



Midwest Generation, LLC
Will County Generating Station
529 East 135th Street
Romeoville, Illinois 60436

January 28, 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 – Will County Generating Station
Account No. W1978100011
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 Will County Generating Station:

Pond ID	CCR Surface Impoundment Description
W1978100011-01	Pond 1N
W1978100011-02	Pond 1S
W1978100011-03	Pond 2S
W1978100011-04	Pond 3S

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 21-108, Midwest Generation was granted an extension to submit the initial operating permit for Ponds 1N and 1S, 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,

Phillip Raush
Plant Manager, Will County Generating Station

Attachment

2021 ANNUAL CONSOLIDATED REPORT WILL COUNTY GENERATING STATION

POND 1N – W19781011-01
POND 1S – W19781011-02
POND 2S – W19781011-03
POND 3S – W19781011-04

ATTACHMENT A – ANNUAL CCR FUGITIVE DUST CONTROL REPORT

ATTACHMENT B – ANNUAL INSPECTION REPORT

ATTACHMENT B.1 – HAZARD POTENTIAL CLASSIFICATION ASSESSMENT
CERTIFICATION

ATTACHMENT B.2 – STRUCTURAL STABILITY ASSESSMENT CERTIFICATION

ATTACHMENT B.3 – SAFETY FACTOR ASSESSMENT CERTIFICATION

ATTACHMENT B.4 – INFLOW DESIGN FLOOD CONTROL PLAN

ATTACHMENT C – ANNUAL GROUNDWATER MONITORING AND CORRECTIVE
ACTION REPORT

**ATTACHMENT A
2021 ANNUAL CCR FUGITIVE DUST
CONTROL REPORT**

Annual CCR Fugitive Dust Control Report
Will County Generating Station
529 East 135th Street/Romeoville, 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 Will County Generating Station, operated by Midwest Generation, LLC (MWG), is located at 529 East 135th Street, Romeoville, Will County, Illinois. The facility is a coal-fired electric power generating station currently occupying approximately 200 acres. There is currently one coal-fired operating unit, Unit 4. 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 disposal management of CCR that is generated from the combustion of coal. CCR units associated with the station include the Pond 1 North (1N), Pond 2 South (1S), South Ash Pond 2 and South Ash Pond 3.

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 Rule and placed in the Will County 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 Waukegan 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).

Annual CCR Fugitive Dust Control Report
Will County Generating Station
529 East 135th Street/Romeoville, Illinois

2.0 Actions Taken to Control CCR Fugitive Dust

As detailed in the 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 South Ash Pond 2. A significant portion of the piping system is contained within a building, which eliminates dust emissions to the outside environment. 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 licensed landfill.

2.2 South Ash Pond 2 and South Ash Pond 3

During normal operations, the South Ash Pond 2 is filled with water thereby suppressing any potential fugitive dust emissions. South Ash Pond 3 was previously filled with water when it was operational and remains filled with water despite being out of service. Infrequently, South Ash Pond 2 will need to be dewatered and the sediment removed off site to a licensed landfill. 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 ponds 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 also are limited during such occasions. Haul trucks are covered with tarps once they have been loaded.

2.3 Ash Pond 1N and Ash Pond 1S

Ash Pond 1N and Ash Pond 1S are inactive surface impoundments and no longer receive bottom

Annual CCR Fugitive Dust Control Report
Will County Generating Station
529 East 135th Street/Romeoville, Illinois

ash or slag. The bottom ash/slag material remains within each pond. Precipitation that falls on the bottom ash/slag prevents it from drying out and becoming airborne. Standing water is not present and excessive precipitation that enters each pond will drain out of the pond into the outlet trough. The bottom ash/slag is substantially vegetated with minimal amounts of ash exposed. Some ash does have the potential to become airborne especially during excessively dry and windy conditions. Each pond will be assessed at least quarterly or more frequent during excessively dry and windy conditions. To minimize fugitive dust emissions from exposed dry bottom ash and slag, the material will be sprayed with water, as needed.

2.4 Fly Ash Handling Equipment

Fly ash from the mechanical separators is sent to the silos within enclosed piping. At the silos, the fly ash is drop loaded into a tank truck through a telescopic, baghouse-controlled drop chute. 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, the truck moves a short distance to an elevated truck stand where it is broom swept to remove any accumulated fly ash. Accumulated ash is promptly transferred to the fly ash concrete storage pad.

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 conducts weekly inspections of the process to confirm compliance. A record of the inspections is maintained at the facility.

2.5 Concrete Storage Pad

The concrete pad only periodically contains bottom ash and slag, fly ash and other ash-related materials generated from routine maintenance activities. Typically, these materials are in a wet state but are allowed to partially dry to facilitate removal. When sufficiently dry, the material is promptly removed to an off-site licensed landfill. The concrete pad 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, fly ash, and other ash related materials, the height of the staged material is minimized, and the material piles are either sprayed with water or covered.

2.6 Ash Transport Roadways

Truck drivers are instructed on the proper procedure for cleaning trucks and a vehicle speed limit

Annual CCR Fugitive Dust Control Report
Will County Generating Station
529 East 135th Street/Romeoville, Illinois

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 to a licensed landfill.

