.97	< 0.0025	< 0.002
	8/23/2021	0.66	130	29	0.17	6.66	< 5	550	< 0.003	0.022	0.32	< 0.001	< 0.0005	< 0.005	0.0016	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.588	< 0.0025	< 0.002
	10/8/2021	0.35	160	38	0.19	6.72	< 5	810	< 0.003	0.036	0.45	< 0.001	< 0.0005	0.0072	0.0026	< ^1+ 0.01	< 0.0002	< 0.005	< 1.08	< 0.0025	< 0.002
	11/29/2021	0.66	130	30	0.18	6.55	< ^- 5	660	< 0.003	0.031	0.37	< 0.001	< 0.0005	< 0.005	0.0015	< 0.0005	< 0.01	< 0.0002	< 0.005	< 0.747	< 0.0025	< 0.002
	3/1/2022	0.21	210	43	0.24	6.71	< 5	900	< 0.003	0.063	0.48	< 0.001	< 0.0005	< 0.005	0.0085	< 0.0005	< 0.002	< 0.0002	< 0.005	1.2	< 0.0025	< 0.002
	6/9/2022	0.45	130	24	0.16	6.91	12	660	< 0.003	0.028	0.4	< 0.001	< 0.0005	< 0.005	0.0028	< 0.0005	< 0.01	< 0.0002	< 0.005	0.953	< 0.0025	< 0.002
	9/1/2022	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/17/2022	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Notes: All units are in mg/l except pH is in standard units.
NA - Not Analyzed
^+ - Continuing Calibration Verification is outsde acceptance limits, high biase
B - Compound was found in the blank and sample
(CL) - Silty Clay Unit
F1 - MS and/or MSD Recovery outside of limits.
H - Sample was prepped or analyzed beyond the specified holding time.
V- Serial dilution exceeds control limits.
^- - Continuing Calibration Verification (CCV) is outside acceptance limits, low biased.
^1+ - Initial Calibration Verification (ICV) is outside acceptance limits, high biased.
DNYA - Data Not Yet Available
NS - Not Sampled Due to Insufficient Water

Table 2. Groundwater Turbidity - Midwest Generation, LLC, Powerton Station, Pekin, IL. Metal Cleaning Basin.

Well	Date	Turbidity (NTU)
MW-13	2/24/2021	8.90
	4/8/2021	6.50
	5/13/2021	2.17
	6/3/2021	2.81
	6/29/2021	4.00
	8/23/2021	3.99
	10/1/2021	4.82
	11/30/2021	5.51
	1/6/2022	16.87
	2/9/2022	1.99
	6/8/2022	30.66
	8/31/2022	16.22
	11/16/2022	4.82
MW-15	2/24/2021	64.90
	4/9/2021	16.80
	5/12/2021	16.45
	6/3/2021	7.85
	6/29/2021	6.58
	7/20/2021	5.82
	8/23/2021	4.28
	10/1/2021	13.13
	11/29/2021	12.35
	2/7/2022	9.38
	6/8/2022	10.32
	8/31/2022	28.7
	11/16/2022	55.82
MW-17	2/24/2021	42.00
	4/8/2021	17.10
	5/12/2021	10.90
	6/3/2021	38.15
	6/28/2021	29.15
	7/20/2021	16.38
	8/23/2021	26.51
	10/1/2021	21.26
	11/30/2021	8.86
	2/9/2022	11.19
	6/8/2022	41.49
	8/31/2022	22.58
	11/16/2022	116.69
MW-14	2/24/2021	13.90
	4/8/2021	5.39
	5/12/2021	1.22
	6/3/2021	2.63
	6/28/2021	3.74
	7/20/2021	4.34
	8/23/2021	4.26
	10/1/2021	10.27
	11/29/2021	12.29
	2/9/2022	8.66
	6/8/2022	19.54
	8/31/2022	40.75
	11/17/2022	31.69
MW-20	3/12/2021	343.30
	4/8/2021	14.45
	5/12/2021	3.89
	6/3/2021	6.01
	6/28/2021	8.28
	7/20/2021	9.16
	8/23/2021	27.31
	10/1/2021	8.27
	11/29/2021	8.35
	2/8/2022	76.4
	6/9/2022	19.31
	9/1/2022	63.5
	11/17/2022	NM
MW-21	3/12/2021	49.20
	4/8/2021	5.88
	5/12/2021	26.09
	6/3/2021	17.61
	6/28/2021	6.33
	7/20/2021	44.93
	8/23/2021	19.43
	10/8/2021	94.82
	11/29/2021	20.2
	3/1/2022	7.64
	6/9/2022	7.56
	9/1/2022	NM
	11/17/2022	NM

NM - Not Measured due to insufficient water volume.

Table 3. Proposed Site-Specific Groundwater Protection Standards - Powerton Metal Cleaning Basin (MCB)

Upgradient Well(s)	Parameter	Section 845.600 Standards	Interwell Background Prediction Limit	**Proposed GWPS**
MW-15/MW-17 All Data Pooled	Antimony	0.006	0.003	**0.006**
MW-17 Last 8 Rounds	Arsenic	0.01	0.024	**0.024**
MW-15 All Data Pooled	Barium	2	0.116	**2**
MW-15/MW-17 All Data Pooled	Beryllium	0.004	0.0013	**0.004**
MW-15 All Data Pooled	Boron	2.0	2.70	**2.7**
MW-15 All Data Pooled	Cadmium	0.005	0.0041	**0.005**
MW-15 All Data Pooled	Chloride	200	255.1	**255.1**
MW-15/MW-17 All Data Pooled	Chromium	0.1	0.005	**0.1**
MW-15 All Data Pooled	Cobalt	0.006	0.0012	**0.006**
MW-15 All Data Pooled	Combined Radium 226 + 228 (pCi/L)	5.0	0.87	**5.0**
MW-15 All Data Pooled	Fluoride	4.0	0.642	**4.0**
MW-15 All Data Pooled	Lead	0.0075	0.0005	**0.0075**
MW-15 Last 8 Rounds	Lithium	0.04	0.039	**0.040**
MW-15/MW-17 All Data Pooled	Mercury	0.002	0.0002	**0.002**
MW-17 Last 8 Rounds	Molybdenum	0.10	0.084	**0.1**
MW-15 All Data Pooled	pH (standard units)	6.5-9.0	6.43-7.50	**6.43 - 9.0**
MW-15 All Data Pooled	Selenium	0.05	0.077	**0.077**
MW-15 Last 8 Rounds	Sulfate	400	733.9	**733.9**
MW-15 All Data Pooled	Thallium	0.002	0.002	**0.002**
MW-17 Last 8 Rounds	Total Dissolved Solids	1200	1477	**1477**
MW-17 Last 8 Rounds	Calcium	NE	200.6	**200.6**
MW-17 Last 8 Rounds	Turbidity	NE	55.15	**55.15**

All values are in mg/L (ppm) unless otherwise noted.
NE - Not Established
Bold - Site-specific Groundwater Protection Standard based on Section 845.600(a)(2)

Table 4. Groundwater Elevations - Metal Cleaning Basin, Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-13	2/22/2021	470.94	31.94	439.00
	4/7/2021	470.94	28.58	442.36
	5/10/2021	470.94	30.74	440.20
	6/2/2021	470.94	28.43	442.51
	6/28/2021	470.94	30.23	440.71
	7/19/2021	470.94	29.98	440.96
	8/23/2021	470.94	31.85	439.09
	9/30/2021	470.94	33.20	437.74
	10/25/2021	470.94	31.55	439.39
	11/29/2021	470.94	30.95	439.99
	12/30/2021	470.94	31.70	439.24
	1/6/2022	470.94	31.19	439.75
	2/7/2022	470.94	32.89	438.05
	3/1/2022	470.94	26.21	444.73
	4/22/2022	470.94	25.62	445.32
	5/24/2022	470.94	27.32	443.62
	6/6/2022	470.94	28.61	442.33
	7/25/2022	470.94	32.37	438.57
	8/29/2022	470.94	33.22	437.72
	9/28/2022	470.94	33.22	437.72
	10/26/2022	470.94	33.25	437.69
	11/14/2022	470.94	32.18	438.76
	12/28/2022	470.94	33.20	437.74
MW-14	2/22/2021	470.79	25.43	445.36
	4/7/2021	470.79	24.46	446.33
	5/10/2021	470.79	24.86	445.93
	6/2/2021	470.79	24.20	446.59
	6/28/2021	470.79	24.45	446.34
	7/19/2021	470.79	24.04	446.75
	8/23/2021	470.79	24.58	446.21
	9/30/2021	470.79	25.35	445.44
	10/25/2021	470.79	25.41	445.38
	11/29/2021	470.79	24.68	446.11
	12/30/2021	470.79	25.05	445.74
	1/6/2022	470.90	22.02	448.88
	2/7/2022	470.90	25.64	445.26
	3/1/2022	470.90	25.36	445.54
	4/22/2022	470.90	23.82	447.08
	5/24/2022	470.90	24.08	446.82
	6/6/2022	470.90	24.10	446.80
	7/25/2022	470.90	25.07	445.83
	8/29/2022	470.90	28.30	442.60
	9/28/2022	470.90	30.29	440.61
	10/26/2022	470.90	31.23	439.67
	11/14/2022	470.90	31.58	439.32
	12/28/2022	470.90	32.05	438.85
MW-15	11/16/2015	471.37	25.33	446.04
	2/22/2016	471.37	22.91	448.46
	5/16/2016	471.37	24.71	446.66
	8/15/2016	471.37	23.45	447.92
	11/14/2016	471.37	23.94	447.43
	2/13/2017	471.37	23.73	447.64
	5/1/2017	471.37	23.27	448.10
	6/20/2017	471.37	22.86	448.51
	8/29/2017	471.37	23.13	448.24
	11/10/2017	471.37	25.13	446.24
	5/17/2018	471.37	23.85	447.52
	8/9/2018	471.37	23.96	447.41
	10/31/2018	471.37	24.55	446.82
	4/29/2019	471.37	23.57	447.80
	11/11/2019	471.37	23.79	447.58
	4/27/2020	471.37	23.95	447.42
	12/7/2020	471.37	25.01	446.36
	4/7/2021	471.37	24.44	446.93
	5/10/2021	471.37	24.62	446.75
	6/2/2021	471.37	24.12	447.25
	6/28/2021	471.37	24.19	447.18
	7/19/2021	471.37	24.01	447.36
	8/23/2021	471.37	24.38	446.99
	9/30/2021	471.37	24.91	446.46
	10/25/2021	471.37	24.92	446.45
	11/29/2021	471.37	24.60	446.77
	12/30/2021	471.37	24.90	446.47
	1/6/2022	471.37	25.04	446.33
	2/7/2022	471.37	25.09	446.28
	3/1/2022	471.37	25.11	446.26
	4/22/2022	471.37	24.18	447.19
	5/24/2022	471.37	24.27	447.10
	6/6/2022	471.37	24.29	447.08
	7/25/2022	471.37	25.05	446.32
	8/29/2022	471.37	25.45	445.92
	9/28/2022	471.37	25.54	445.83
	10/26/2022	471.37	26.00	445.37
	11/14/2022	471.37	26.14	445.23
	12/28/2022	471.37	27.84	443.53

