MWG
Midwest Generation, LLC

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

January 27, 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
CCR Surface Impoundment Annual Consolidated Report

Dear Sir or Madam:

In accordance with the requirements of Title 35 of the Illinois Administrative Code ("35 IAC") Section 845.550, the Annual Consolidated Report is attached for the following CCR surface impoundments at Powerton Generating Station:

Pond ID	CCR Surface Impoundment Description
W179801008-01	Ash Surge Basin
W179801008-04	Bypass Basin
W179801008-03	Metal Cleaning Basin
W179801008-05	Former Ash Basin

The certification pages from the Hazard Potential Classification Assessments, Structural Stability Assessments, Safety Factor Assessments, and Inflow Design Flood Control System Plans have been provided in Attachment B. A full copy of these assessments can be found on our public website at www.midwestgenerationllc.com. Per Variance Request PCB 21-109, Midwest Generation was granted an extension to submit the initial operating permit for the Metal Cleaning Basin, including the Inflow Design Flood Control System Plan until March 31, 2022 by the Illinois Pollution Control Board. If you have any questions or require additional information regarding this submittal, please contact Jill Buckley at Jill.Buckley@nrg.com.

Sincerely,

Dale Green

Dale Green
Midwest Generation, LLC
Powerton Generating Station Director

Attachment

2021 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
2021 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 2021 Annual Report for LSQ 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, including those specific to the reporting period (October through December 2021) relevant to this Annual Report.

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 October through December 2021.

Owner Representative/Responsible Person Contact Information:

Mr. Dale Green
Station Manager
309-346-2165

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, MWG's regional environmental 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 October through December 2021.

5.0 Summary of Corrective Actions Taken

For the October through December 2021 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, either as a result of internally identified deficiencies or from resolution of citizen complaints.

QUARTERLY FUGITIVE DUST COMPLAINT REPORTS

MWG
Midwest Generation, LLC

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

January 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 Fourth Quarter 2021 at Powerton Generating Station. There were no complaints received from members of the public during the period October 1, 2021 through December 31, 2021.

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

Sincerely,

Dale Green
Plant Manager, Powerton Generating Station

ATTACHMENT B
2021 ANNUAL INSPECTION REPORT

ANNUAL INSPECTION REPORT
ASH SURGE BASIN AND ASH BYPASS BASIN
POWERTON STATION
OCTOBER 2021

This annual inspection report has been prepared pursuant to both Title 35 IAC Part 845 Subpart E, Section 845.540(b) and Title 40 of the Code of Federal Regulations 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 Part 845.540 and 40 CFR 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 13, 2021, 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. At the time of the inspection, the ASB was partially drained.

1.0 CHANGES IN GEOMETRY

At the time of inspection, both the ASB and ABB geometry was observed to be unchanged since the October 2020 inspection. The ABB was modified by plugging both the concrete discharge and inlet structures and the reinforced concrete pipe overflow between the ABB and ASB.

2.0 INSTRUMENTATION

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, construction drawings, and from modeling using existing topographic data.

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 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: October 13, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

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)	4 feet	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)	92.1 Acre Feet	None
Impounded Water Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	13.8 Acre Feet	None
Impounded CCR Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	9.2 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)	6.5 feet	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)	4.85 Acre Feet	None
Impounded CCR Volume	§845.450(b)(2)(E) §257.83(b)(2)(v)	0.25 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 2021

This Annual Inspection Report has been prepared pursuant to both Title 35 IAC Part 845 Subpart E, Section 845.540(b) and Title 40 of the Code of Federal Regulations Part 257.83(b) 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; and
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.
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:

- CEC reviewed the weekly and monthly inspection reports by a qualified person employed by MWG, and the previous annual inspection report.
- CEC performed the annual inspection in accordance with the requirements of Part 845.540 and 40 CFR 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. In 2010, the FAB was sectioned into a North Pond and South Pond to accommodate a new railroad embankment and the geometry has remained unchanged since.

On June 23, 2021, 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 2020 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 investigation. 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 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, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

Table 1: Inspection Summary - Former Ash Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	845 §257.83(b)(2)(i)	None	None
Instrumentation	§257.83(b)(2)(ii)	None	None
Water Depth	§257.83(b)(2)(iii)	North Pond - 13.4 feet South Pond - 15.5 feet	None
CCR Depth	§257.83(b)(2)(iii)	10 feet	None
Estimated Storage Capacity	§257.83(b)(2)(iv)	500,000 CY	None
Impounded Water Volume	§257.83(b)(2)(v)	North Pond - 9.7 Acre Feet South Pond - 22.8 Acre Feet Ground Water Elevation 444.0	None
Impounded CCR Volume	§257.83(b)(2)(v)	North Pond - 300,000 CY South Pond - 200,000 CY	None
Structural/Operational Observations	§257.83(b)(2)(vi)	Minor erosion, burrows, and vegetative cover	Continue to monitor
Other Changes	§257.83(b)(2)(vii)	None	None

ANNUAL INSPECTION REPORT
METAL CLEANING BASIN
POWERTON STATION
OCTOBER 2021

This initial annual inspection report has been prepared pursuant to the coal combustion residuals (CCR) rule codified in Title 35 of the Illinois Administrative Code, Section 845.540(b) effective as of April 21, 2021 for the Metal Cleaning Basin (MCB or Basin) at Powerton Station in Pekin, Illinois (Station). The purpose of this project is to perform the annual inspection of the 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. 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 provided by station personnel. Since this is an initial inspection, no previous annual inspection report has been completed.

- CEC performed the annual inspection in accordance with the requirements of Part 845.540 including observations pertaining to the following:

    - Changes in Geometry: Observations of changes in the geometry of the MCB.

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

    - Capacity and Impounded Volume: 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 MCB is an active surface impoundment less than two acres in size. On October 13, 2021, CEC inspected the MCB 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

Since this is an initial annual inspection, changes in geometry compared to previous inspections could not be assessed. However, at the time of inspection, the MCB geometry was observed to be unchanged from previous online aerial photographs.

2.0 INSTRUMENTATION

Based on our interview of Station personnel which was confirmed through our inspection, the MCB has no instrumentation.

3.0 CAPACITY AND IMPOUNDED VOLUME

Capacity and impounded volume of the MCB and estimated depth of impounded water and CCR are represented in Table 1, attached. Volumes and depths were determined through discussion with station personnel and by reviewing inspection reports, construction drawings, and from modeling using existing topographic data.

4.0 STRUCTURAL/OPERATIONAL OBSERVATIONS

The MCB was inspected for signs of distress that would have the potential to disrupt operation and safety of the basin. Prior to performing the initial inspection, discussion with statement personnel 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

The MCB was 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 MCB.

6.0 LIMITATIONS AND CERTIFICATION

This initial CCR Annual Inspection Report 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: October 13, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

Table 1: Inspection Summary - Metal Cleaning Basin

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	§845(b)(2)(A)	None	None
Instrumentation	§845(b)(2)(B)	None	None
Water Depth	§845(b)(2)(C)	Less than 1 foot	None
CCR Depth	§845(b)(2)(C)	Less than 1 foot	None
Estimated Storage Capacity	§845(b)(2)(D)	17 Acre Feet	None
Impounded Water Volume	§845(b)(2)(E)	1.8 Acre Feet	None
Impounded CCR Volume	§845(b)(2)(E)	0.3 Acre Feet	None
Structural/Operational Observations	§845(b)(2)(F)	None	None
Other Changes	§845(b)(2)(G)	None	None

ATTACHMENT B.1
2021 ANNUAL HAZARD POTENTIAL CLASSIFICATION CERTIFICATION

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 and with the requirements of 40 CFR 257.73(a)(2).
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2021

Seal:

Th. Dehlin
10/14/2021
Exp. 11/30/2021

3.0 HAZARD POTENTIAL CLASSIFICATION ASSESSMENT

Based on our assessment of the Basin and surrounding site features, the Basin can be classified as a Class 2 CCR surface impoundment. Potential downstream inundation areas that could be impacted by a failure or mis-operation the Basin 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 Initial 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: September 22, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

Enclosure: Figure 1 - Site Plan

ATTACHMENT B.2
2021 ANNUAL STRUCTURAL STABILITY ASSESSMENT CERTIFICATION

Given the noted deficiencies in available information for the Former Ash Basin which preclude verifying the basin's northern dike has adequate slope protection, material compaction, and stability, it is unknown whether the Former Ash Basin was designed and constructed in accordance with recognized and generally accepted good engineering practices for the maximum volume of CCR and CCR wastewater which can be impounded therein. 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 and Federal CCR Rules.

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 and with the requirements of 40 CFR 257.73(d).
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2021

Seal:

Th. Dehlin
10/14/2021
Exp. 11/30/2021

Table 1: Safety Factor Results

Loading Condition	Required FS	Calculated FS
Static, Long Term - 845.460(a)(2)	1.50	1.50
Static, Maximum Storage Pool - 845.460(a)(3)	1.40	1.50
Seismic - 845.460(a)(4)	1.00	1.28
Liquefaction - 845.460(a)(5)	1.20	>1.20

5.0 LIMITATIONS AND CERTIFICATION

This Initial Structural Stability and Factor of Safety Assessment was prepared to meet the requirements of Parts 845.450 and 845.460 of draft Title 35 Subtitle G Subchapter 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 8, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

ATTACHMENT B.3
2021 ANNUAL SAFETY FACTOR ASSESSMENT CERTIFICATION

accordance with 40 CFR 257.102. Closure of the Former Ash Basin will also comply with the requirements promulgated under 35 Ill. Adm. Code Part 845 Subpart G.

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 and with the requirements of 40 CFR 257.73(e).
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 15, 2021

Seal:

Th. Dehlin
10/15/2021
Exp. 11/30/2021

Table 1: Safety Factor Results

Loading Condition	Required FS	Calculated FS
Static, Long Term - 845.460(a)(2)	1.50	1.50
Static, Maximum Storage Pool - 845.460(a)(3)	1.40	1.50
Seismic - 845.460(a)(4)	1.00	1.28
Liquefaction - 845.460(a)(5)	1.20	>1.20

5.0 LIMITATIONS AND CERTIFICATION

This Initial Structural Stability and Factor of Safety Assessment was prepared to meet the requirements of Parts 845.450 and 845.460 of draft Title 35 Subtitle G Subchapter 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 8, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

ATTACHMENT B.4
2021 ANNUAL INFLOW DESIGN FLOOD CONTROL SYSTEM PLAN CERTIFICATION

Per Variance Request PCB 21-109, Midwest Generation was granted an extension to submit the initial operating permit for the Metal Cleaning Basin, including the Inflow Design Flood Control System Plan until March 31, 2022 by the Illinois Pollution Control Board.

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 and with the requirements of 40 CFR 257.82.
- I am a registered professional engineer under the laws of the State of Illinois.

Certified By: Thomas J. Dehlin Date: October 14, 2021

Seal:

Th. Dehlin
10/14/2021
Exp. 11/30/2021

ATTACHMENT C
2021 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 - 2021

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 27, 2022

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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) 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 2021 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:

    - Barium: MW-11 and MW-18 (2^{nd} through 4^{th} quarters).
    - Calcium: MW-15 (2^{nd} through 4^{th} quarters).
    - Chloride: MW-08, MW-11, MW-12, MW-15, MW-17, and MW-18 (2^{nd} through 4^{th} quarters).
    - Fluoride: MW-08, MW-11, MW-17 and MW-18 (2^{nd} through 4^{th} quarters), and , MW-12 (3^{rd} and 4th quarters).
    - Lithium: MW-08, MW-15, MW-17 and MW-18 (2^{nd} through 4^{th} quarters), MW-12 (2^{nd} and 3^{rd} quarters).
    - pH: MW-18 (2^{nd} through 4^{th} quarters)

- Selenium: MW-15 (2nd through 4th quarters)
- Sulfate: MW-09, MW-19, MW-11. MW-12, MW-15, MW-17 and MW-18 (2nd through 4th quarters), MW-08 (2nd and 3rd quarters).
- Total Dissolved Solids: MW-11, MW-12, MW-15, MW-17 and MW-18 (2nd through 4th quarters).

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:

  - Calcium: MW-15 (2nd through 4th quarters), MW-17 and MW-18 (3rd and 4th quarters).
  - Chloride: MW-15 (4th quarter)
  - Selenium: MW-15 (4th quarter).
  - Sulfate: MW-15 and MW-17 (2nd through 4th quarters).
  - Total Dissolved Solids: MW-15 (2nd through 4th quarters).

  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))

2021 is the initial year of State CCR Rule implementation starting with the second quarter within which the Rule became effective. The following key actions have been completed:

- 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). It is noted that during this time, eight rounds of turbidity measurements were collected for the purposes of statistical background development in accordance with Section 845.650(b)(A).

- 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 Operating Permit – Powerton Generating Station was submitted on October 31, 2021 to the Agency for review in accordance with Section 845.230. As part of that permit application, proposed GWPSs were provided for review/approval. The application is currently under review by the Agency.

- Work has been initiated on the Application for Initial Construction Permit – Powerton Generating Station during this reporting period.

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.

- Submittal of the Application for Construction Permit – 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. 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. It is noted that wells MW-18, MW-20 and MW-21 appear to be transitional between the area which includes the clay/silt unit and the area that does not include this unit. Therefore, the water levels may be biased slightly low or high depending on which unit is being evaluated (i.e., you can use the water levels for evaluation of flow in either unit or disregarded them and the overall interpretations of flow direction will for the most part be the same). 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 are 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 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:

- Barium: MW-11 and MW-18 (2^{nd} through 4^{th} quarters).
- Calcium: MW-15 (2^{nd} through 4^{th} quarters).
- Chloride: MW-08, MW-11, MW-12, MW-15, MW-17, and MW-18 (2^{nd} through 4^{th} quarters).
- Fluoride: MW-08, MW-11, MW-17 and MW-18 (2^{nd} through 4^{th} quarters), and , MW-12 (3^{rd} and 4th quarters).
- Lithium: MW-08, MW-15, MW-17 and MW-18 (2^{nd} through 4^{th} quarters), MW-12 (2^{nd} and 3^{rd} quarters).
- pH: MW-18 (2^{nd} through 4^{th} quarters)
- Selenium: MW-15 (2^{nd} through 4^{th} quarters)
- Sulfate: MW-09, MW-19, MW-11. MW-12, MW-15, MW-17 and MW-18 (2^{nd} through 4^{th} quarters), MW-08 (2^{nd} and 3^{rd} quarters).

- Total Dissolved Solids: MW-11, MW-12, MW-15, MW-17 and MW-18 (2nd through 4th quarters).

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

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	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	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	< 0.0010	0.060	< 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	1.10	0.0026	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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	< 0.01	< 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
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	< 0.005	< 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	0.070	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0038	< 0.0002	0.05	1.18	< 0.0025	< 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

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	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	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	0.030	< 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	1.30	< 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	0.040	< 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
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
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	7.3	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
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	0.030	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	< 0.0005	< 0.005	< 0.001	0.00062	0.015	< 0.0002	0.018	< 0.514	< 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
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
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	0.00
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
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
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
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
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
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

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. Ash By-Pass Basin Ash Surge Basin.

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
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
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

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL. Ash By-Pass Basin Ash Surge Basin.

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
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
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
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

Table 4. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL. Ash By-Pass Basin Ash Surge Basin.

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
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
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

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)
5/2021	Silt/clay	Westerly	3.280E-07	0.0276	0.4	0.0020
5/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0036	0.35	1.24
6/2021	Silt/clay	Westerly	3.280E-07	0.0288	0.4	0.0020
6/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0030	0.35	1.03
7/2021	Silt/clay	Westerly	3.280E-07	0.0157	0.4	0.0011
7/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0014	0.35	0.48
8/2021	Silt/clay	Westerly	3.280E-07	0.0350	0.4	0.0025
8/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0117	0.35	4.01
9/2021	Silt/clay	Westerly	3.280E-07	0.0285	0.4	0.0020
9/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0060	0.35	2.06
10/2021	Silt/clay	Westerly	3.280E-07	0.0234	0.4	0.0017
10/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0043	0.35	1.48
11/2021	Silt/clay	Westerly	3.280E-07	0.0230	0.4	0.0016
11/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0033	0.35	1.13
12/2021	Silt/clay	Westerly	3.280E-07	0.0237	0.4	0.0017
12/2021	Sandy	Northeasterly - Northwesterly	1.390E-03	0.0030	0.35	1.03

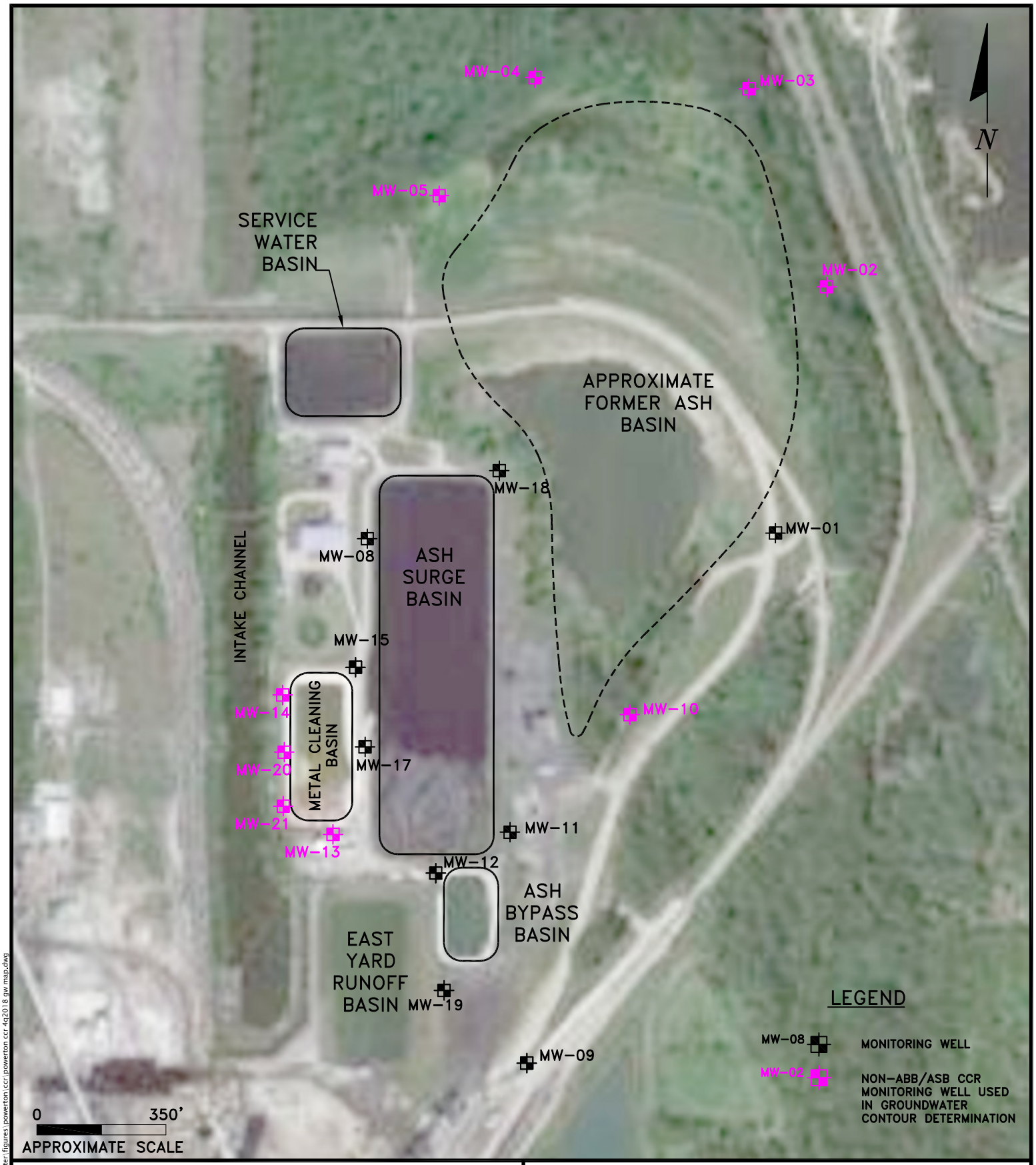
* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.
Average hydraulic conductivity for silt/clay unit (feet/second) from Groundwater, Freeze and Cherry, 1979.