3.0 Fugitive CCR Dust Assessments

Pursuant to §845.500(b)(3), assessments of the potential fugitive dust emission sources identified in the Will County facility's CCR Fugitive Dust Control Plan (Plan) were 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 Will County facility's CCR Fugitive Dust Control Plan.

No issues were identified during this Annual Report's period of record covering October through December 2021.

Owner Representative/Responsible Person Contact Information:

Mr. Phillip Raush
Station Manager
815-207-5412

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 Will County 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.

Annual CCR Fugitive Dust Control Report
Will County Generating Station
529 East 135th Street/Romeoville, Illinois

No complaints 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 undertaken during the past year, either as a result of internally identified deficiencies or from resolution of citizen complaints.

QUARTERLY FUGITIVE DUST
COMPLAINT REPORTS



Midwest Generation, LLC
Will County Generating Station
529 East 135th Street
Romeoville, Illinois 60436

January 14, 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 – Will County Generating Station
Account No. W19781011
Pond IDs: W19781011-01, W19781011-02, W19781011-03, W19781011-04
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 Will County 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,

A handwritten signature in black ink, appearing to read "P. Raush".

Phillip Raush
Plant Manager, Will County Generating Station

ATTACHMENT B
2021 ANNUAL INSPECTION REPORT

**ANNUAL INSPECTION REPORT
ASH PONDS 1N AND 1S
WILL COUNTY 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 Ash Ponds 1N and 1S at Will County Station in Romeoville, Illinois (Station). The purpose of this project is to perform the annual inspection of Ash Ponds 1N and 1S 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 completed by a qualified person employed by Midwest Generation, LLC. 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 Ash Ponds 1N and 1S.
 - 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.

Ash Ponds 1N and 1S are closed surface impoundments, both less than 2 acres in size. On August 19, 2021, CEC inspected Ash Ponds 1N and 1S and our observations showed no signs of distress that would suggest the stability or operation of the impounding structures are compromised.

1.0 CHANGES IN GEOMETRY

At the time of inspection, Ash Ponds 1N and 1S geometry was observed to be unchanged from previous construction plans and online aerial photography.

2.0 INSTRUMENTATION

Based on our interview of Station personnel, which was confirmed through our inspection, Ash Ponds 1N and 1S have no instrumentation.

3.0 CAPACITY AND IMPOUNDED VOLUME

Capacity and impounded volume of Ash Ponds 1N and 1S and estimated depth of impounded water and CCR are represented in Table 1 and 2, 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

Ash Ponds 1N and 1S were inspected for signs of distress that would have the potential to disrupt operation and safety of the basin. Prior to performing the initial inspection, discussions 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

Ash Ponds 1N and 1S 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 Ash Ponds 1N and 1S.

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: Dean Jones

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 Pond 1N

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)	7 feet	None
Estimated Storage Capacity	§845(b)(2)(D)	11.5 Acre Feet	None
Impounded Water Volume	§845(b)(2)(E)	0.0 Acre Feet	None
Impounded CCR Volume	§845(b)(2)(E)	11.5 Acre Feet	None
Structural/Operational Observations	§845(b)(2)(F)	None	None
Other Changes	§845(b)(2)(G)	None	None

Table 2: Inspection Summary - Ash Pond 1S

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)	7 feet	None
Estimated Storage Capacity	§845(b)(2)(D)	10.5 Acre Feet	None
Impounded Water Volume	§845(b)(2)(E)	0.0 Acre Feet	None
Impounded CCR Volume	§845(b)(2)(E)	10.5 Acre Feet	None
Structural/Operational Observations	§845(b)(2)(F)	None	None
Other Changes	§845(b)(2)(G)	None	None

**ANNUAL INSPECTION REPORT
ASH PONDS 2S AND 3S
WILL COUNTY 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 Ash Ponds 2S and 3S at Will County Station in Romeoville, Illinois (Station). The purpose of this project is to perform the annual inspection of Ash Ponds 2S and 3S 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 completed by a qualified person employed by Midwest Generation, LLC. 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 Ash Ponds 2S and 3S.
 - 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.

Ash Ponds 2S and 3S are surface impoundments, both less than 2 acres in size. Pond 2S is an active pond receiving bottom ash from Unit 4, and at the time of our inspection, Pond 3S was inactive since the mothballing of Unit 3. On August 19, 2021, CEC inspected Ash Ponds 2S and 3S and our observations showed no signs of distress that would suggest the stability or operation of the impounding structures are compromised.

1.0 CHANGES IN GEOMETRY

At the time of inspection, Ash Ponds 2S and 3S geometry was observed to be unchanged from previous construction plans and online aerial photography.

2.0 INSTRUMENTATION

Based on our interview of Station personnel, which was confirmed through our on-site inspection, Ash Ponds 2S and 3S have no instrumentation.

3.0 CAPACITY AND IMPOUNDED VOLUME

Capacity and impounded volume of Ash Ponds 2S and 3S and estimated depth of impounded water and CCR are represented in Table 1 and 2, 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

Ash Ponds 2S and 3S were inspected for signs of distress that would have the potential to disrupt operation and safety of the basin. Prior to performing the initial inspection, discussions 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

Ash Ponds 2S and 3S 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 Ash Ponds 2S and 3S.