Table 4. Groundwater Elevations - Metal Cleaning Basin, Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-17	11/16/2015	467.75	26.92	440.83
	2/22/2016	467.75	19.86	447.89
	5/16/2016	467.75	20.42	447.33
	8/15/2016	467.75	21.61	446.14
	11/14/2016	467.75	21.39	446.36
	2/13/2017	467.75	19.66	448.09
	5/1/2017	467.75	18.78	448.97
	6/20/2017	467.75	19.42	448.33
	8/29/2017	467.75	22.68	445.07
	11/6/2017	467.75	24.66	443.09
	5/14/2018	467.75	19.79	447.96
	8/6/2018	467.75	21.03	446.72
	10/29/2018	467.75	21.98	445.77
	4/29/2019	467.75	18.75	449.00
	11/11/2019	467.75	19.60	448.15
	4/27/2020	467.75	19.15	448.60
	12/7/2020	467.75	24.12	443.63
	2/22/2021	467.75	20.22	447.53
	4/7/2021	467.75	19.69	448.06
	5/10/2021	467.75	20.00	447.75
	6/2/2021	467.75	19.65	448.10
	6/28/2021	467.75	19.98	447.77
	7/19/2021	467.75	19.57	448.18
	8/23/2021	467.75	20.15	447.60
	9/30/2021	467.75	23.25	444.50
	10/28/2021	467.75	23.35	444.40
	11/29/2021	467.75	20.64	447.11
	12/30/2021	467.75	22.61	445.14
	1/6/2022	467.75	23.19	444.56
	2/7/2022	467.75	22.03	445.72
	3/1/2022	467.75	19.97	447.78
	4/22/2022	467.75	19.36	448.39
	5/24/2022	467.75	19.38	448.37
	6/6/2022	467.75	19.45	448.30
	7/25/2022	467.75	20.39	447.36
	8/29/2022	467.75	23.75	444.00
	9/28/2022	467.75	25.38	442.37
	10/26/2022	467.75	27.49	440.26
	11/14/2022	467.75	27.73	440.02
	12/28/2022	467.75	27.47	440.28
MW-20	3/12/2021	468.95	27.35	441.60
	4/7/2021	468.95	26.64	442.31
	5/10/2021	468.95	28.54	440.41
	6/2/2021	468.95	26.16	442.79
	6/28/2021	468.95	28.01	440.94
	7/19/2021	468.95	24.48	444.47
	8/23/2021	468.95	28.94	440.01
	9/30/2021	468.95	30.82	438.13
	10/25/2021	468.95	29.42	439.53
	11/29/2021	468.95	28.56	440.39
	12/30/2021	468.95	29.54	439.41
	1/6/2022	468.95	29.96	438.99
	2/7/2022	468.95	30.51	438.44
	3/1/2022	468.95	25.72	443.23
	4/22/2022	468.95	24.39	444.56
	5/24/2022	468.95	25.23	443.72
	6/6/2022	468.95	26.10	442.85
	7/25/2022	468.95	29.72	439.23
	8/29/2022	468.95	31.02	437.93
	9/28/2022	468.95	32.00	436.95
	10/26/2022	468.95	32.52	436.43
	11/14/2022	468.95	32.52	436.43
	12/28/2022	468.95	32.55	436.40
MW-21	3/12/2021	468.17	27.52	440.65
	4/7/2021	468.17	27.51	440.66
	5/10/2021	468.17	29.24	438.93
	6/2/2021	468.17	27.22	440.95
	6/28/2021	468.17	29.78	438.39
	7/19/2021	468.17	24.42	443.75
	8/23/2021	468.17	31.01	437.16
	9/30/2021	468.17	32.13	436.04
	10/25/2021	468.17	30.65	437.52
	11/29/2021	468.17	30.11	438.06
	12/30/2021	468.17	30.96	437.21
	1/6/2022	468.17	28.40	439.77
	2/7/2022	468.17	30.92	437.25
	3/1/2022	468.17	24.59	443.58
	4/22/2022	468.17	24.27	443.90
	5/24/2022	468.17	26.13	442.04
	6/6/2022	468.17	27.55	440.62
	7/25/2022	468.17	31.32	436.85
	8/29/2022	468.17	31.96	436.21
	9/28/2022	468.17	32.49	435.68
	10/26/2022	468.17	32.57	435.60
	11/14/2022	468.17	32.85	435.32
	12/28/2022	468.17	32.59	435.58

MSL - Mean Sea Level
TOC - Top of Casing

Table 5. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Powerton Generation Station. Metal Cleaning Basin.

DATE	Screened Unit	Groundwater Flow Direction	K_{avg} (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
1/6/2022	Silt/clay	Westerly	3.280E-07	0.0255	0.4	0.0018
2/7/2022	Silt/clay	Westerly	3.280E-07	0.0359	0.4	0.0025
3/1/2022	Silt/clay	Westerly	3.280E-07	0.0210	0.4	0.0015
4/22/2022	Silt/clay	Westerly	3.280E-07	0.0157	0.4	0.0011
5/24/2022	Silt/clay	Westerly	3.280E-07	0.0199	0.4	0.0014
6/6/2022	Silt/clay	Westerly	3.280E-07	0.0291	0.4	0.0021
7/25/2022	Silt/clay	Westerly	3.280E-07	0.0309	0.4	0.0022
8/29/2022	Silt/clay	Westerly	3.280E-07	0.0311	0.4	0.0022
9/28/2022	Silt/clay	Westerly	3.280E-07	0.0342	0.4	0.0024
10/26/2022	Silt/clay	Westerly	3.280E-07	0.0347	0.4	0.0025
11/14/2022	Silt/clay	Westerly	3.280E-07	0.0321	0.4	0.0023
12/28/2022	Silt/clay	Westerly	3.280E-07	0.0357	0.4	0.0025

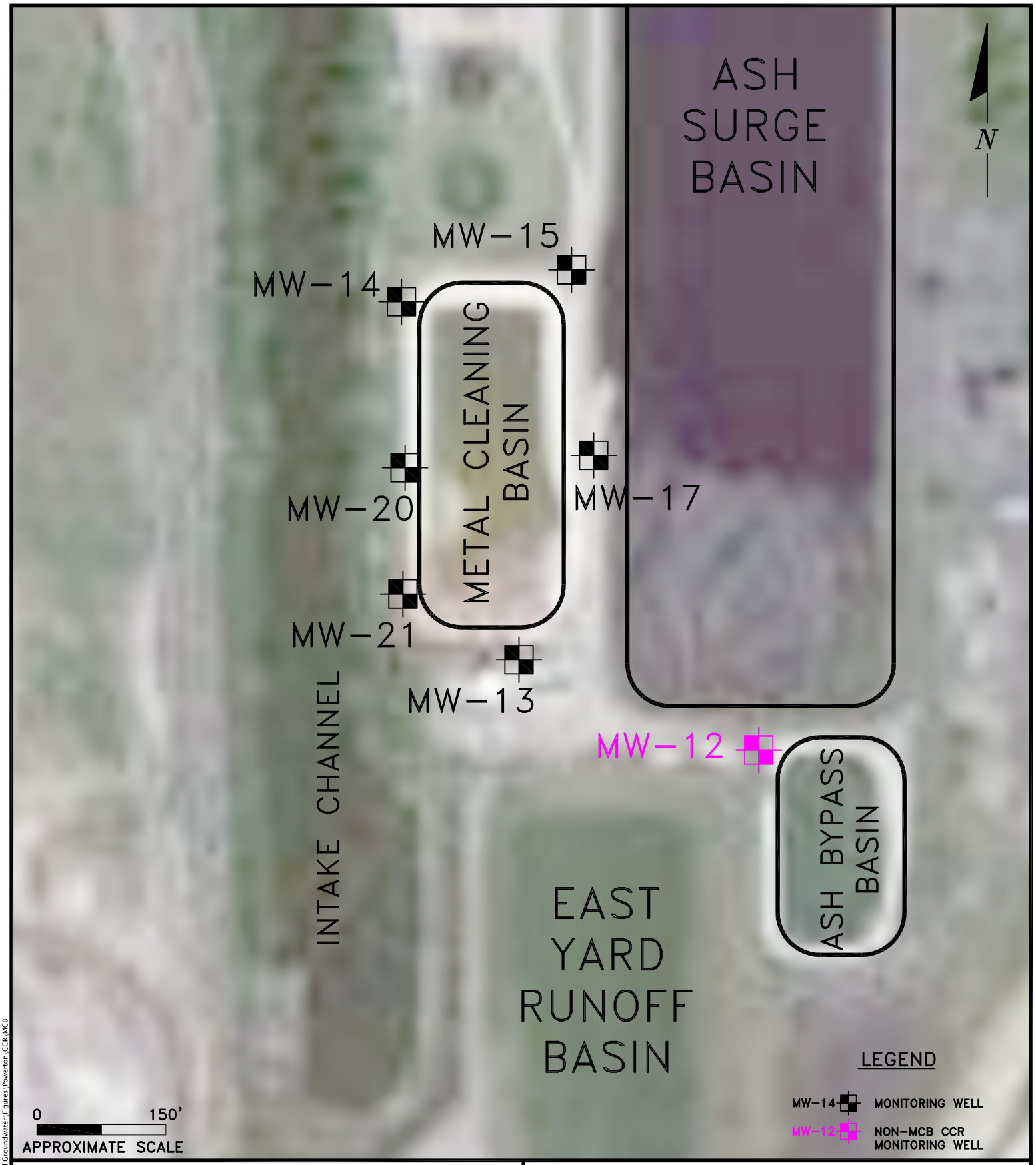
* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.
Average hydraulic conductivity for silt/clay unit (feet/second) from Groundwater, Freeze and Cherry, 1979.

** - Porosity estimates from Applied Hydrogeology, Fetter, 1980.

Table 6. CCR Groundwater Sample Collection Summary for 2022 - Powerton Generating Station. Metal Cleaning Basin.

Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events
MW-13 (Upgradient)	5	1/6/2022
		2/9/2022
		6/8/2022
		8/31/2022
		11/16/2022
MW-15 (Upgradient)	4	2/9/2022
		6/8/2022
		8/31/2022
		11/16/2022
MW-17 (Upgradient)	4	2/7/2022
		6/8/2022
		8/31/2022
		11/16/2022
MW-14 (Downgradient)	3	2/9/2022
		6/8/2022
		8/31/2022
MW-20 (Downgradient)	3	2/8/2022
		6/9/2022
		9/1/2022
MW-21 (Downgradient)	2	3/1/2022
		6/9/2022