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

Table 6. CCR Groundwater Sample Collection Summary for 2021 - Powerton Generating Station Ash Bypass Basin & Ash Surge Basin

Well ID	Number of Groundwater Sampling Events	Dates of Groundwater Sampling Events
MW-01 (Upgradient)	3	5/11/2021
		8/24/2021
		11/30/2021
MW-09 (Upgradient)	3	5/13/2021
		8/25/2021
		12/1/2021
MW-19 (Upgradient)	3	5/10/2021
		8/26/2021
		12/1/2021
MW-08 (Downgradient)	3	5/11/2021
		8/25/2021
		12/1/2021
MW-11 (Downgradient)	3	5/11/2021
		8/25/2021
		12/1/2021
MW-12 (Downgradient)	3	5/13/2021
		8/25/2021
		12/1/2021
MW-15 (Downgradient)	3	5/12/2021
		8/23/2021
		11/29/2021
MW-17 (Downgradient)	3	5/12/2021
		8/23/2021
		11/29/2021
MW-18 (Downgradient)	3	5/10/2021
		8/26/2021
		12/1/2021

FIGURES



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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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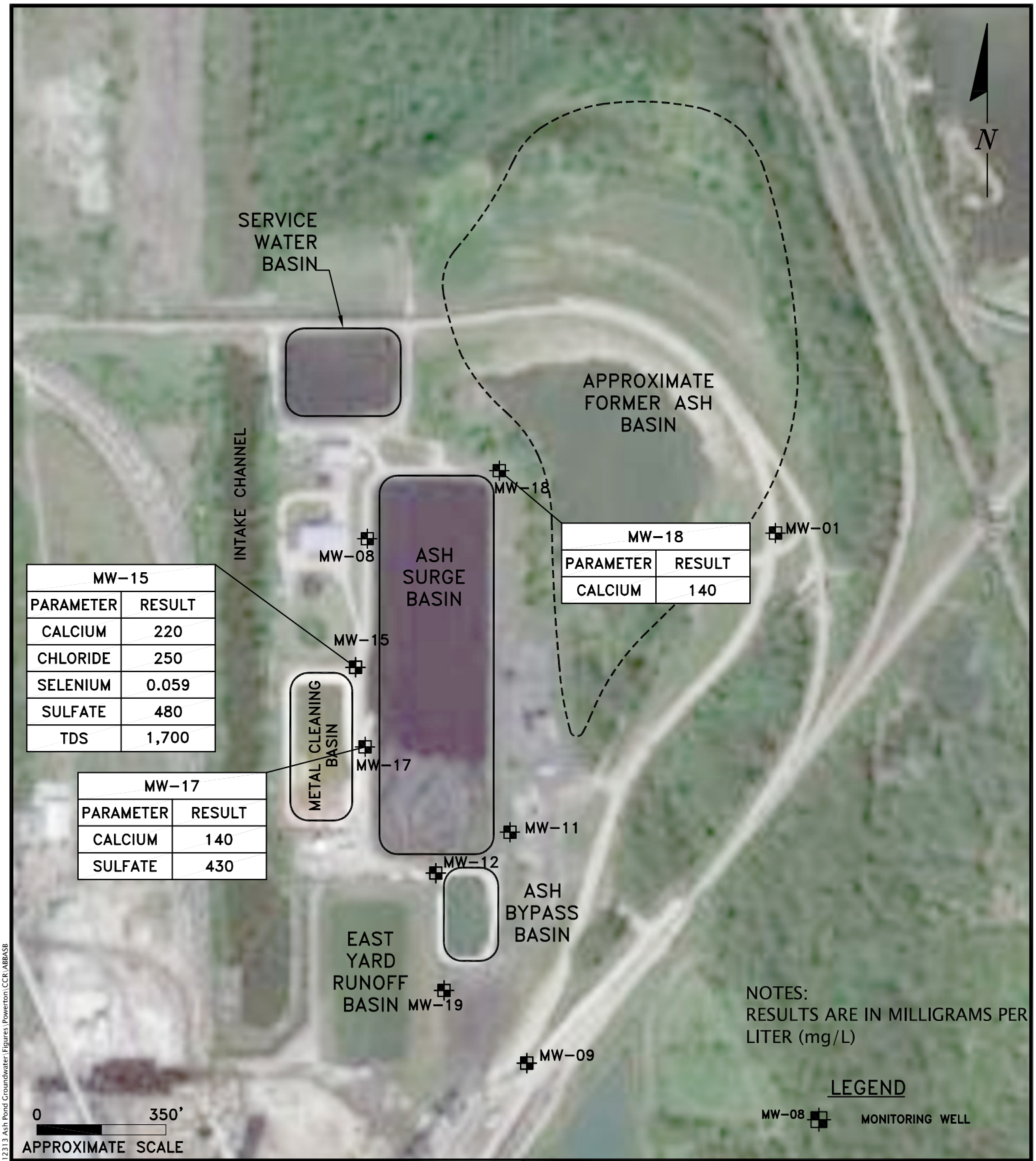

MW-15	
PARAMETER	RESULT
CALCIUM	220
CHLORIDE	250
SELENIUM	0.059
SULFATE	480
TDS	1,700

MW-17	
PARAMETER	RESULT
CALCIUM	140
SULFATE	430

MW-18	
PARAMETER	RESULT
CALCIUM	140

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4Q2021 AREAL DISTRIBUTION MAP OF PARAMETERS ABOVE PROPOSED GWPSs

POWERTON STATION-ABB/ASB
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | FIGURE 2

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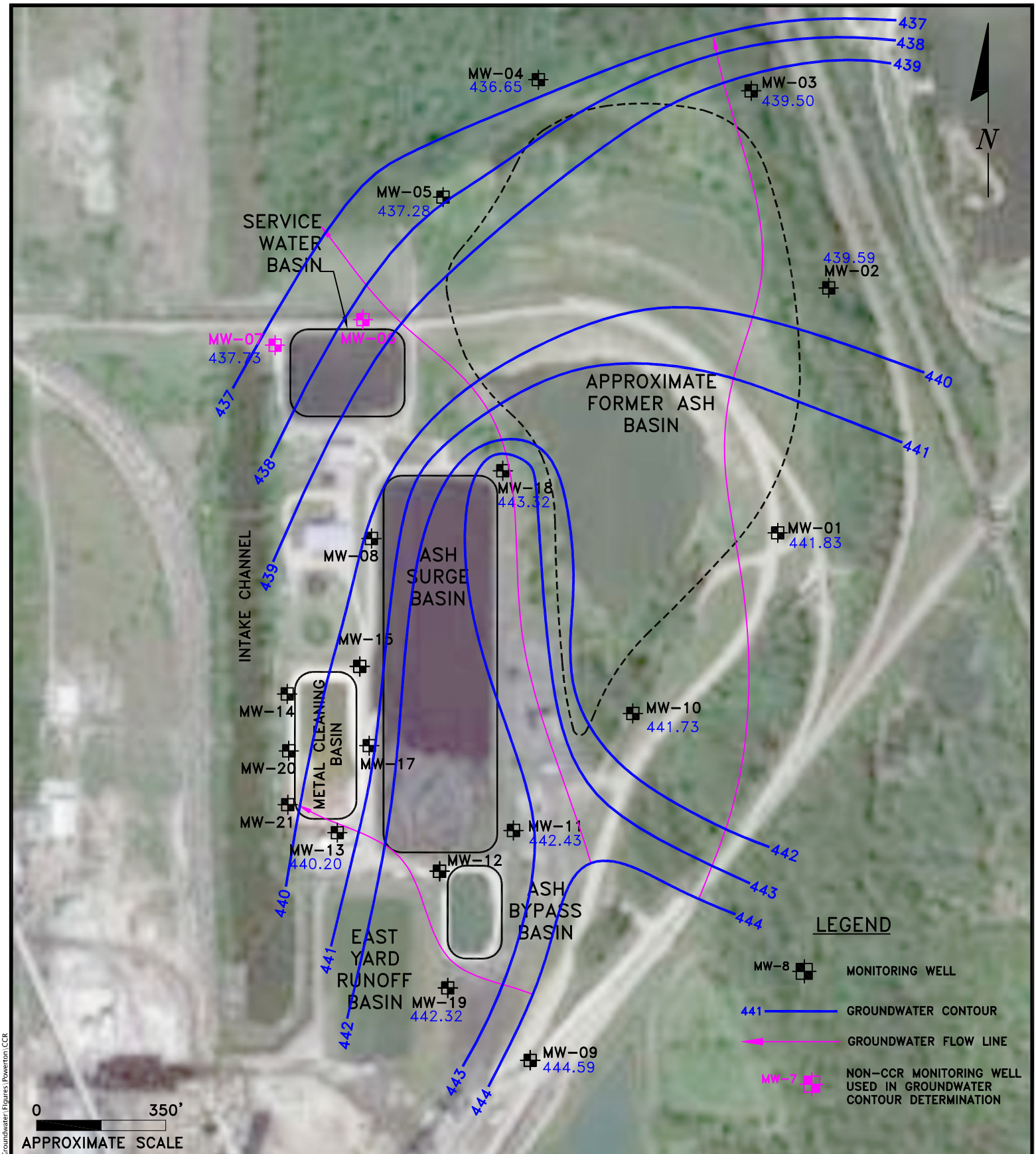
ATTACHMENT 1
Monthly Potentiometric Maps



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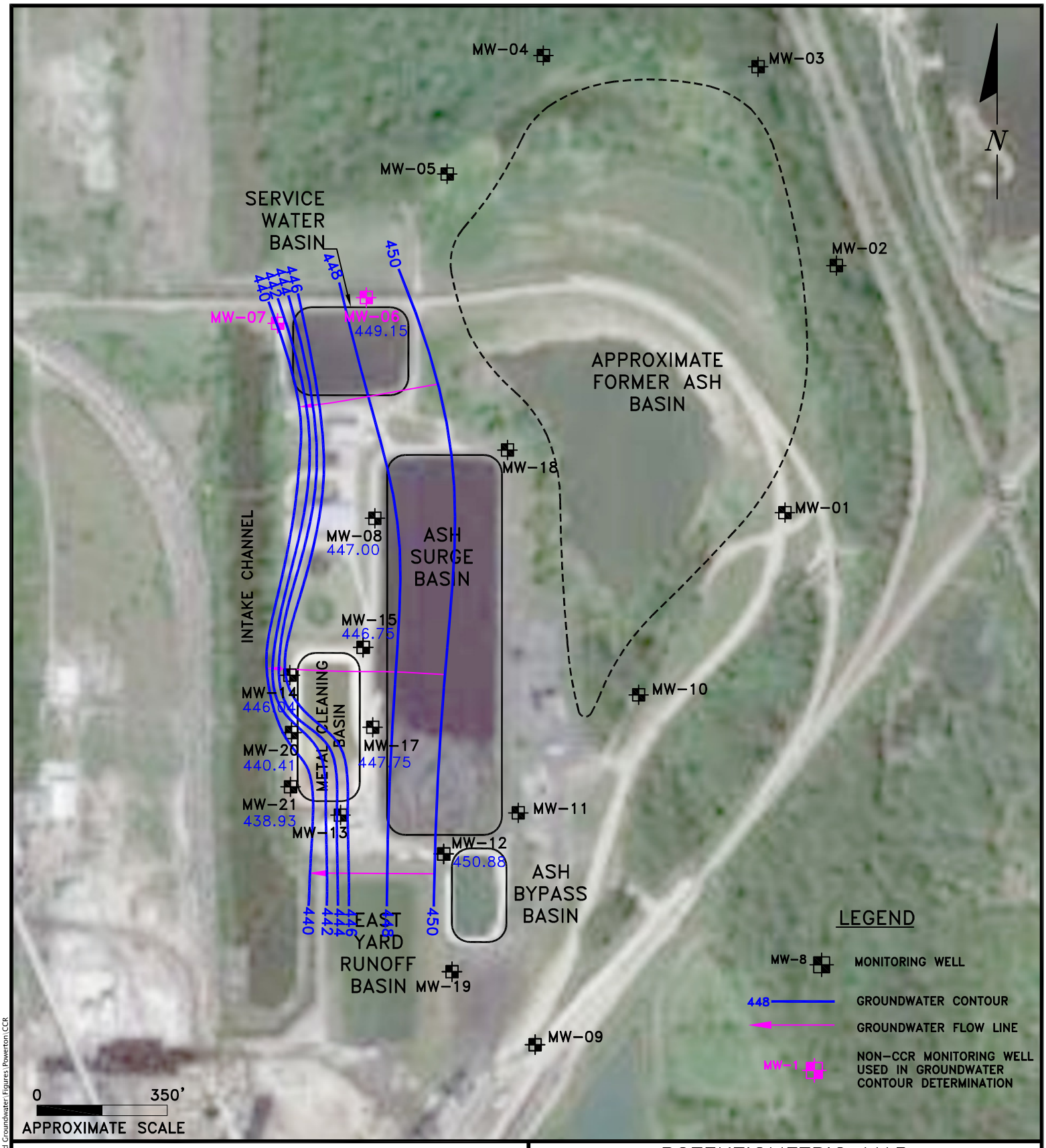
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 05/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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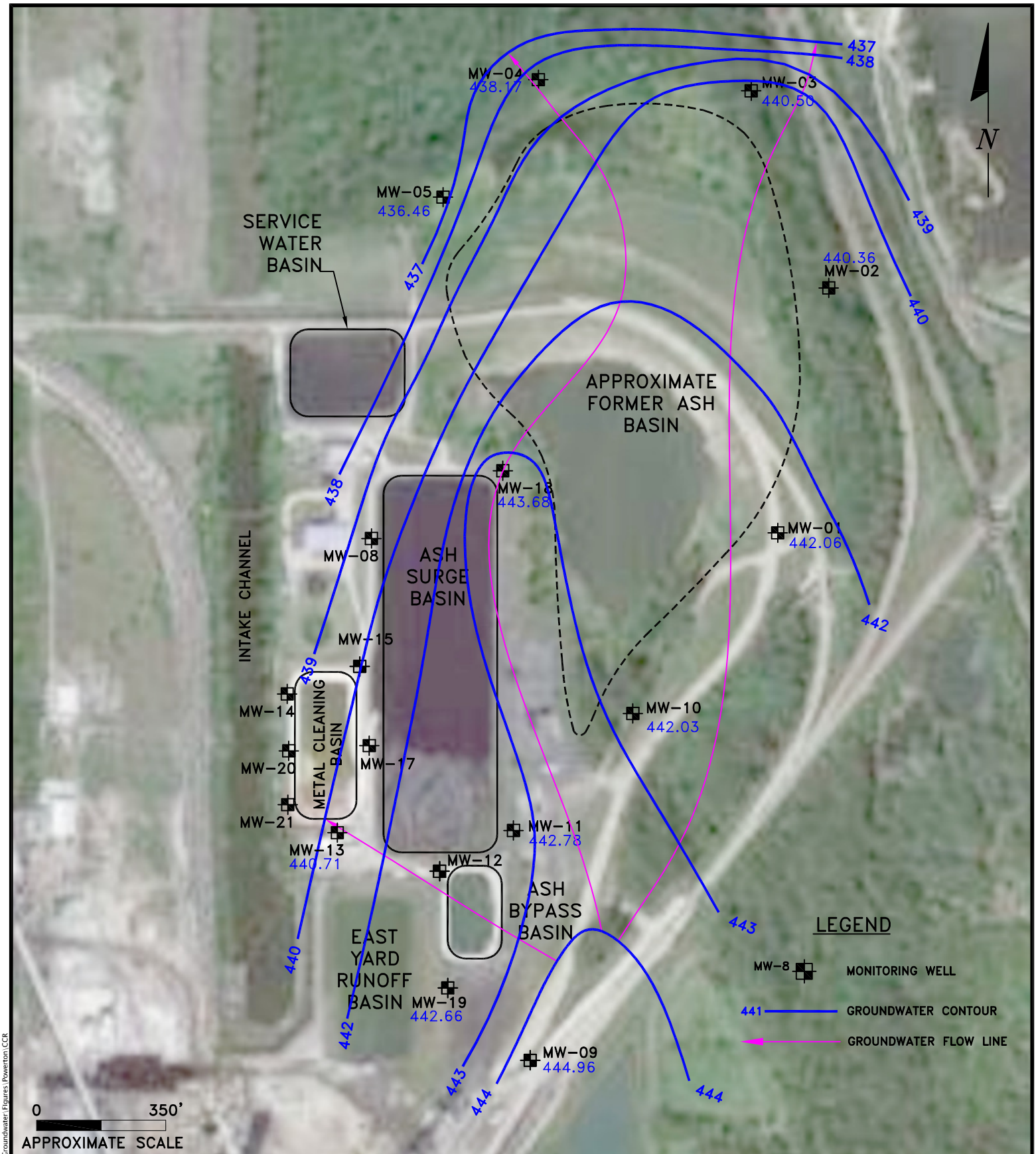
POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 05/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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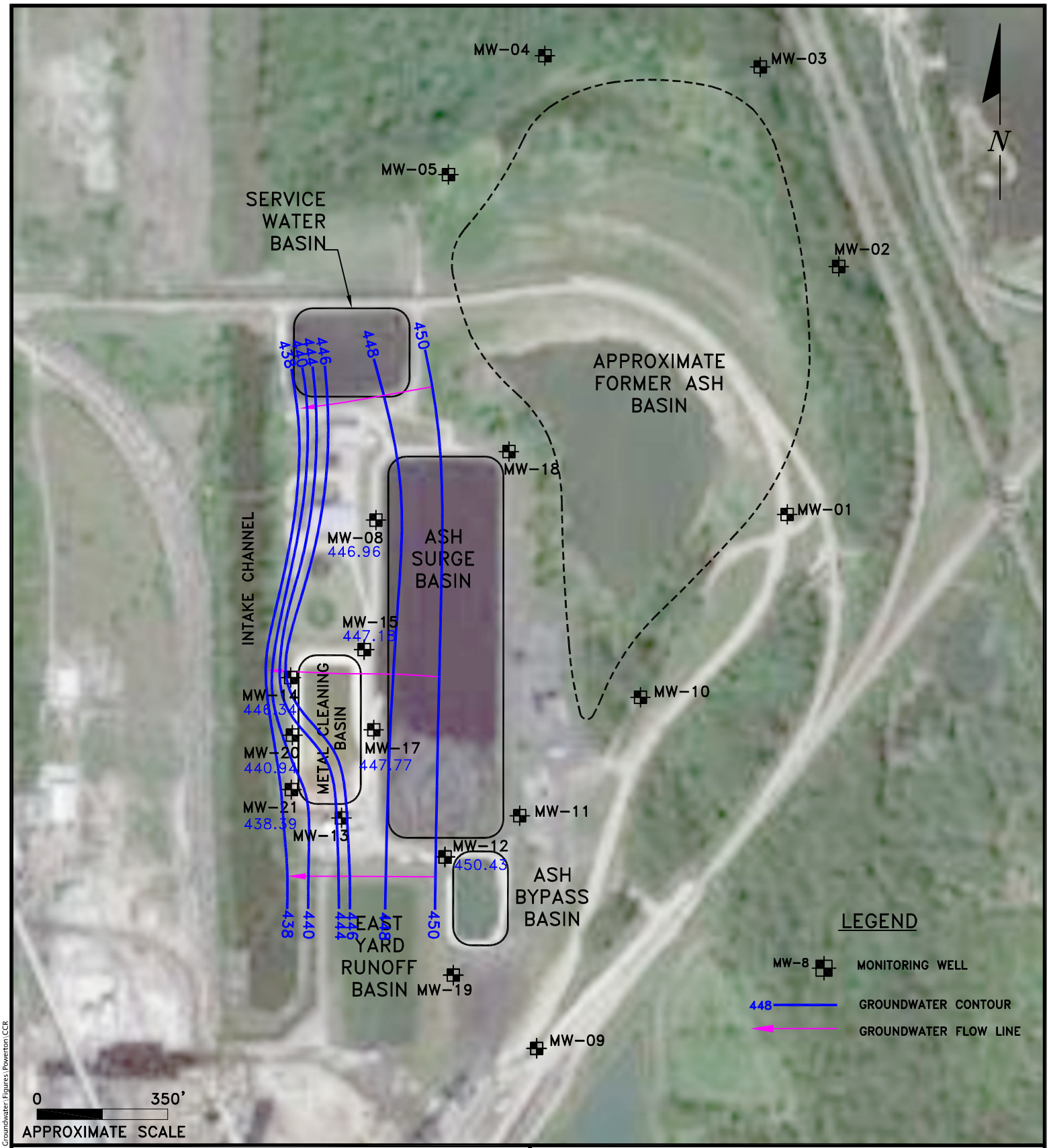
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 06/2021

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'	Date: January 11, 2022
KPRG Project No. 12313.1	ATTACHMENT 1