6.0 LIMITATIONS AND CERTIFICATION

This initial annual CCR 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: Dean Jones

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 Pond 2S

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	§845.450(b)(2)(A)	None	None
Instrumentation	§845.450(b)(2)(B)	None	None
Water Depth	§845.450(b)(2)(C)	1 to 2 feet	None
CCR Depth	§845.450(b)(2)(C)	6 to 7 feet	None
Estimated Storage Capacity	§845.450(b)(2)(D)	10.9 Acre Feet	None
Impounded Water Volume	§845.450(b)(2)(E)	2.0 Acre Feet	None
Impounded CCR Volume	§845.450(b)(2)(E)	8.9 Acre Feet	None
Structural/Operational Observations	§845.450(b)(2)(F)	None	None
Other Changes	§845.450(b)(2)(G)	None	None

Table 2: Inspection Summary - Ash Pond 3S

Category	Regulation Reference	Evaluation	Recommended Action
Change in Geometry	§845.450(b)(2)(A)	None	None
Instrumentation	§845.450(b)(2)(B)	None	None
Water Depth	§845.450(b)(2)(C)	Less than 1 foot	None
CCR Depth	§845.450(b)(2)(C)	7 feet	None
Estimated Storage Capacity	§845.450(b)(2)(D)	12.3 Acre Feet	None
Impounded Water Volume	§845.450(b)(2)(E)	0.0 Acre Feet	None
Impounded CCR Volume	§845.450(b)(2)(E)	12.3 Acre Feet	None
Structural/Operational Observations	§845.450(b)(2)(F)	None	None
Other Changes	§845.450(b)(2)(G)	None	None

The result of the GeoHECRAS model for Pond 1S shows that the flow through the modeled breach travels from Pond 1S towards the north, south, and east, with the majority traveling to the southeast. Estimated water depths near the buildings range from 0–1.75 feet with velocities less than 1.50 feet per second.

7.0 HAZARD CLASSIFICATION ASSESSMENT

As discussed in Section 1, a CCR surface impoundment is classified as Class 1 if failure or misoperation will probably cause loss of human life. Guidelines for evaluating potential loss of life during flood conditions are provide in USBR [1998]. Attachment B presents a relationship between flood flow depth and velocity for buildings on foundations that could cause potential loss of human life. Both Pond 1N and 1S’ eastern embankment breaches plot in the “low danger zone”. This indicates that a breach of either pond will not result in probable loss of human life.

Based on the results of the analysis provided in this report, Ponds 1N and 1S are classified as a Class 2 CCR impoundment because their failure would not result in probable loss of life but could result in impacts to the Des Plaines River creating potential economic loss, environmental damage, disruption of lifeline facilities, or impact other concerns.

8.0 LIMITATIONS AND CERTIFICATIONS

The findings and opinions presented are relative to the dates of the referenced and hydraulic data sets and should not be relied on to represent conditions at substantially later dates. The opinions included herein are based on information obtained during the study of CEC’s experience. If additional information becomes available that might impact CEC’s conclusions, CEC requests the opportunity to review the information, reassess the potential concerns, and modify CEC’s opinions, if warranted. If our services included a review or use of documents or data sources prepared by others, CEC has no responsibility for accuracy of information contained therein.

CEC has relied on the accuracy of models and calculations enclosed by the regulatory authorities. Their analyses are in general accordance with industry standards. CEC makes no warrants or representations as to the accuracy or quality of these methods.

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: Dean Jones

Name: M. Dean Jones, P.E.

Date of Certification: September 23, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

Enclosures: Figures:

- Figure 1 - Site Map
- Figure 2 - Pond 1N Maximum Flow Depth
- Figure 3 - Pond 1N Maximum Velocity
- Figure 4 - Pond 1S Maximum Flow Depth
- Figure 5 - Pond 1S Maximum Velocity

Attachments:

- Attachment A - Storage Tables
- Attachment B - USBR Loss of Life Graph

ATTACHMENT B.2
2021 ANNUAL STRUCTURAL STABILITY
ASSESSMENT CERTIFICATION

Table 2: Safety Factor Results - Ponds 1N, 1S, 2S, and 3S

Loading Condition	Required FS	Calculated Factor of safety			
		1N	1S	2S	3S
Static, Long-Term 845.460(a)(2)	1.50	3.76	2.87	2.87	3.48
Static, Maximum Storage Pool 845.460(a)(3)	1.40	3.76	2.87	2.87	3.48
Seismic 845.460(a)(4)	1.00	1.89	1.77	2.11	2.56
Liquefaction 845.460(a)(5)	1.20	>1.20	>1.20	>1.20	>1.20

5.0 LIMITATIONS AND CERTIFICATION

This initial Structural Stability and Factor of Safety Assessment report was prepared to meet the requirements of Sections 845.450 and 845.460 of the Illinois Administrative Code 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: *M. Dean Jones*

Name: M. Dean Jones, P.E.