FIGURES



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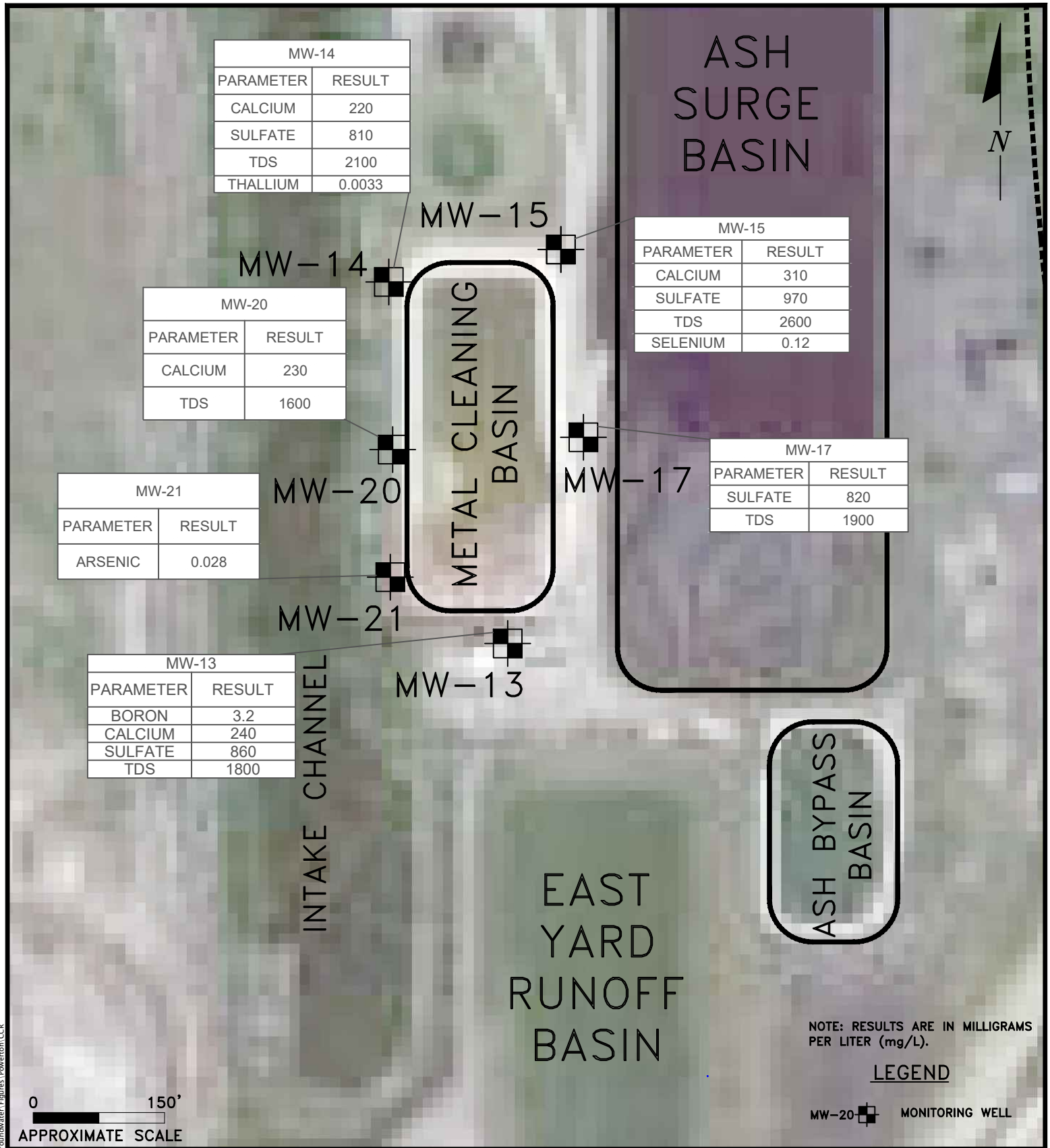
SITE MAP

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: July 13, 2021

KPRG Project No. 12313.5 | FIGURE 1



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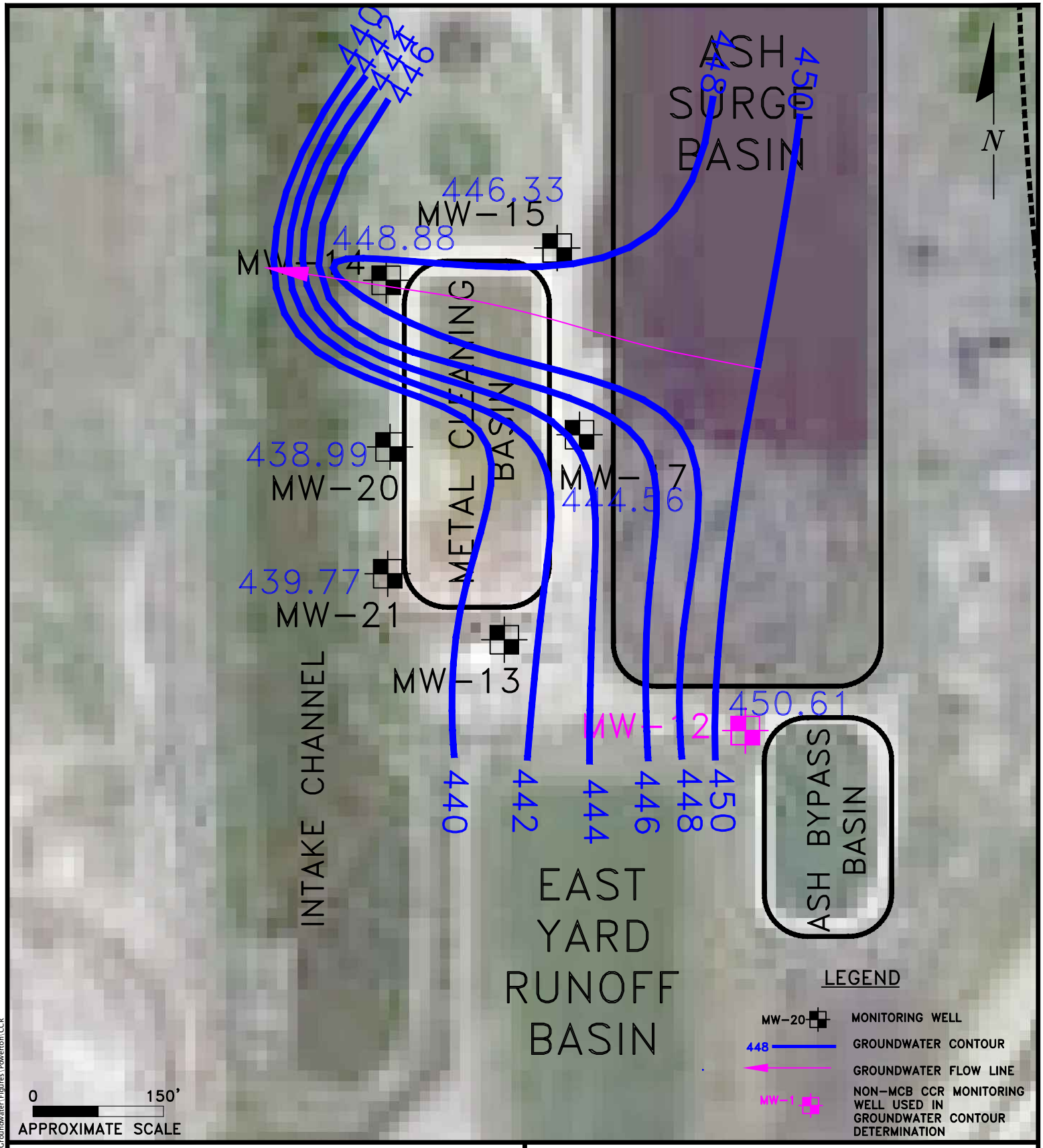
2Q22 AREAL DISTRIBUTION MAP OF PARAMETERS ABOVE PROPOSED GWPSs

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: January 23, 2023

KPRG Project No. 12313.5 | Figure 2

ATTACHMENT 1
Monthly Potentiometric Maps



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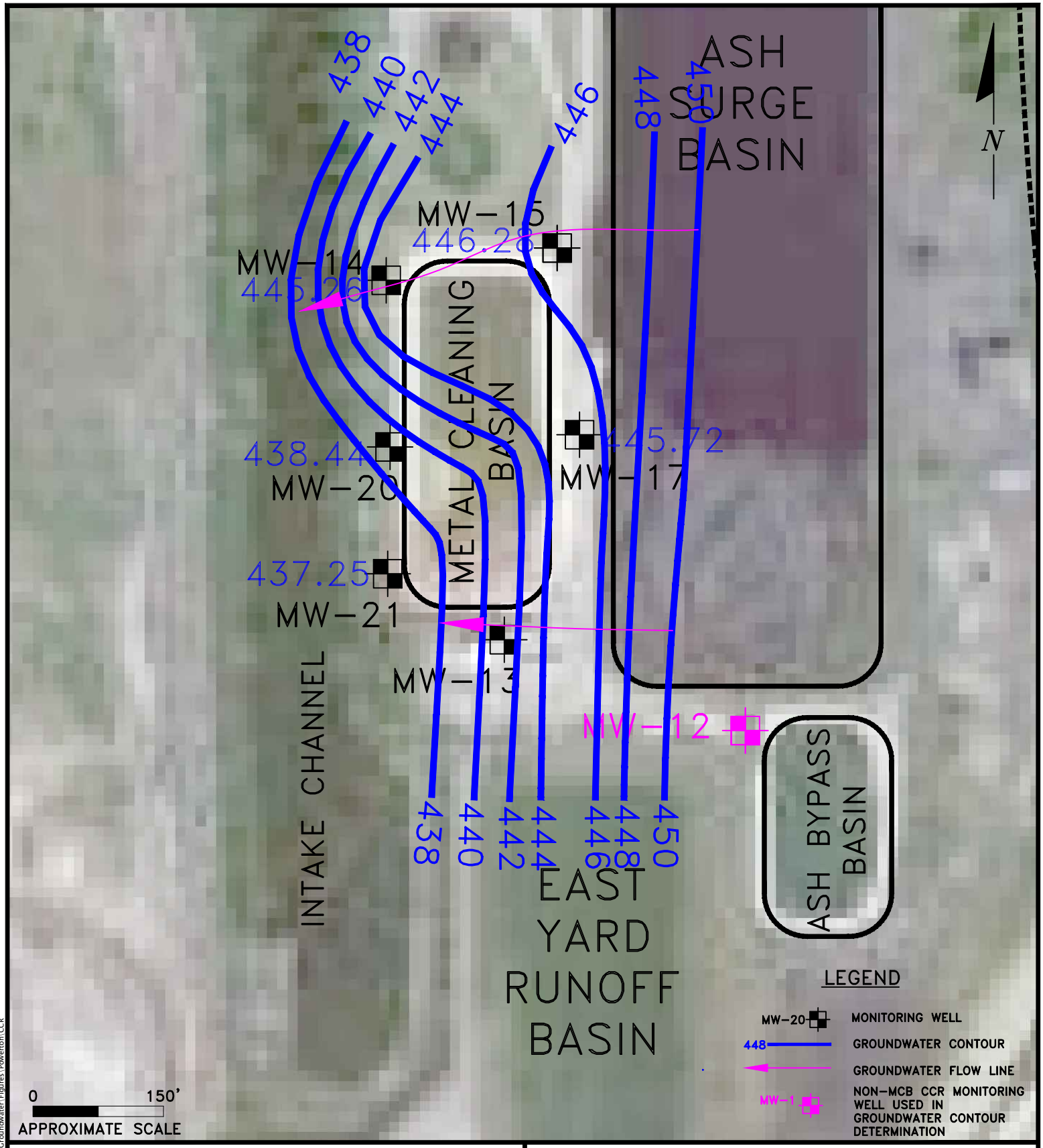
POTENTIOMETRIC MAP 01/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: April 20, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1