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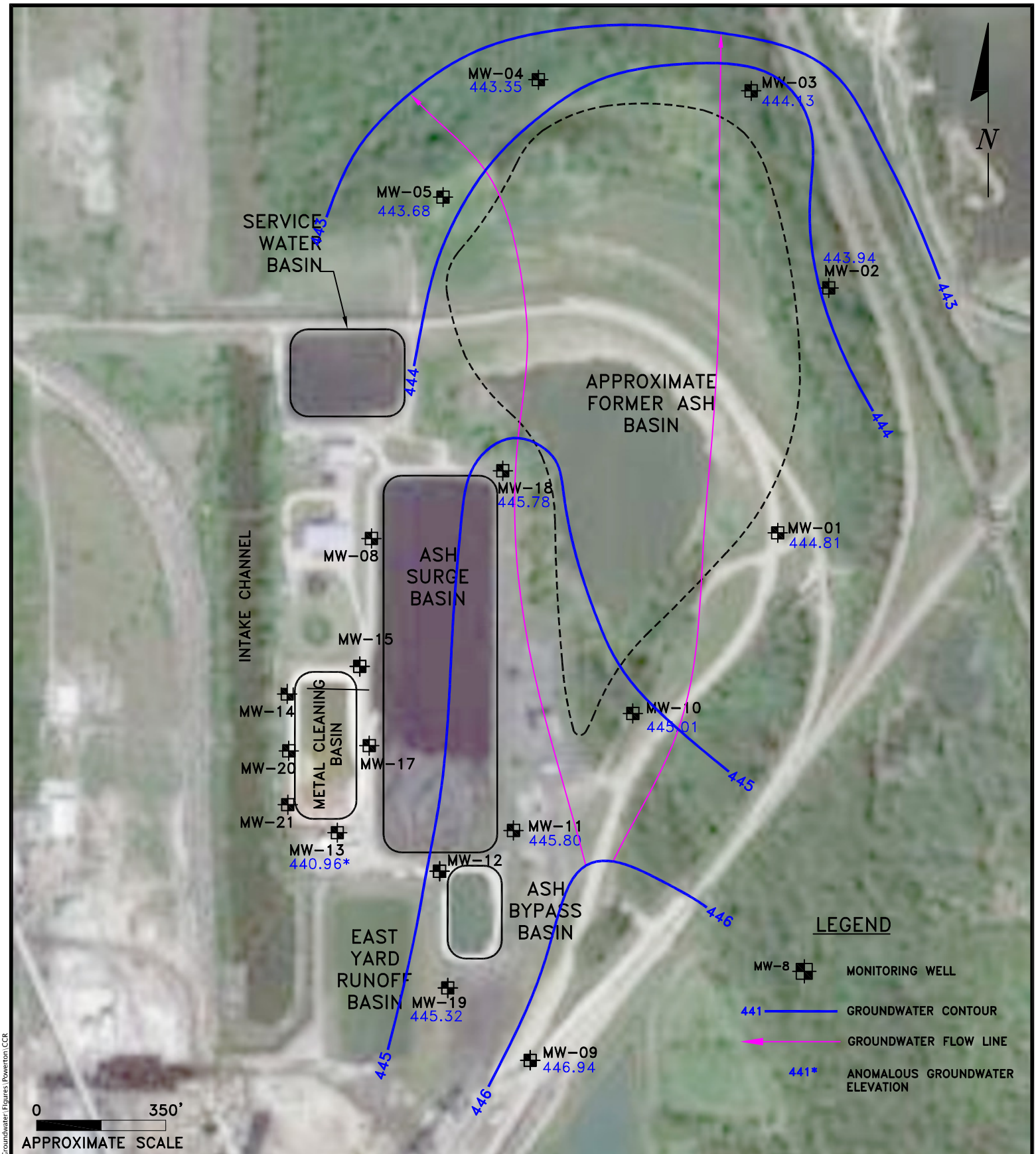
POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 06/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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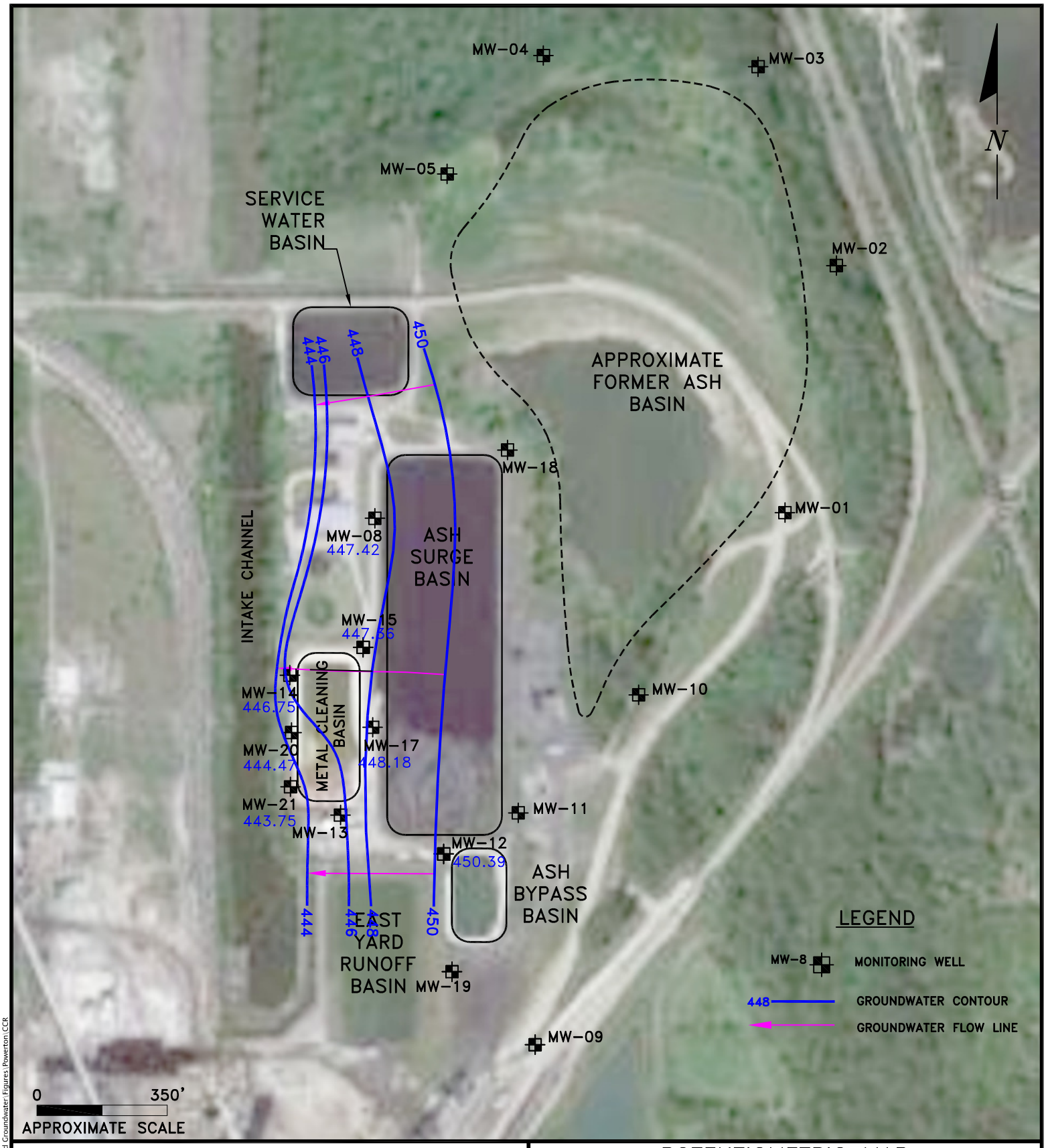
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 07/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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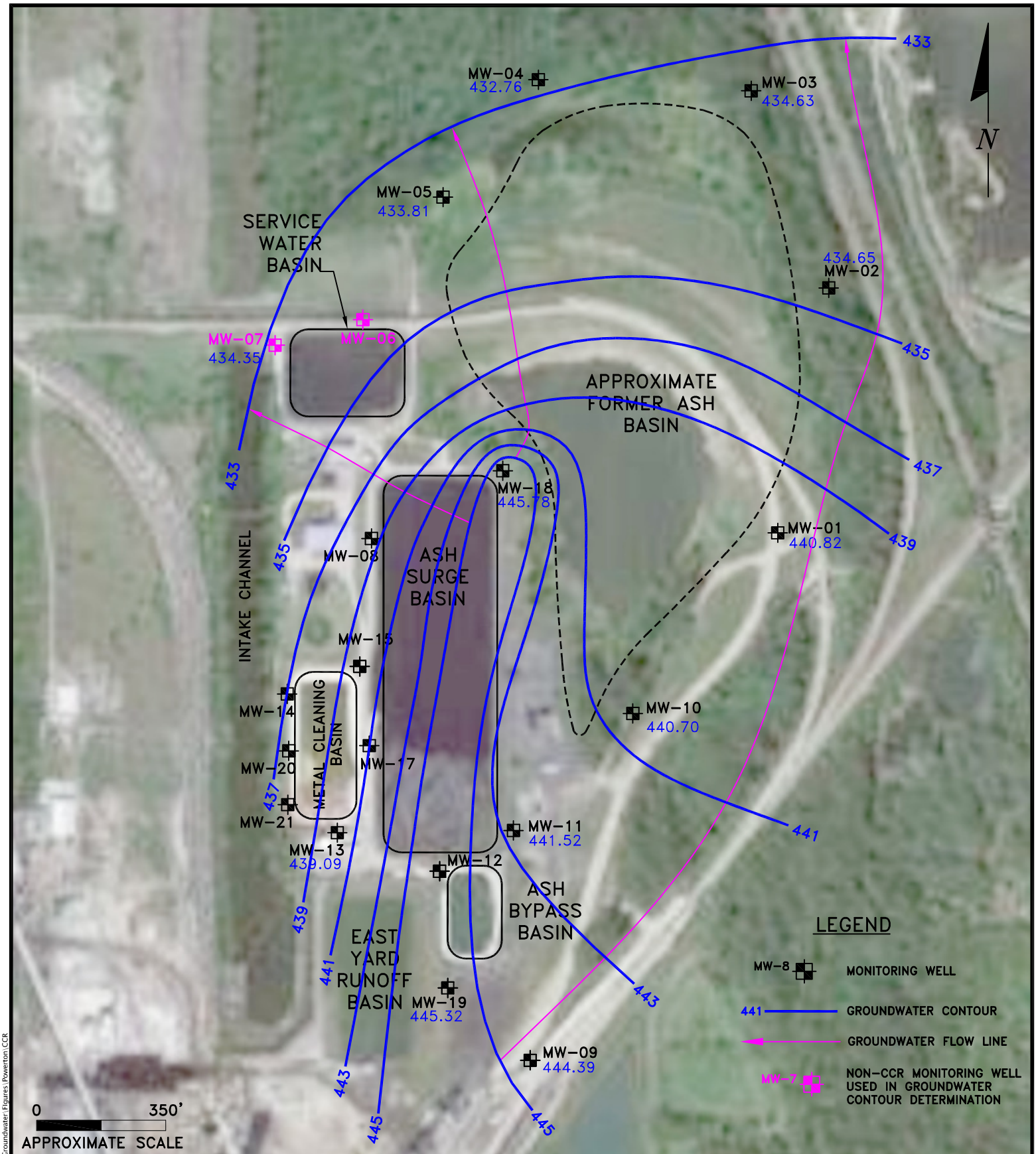
POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 07/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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ENVIRONMENTAL CONSULTATION & REMEDIATION

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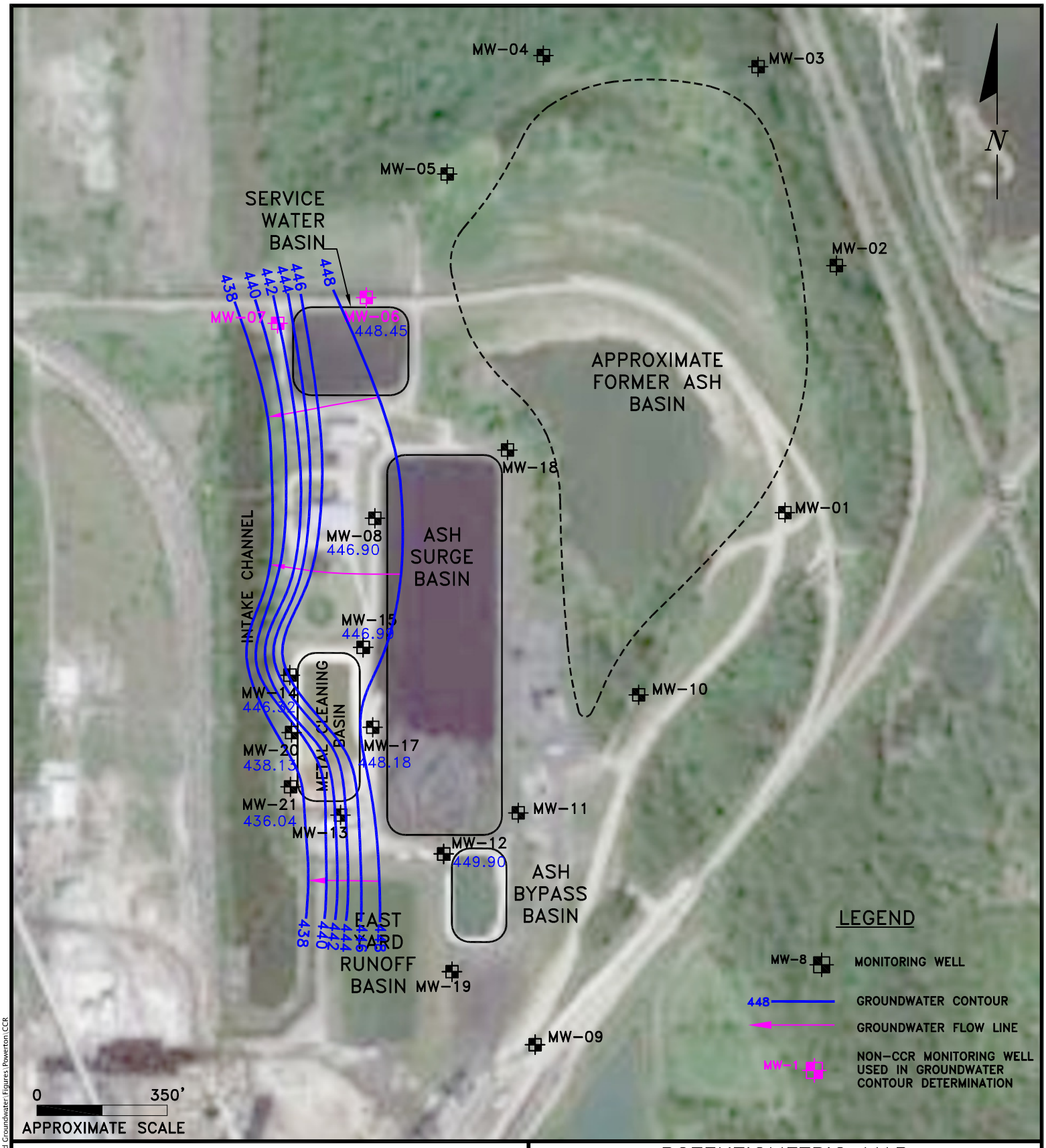
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 08/2021

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'	Date: January 11, 2022
KPRG Project No. 12313.1	ATTACHMENT !



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

POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 08/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1

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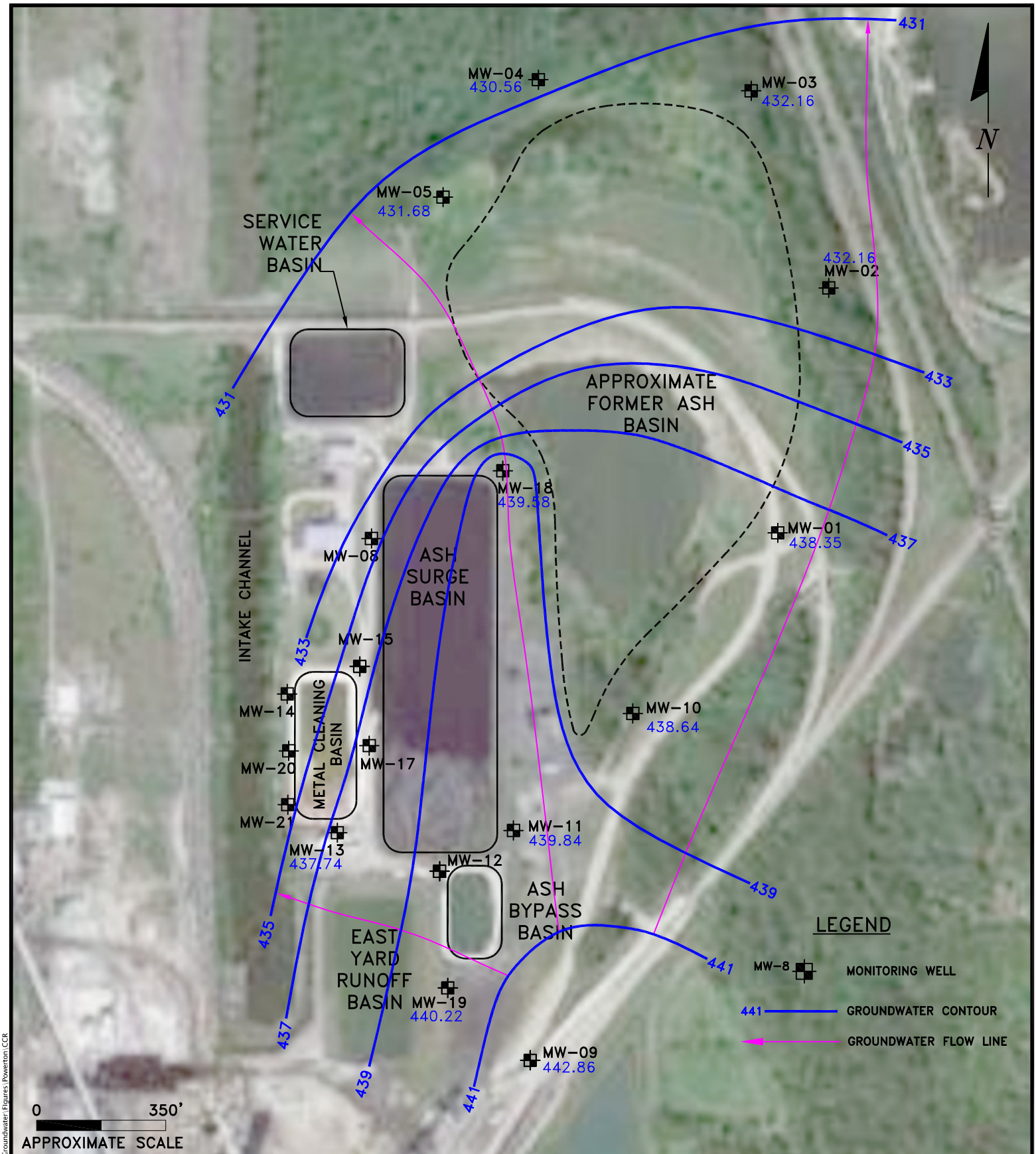

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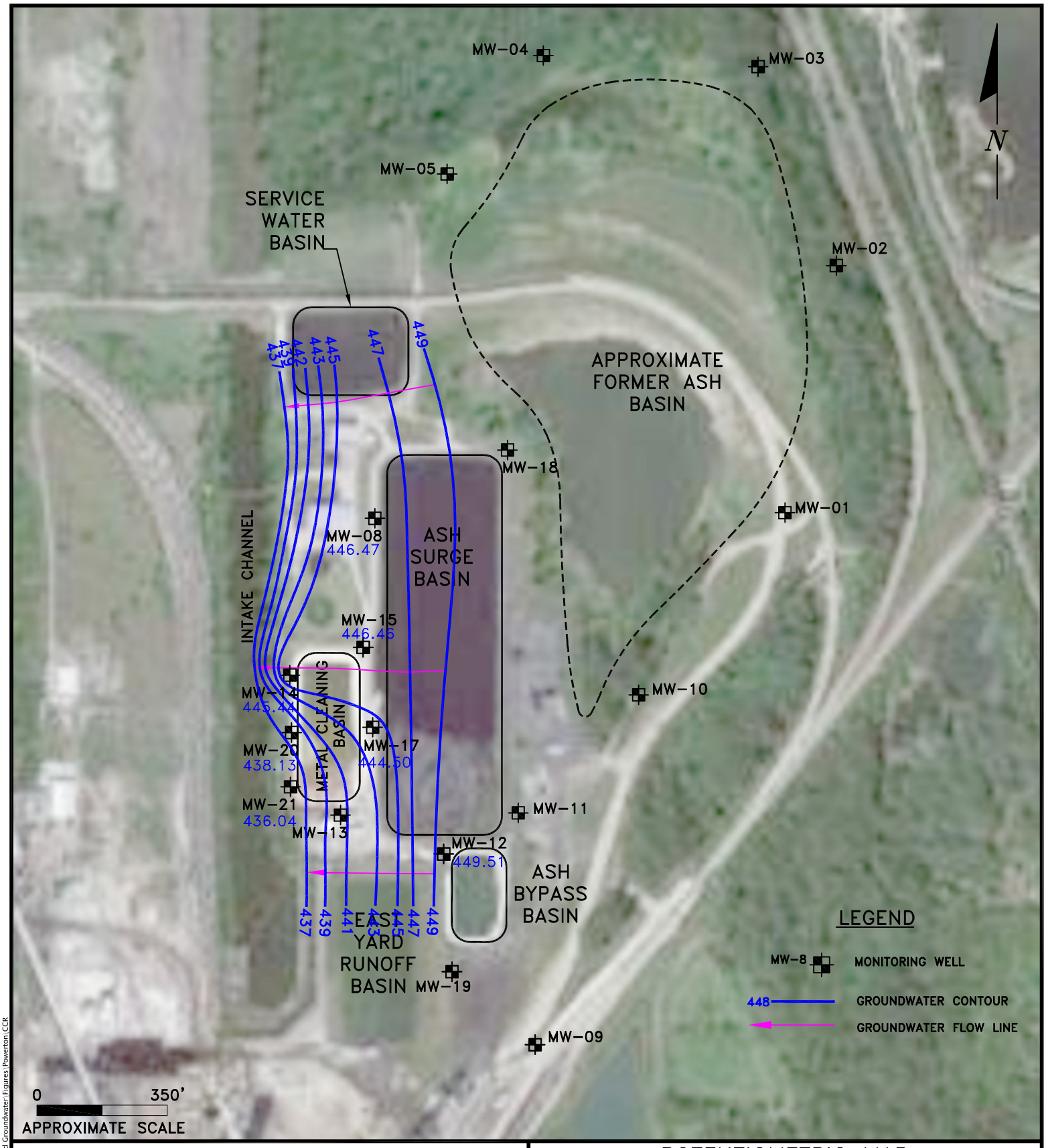
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 09/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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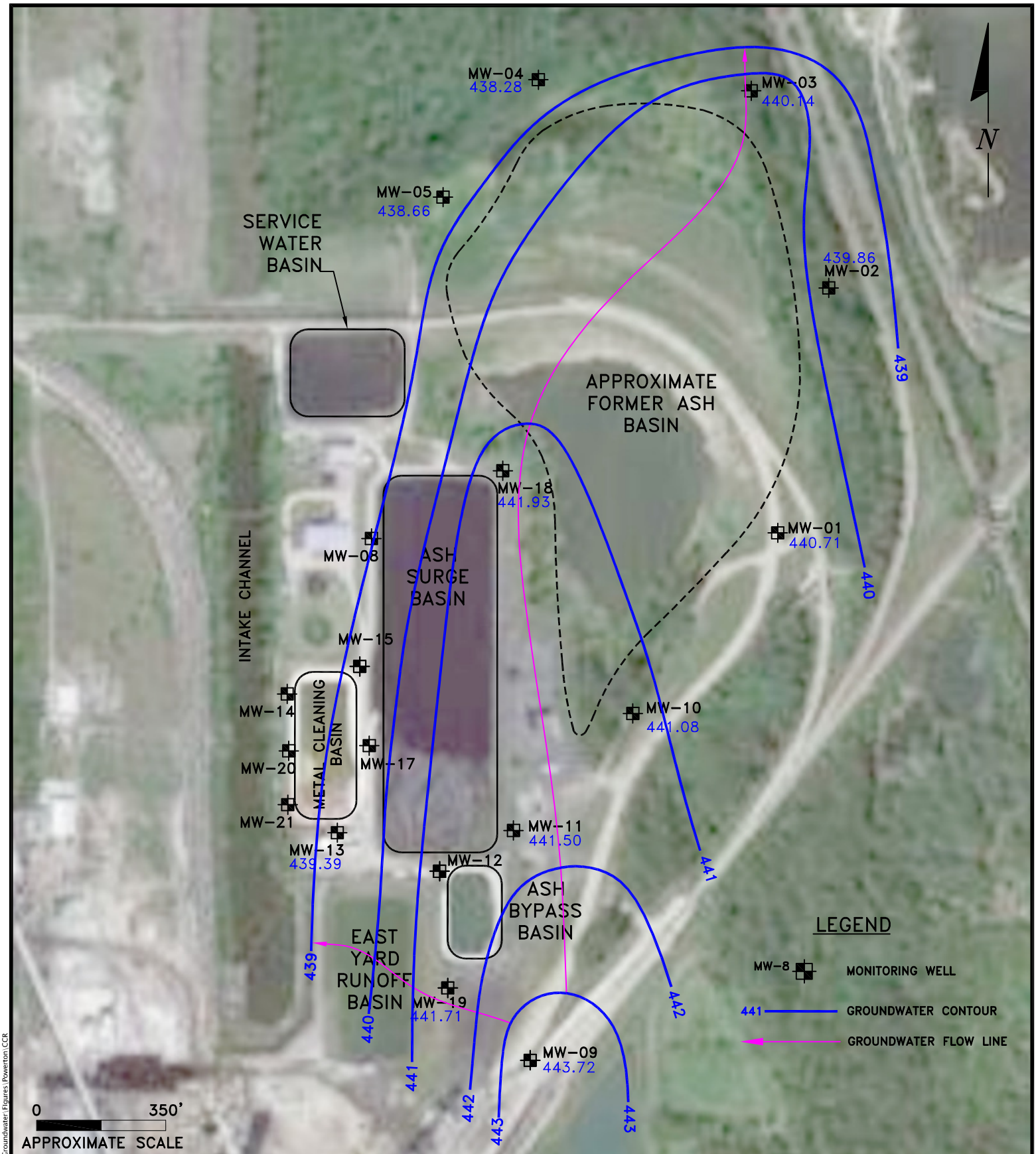
POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 09/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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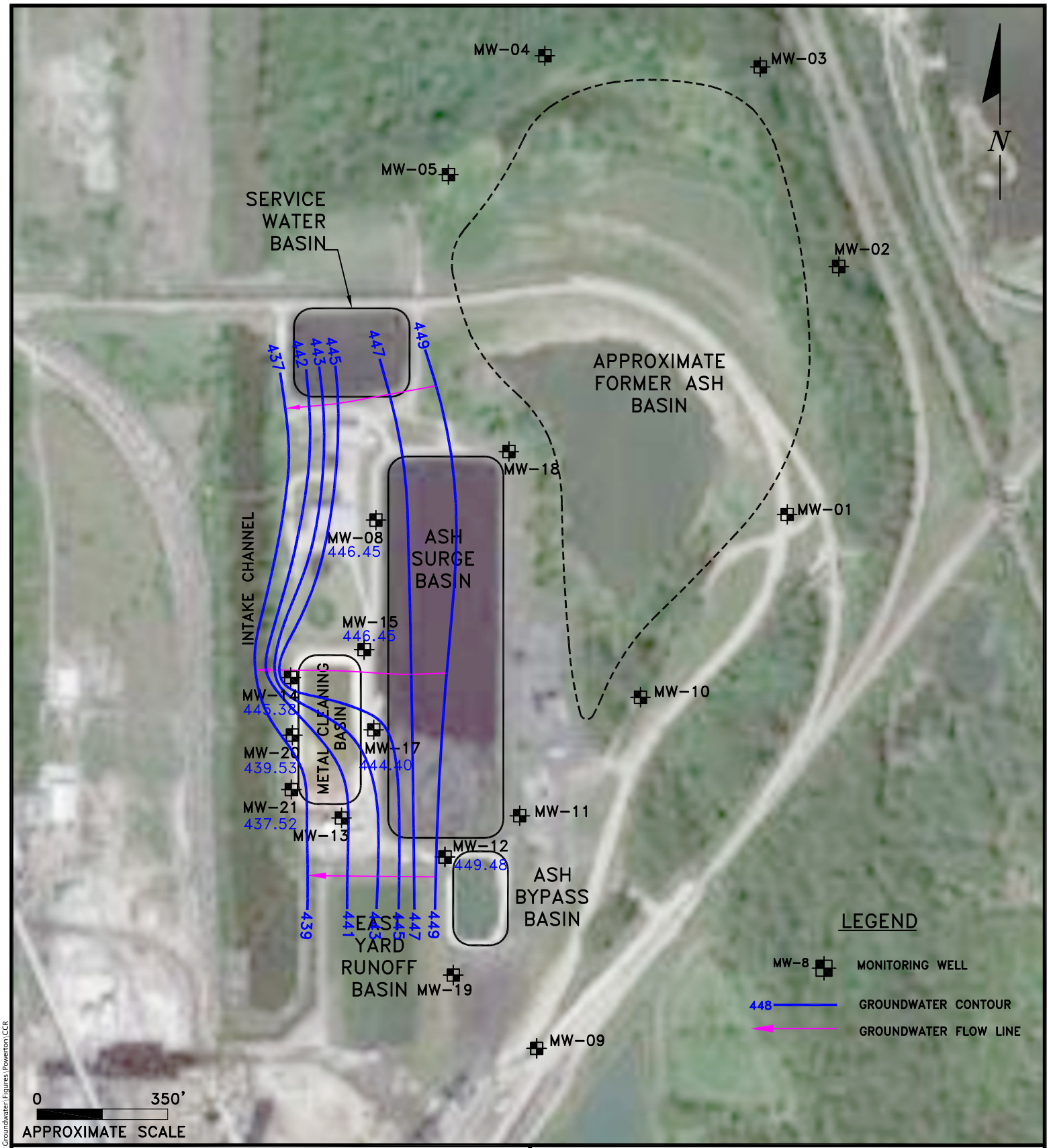
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 10/2021