Date of Certification: September 23, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

Enclosure: Figures

ATTACHMENT B.3
2021 ANNUAL SAFETY FACTOR
ASSESSMENT CERTIFICATION

Table 2: Safety Factor Results - Ponds 1N, 1S, 2S, and 3S

Loading Condition	Required FS	Calculated Factor of safety			
		1N	1S	2S	3S
Static, Long-Term 845.460(a)(2)	1.50	3.76	2.87	2.87	3.48
Static, Maximum Storage Pool 845.460(a)(3)	1.40	3.76	2.87	2.87	3.48
Seismic 845.460(a)(4)	1.00	1.89	1.77	2.11	2.56
Liquefaction 845.460(a)(5)	1.20	>1.20	>1.20	>1.20	>1.20

5.0 LIMITATIONS AND CERTIFICATION

This initial Structural Stability and Factor of Safety Assessment report was prepared to meet the requirements of Sections 845.450 and 845.460 of the Illinois Administrative Code 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: *M. Dean Jones*

Name: M. Dean Jones, P.E.

Date of Certification: September 23, 2021

Illinois Professional Engineer No.: 062-051317

Expiration Date: November 30, 2021

Enclosure: Figures

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

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

Per Variance Request PCB 21-108, Midwest Generation was granted an extension to submit the initial operating permit for Ponds 1N and 1S, including the Inflow Design Flood Control System Plan, until March 31, 2022 by the Illinois Pollution Control Board.

4.3 RESULTS

Table 4-1 summarizes the results from the hydrologic and hydraulic calculations performed for South Ash Ponds 2 and 3 (Ref. 10). Based on these results, water entering South Ash Ponds 2 and 3 during the inflow design flood event will not overtop the either pond's dikes. The freeboard in each pond during the design event was estimated to be 0.15 foot.

Table 4-1 – Summary of Hydrologic & Hydraulic Assessment Results for Ash Pond 2

CCR Surface Impoundment	Illinois Hazard Potential Classification	Federal Hazard Potential Classification	Inflow Design Flood	Maximum Surface Water Elevation	Pond Crest Elevation
South Ash Pond 2	Class 2	Significant	1,000 Year	590.35 feet	590.50 feet
South Ash Pond 3	Class 2	Significant	1,000 Year	590.35 feet	590.50 feet

5.0 CONCLUSIONS

Based on the hydrologic and hydraulic calculations performed for South Ash Ponds 2 and 3 (Ref. 10), the ponds have adequate hydraulic capacities to retain the 1000-year flood event without water overtopping the ponds' dikes. Therefore, South Ash Ponds 2 and 3 are able to collect and control the inflow design flood event specified in 35 Ill. Adm. Code 845.510(a)(3) and 40 CFR 257.82(a)(3).

6.0 CERTIFICATION

I certify that:

- This inflow design flood control system plan was prepared by me or under my direct supervision.
- The work was conducted in accordance with the requirements of 35 Ill. Adm. Code 845.510 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**



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**ILLINOIS CCR COMPLIANCE
ASH PONDS 1 NORTH and 1 SOUTH
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT - 2021**

**Midwest Generation, LLC
Will County Station
529 Old Romeo Rd.
Romeoville, Illinois**

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

January 27, 2022

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- 1 – New Well Boring Logs and Construction Summaries
- 2 – Monthly Potentiometric Maps

1.0 INTRODUCTION and OVERVIEW

Groundwater monitoring requirements in accordance with the Ill. Adm. Code Title 35, Part 845: Standards for the Disposal of Coal Combustion Residuals in Surface Impoundments dated April 15, 2021 (State CCR Rule), are being completed for the monitoring wells associated with Ash Ponds 1 North (1N) and 1 South (1S) located at the Midwest Generation, LLC (Midwest Generation) Will County Generating Station. The wells sampled were selected to meet the monitoring requirements of the State CCR Rule for the Ash Ponds 1N and 1S. The CCR monitoring well network around these ponds consists of nine monitoring wells (MW-01 through MW-04, MW-07, MW-08, MW-13, MW-14 and MW-15). Wells MW-01 through MW-04 are upgradient wells as shown on Figure 1. All CCR groundwater monitoring data available to date are provided in Tables 1 and 2. Since these two ponds were 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 variance petition to extend the schedule for submittal of the Application for Initial Operating Permit (Application) for these ponds 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 through H) – Ponds 1N and 1S are currently not in corrective action.

2.0 ANNUAL STATUS SUMMARY

As discussed in Section 1.0 the CCR monitoring well network around Ash Ponds 1N and 1S consists of nine monitoring wells (MW-01 through MW-04, MW-07, MW-08, MW-13, MW-14 and MW-15). Wells MW-01 through MW-04 are upgradient wells as shown on Figure 1. 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 facilities operating record in accordance with Section 845.610(b)(3)(D).
- Water level gauges were installed within the regulated units. Water levels were recorded monthly as pond gauges were established.
- On May 11, 2021 a petition 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.

Three new monitoring wells were installed to augment the groundwater monitoring network for Ponds 1N and 1S. These were wells MW-13 through MW-15. 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 as part of each sampling event. Water levels were not recorded for September, October and December due to a miscommunication with plant personnel relative to the new State CCR Rule requirements for monthly water level measurements. It is noted however, that groundwater flow conditions in the vicinity of Ash Ponds 1N and 1S have been being monitored on a regular basis since 2011 and flow conditions have been found to be consistent with flow direction to the west. The available water levels are summarized in Table 3. Potentiometric surface maps for each round of available water levels are provided in Attachment 2. As noted above, groundwater flow beneath Ash Ponds 1N and 1S is consistently 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 2. Groundwater Turbidity - Ponds 1N/1S, Midwest Generation, LLC, Will County Generating Station, Romeoville, IL.