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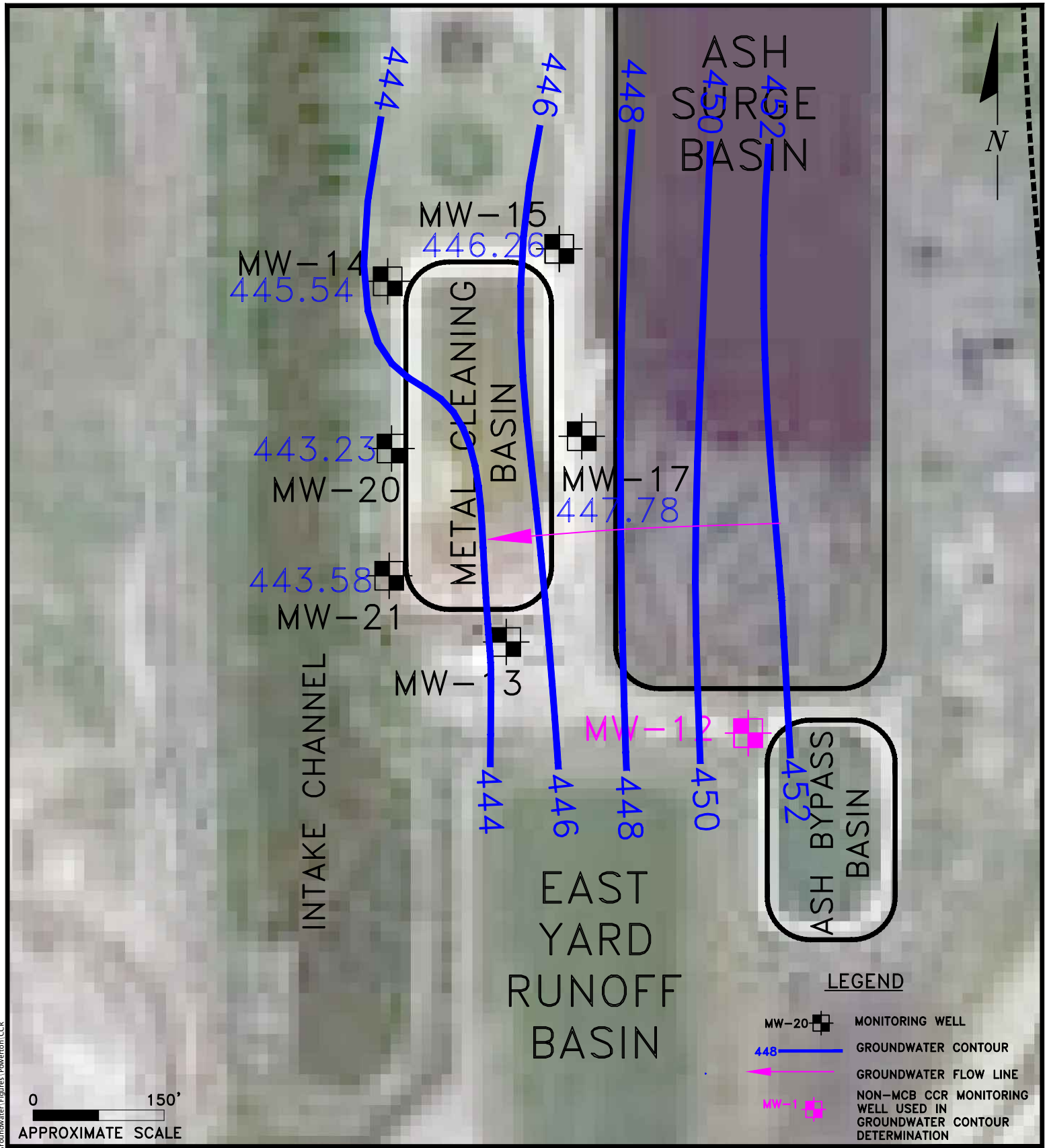
POTENTIOMETRIC MAP 02/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: April 21, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1



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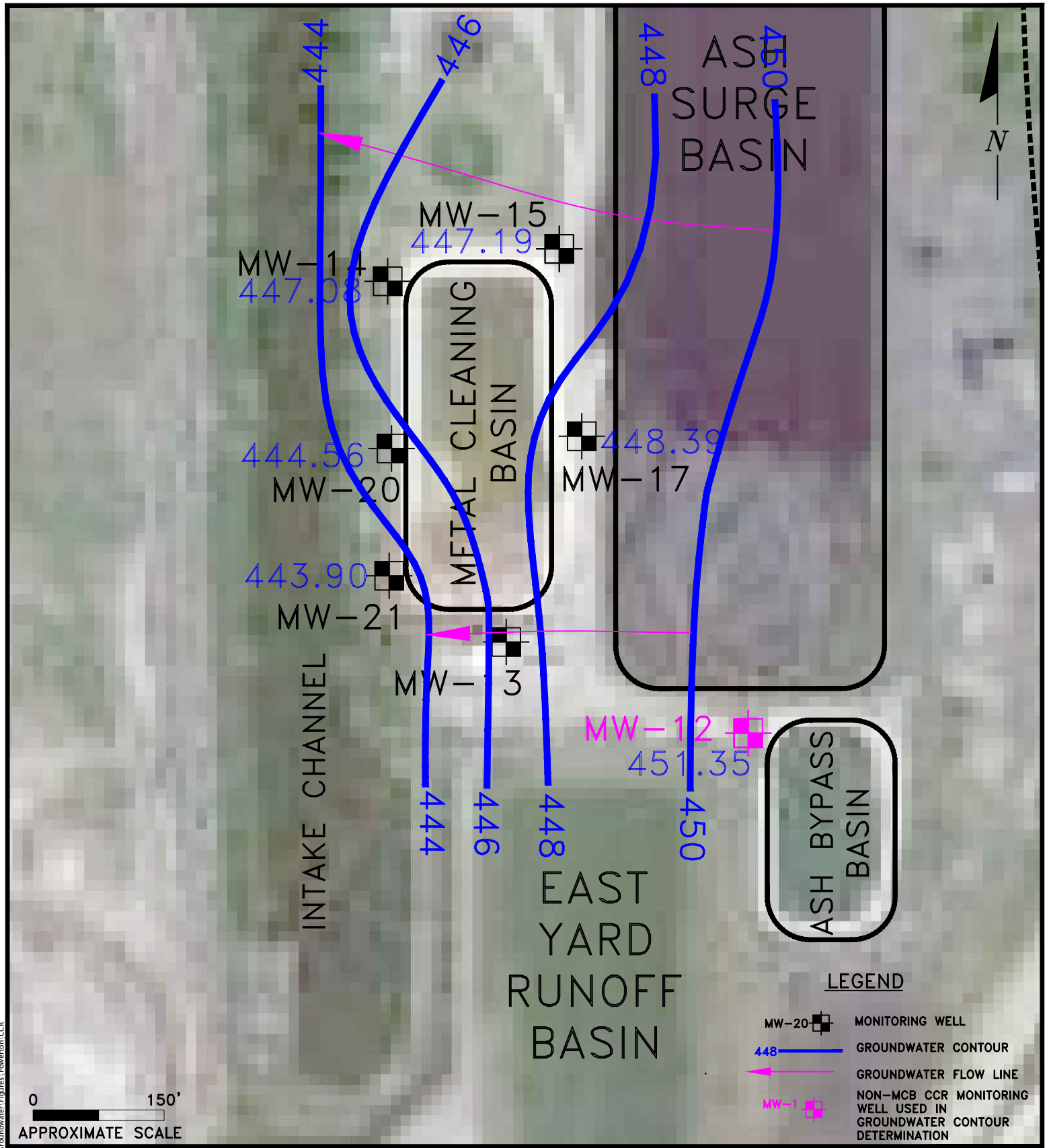
POTENTIOMETRIC MAP 03/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150'	Date: April 21, 2022
KPRG Project No. 12313.5	ATTACHMENT 1



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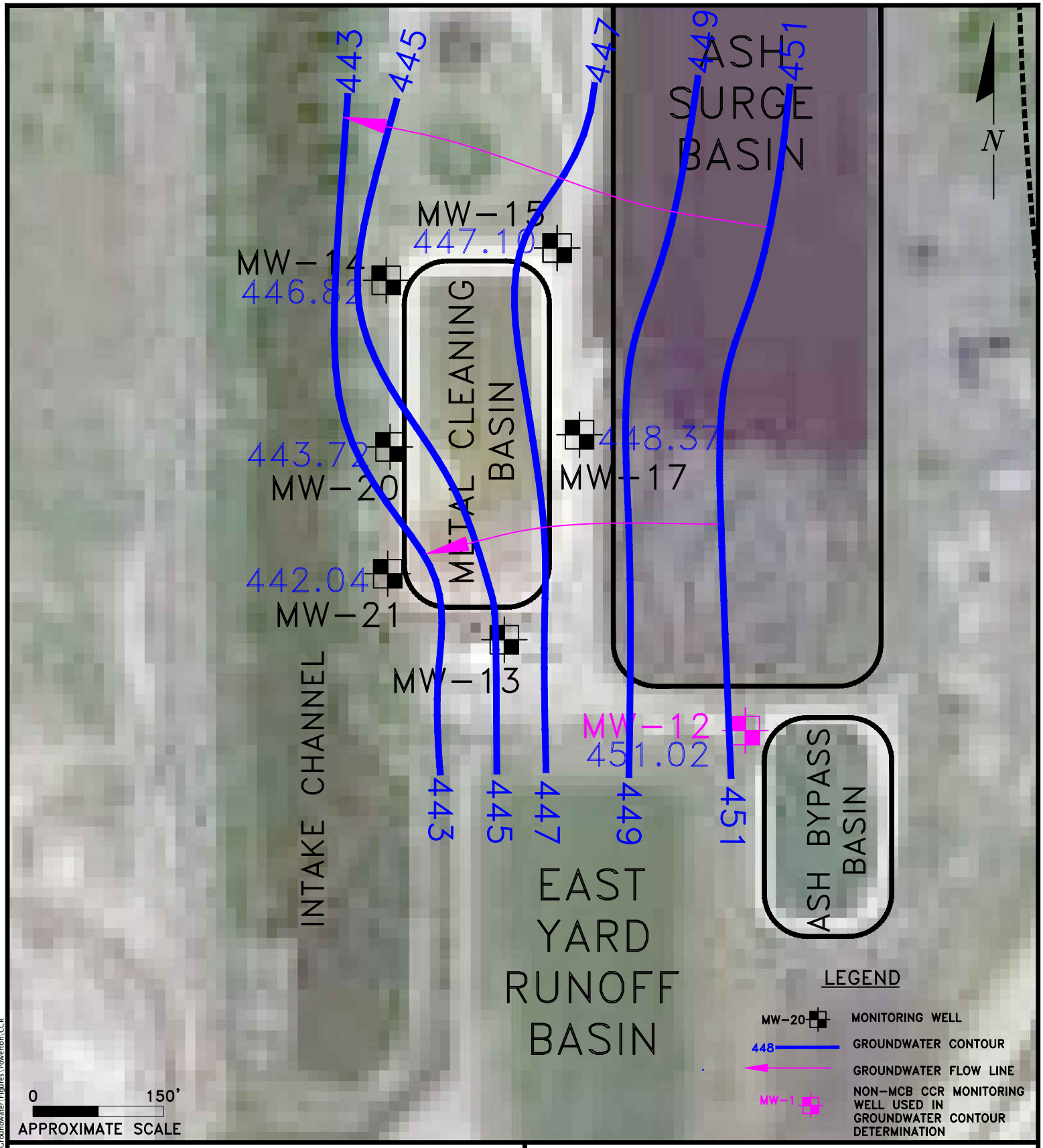
POTENTIOMETRIC MAP 04/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: May 18, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1



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POTENTIOMETRIC MAP 05/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: July 28, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1