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'	Date: January 11, 2022
KPRG Project No. 12313.1	ATTACHMENT 1



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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 10/2021

POWERTON STATION
PEKIN, ILLINOIS

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

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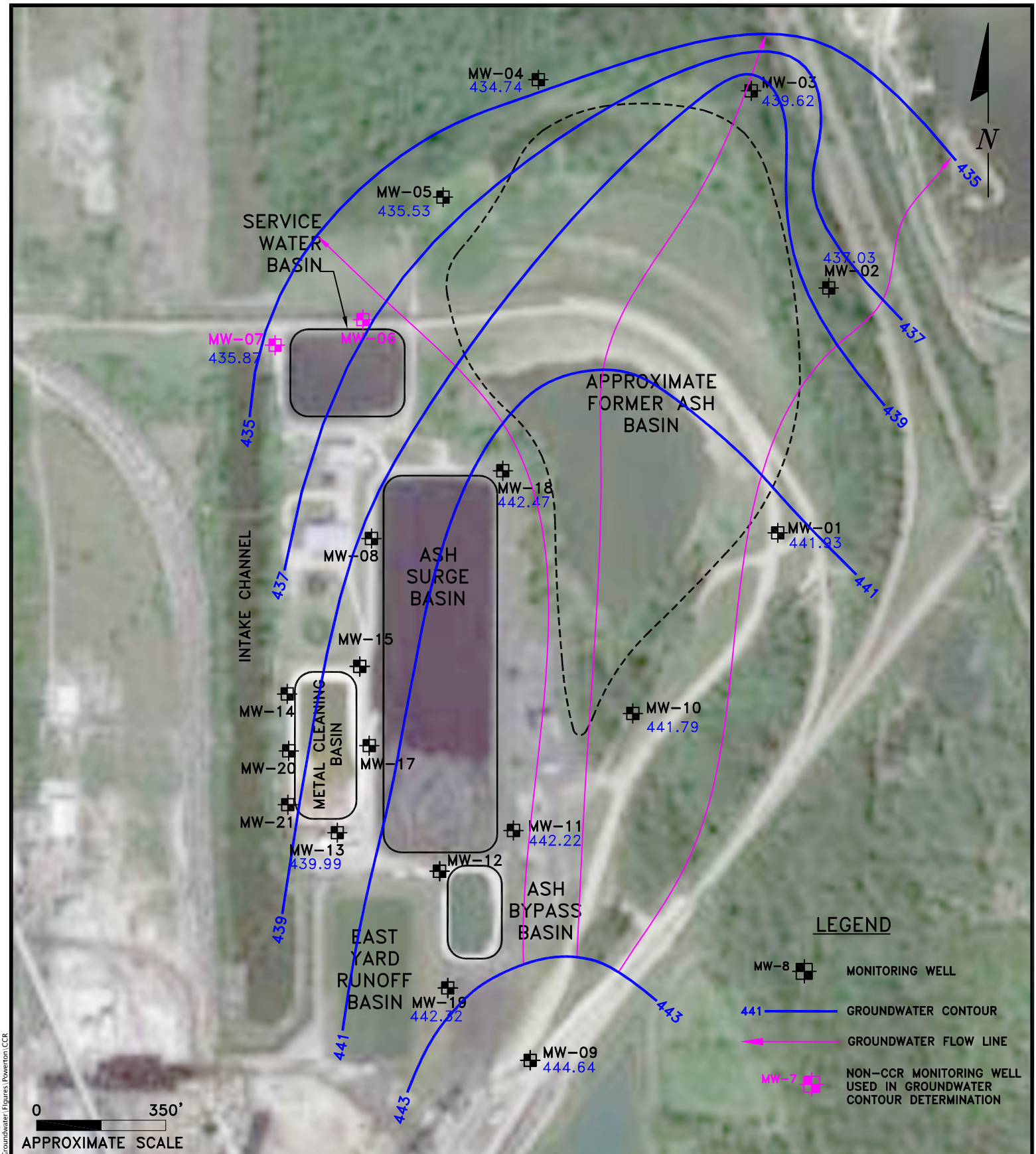

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POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 11/2021

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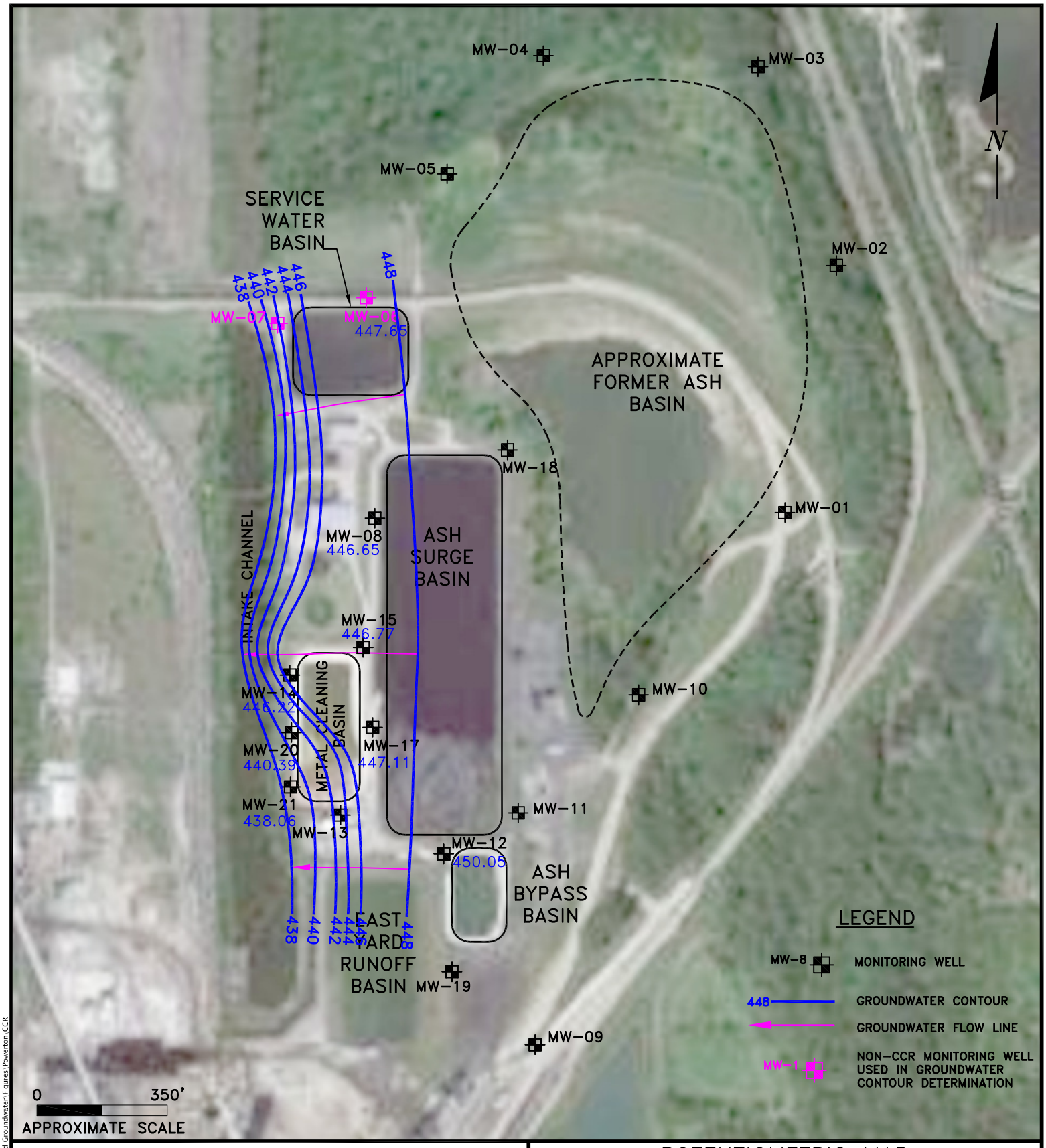

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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 11/2021

POWERTON STATION
PEKIN, ILLINOIS

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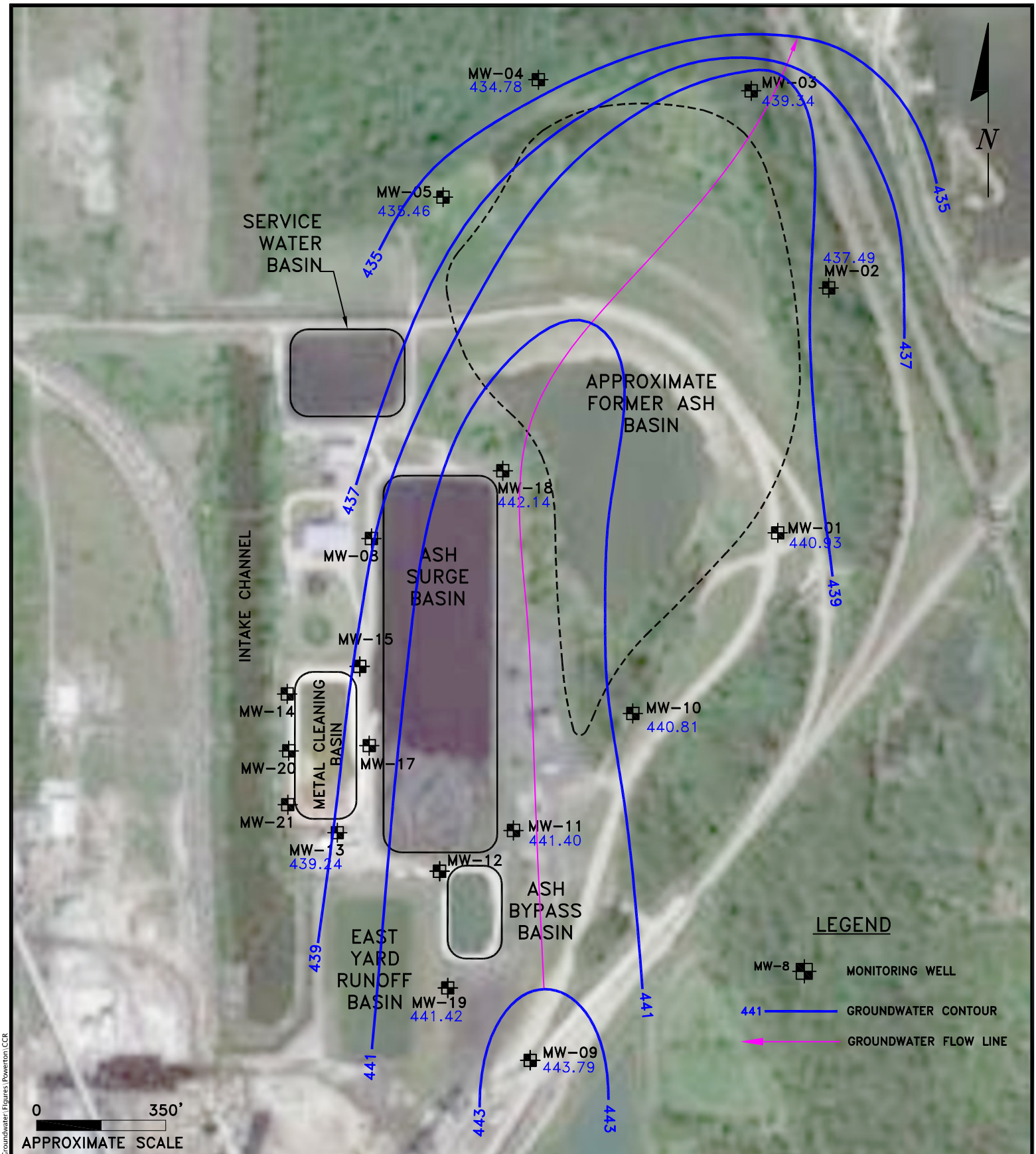

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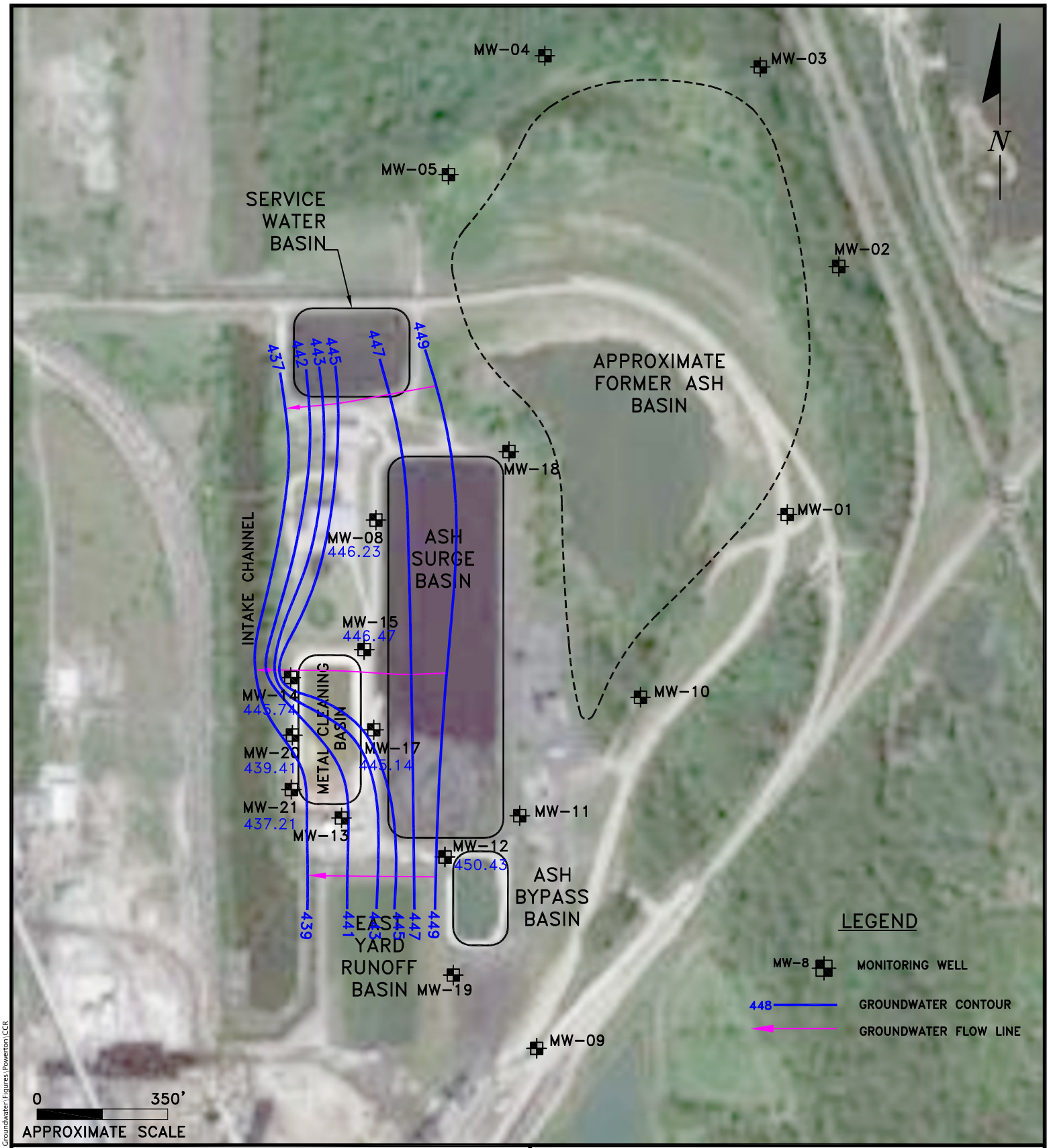
POTENTIOMETRIC MAP
ABB/ASB GRAVELLY SAND UNIT 12/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
ABB/ASB SILT/CLAY UNIT 12/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1

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ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ILLINOIS CCR COMPLIANCE
FORMER ASH BASIN
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2021

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 27, 2022

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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 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 2021 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:

    - Barium: MW-10 (2nd through 4th quarters).
    - Chloride: MW-05 (3rd and 4th quarters)
    - Fluoride: MW-04 (2nd and 3rd quarters), MW-05 (2nd through 4th quarters).
    - Molybdenum: MW-04 (3rd quarter).
    - Sulfate: MW-05 (2nd through 4th 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 since the enactment of the State CCR Rule in April 2021 has not identified any constituents above the proposed GWPSs at any subject well location.

- 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))

2021 is the initial year of State CCR Rule implementation starting with the second quarter within which the Rule became effective. The following key actions have been completed:

- 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). It is noted that during this time, eight rounds of turbidity measurements were collected for the purposes of statistical background development in accordance with Section 845.650(b)(A).

- 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 Operating Permit – Powerton Generating Station submitted on October 31, 2021 was submitted to the Agency for review in accordance with Section 845.230. As part of that permit application, proposed GWPSs were provided for review/approval. The application is currently under review by the Agency.