Well ID	Date	Turbidity (NTU)
MW-01	2/23/2021	0.64
	4/10/2021	5.81
	4/25/2021	7.69
	5/3/2021	1.74
	5/24/2021	1.83
	6/7/2021	2.32
	6/25/2021	3.50
	7/12/2021	4.18
	8/2/2021	2.87
	8/23/2021	1.17
	9/24/2021	3.25
11/19/2021	16.82	
MW-02	2/25/2021	8.84
	4/10/2021	9.17
	4/25/2021	12.03
	5/3/2021	2.42
	5/24/2021	2.7
	6/7/2021	1.82
	6/28/2021	3.15
	7/12/2021	4.23
	8/2/2021	3.11
	8/23/2021	1.37
	9/24/2021	4.63
11/19/2021	2.10	
MW-03	3/1/2021	0.0
	4/10/2021	1.45
	4/25/2021	3.41
	5/3/2021	1.61
	5/24/2021	2.06
	6/8/2021	2.34
	6/28/2021	2.69
	7/12/2021	4.07
	8/2/2021	1.98
	8/24/2021	5.1
9/24/2021	4.18	
11/19/2021	0.47	
MW-04	2/22/2021	9.87
	4/10/2021	42.2
	4/25/2021	7.41
	5/3/2021	4.2
	5/24/2021	4.45
	6/8/2021	2.8
	6/28/2021	12.93
	7/12/2021	3.93
	8/2/2021	3.75
	8/24/2021	10.1
9/24/2021	5.74	
11/19/2021	15.15	
MW-07	3/1/2021	6.11
	4/10/2021	6.19
	4/25/2021	6.98
	5/4/2021	37.65
	5/24/2021	2.54
	6/7/2021	6.21
	6/25/2021	6.02
	7/12/2021	5.13
	8/2/2021	2.45
	8/25/2021	7.7
9/24/2021	4.13	
11/19/2021	7.35	

Table 2. Groundwater Turbidity - Ponds 1N and 1S, Midwest Generation, LLC, Will County Generating Station, Romeoville, IL.

Well ID	Date	Turbidity (NTU)
MW-08	3/1/2021	2.3
	4/10/2021	270.98
	4/25/2021	26.73
	5/4/2021	6.6
	5/28/2021	6.51
	6/7/2021	4.58
	6/28/2021	5.67
	7/12/2021	6.71
	8/2/2021	14.15
	8/25/2021	8.9
9/24/2021	7.21	
11/19/2021	2.34	
MW-13	5/4/2021	20.6
	5/25/2021	9.8
	6/7/2021	6.49
	6/28/2021	8.25
	7/12/2021	5.89
	8/2/2021	2.91
	8/26/2021	12.9
	9/24/2021	9.13
11/23/2021	17.83	
MW-14	5/4/2021	6.88
	5/25/2021	3.5
	6/7/2021	2.55
	6/28/2021	7.44
	7/12/2021	4.89
	8/2/2021	9.8
	8/25/2021	11.7
	9/24/2021	6.87
11/19/2021	5.19	
MW-15	5/4/2021	28.65
	5/25/2021	8.89
	6/7/2021	8.82
	6/28/2021	6.48
	7/12/2021	8.52
	8/2/2021	22.71
	8/25/2021	12.4
	9/24/2021	11.44
11/19/2021	10.83	

Table 3. Groundwater Elevations - Midwest Generation, LLC, Will County Station Ponds 1N/1S, Romeoville, IL

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-01	5/24/2021	592.95	10.30	582.65
	6/7/2021	592.95	10.50	582.45
	7/12/2021	592.95	10.12	582.83
	8/23/2021	592.95	11.11	581.84
	11/19/2021	592.95	10.49	582.46
MW-02	5/24/2021	594.00	11.49	582.51
	6/7/2021	594.00	11.70	582.30
	7/12/2021	594.00	11.30	582.70
	8/23/2021	594.00	12.25	581.75
	11/19/2021	594.00	11.80	582.20
MW-03	5/25/2021	593.51	10.82	582.69
	6/7/2021	593.51	11.23	582.28
	7/12/2021	593.51	10.70	582.81
	8/23/2021	593.51	12.15	581.36
	11/19/2021	593.51	10.92	582.59
MW-04	5/24/2021	593.93	11.28	582.65
	6/7/2021	593.93	11.55	582.38
	7/12/2021	593.93	11.20	582.73
	8/23/2021	593.93	11.40	582.53
	11/19/2021	593.93	11.36	582.57
MW-07	5/24/2021	592.89	11.42	581.47
	6/11/2021	592.89	11.66	581.23
	7/12/2021	592.89	11.09	581.80
	8/23/2021	592.89	11.97	580.92
	11/19/2021	592.89	11.20	581.69
MW-08	5/24/2021	592.75	11.71	581.04
	6/7/2021	592.75	12.80	579.95
	7/12/2021	592.75	11.55	581.20
	8/23/2021	592.75	12.21	580.54
	11/19/2021	592.75	11.62	581.13
MW-13	5/24/2021	592.80	10.92	581.88
	6/7/2021	592.80	11.02	581.78
	7/12/2021	592.80	10.90	581.90
	8/23/2021	592.80	11.30	581.50
	11/19/2021	592.80	10.85	581.95
MW-14	5/24/2021	592.70	10.79	581.91
	6/7/2021	592.70	10.99	581.71
	7/12/2021	592.70	10.58	582.12
	8/23/2021	592.70	11.35	581.35
	11/19/2021	592.70	10.95	581.75
MW-15	5/24/2021	592.89	10.24	582.65
	6/7/2021	592.89	10.56	582.33
	7/12/2021	592.89	10.11	582.78
	8/23/2021	592.89	11.02	581.87
	11/19/2021	592.89	10.30	582.59