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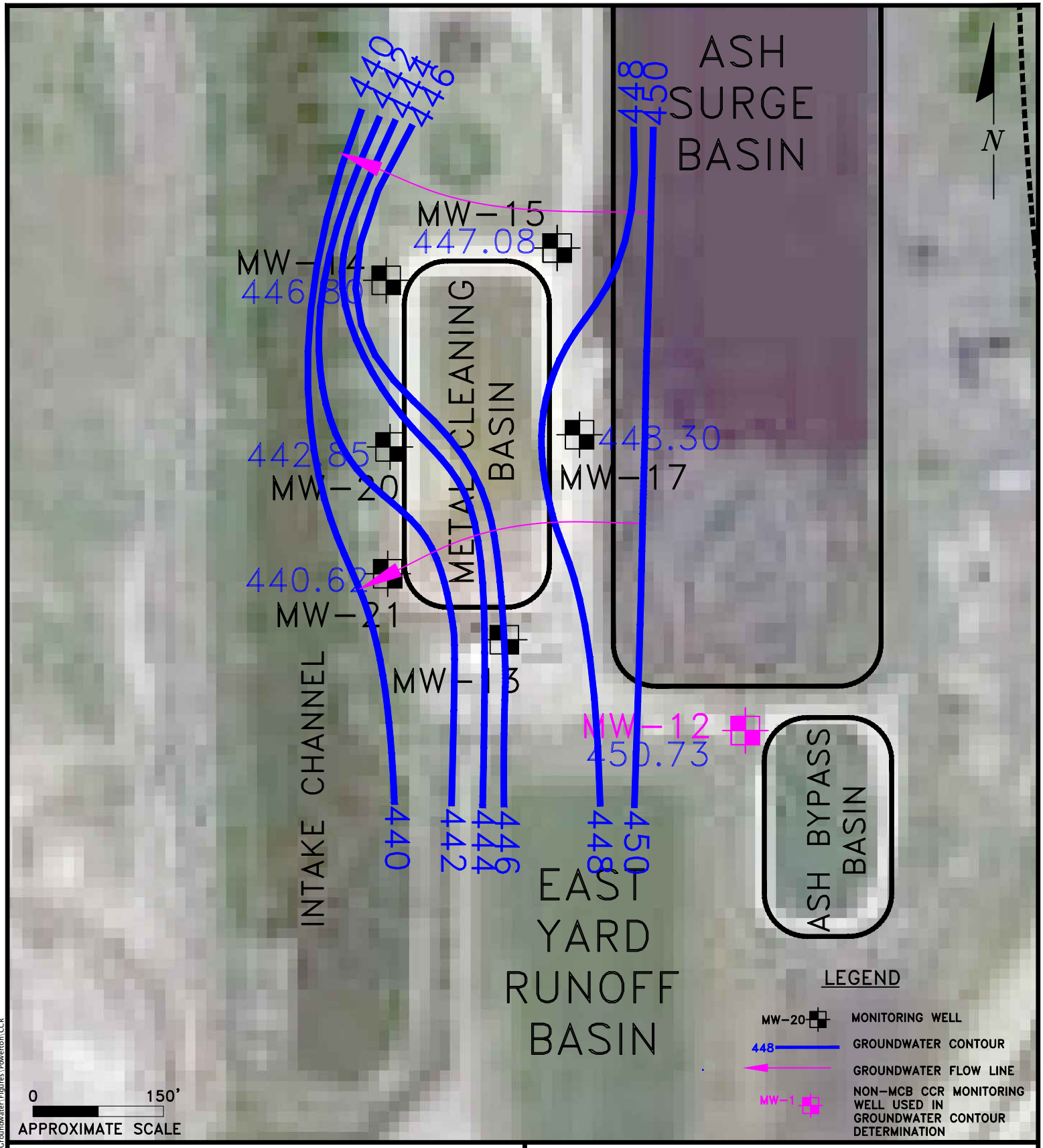

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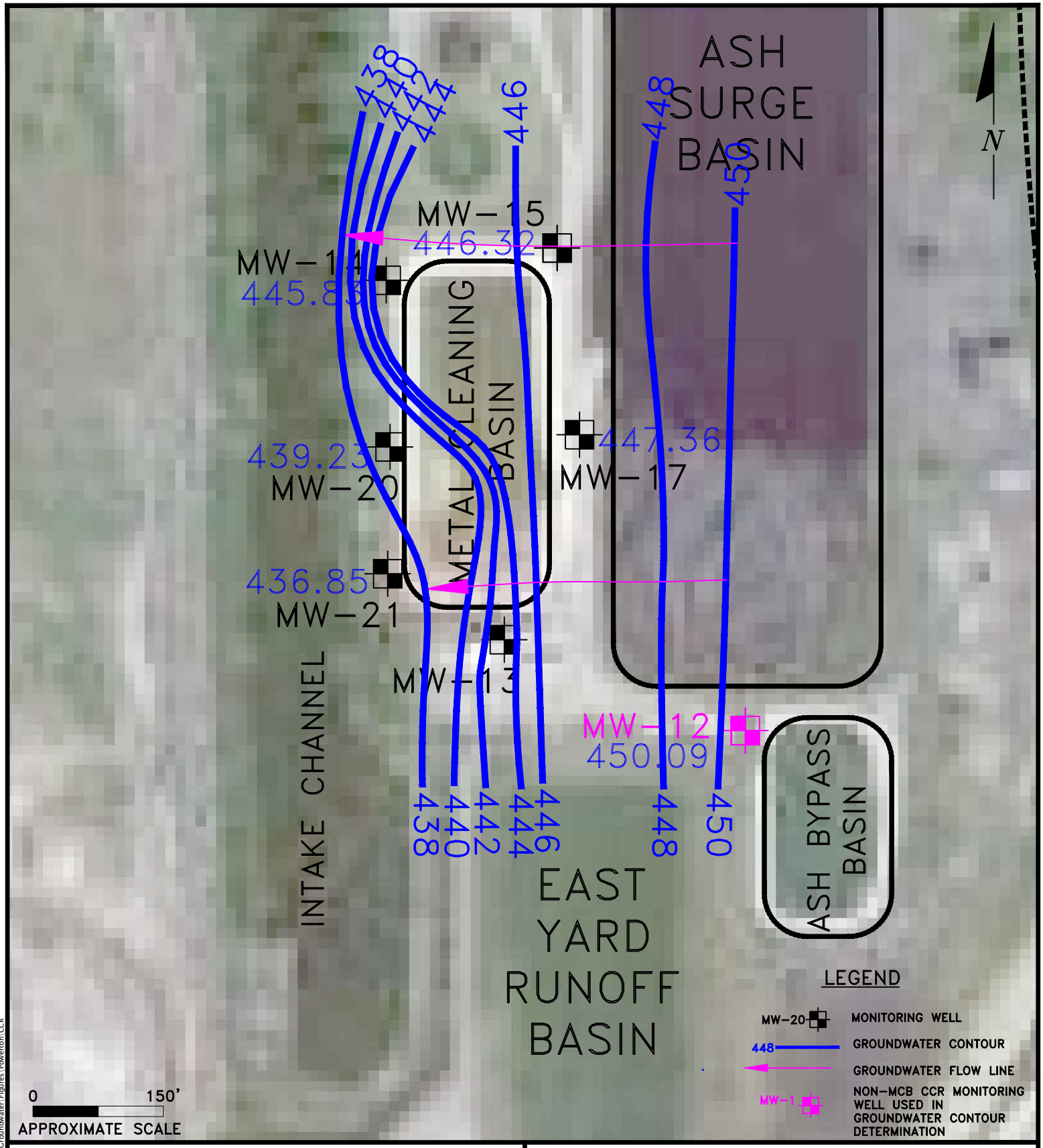
POTENTIOMETRIC MAP 06/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: July 28, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1



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ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG

KPRG and Associates, inc.

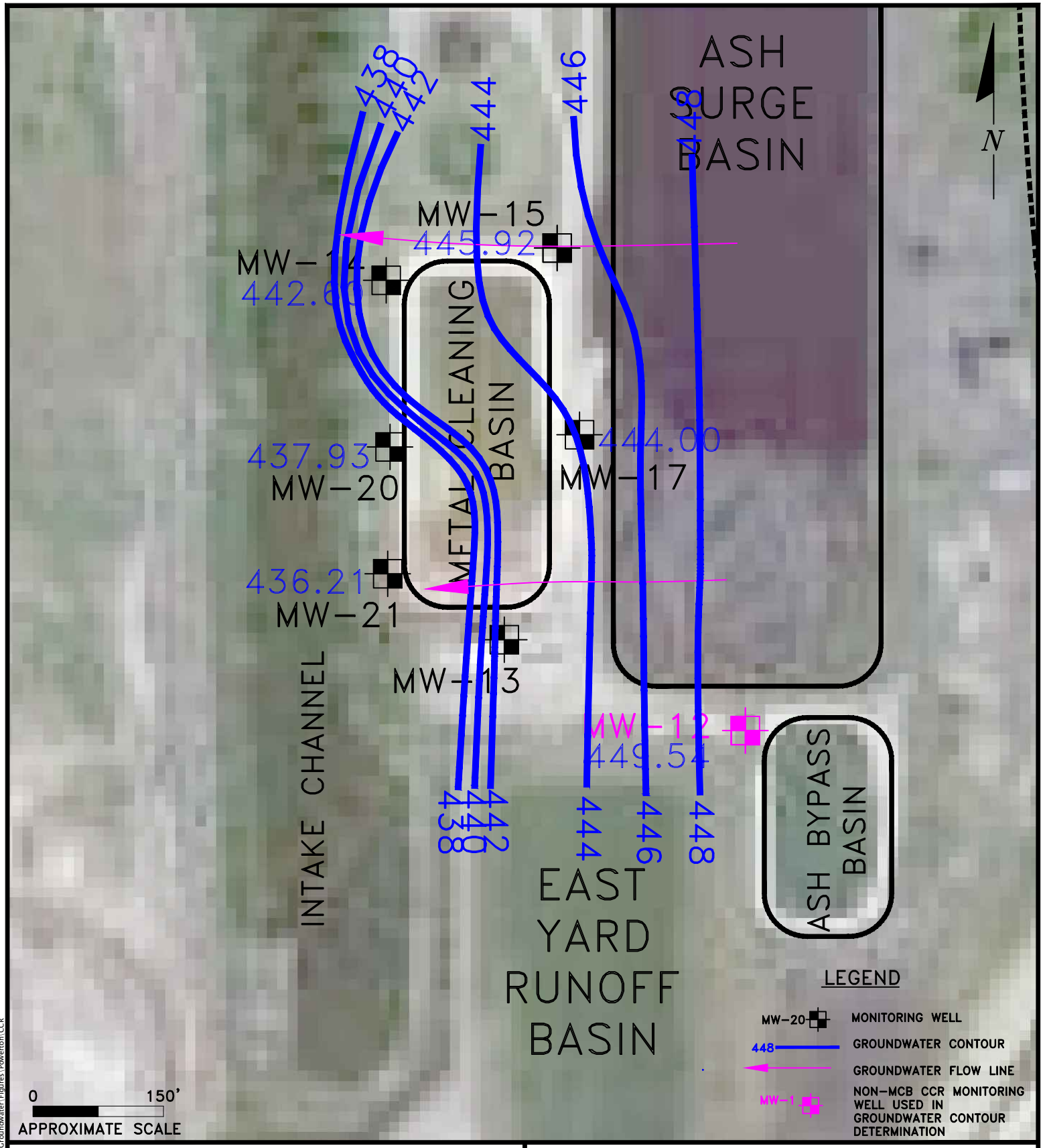
414 Plaza Drive, Suite 106 Westmont, Illinois 60559 Telephone 630-325-1300 Facsimile 630-325-1593

14665 West Lisbon Road, Suite 1A Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

POTENTIOMETRIC MAP 07/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150'	Date: September 27, 2022
KPRG Project No. 12313.5	ATTACHMENT 1



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POTENTIOMETRIC MAP 08/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150'	Date: October 13, 2022
KPRG Project No. 12313.5	ATTACHMENT 1