- Work has been initiated on the Application for Initial Construction Permit – Powerton Generating Station during this reporting period.

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.

- Submittal of the Application for Construction Permit – 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. 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. It is noted that Ash By-pass Basin and Ash Surge Basin CCR monitoring network well MW-18 is not a FAB CCR well but was used to assist with groundwater flow map development. It is noted that water level from well MW-18 may be biased high and considered transitional between the clay/silty clay unit and the sand unit. 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 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:

- Barium: MW-10 (2nd through 4th quarters).
- Chloride: MW-05 (3rd and 4th quarters)
- Fluoride: MW-04 (2nd and 3rd quarters), MW-05 (2nd through 4th quarters).
- Molybdenum: MW-04 (3rd quarter).
- Sulfate: MW-05 (2nd through 4th quarters)

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

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	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	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	0.0070	< 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
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	0.0020	< 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	0.20	< 0.001	< 0.0005	< 0.005	0.004	0.0005	0.0031	< 0.0002	< 0.005	1.39	< 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	< 0.470	< 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

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	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Lead	Lithium	Mercury	Molybdenum	Radium 226 + 228	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	0.001	0.063	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.004	< 0.0002	< 0.005	< 0.436	< 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	0.001	0.035	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.0035	< 0.0002	< 0.005	< 0.419	< 0.0025	< 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	0.0070	< 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

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
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
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
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
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
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

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
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
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

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-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
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
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

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)
5/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0036	0.35	1.24
6/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0030	0.35	1.03
7/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0014	0.35	0.48
8/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0117	0.35	4.01
9/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0060	0.35	2.06
10/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0043	0.35	1.48
11/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0033	0.35	1.13
12/2021	Sandy	Northerly (Northwest - Northeast)	1.390E-03	0.0030	0.35	1.03

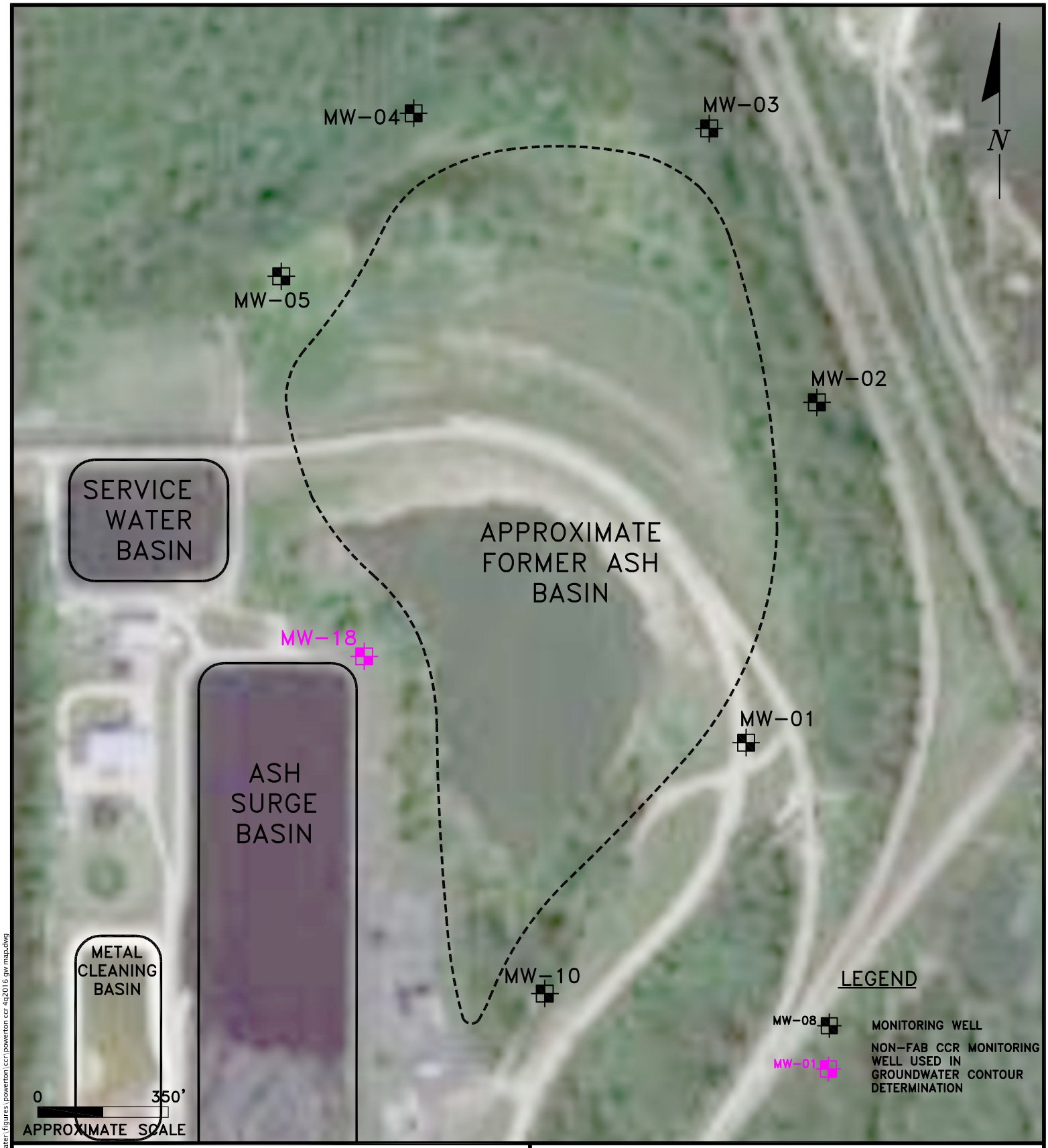
* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.

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

Table 6. CCR Groundwater Sample Collection Summary for 2021 - Powerton Generating Station Former Ash Basin

Well ID	Number of Groundwater Sampling Events	Dates of Groundwater Sampling Events
MW-01 (Upgradient)	3	5/11/2021
		8/24/2021
		11/30/2021
MW-10 (Upgradient)	3	5/11/2021
		8/24/2021
		11/30/2021
MW-02 (Downgradient)	3	5/11/2021
		8/24/2021
		11/30/2021
MW-03 (Downgradient)	3	5/11/2021
		8/24/2021
		11/30/2021
MW-04 (Downgradient)	3	5/11/2021
		8/24/2021
		11/30/2021
MW-05 (Downgradient)	3	5/11/2021
		8/24/2021
		11/30/2021

FIGURES



W:\projects\midwest generation\12313 groundwater\figures\powerton\ccr\powerton ccr 4q2016 gw map.dwg

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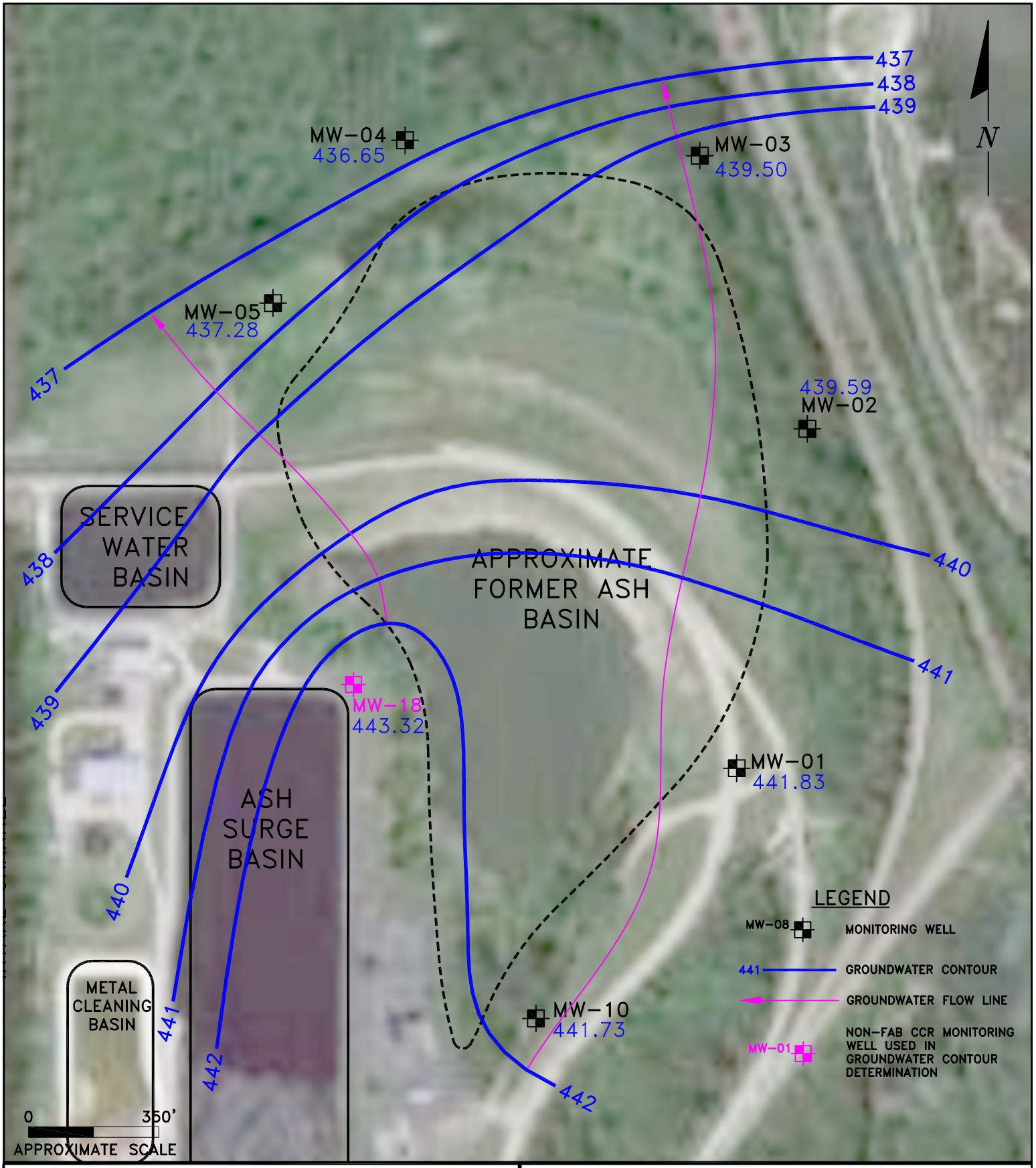
FORMER ASH BASIN CCR MONITORING WELL SITE MAP

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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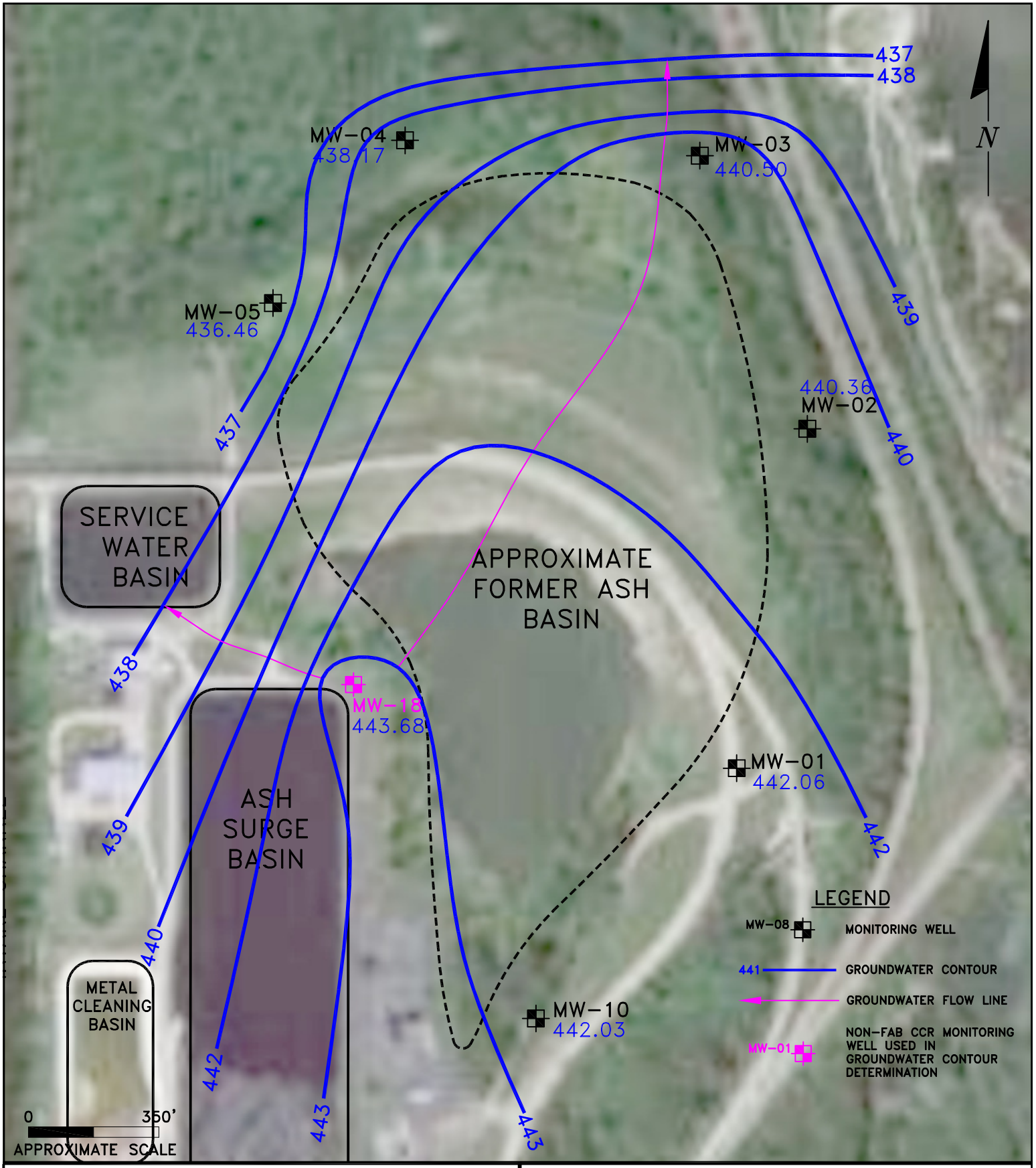
POTENTIOMETRIC MAP
FORMER ASH BASIN 05/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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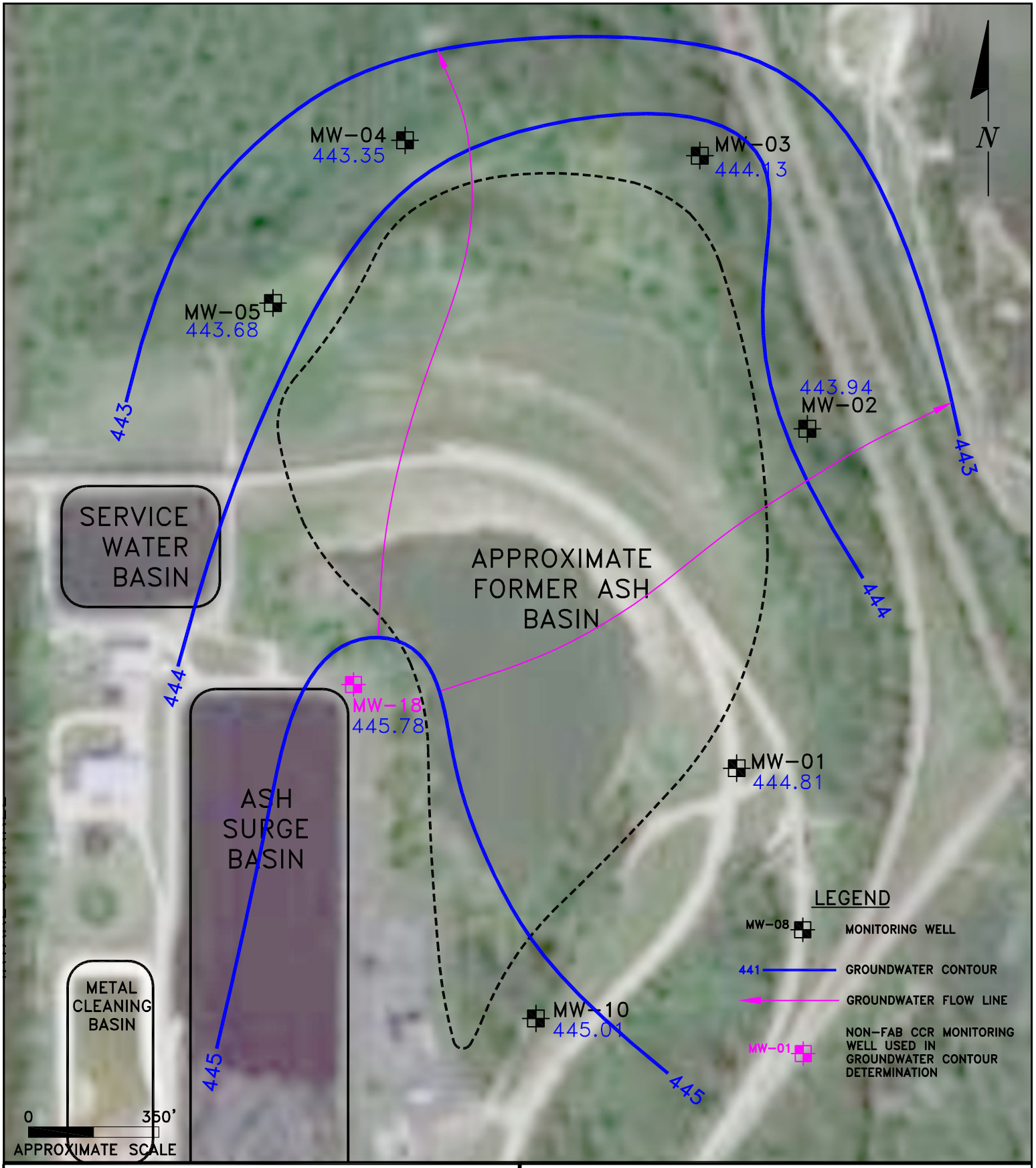
POTENTIOMETRIC MAP
FORMER ASH BASIN 06/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 07/2021

POWERTON STATION
PEKIN, ILLINOIS

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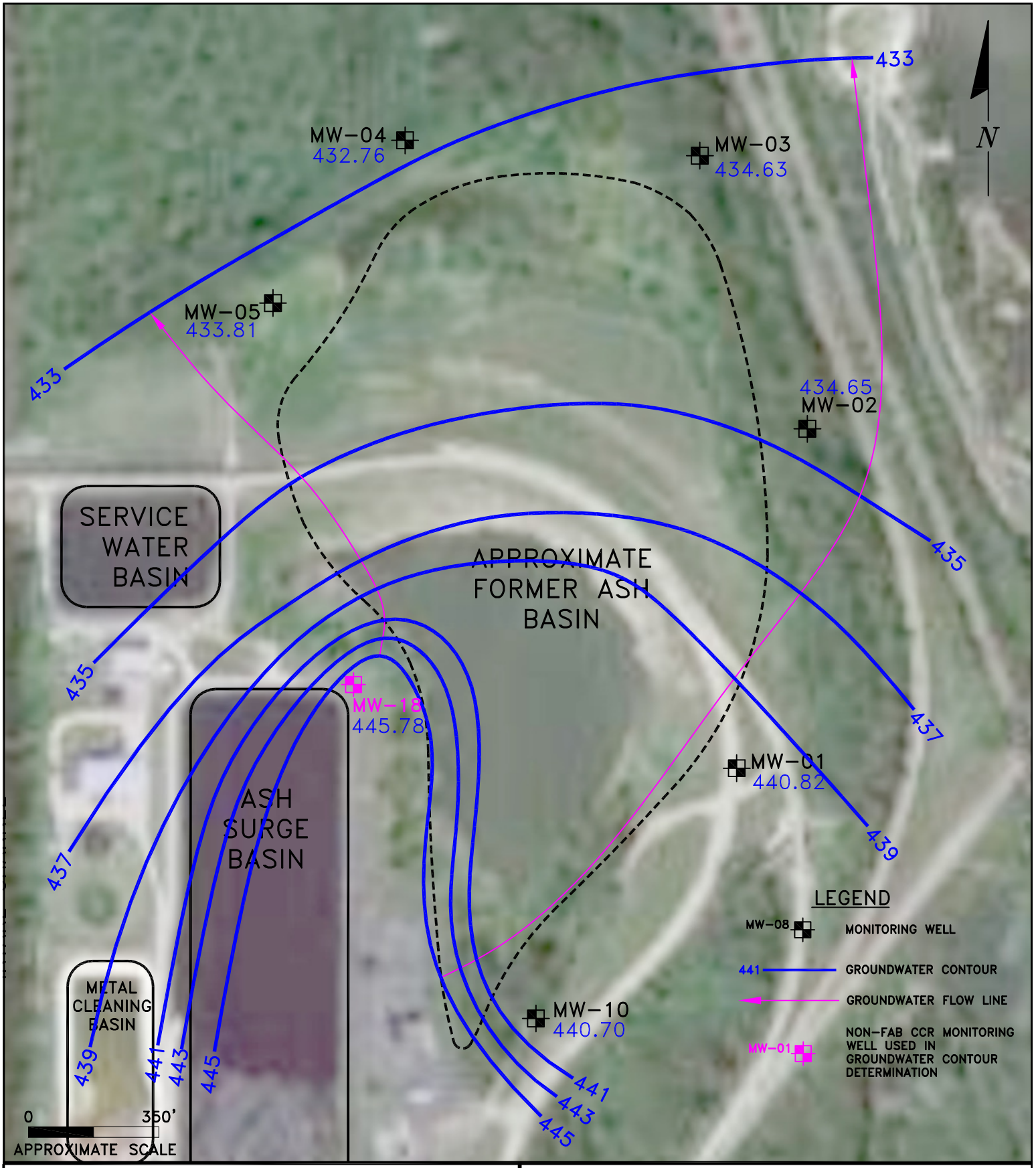
KPRG Project No. 12313.1	ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 08/2021