MSL - Mean Sea Level

TOC - Top of Casing

Table 4. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Will County Generation Station. Ponds 1N-1S.

DATE	Groundwater Flow Direction	Kavg (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
5/24/2021	West	2.315E-04	0.0096	0.2	0.96
6/7/2021	West	2.315E-04	0.0090	0.2	0.90
7/12/2021	West	2.315E-04	0.0057	0.2	0.57
8/23/2021	West	2.315E-04	0.0028	0.2	0.28
11/19/2021	West	2.315E-04	0.0069	0.2	0.69

* Kavg - Pre-2021 K values from Hydrologic Assessment Report, Patrick Engineering, February 2011. 2021 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 estimate from Groundwater, Freeze and Cherry, 1979.

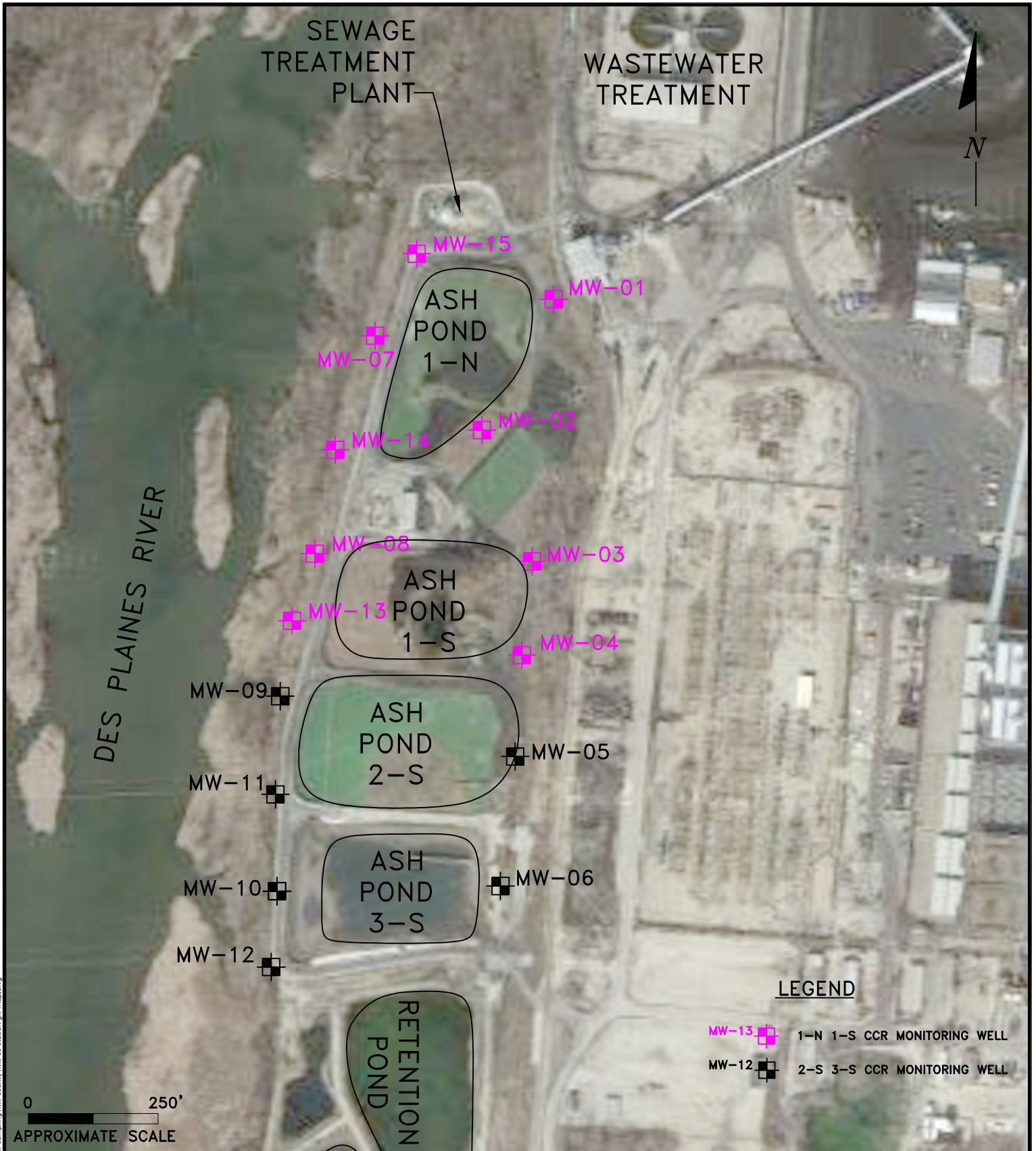
Table 5. CCR Groundwater Sample Collection Summary for 2021 - Will County Generating Station. Ponds 1N/1S.

Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events
MW-01 (Upgradient)	8	5/3/2021
		5/24/2021
		6/7/2021
		6/25/2021
		7/12/2021
		8/2/2021
		8/23/2021
		11/19/2021
MW-02 (Upgradient)	8	5/3/2021
		5/24/2021
		6/7/2021
		6/28/2021
		7/12/2021
		8/2/2021
		8/23/2021
		11/19/2021
MW-03 (Upgradient)	8	5/3/2021
		5/24/2021
		6/8/2021
		6/28/2021
		7/12/2021
		8/2/2021
		8/24/2021
		11/19/2021
MW-04 (Upgradient)	8	5/3/2021
		5/24/2021
		6/8/2021
		6/28/2021
		7/12/2021
		8/2/2021
		8/24/2021
		11/19/2021
MW-07 (Downgradient)	8	5/4/2021
		5/24/2021
		6/7/2021
		6/25/2021
		7/12/2021
		8/2/2021
		8/25/2021
		11/19/2021

Table 5. CCR Groundwater Sample Collection Summary for 2021 - Will County Generating Station. Ponds 1N/1S.

Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events
MW-08 (Downgradient)	8	5/4/2021
		5/25/2021
		6/7/2021
		6/28/2021
		7/12/2021
		8/2/2021
		8/25/2021
		11/19/2021
MW-13 (Downgradient)	8	5/4/2021
		5/26/2021
		6/7/2021
		6/28/2021
		7/12/2021
		8/2/2021
		8/26/2021
		11/23/2021
MW-14 (Downgradient)	8	5/4/2021
		5/25/2021
		6/7/2021
		6/28/2021
		7/12/2021
		8/2/2021
		8/25/2021
		11/23/2021
MW-15 (Downgradient)	8	5/4/2021
		5/25/2021
		6/7/2021
		6/25/2021
		7/12/2021
		8/2/2021
		8/25/2021
		11/19/2021

FIGURES



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ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, inc.

14665 West Lisbon Road, Suite 2B Brookfield, Wisconsin 53005 Telephone 262-781-0475 Facsimile 262-781-0478

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

SITE MAP

WILL COUNTY STATION
ROMEOLVILLE, ILLINOIS

Scale: 1" = 250' Date: January 18, 2022

KPRG Project No. 12313.3

FIGURE 1

ATTACHMENT 1

New Well Boring Logs and Construction Summaries

GEOLOGIC LOG OF MW-13

(Page 1 of 1)

Midwest Generation, LLC
Will County Station
Romeoville, Illinois

Project No. 12313

Date Started : 04/12/21
Date Well Set : 04/13/21
Drilling Tools : 8 1/4 HSA
Reaming Tools : None
Drill Rig : Deitrich D-120
Driller Name/Co : J. Luna / Earth Solutions

Total Boring Depth : 16.0 feet
Well Bottom Depth : 15.0 feet
Surface Elev. : 589.45 feet above MSL
TOC Elev. : 592.80 feet above MSL
Groundwater Elev. : xxx feet above MSL
Riser Material : 2" Sch 40 PVC
Screen Material : 2" Sch 40 PVC, 0.010 slot
Coordinate N :
Coordinate E :
Logged By : E. Bulson

Depth in Feet	Surf. Elev. 589.45	DESCRIPTION	% RQD	% Recovery	Well Diagram:
0	589.45	Brown/Tan SILTY SAND with Clay and Gravel, slightly moist. Some black cinders. Gray/Brown SILTY SAND and Gravel, trace clay, slightly moist. Tan fine SAND and GRAVEL, slightly moist.			
1	588.45				
2	587.45				
3	586.45				
4	585.45				
5	584.45				
6	583.45				
7	582.45				
8	581.45				
9	580.45				
10	579.45	White DOLOMITE bedrock, fractured.			
11	578.45				
12	577.45				
13	576.45				
14	575.45				
15	574.45				
16	573.45				
17	572.45	End of Boring at 16 feet.			
18	571.45				
19	570.45				
20	569.45				
21	568.45				
22					

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GEOLOGIC LOG OF MW-14

(Page 1 of 1)

Midwest Generation, LLC
Will County Station
Romeoville, Illinois

Project No. 12313

Date Started : 04/12/21
Date Well Set : 04/12/21
Drilling Tools : 8 1/4 HSA
Reaming Tools : None
Drill Rig : Deitrich D-120
Driller Name/Co : J. Luna / Earth Solutions

Total Boring Depth : 16.0 feet
Well Bottom Depth : 15.0 feet
Surface Elev. : 589.45 feet above MSL
TOC Elev. : 592.80 feet above MSL
Groundwater Elev. : xxx feet above MSL
Riser Material : 2" Sch 40 PVC
Screen Material : 2" Sch 40 PVC, 0.010 slot
Coordinate N :
Coordinate E :
Logged By : E. Bulson