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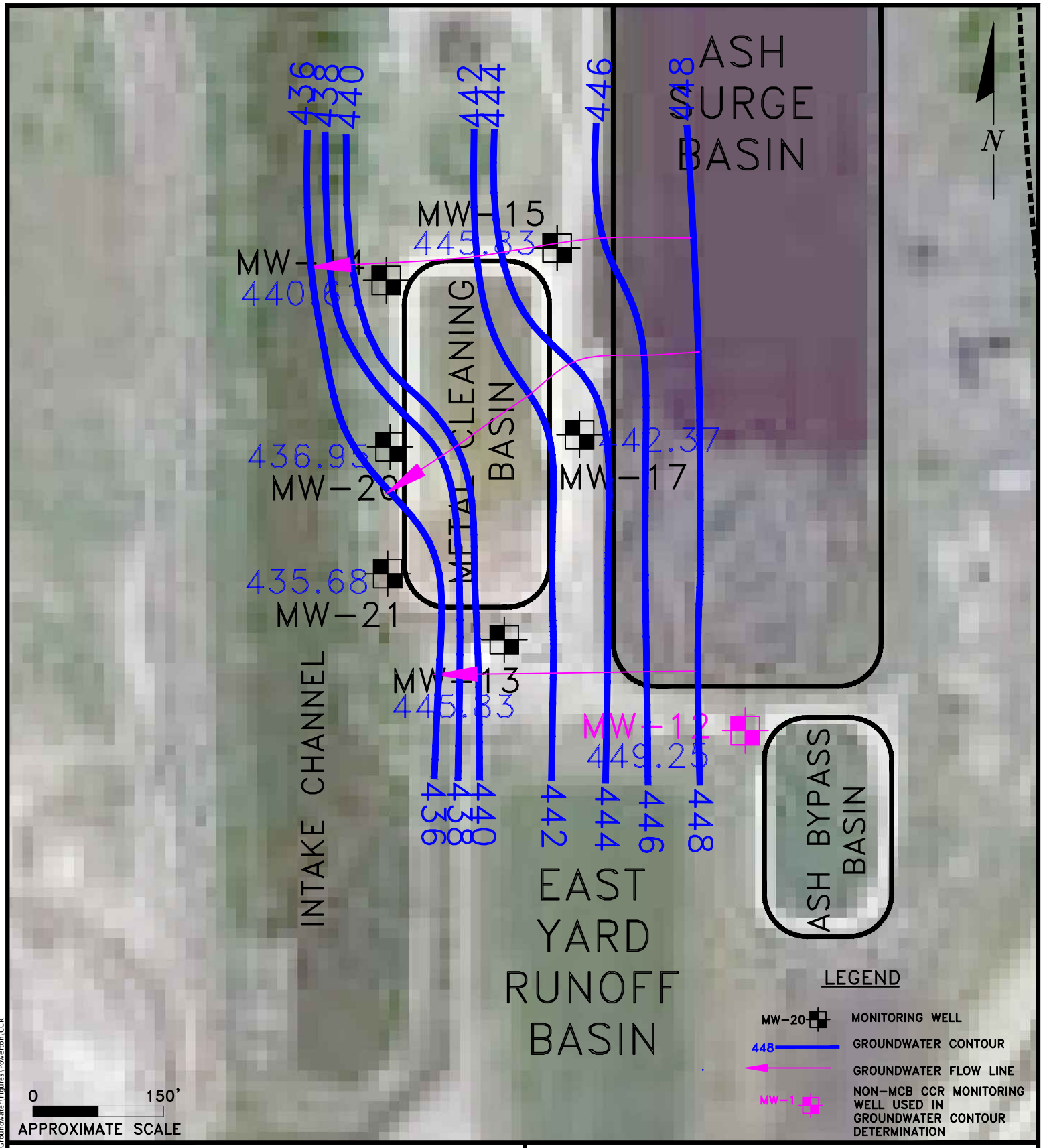

ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 09/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: November 1, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1

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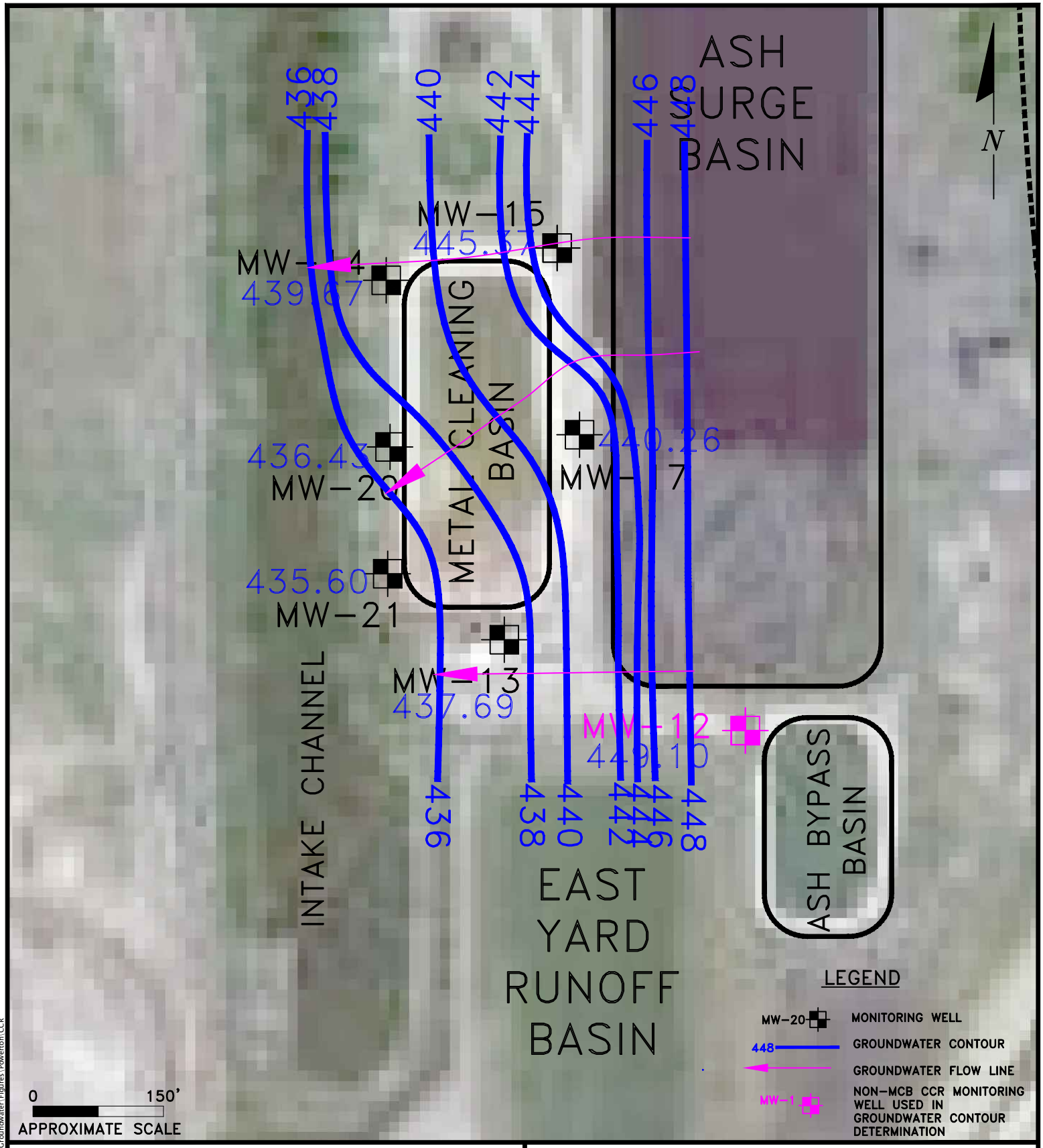

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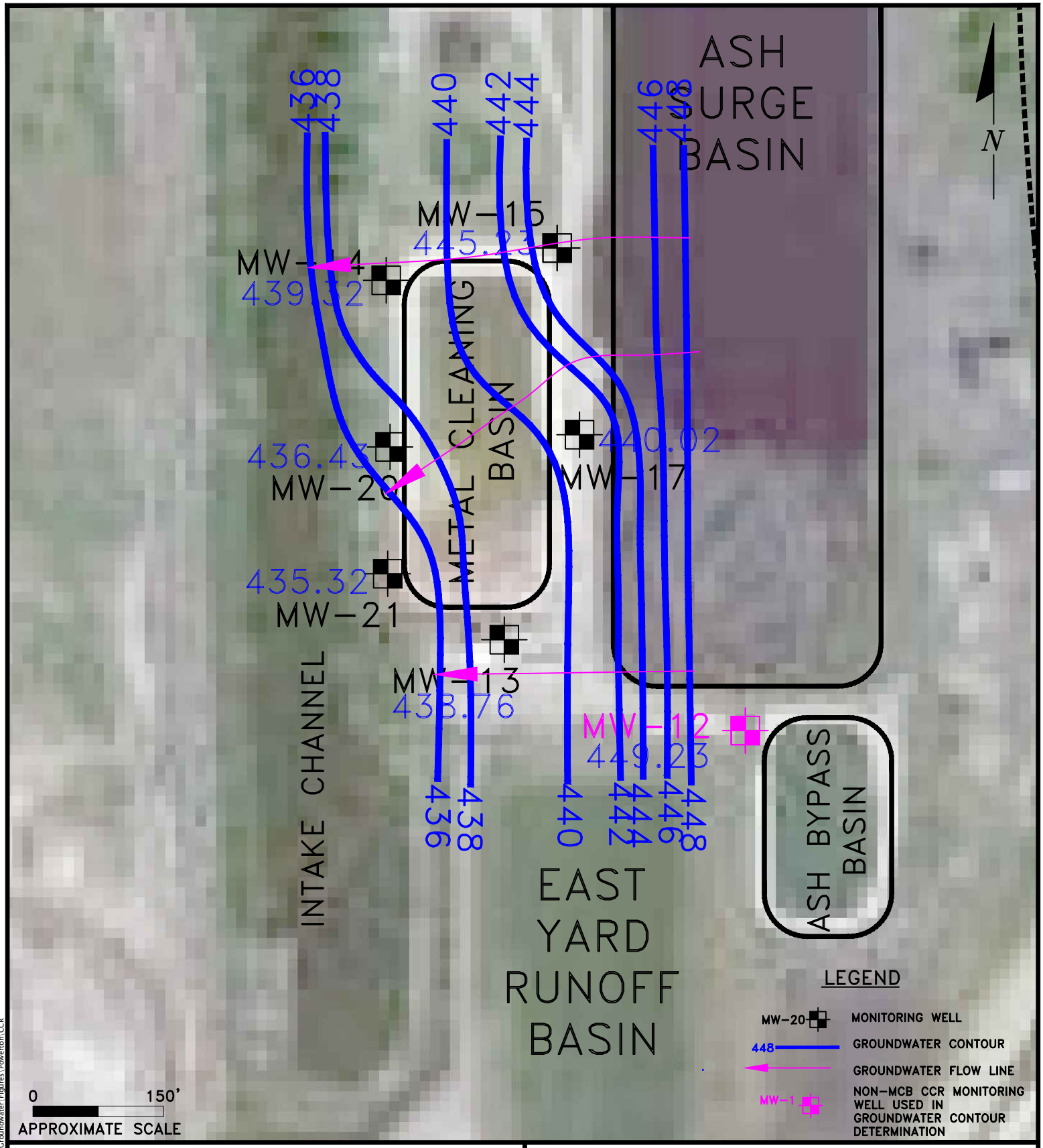
POTENTIOMETRIC MAP 10/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: December 30, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1