POWERTON STATION
PEKIN, ILLINOIS

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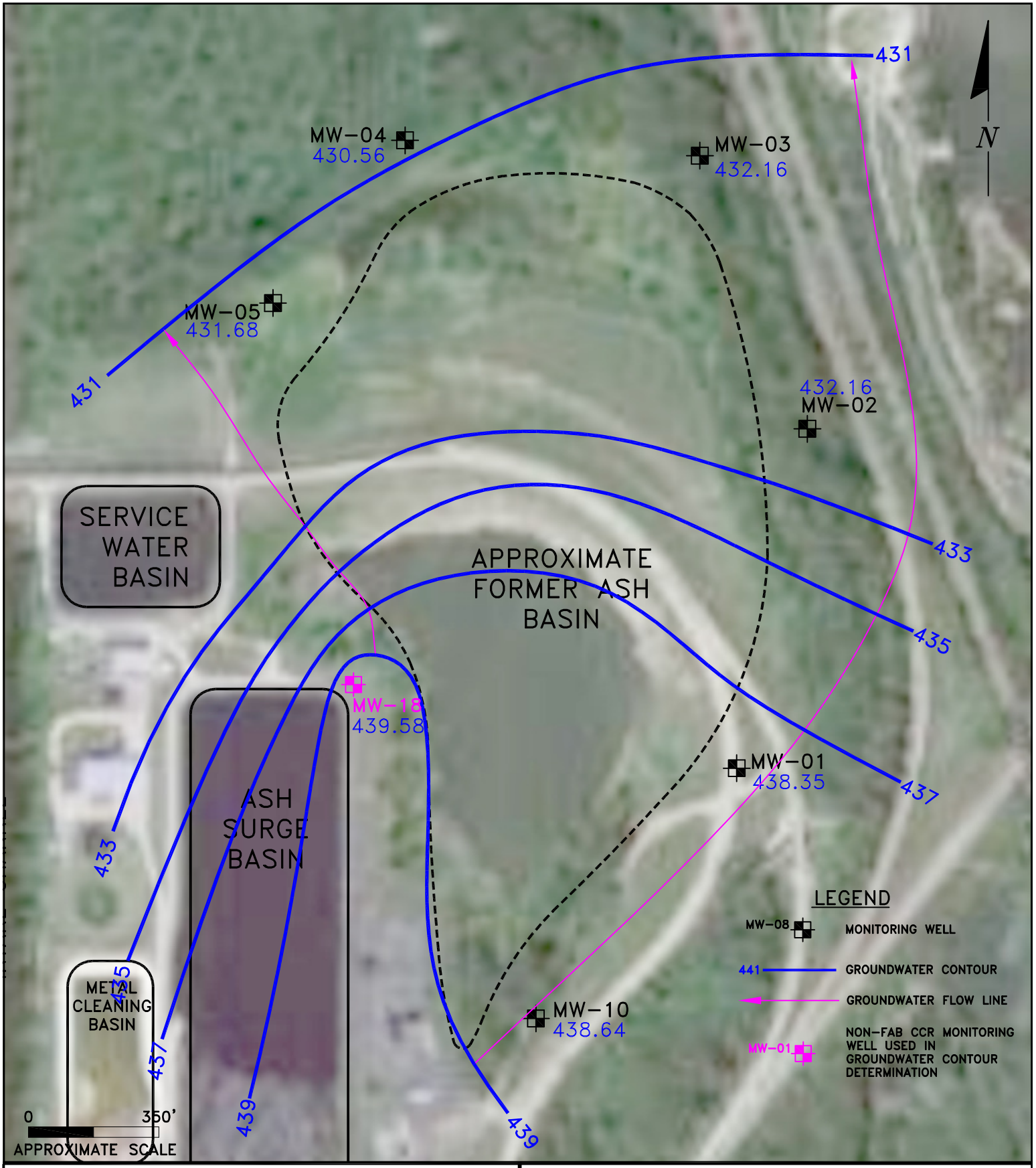
KPRG Project No. 12313.1 | ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 09/2021

POWERTON STATION
PEKIN, ILLINOIS

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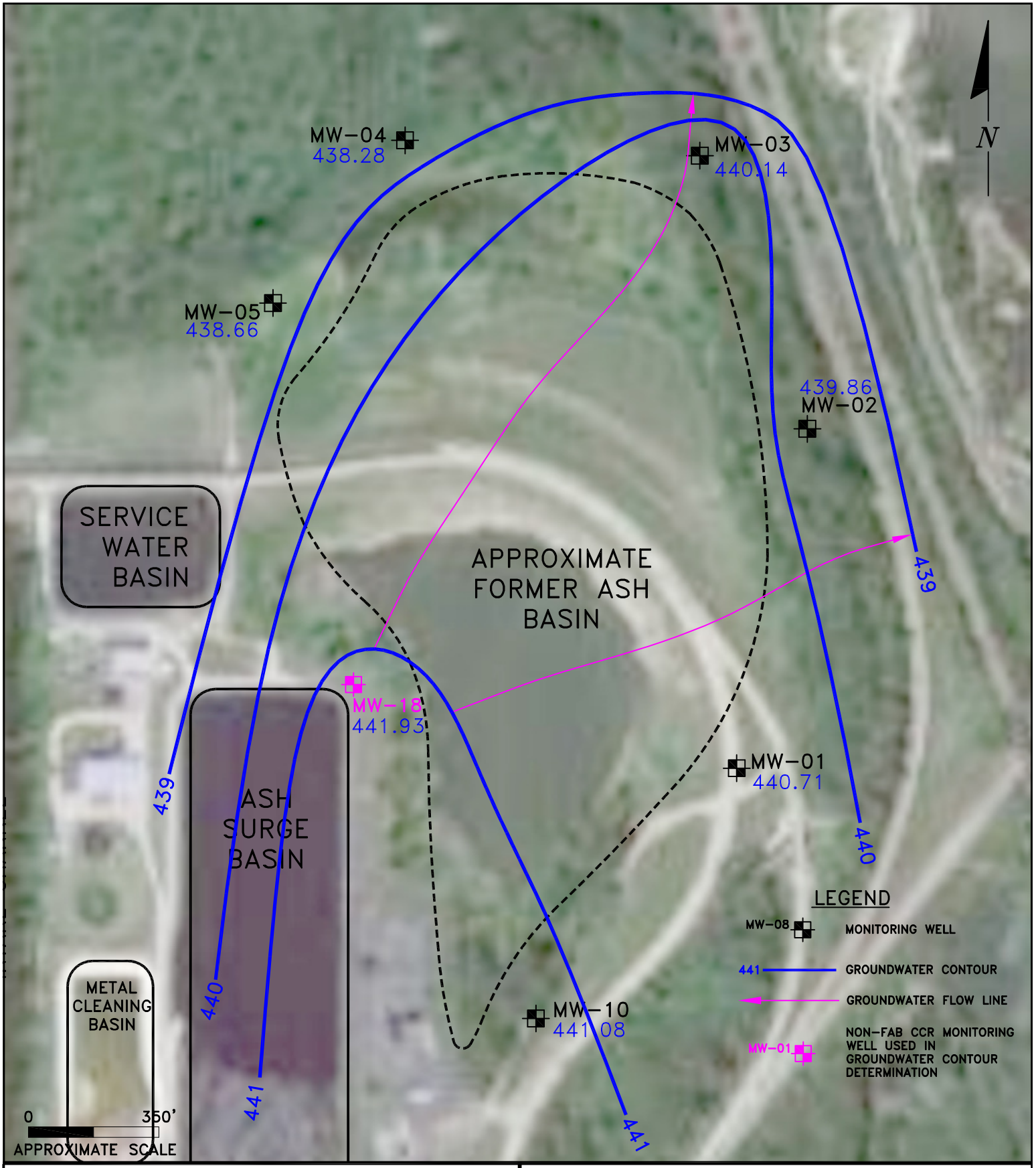
KPRG Project No. 12313.1	ATTACHMENT 1



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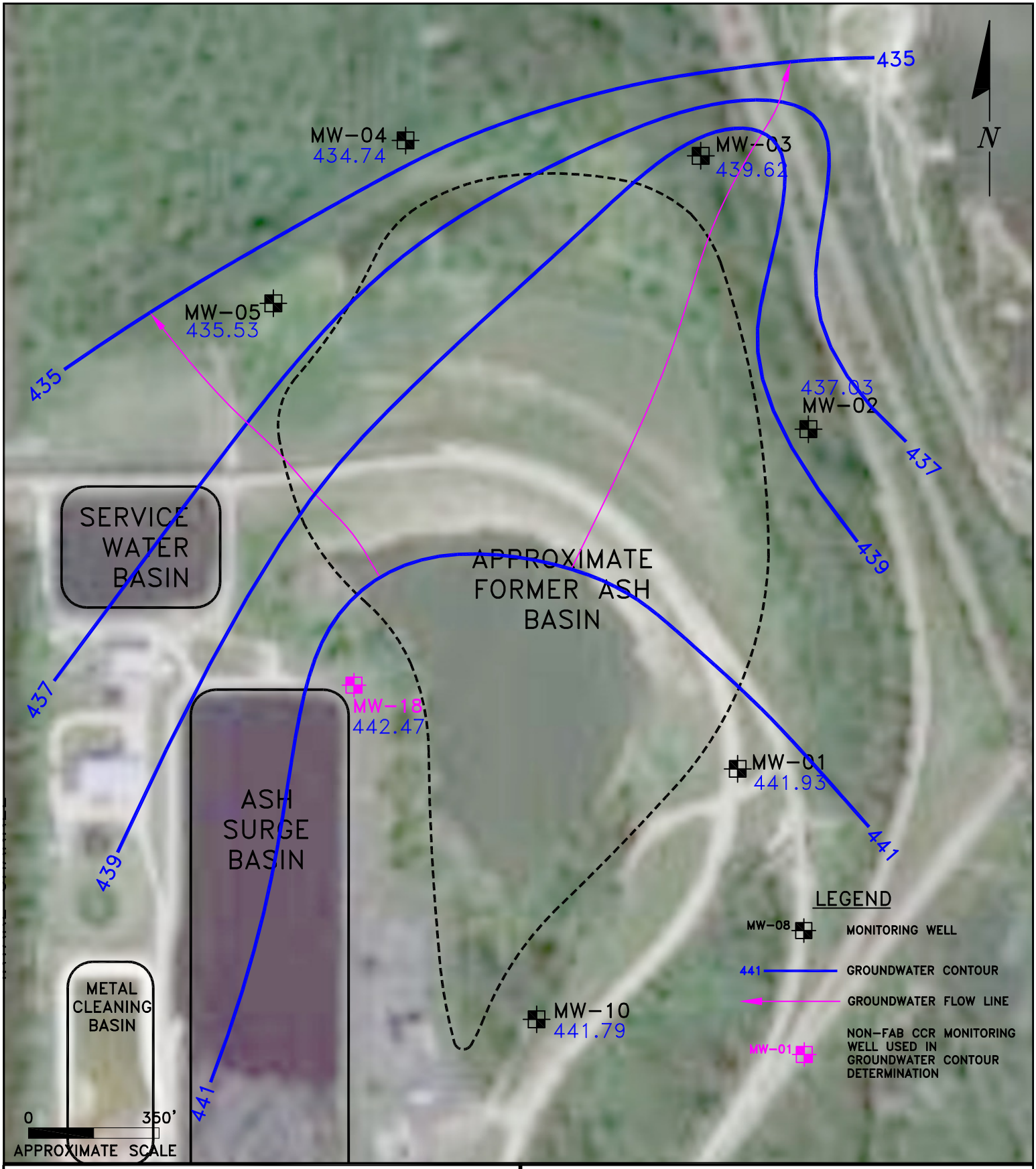
POTENTIOMETRIC MAP
FORMER ASH BASIN 10/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1



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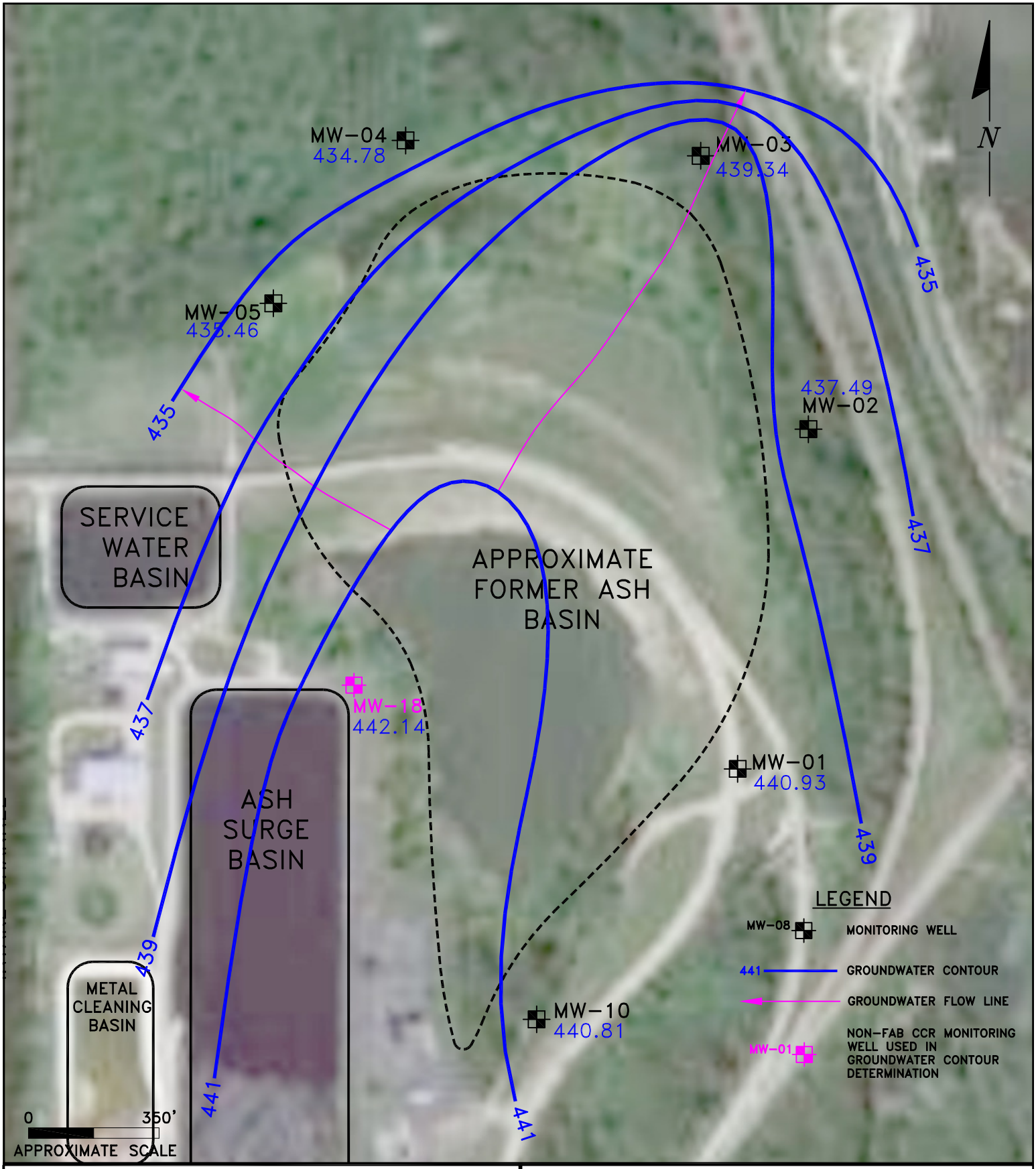
POTENTIOMETRIC MAP
FORMER ASH BASIN 11/2021

POWERTON STATION
PEKIN, ILLINOIS

Scale: 1" = 350'	Date: January 12, 2022
KPRG Project No. 12313.1	ATTACHMENT 1



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POTENTIOMETRIC MAP
FORMER ASH BASIN 12/2021

POWERTON STATION
PEKIN, ILLINOIS

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

KPRG Project No. 12313.1 | ATTACHMENT 1

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ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

ILLINOIS CCR COMPLIANCE
METAL CLEANING BASIN
ANNUAL GROUNDWATER MONITORING and CORRECTIVE ACTION REPORT - 2021

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 27, 2022

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TABLES

FIGURES

ATTACHMENTS

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), are being 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 needed to be installed, and groundwater sampling for establishing statistical background needed to be completed to meet the new State CCR Rule requirements. A 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) to allow for the new well installations and subsequent eight rounds of groundwater sampling for statistical calculation purposes. The extended submittal date for the Application is March 31, 2022. Groundwater data evaluation work is ongoing.

This overview of the 2021 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) – Background statistical evaluations are still being completed at this time. Proposed statistical background Prediction Limits and site-specific proposed Groundwater Protection Standards (GWPSs) will be included with the submittal of the Application for Initial Operating Permit no later than March 31, 2022. No comparisons to statistical background can be made until that time.

- Section 845.610(e)(4)(C and D) – Site-specific GWPSs are still being developed along with statistical site background. Proposed GWPSs in accordance with Section 845.600(a)(2) will be included with the submittal of the Application for Initial Operating Permit no later than March 31, 2022. No comparisons to proposed GWPSs can be made until that time.

- 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))

2021 is the initial year of State CCR Rule implementation starting with the second quarter within which the Rule became effective. The following key actions have been completed:

- Groundwater sampling for establishment of statistical background of all parameters specified in Section 845.600(a) plus calcium and turbidity is in the process of being completed. The 60-day data summary submittals for all rounds collected to date have been placed in the facility's 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.

- On May 11, 2021 a request for variance was filed with the IPCB to extend the date for submittal of the Application for Initial Operating Permit to facilitate additional monitoring well installations and subsequent background groundwater quality sampling to meet the requirements of the new State CCR Rule. The variance was granted on September 9, 2021 with an extended Application submittal date of March 31, 2022.

Key activities for the upcoming year include:

- Submittal of an Application for Initial Operating Permit by no later than March 31, 2022.

- Continued quarterly groundwater monitoring/reporting.

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

All groundwater data generated to date are summarized in Tables 1 and 2. Development of statistical background and proposed site-specific GWPSs is in progress. Since no proposed GWPSs are available at this time, no comparisons to those standards can be made.

Two new monitoring wells were installed to augment the groundwater monitoring network for the MCB. These were wells MW-20 and MW-21. The boring logs and well construction summaries are included in Attachment 1. There were no monitoring wells 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 3. Potentiometric surface maps for each round of water levels are provided in Attachment 2. 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 4.

A summary of the number of groundwater samples collected for analysis for each CCR monitoring well along with sample dates is provided in Table 5.

As previously stated, sampling for background water quality evaluations is still ongoing. Proposed statistical background concentrations for all parameters specified in Section 845.600(a) plus calcium and turbidity will be presented as part of the Application for Initial Operating Permit to be submitted no later than March 31, 2022.

TABLES

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

Well	Date	Boron	Calcium	Chloride	Fluoride	pH	Sulfate	Total Dissolved	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
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	< 0.005	< 0.001	< 0.0005	0.024	< 0.0002	0.016	< 0.353	0.055	< 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	7.3	^- 400	1100	< 0.003	0.0065	0.025	< 0.001	< 0.0005	< 0.005	< 0.001	< 0.0005	0.017	< 0.0002	0.038	< 0.388	< 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	180	94	1.1	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
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
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	< 5.0	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	< 5.0	810	< 0.003	0.036	0.45	< 0.001	< 0.0005	0.0072	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	< ^- 5.0	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

Notes: All units are in mg/l except pH is in standard units.
NA - Not Analyzed
^+ - Continuing Calibration Verification is outsde acceptance limits, high biased
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.

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
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
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
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
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
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

Table 3. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL. Metal Cleaning Basin.

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
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
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

Table 3. Groundwater Elevations - Midwest Generation, LLC, Powerton Station, Pekin, IL. Metal Cleaning Basin.

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
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
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

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)
5/2021	Silt/clay	Westerly	3.280E-07	0.0276	0.4	0.0020
6/2021	Silt/clay	Westerly	3.280E-07	0.0288	0.4	0.0020
7/2021	Silt/clay	Westerly	3.280E-07	0.0157	0.4	0.0011
8/2021	Silt/clay	Westerly	3.280E-07	0.0350	0.4	0.0025
9/2021	Silt/clay	Westerly	3.280E-07	0.0285	0.4	0.0020
10/2021	Silt/clay	Westerly	3.280E-07	0.0234	0.4	0.0017
11/2021	Silt/clay	Westerly	3.280E-07	0.0230	0.4	0.0016
12/2021	Silt/clay	Westerly	3.280E-07	0.0237	0.4	0.0017

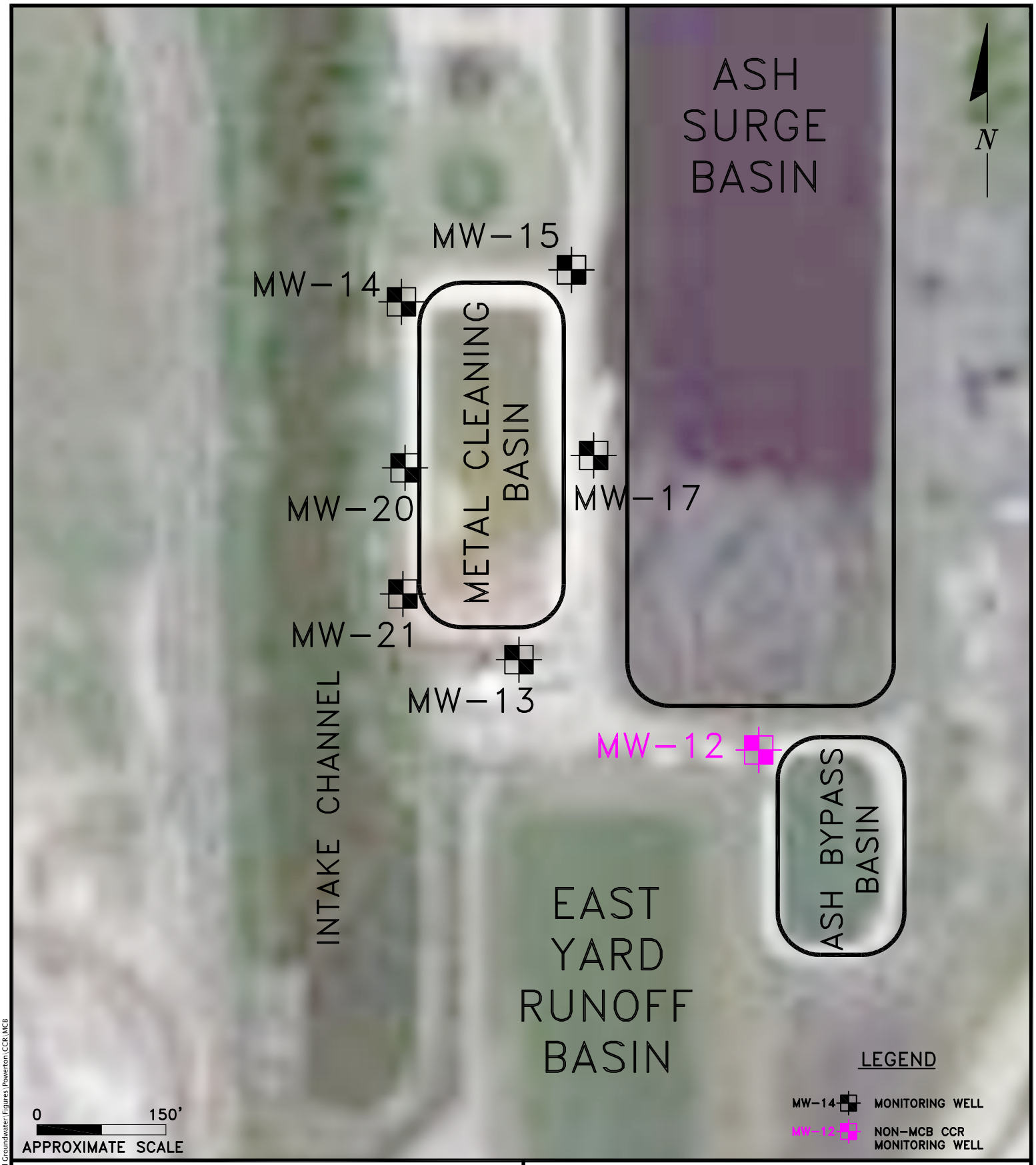
* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.
Average hydraulic conductivity for silt/clay unit (feet/second) from Groundwater, Freeze and Cherry, 1979.