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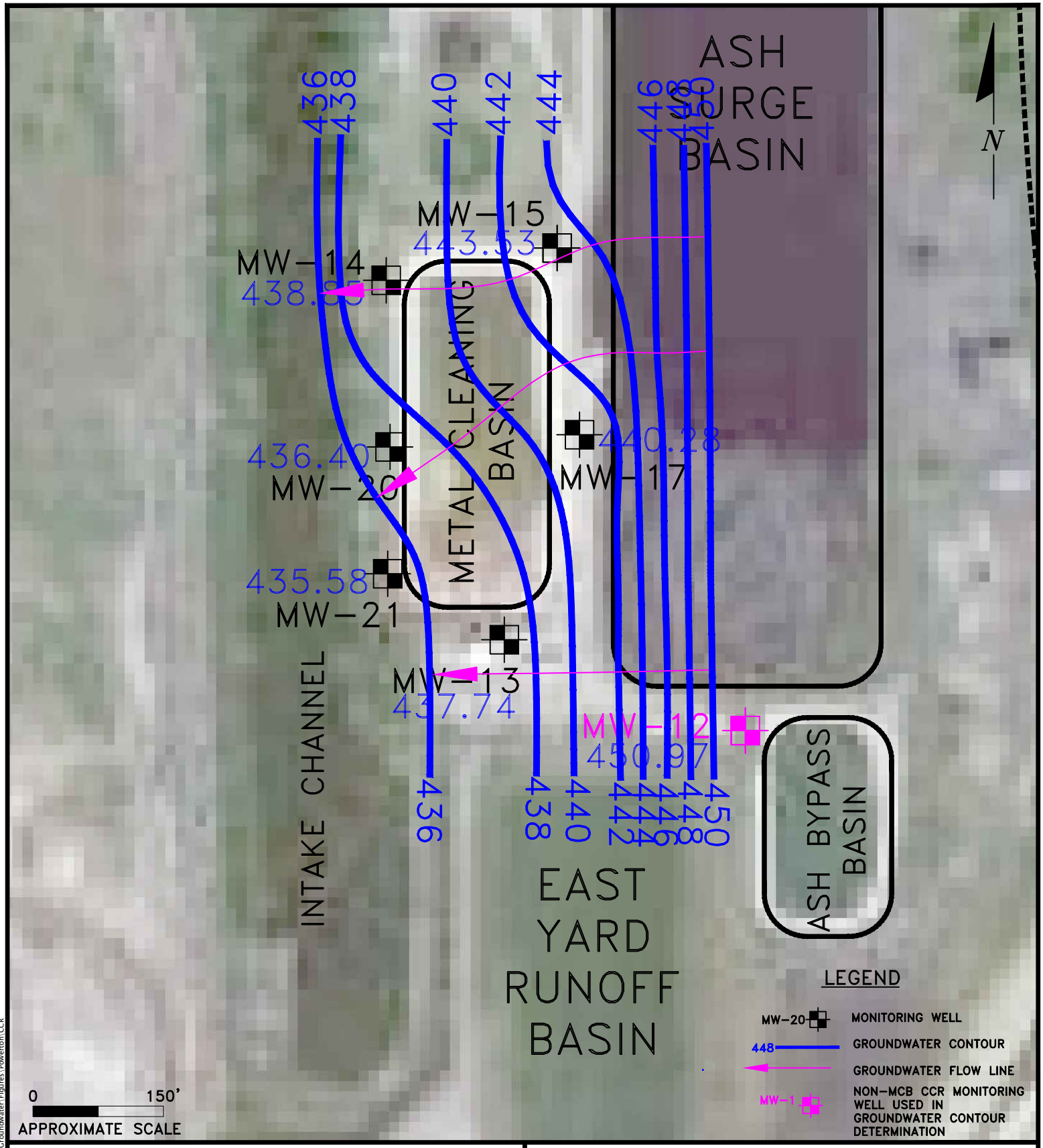
POTENTIOMETRIC MAP 11/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: December 30, 2022

KPRG Project No. 12313.5 | ATTACHMENT 1



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POTENTIOMETRIC MAP 12/2022

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150' | Date: January 4, 2023

KPRG Project No. 12313.5 | ATTACHMENT 1

ATTACHMENT 2
Supporting Evidence for Low Water Wells

Figure 2-1. Peoria Area Monthly Normal Precipitation vs. 2022

Peoria Normal Monthly Statistics

Month	Average High (°F)	Average Low (°F)	Mean Temp. (°F)	Heating Degree Days	Cooling Degree Days	Average Precip. (in.)	Average Snow (in.)
January	33.6	17.6	25.6	1221	0	2.06	7.7
February	38.7	21.4	30.0	978	0	1.99	6.9
March	51.2	31.6	41.4	734	2	2.69	3.3
April	63.7	41.4	52.9	376	12	3.99	0.5
May	74.2	52.8	63.5	135	88	4.69	0
June	83.2	62.4	72.8	13	247	3.73	0
July	86.3	66.3	76.3	1	351	3.53	0
August	84.6	64.4	74.5	3	297	3.31	0
September	78.4	56.3	67.4	66	137	3.48	0
October	65.4	44.4	54.9	335	22	3.17	0.1
November	50.8	33.0	41.9	694	1	2.70	1.5
December	38.5	23.2	30.9	1058	0	2.21	6.2
Annual	62.4	43.0	52.7	5614	1157	37.55	26.2

https://www.weather.gov/ilx/pia-normal-monthly

NOWData - NOAA Online Weather Data Enlarge results Print

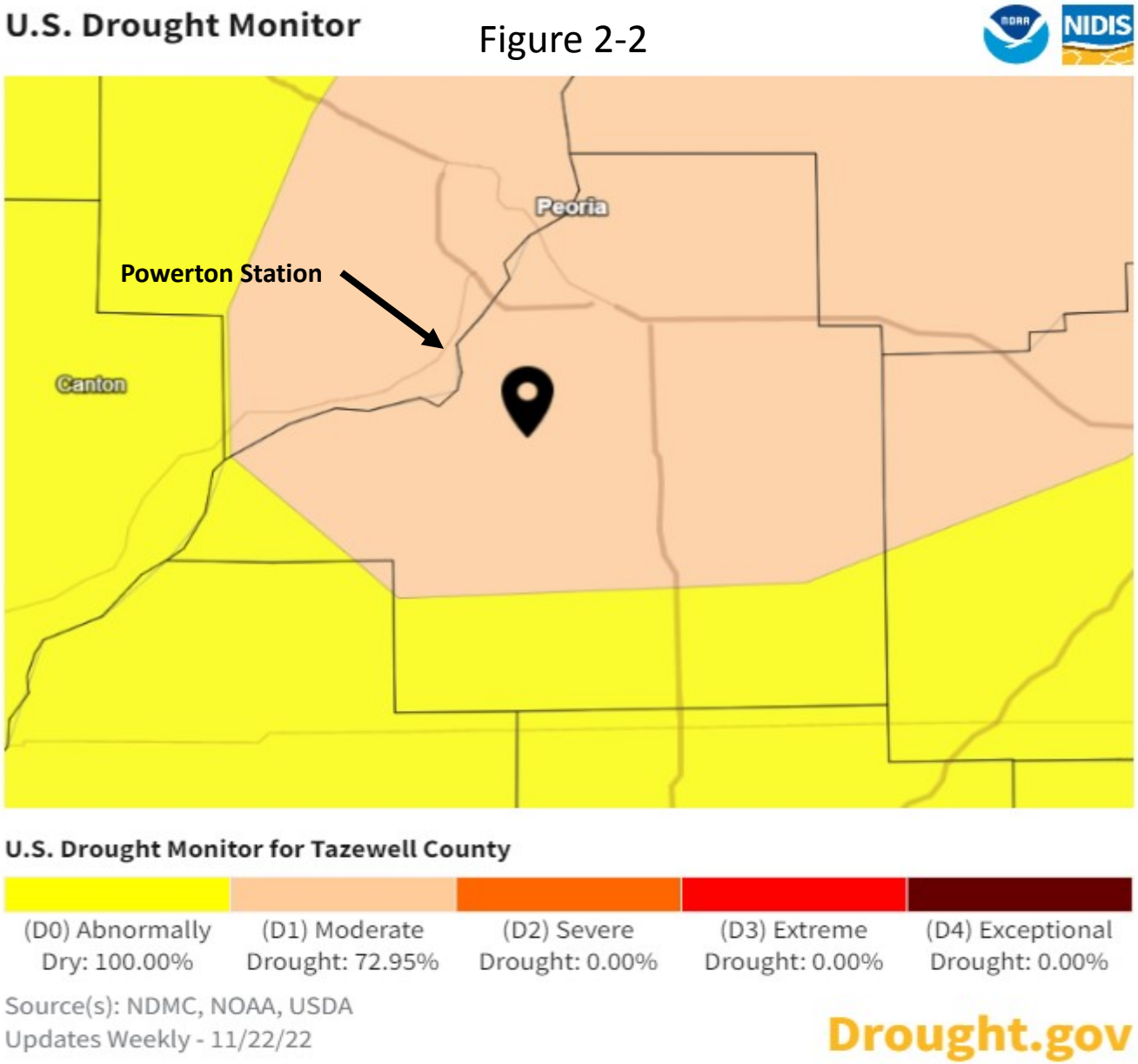
Monthly Total Precipitation for Peoria Area, IL (ThreadEx)

Click column heading to sort ascending, click again to sort descending.

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2022	0.76	2.73	3.55	2.36	3.48	2.42	1.87	3.45	0.79	2.67	1.95	M	M
Mean	0.76	2.73	3.55	2.36	3.48	2.42	1.87	3.45	0.79	2.67	1.95	M	M
Max	0.76 2022	2.73 2022	3.55 2022	2.36 2022	3.48 2022	2.42 2022	1.87 2022	3.45 2022	0.79 2022	2.67 2022	1.95 2022	M -	M M
Min	0.76 2022	2.73 2022	3.55 2022	2.36 2022	3.48 2022	2.42 2022	1.87 2022	3.45 2022	0.79 2022	2.67 2022	1.95 2022	M -	M M

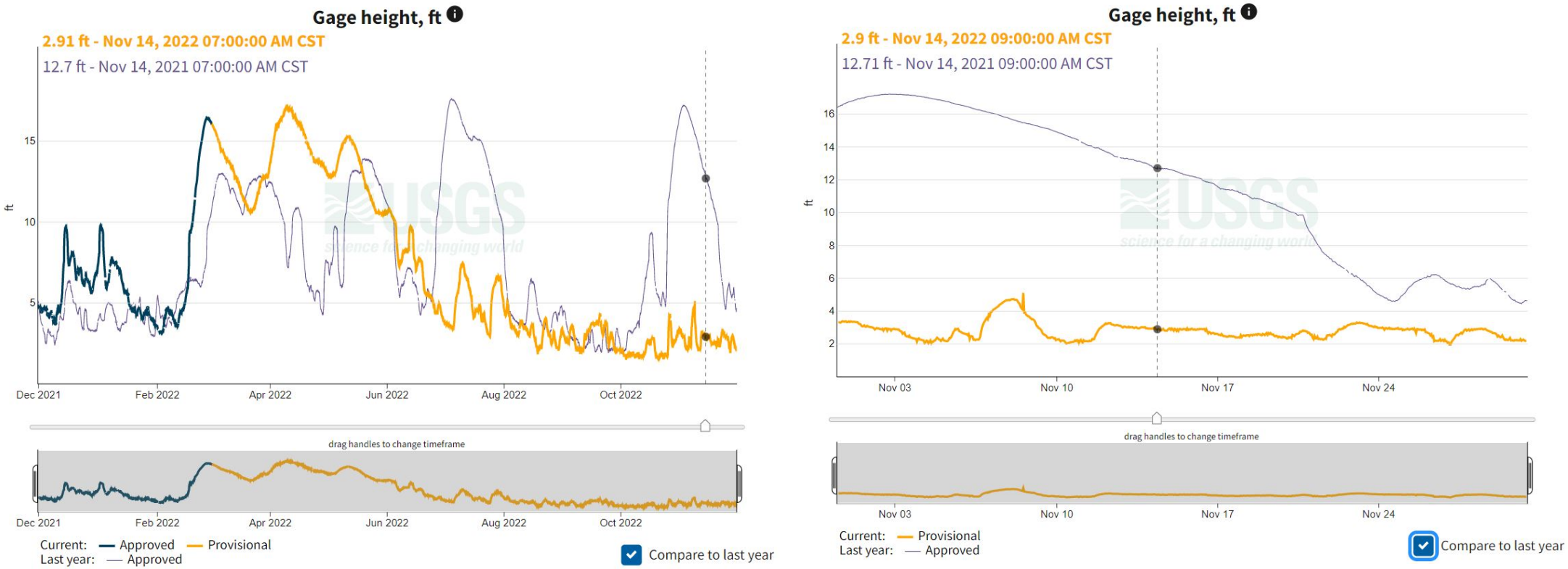
https://www.weather.gov/wrh/climate?wfo=ilx