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

Table 5. CCR Groundwater Sample Collection Summary for 2021 - Powerton Generating Station. Metal Cleaning Basin.

Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events
MW-13 (Upgradient)	6	4/8/2021
		5/13/2021
		6/3/2021
		8/23/2021
		10/1/2021
		11/30/2021
MW-15 (Upgradient)	5	5/12/2021
		7/20/2021
		8/23/2021
		10/1/2021
		11/29/2021
MW-17 (Upgradient)	8	4/8/2021
		5/12/2021
		6/3/2021
		6/28/2021
		7/20/2021
		8/23/2021
		10/1/2021
		11/29/2021
MW-14 (Downgradient)	8	4/8/2021
		5/12/2021
		6/3/2021
		6/28/2021
		7/20/2021
		8/23/2021
		10/1/2021
		11/29/2021
MW-20 (Downgradient)	8	4/8/2021
		5/12/2021
		6/3/2021
		6/28/2021
		7/20/2021
		8/23/2021
		10/1/2021
		11/29/2021
MW-21 (Downgradient)	8	4/8/2021
		5/12/2021
		6/3/2021
		6/28/2021
		7/20/2021
		8/23/2021
		10/8/2021
		11/29/2021

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

ATTACHMENT 1
New Well Boring Logs and Construction Summaries

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GEOLOGIC LOG OF MW-20

Midwest Generation, LLC
Powerton Station
Pekin, IL

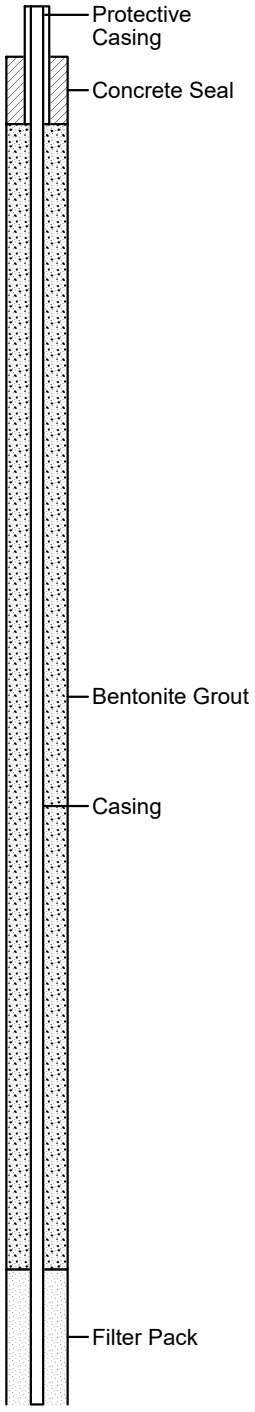
Project # 12313.5

Date Started	: 03/11/21
Date Completed	: 03/11/21
Drilling Method	: 8 1/4 HSA
Drill Rig	: Geoprobe
Driller Name/Co.	: Matt / Cabeno Env. Serv.

Boring Depth	: 30.0
Well Bottom Depth	: 30.0
Surface Elevation	: 466.43 ft. above MSL
Top of Casing Elev.	: 468.95 ft. above MSL
Groundwater Elev.	: 441.60 ft. above MSL
Riser Material	: 2 " Sch 40 PVC
Screen Material	: 2 " Sch 40 PVC, 0.01 slot
Coordinate N	:
Coordinate E	:
Logged By	: M. Dolan

Depth in Feet	Surf. Elev. 466.5	DESCRIPTION	Recovery (in.)	REMARKS
0	466	CLAY with SAND and GRAVEL, brown, dark brown, top soil, dry.	24	
5	461	SAND and GRAVEL, coarse, brown, tan, dry.	30	
10	456	CLAY, trace SAND and GRAVEL, brown, dark brown, dry.	36	
		CLAY, some SAND and GRAVEL, cinders and slag, dark brown, black, dry.		
15	451		48	
		CLAY, black, organic, stiff, dry.		
		SILTY CLAY with SAND and GRAVEL, black, gray, dry.		
20				

Well: MW-20
Elev.: 468.95



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Midwest Generation, LLC
Powerton Station
Pekin, IL

Project # 12313.5

GEOLOGIC LOG OF MW-20

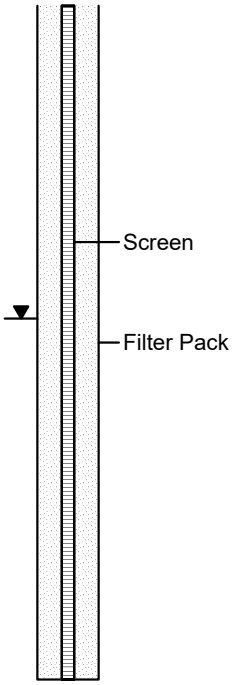
(Page 2 of 2)

Date Started	: 03/11/21
Date Completed	: 03/11/21
Drilling Method	: 8 1/4 HSA
Drill Rig	: Geoprobe
Driller Name/Co.	: Matt / Cabeno Env. Serv.

Boring Depth	: 30.0
Well Bottom Depth	: 30.0
Surface Elevation	: 466.43 ft. above MSL
Top of Casing Elev.	: 468.95 ft. above MSL
Groundwater Elev.	: 441.60 ft. above MSL
Riser Material	: 2 " Sch 40 PVC
Screen Material	: 2 " Sch 40 PVC, 0.01 slot
Coordinate N	:
Coordinate E	:
Logged By	: M. Dolan

Depth in Feet	Surf. Elev. 466.5	DESCRIPTION	Recovery (in.)	REMARKS
20	446	CLAYEY SILT, trace SAND and GRAVEL, black, gray, moist.	36	
25	441	SILT, trace SAND, organic with laminations, dark gray, black, wet.	42	
30	436	End of Boring at 30 feet.		
35	431			
40				

Well: MW-20
Elev.: 468.95



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GEOLOGIC LOG OF MW-21

Midwest Generation, LLC
Powerton Station
Pekin, IL

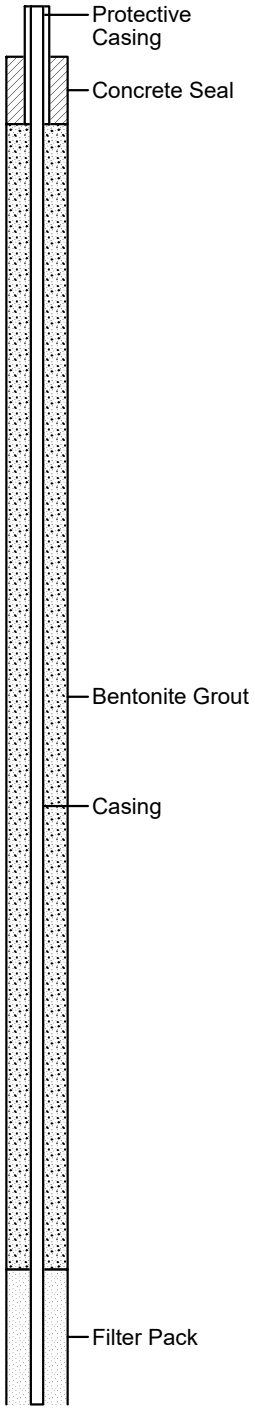
Project # 12313.5

Date Started	: 03/11/21
Date Completed	: 03/11/21
Drilling Method	: 8 1/4 HSA
Drill Rig	: Geoprobe
Driller Name/Co.	: Matt / Cabeno Env. Serv.

Boring Depth	: 35.0
Well Bottom Depth	: 30.0
Surface Elevation	: 465.71 ft. above MSL
Top of Casing Elev.	: 468.17 ft. above MSL
Groundwater Elev.	: 440.65 ft. above MSL
Riser Material	: 2 " Sch 40 PVC
Screen Material	: 2 " Sch 40 PVC, 0.01 slot
Coordinate N	:
Coordinate E	:
Logged By	: M. Dolan

Depth in Feet	Surf. Elev. 466	DESCRIPTION	Recovery (in.)	REMARKS
0	465.5	CLAY, black, dark brown, top soil, dry.		
		CLAY, dark brown, black cinders, dry.		
		SAND and GRAVEL, brown, black cinders, dry.	36	
		SAND and fine grained GRAVEL, brown, dry.		
5	460.5	CLAY with SAND and GRAVEL, black, dark brown, dry.	30	
10	455.5	SAND and GRAVEL, coarse, trace CLAY, brown, dry.	42	
		SILTY SAND, trace GRAVEL, brown, dry.		
15	450.5	CLAY, black, stiff, dry	42	
		SILT, trace SAND, black, gray, organic, moist		
20				

Well: MW-21
Elev.: 468.17



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Midwest Generation, LLC
Powerton Station
Pekin, IL

Project # 12313.5

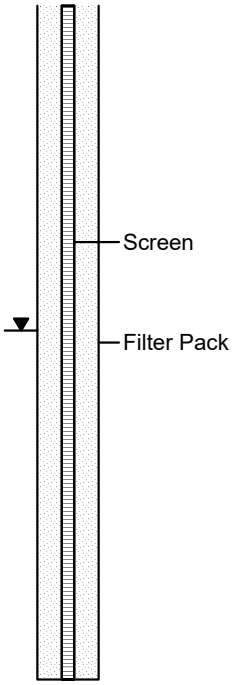
GEOLOGIC LOG OF MW-21

(Page 2 of 2)

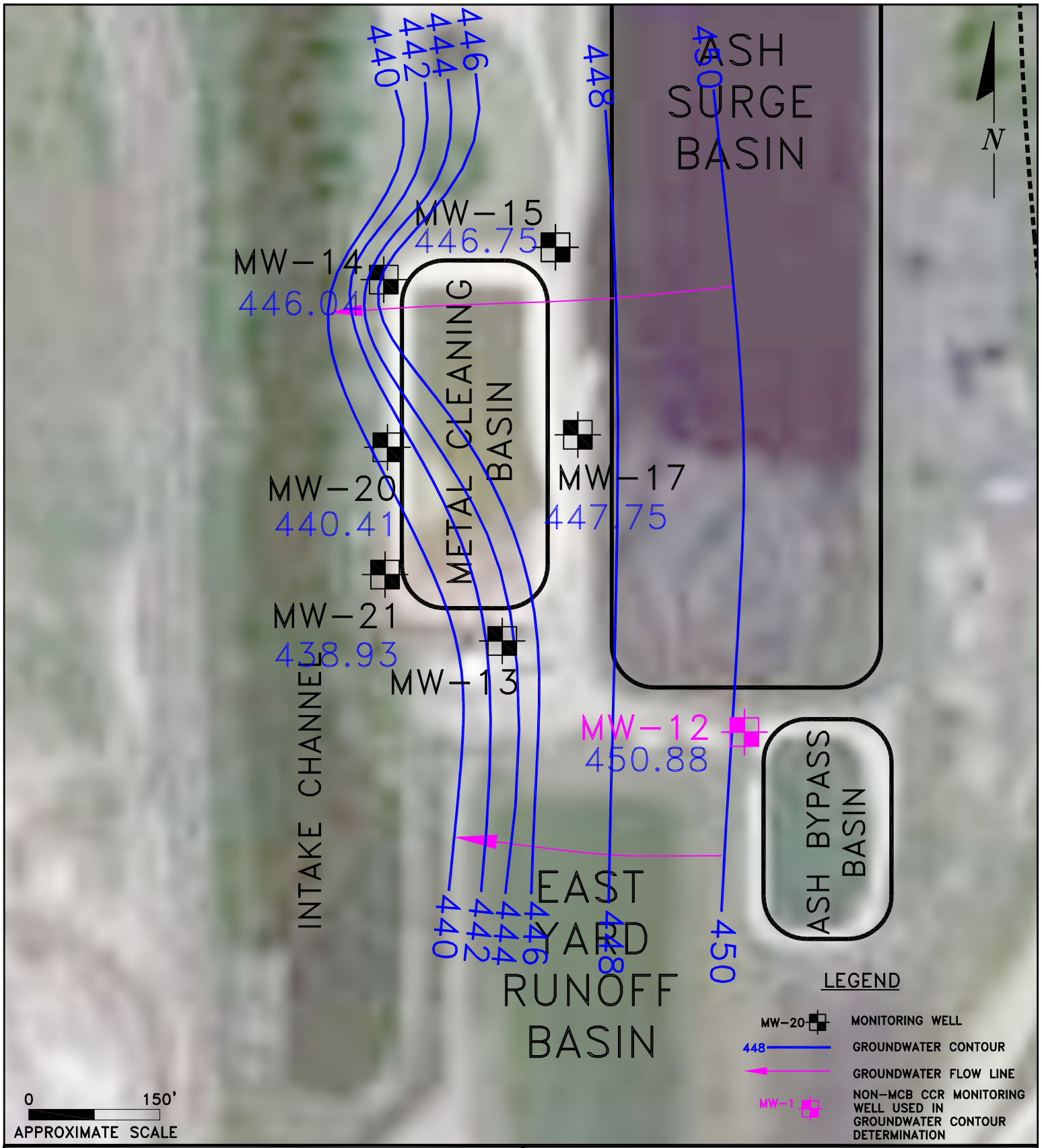
Date Started	: 03/11/21
Date Completed	: 03/11/21
Drilling Method	: 8 1/4 HSA
Drill Rig	: Geoprobe
Driller Name/Co.	: Matt / Cabeno Env. Serv.

Boring Depth	: 35.0
Well Bottom Depth	: 30.0
Surface Elevation	: 465.71 ft. above MSL
Top of Casing Elev.	: 468.17 ft. above MSL
Groundwater Elev.	: 440.65 ft. above MSL
Riser Material	: 2 " Sch 40 PVC
Screen Material	: 2 " Sch 40 PVC, 0.01 slot
Coordinate N	:
Coordinate E	:
Logged By	: M. Dolan

Depth in Feet	Surf. Elev. 466	DESCRIPTION	Recovery (in.)	REMARKS
20	445.5		60	
25	440.5		60	
30	435.5	SILT, trace very fine grained SAND, black, gray, organic, stiff, wet.	48	
35	430.5	CLAYEY SILT, trace very fine grained SAND, black, gray, organic, stiff, wet.		
40		End of Boring at 35 feet.		



ATTACHMENT 2
Monthly Potentiometric Maps



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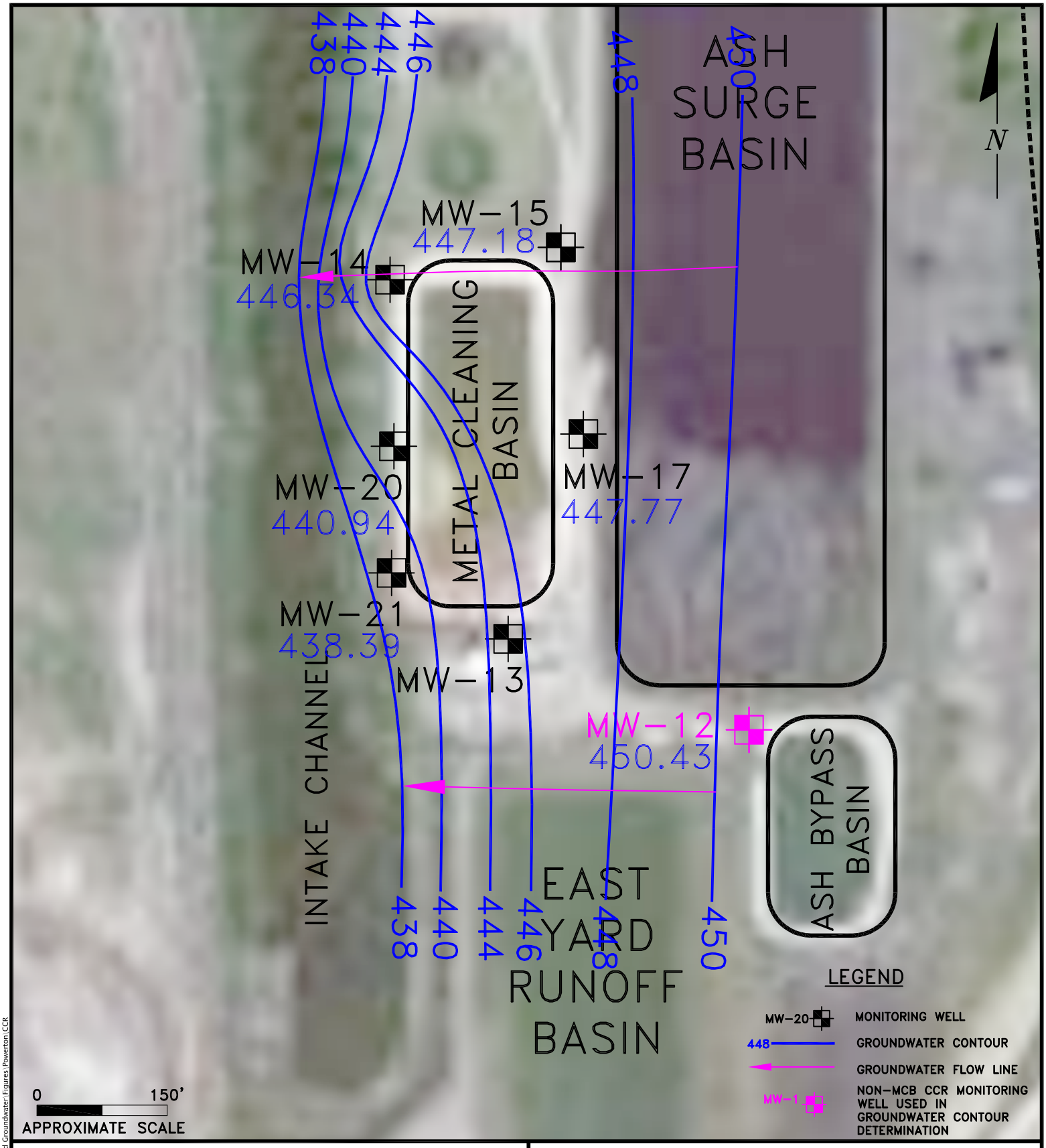
POTENTIOMETRIC MAP 05/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150'	Date: January 20, 2022
KPRG Project No. 12313.5	ATTACHMENT 1



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POTENTIOMETRIC MAP 06/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