Figure 2-2



https://www.drought.gov/states/illinois/county/Tazewell

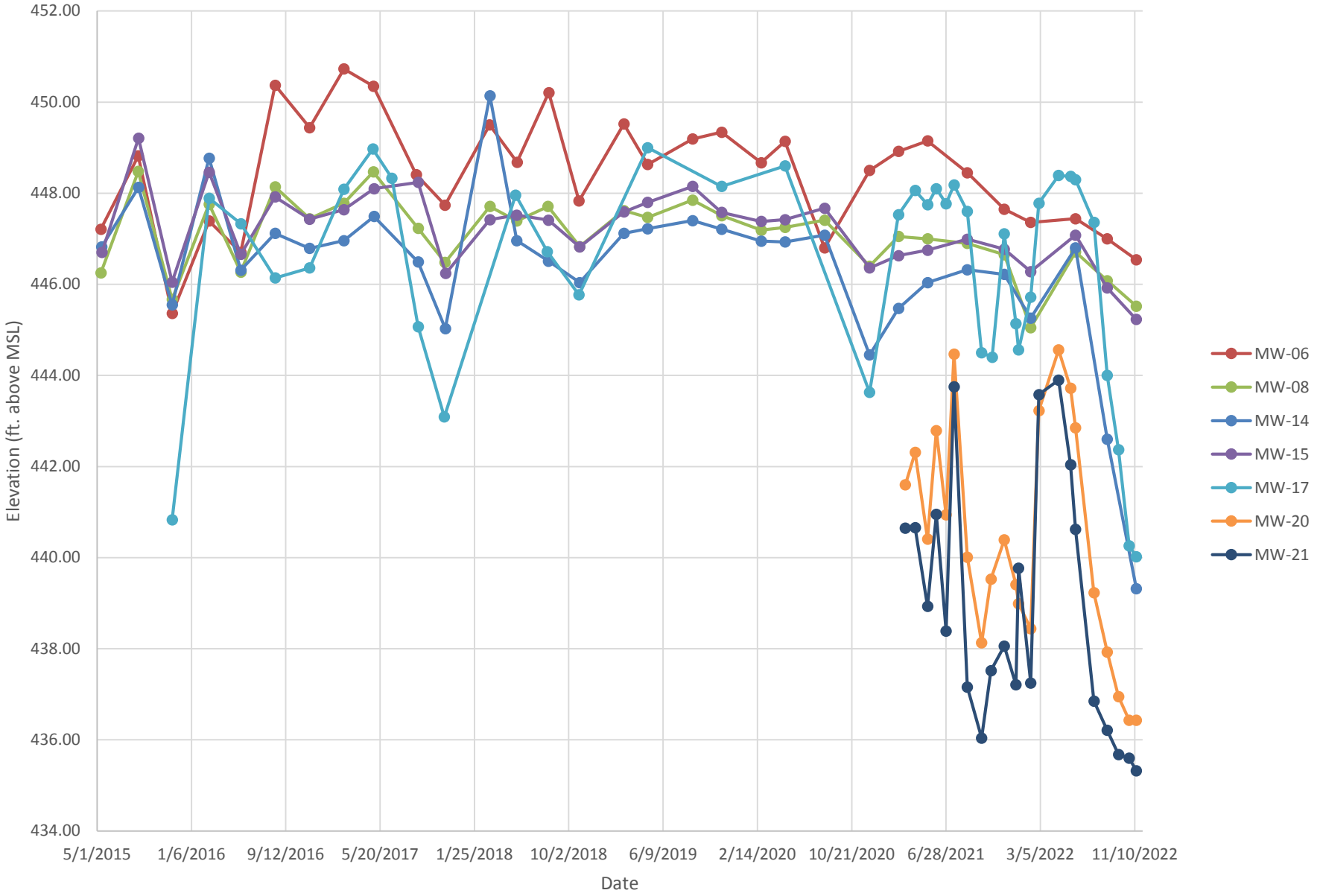
Figure 2-3. Illinois River at Kingston Mines, IL Stream Gage



https://waterdata.usgs.gov/monitoring-location/05568500/#parameterCode=00065&period=P7D

- Located South-Southwest and downstream of Powerton Station.
- Gage Altitude = 428 ft/MSL
- River Elevation:
  - November 14, 2021 = 440.71 ft/MSL
  - November 14, 2022 = 430.90 ft/MSL

Figure 2-4. Powerton Silt/Clay Wells Hydrograph



MW-14:

- Nov 2021 = 446.22
- Nov 2022 = 439.32

MW-15:

- Nov 2021 = 446.77
- Nov 14, 2022 = 445.22
- Nov 28, 2022 = 440.67

MW-20:

- Nov 2021 = 440.39
- Nov 2022 = 436.43

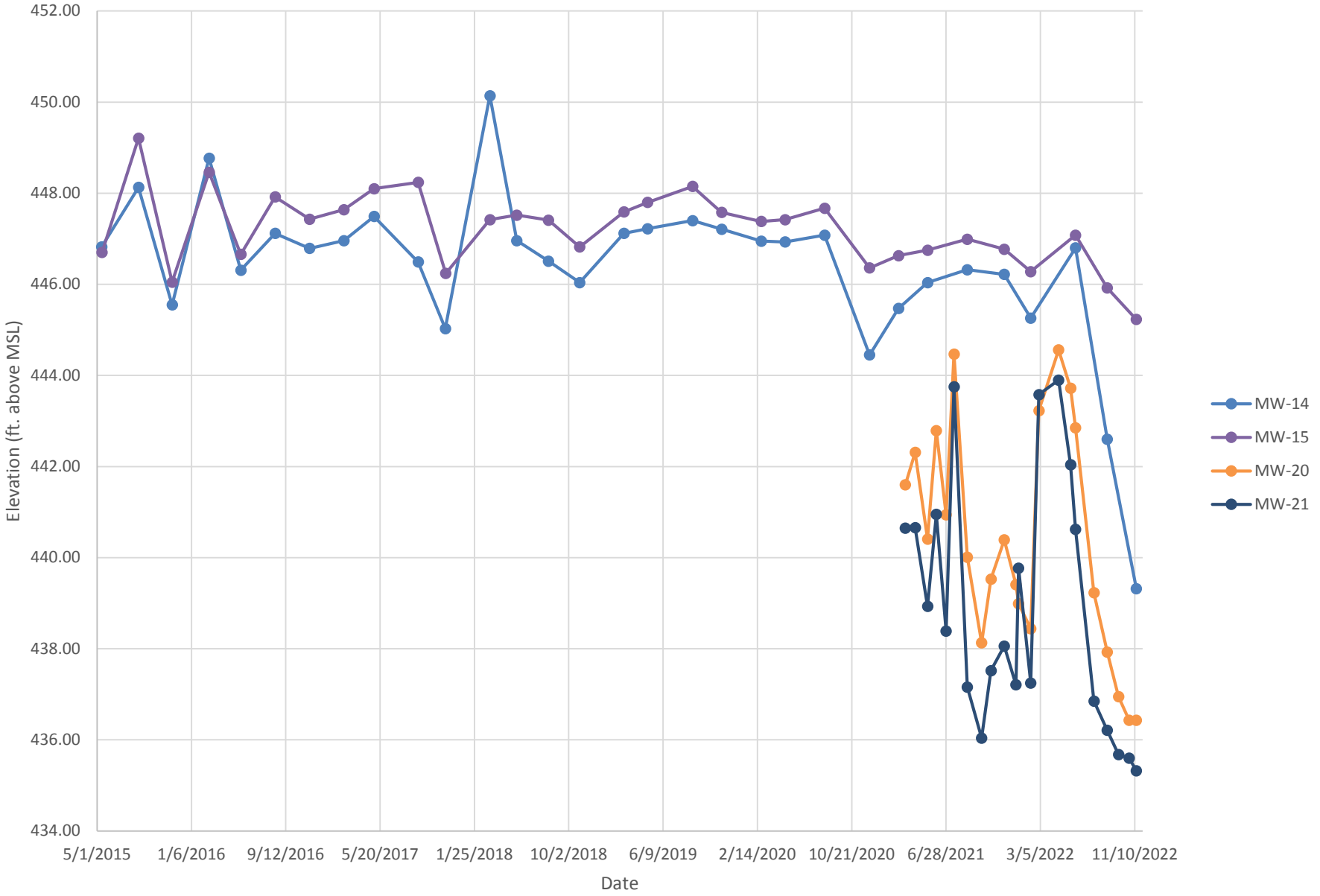
- April 2021 = 442.31
- April 2022 = 444.56

MW-21:

- Nov 2021 = 438.06
- Nov 2022 = 435.32

- April 2021 = 440.66
- April 2022 = 443.90

Figure 2-5. Powerton Silt/Clay Wells Hydrograph



ATTACHMENT D
2022 MONTHLY SURFACE IMPOUNDMENT WATER ELEVATIONS

Monthly Surface Impoundment Water Elevations
Midwest Generation, LLC, Powerton Station, Pekin, IL

Pond	Date	Basin Gauge Level (ft)	Basin Surface Elevation (ft above MSL)
Ash Bypass Basin	12/30/2021	2.1	459.1
	1/6/2022	2.2	459.2
	2/7/2022	2.2	459.2
	3/1/2022	2.2	459.2
	4/22/2022	1.5	459.2
	5/24/2022	3.3	460.3
	6/6/2022	2.1	459.1
	8/29/2022	1.6	458.6
	9/28/2022	1.3	458.7
	10/26/2022	1.4	458.4
	11/14/2022	1.4	458.4
	12/28/2022	2.0	459

Pond	Date	PI System Reading (in)	Basin Surface Elevation (ft above MSL)
Ash Surge Basin	12/30/2021	44.0	462.33
	1/6/2022	38.0	461.83
	2/7/2022	57.0	463.42
	3/1/2022	44.0	462.33
	4/22/2022	52.0	463.00
	5/24/2022	44.0	462.33
	6/6/2022	37.0	461.75
	8/29/2022	49.0	462.75
	9/28/2022	58.0	463.50
	10/26/2022	50.0	462.83
	11/14/2022	45.0	462.42
	12/28/2022	56.0	463.33

Monthly Surface Impoundment Water Elevations
Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Basin Gauge Level (ft)	Basin Surface Elevation (ft above MSL)
Former Ash Basin	1/6/2022	2.6	439.2
	2/7/2022	2.3	438.9
	3/1/2022	4.6	441.2
	4/22/2022	7.6	444.2
	5/24/2022	6.0	442.6
	6/6/2022	4.9	441.5
	7/25/2022	LOW	LOW
	8/29/2022	LOW	LOW
	9/28/2022	LOW	LOW
	10/26/2022	LOW	LOW
	11/14/2022	LOW	LOW
	12/28/2022	1.6	438.2

Notes: LOW basin gauge level denotes a water level in the basin below the installed gauge height.

Monthly Surface Impoundment Water Elevations
Midwest Generation, LLC, Powerton Station, Pekin, IL

Well ID	Date	Basin Gauge Level (ft)	Basin Surface Elevation (ft above MSL)
Metal Cleaning Basin	12/30/2021	DRY	DRY
	1/6/2022	DRY	DRY
	2/7/2022	1.0	456.9
	3/1/2022	1.0	456.9
	4/22/2022	DRY	DRY
	5/24/2022	3.4	459.3
	6/6/2022	DRY	DRY
	8/29/2022	DRY	DRY
	9/28/2022	DRY	DRY
	10/26/2022	LOW	LOW
	11/14/2022	LOW	LOW
	12/28/2022	2.2	458.1

Notes: LOW basin gauge level denotes a water level in the basin below the installed gauge height.