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

KPRG Project No. 12313.5 | ATTACHMENT 1

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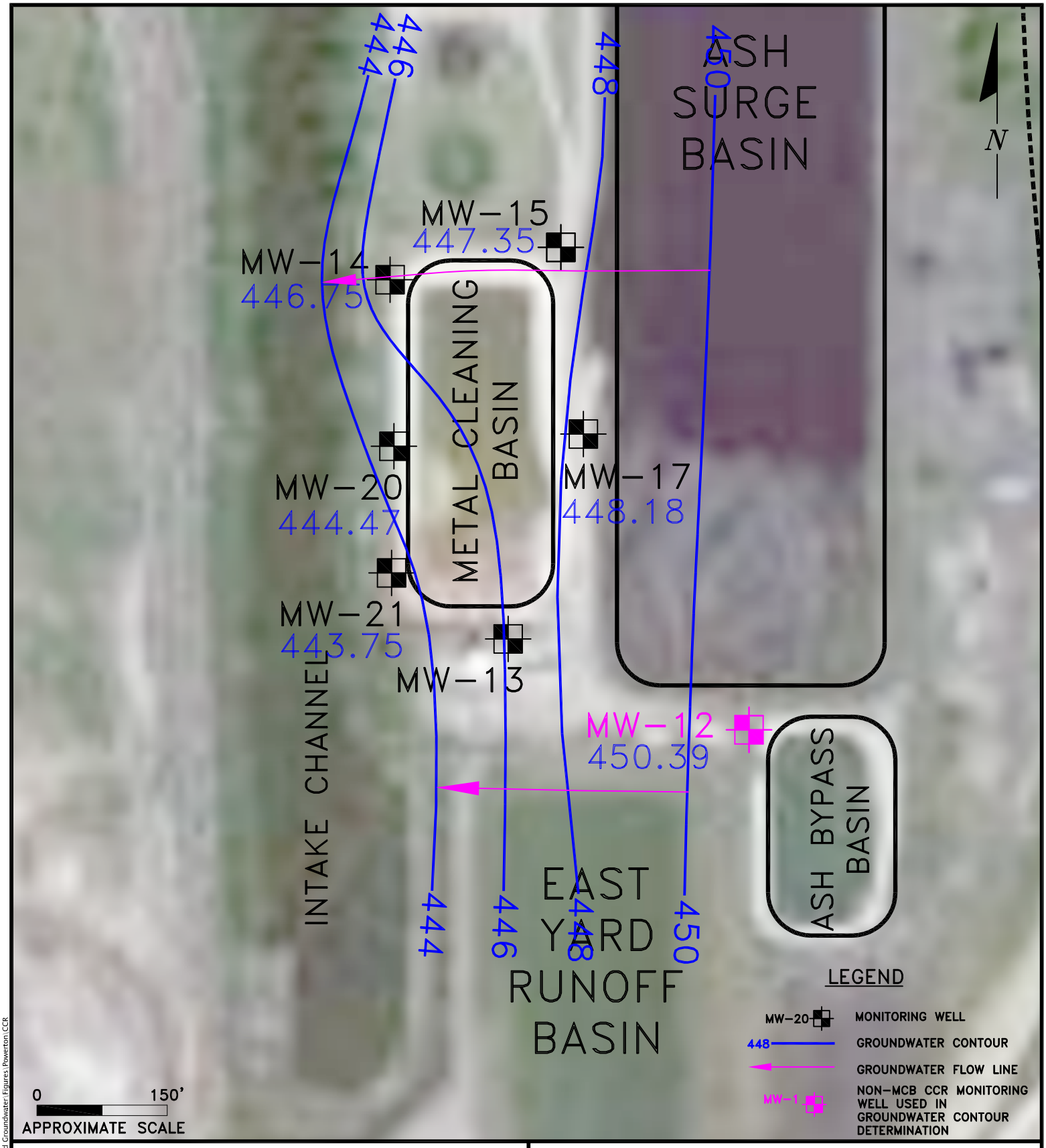

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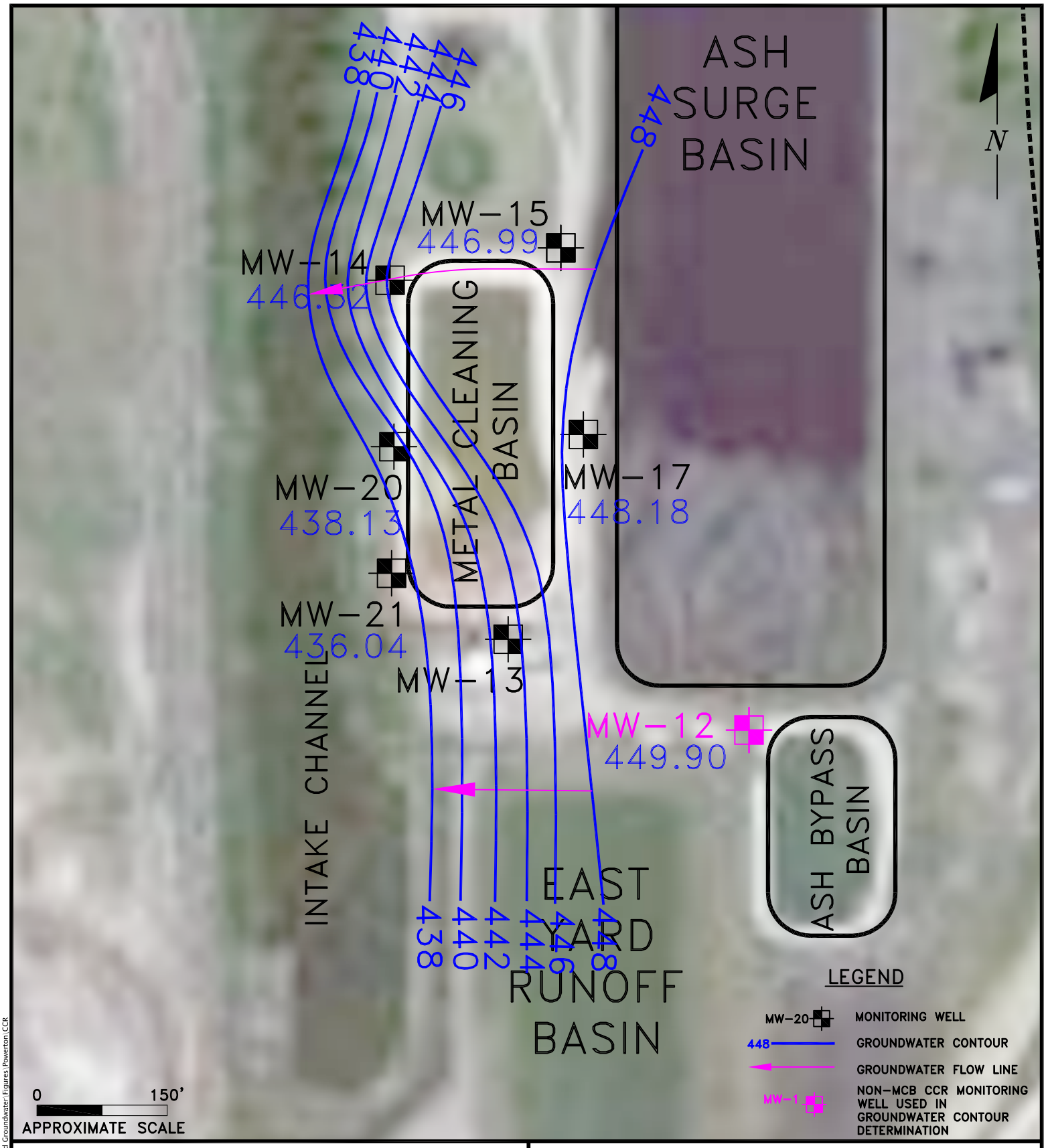
POTENTIOMETRIC MAP 07/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

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

KPRG Project No. 12313.5 | ATTACHMENT 1



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POTENTIOMETRIC MAP 08/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

Scale: 1" = 150'	Date: January 20, 2022
KPRG Project No. 12313.5	ATTACHMENT 1

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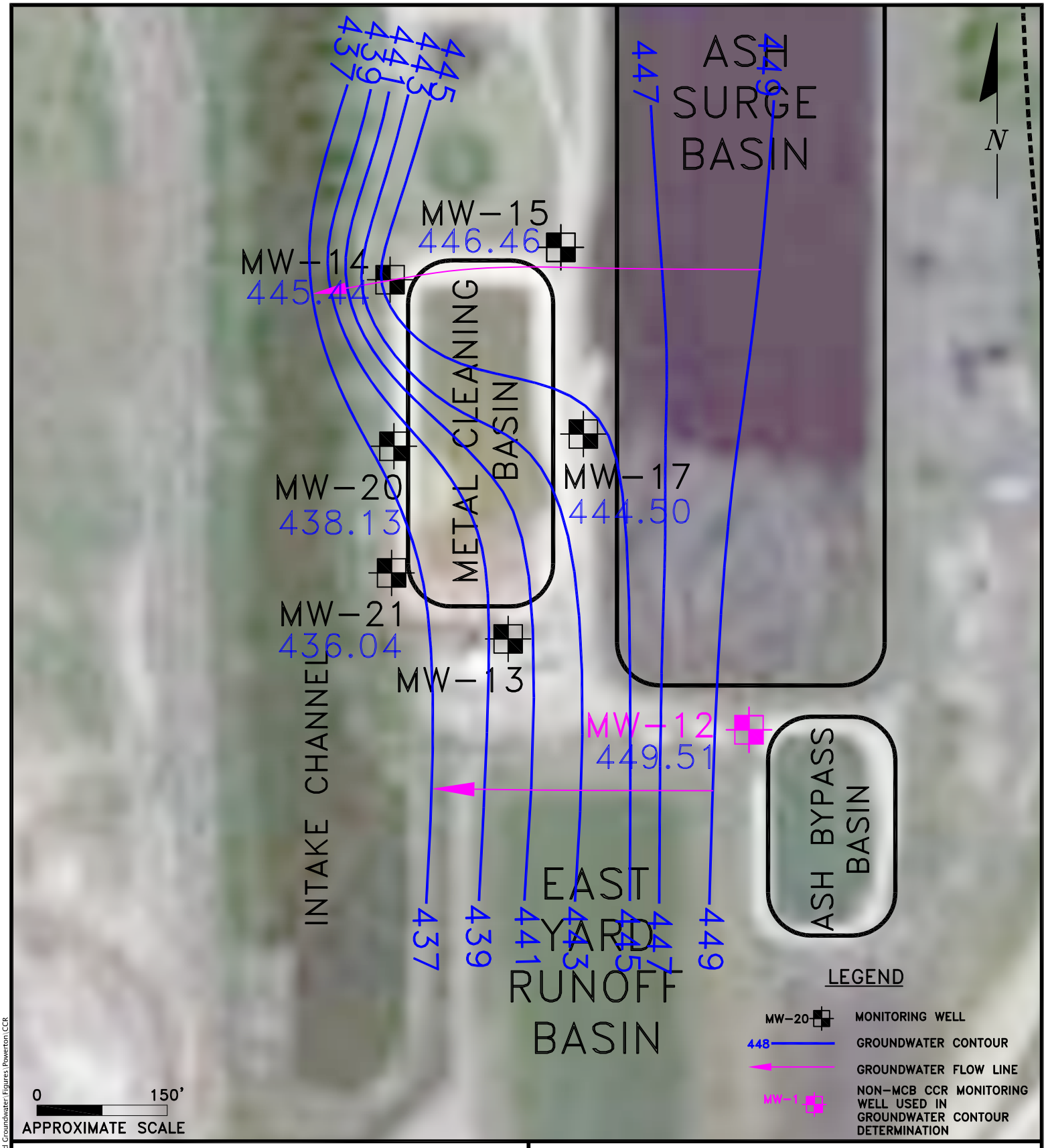

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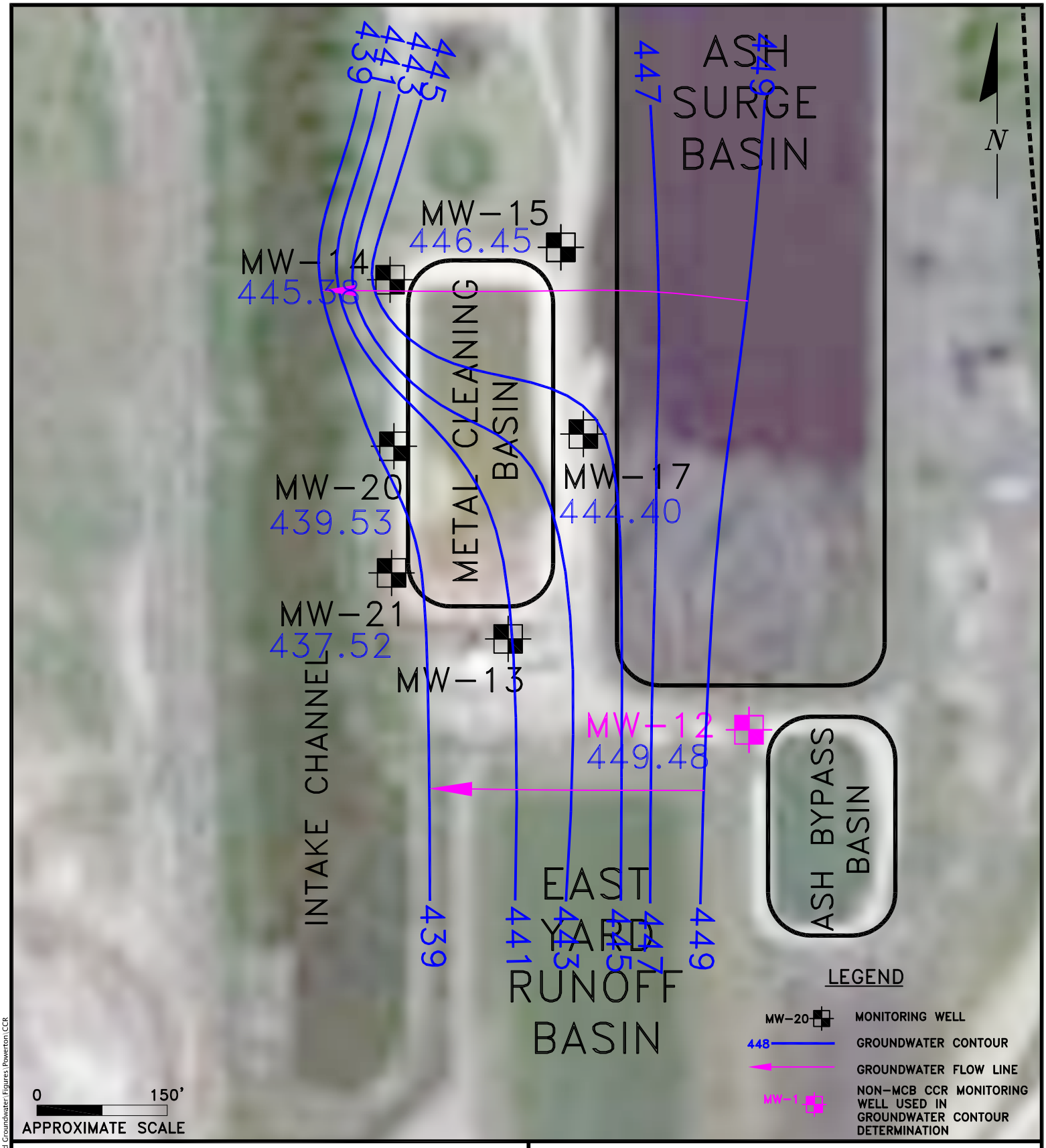
POTENTIOMETRIC MAP 09/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

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

KPRG Project No. 12313.5 | ATTACHMENT 1



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ENVIRONMENTAL CONSULTATION & REMEDIATION

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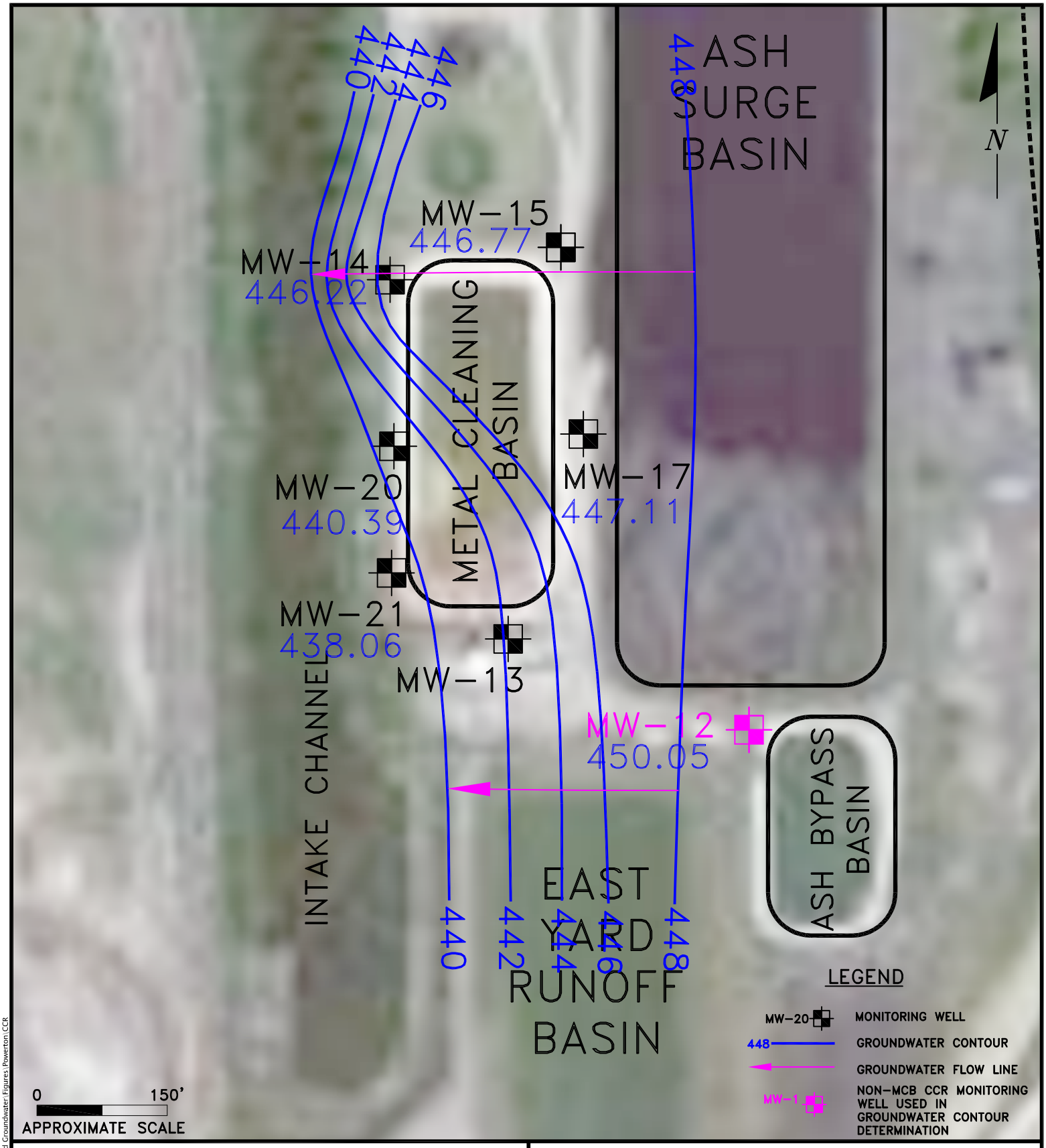
POTENTIOMETRIC MAP 10/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

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

KPRG Project No. 12313.5 | ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 11/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

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

KPRG Project No. 12313.5 | ATTACHMENT 1

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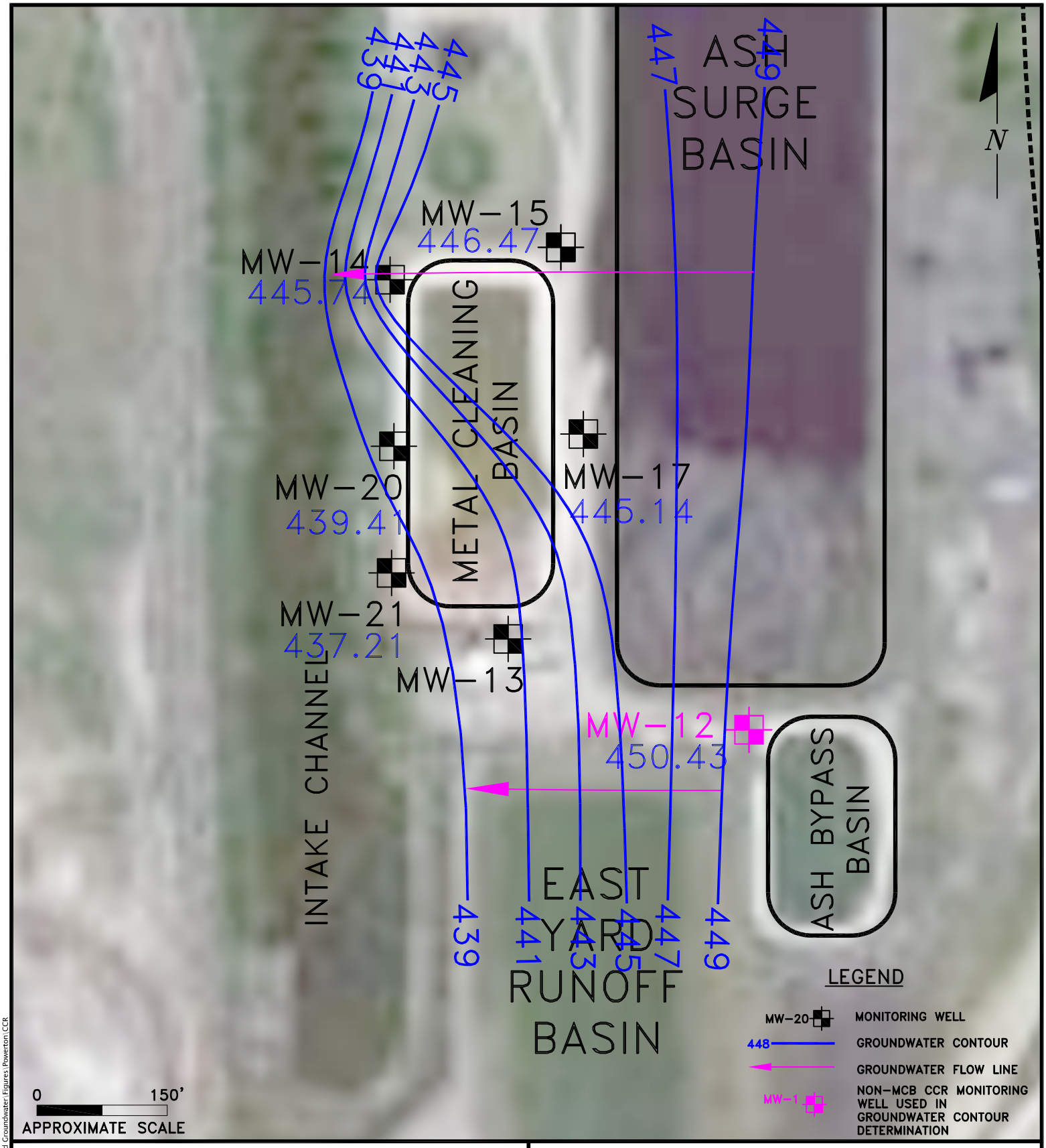

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POTENTIOMETRIC MAP 12/2021

POWERTON STATION METAL CLEANING BASIN
PEKIN, ILLINOIS

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

KPRG Project No. 12313.5 | ATTACHMENT 1

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