Depth in Feet	Surf. Elev. 589.85	DESCRIPTION	% RQD	% Recovery	Well Diagram:
0	589.85	Brown COBBLES, Black SILTY SAND, slightly moist.			
1	588.85	Black SILTY SAND, trace road GRAVEL, trace CLAY, slightly moist.			
2	587.85				
3	586.85				
4	585.85				
5	584.85	increase GRAVEL			
6	583.85				
7	582.85				
8	581.85	increase SAND			
9	580.85				
10	579.85				
11	578.85				
12	577.85	White DOLOMITE bedrock.			
13	576.85				
14	575.85				
15	574.85				
16	573.85				
17	572.85	End of Boring at 16 feet.			
18	571.85				
19	570.85				
20	569.85				
21	568.85				
22					

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GEOLOGIC LOG OF MW-15

(Page 1 of 1)

Midwest Generation, LLC
Will County Station
Romeoville, Illinois

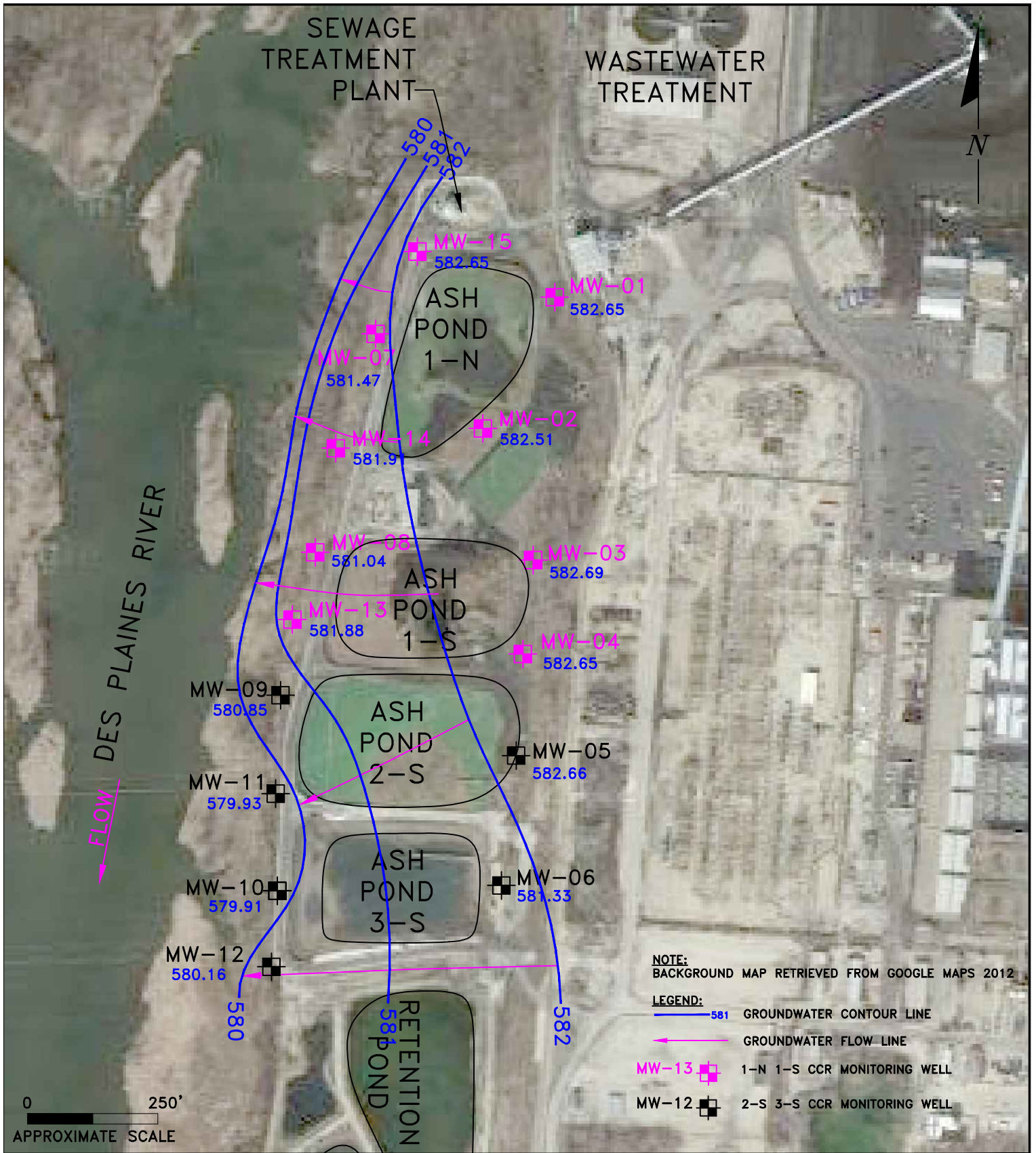
Project No. 12313

Date Started : 04/13/21
Date Well Set : 04/13/21
Drilling Tools : 8 1/4 HSA
Reaming Tools : None
Drill Rig : Deitrich D-120
Driller Name/Co : J. Luna / Earth Solutions

Total Boring Depth : 16.0 feet
Well Bottom Depth : 15.0 feet
Surface Elev. : 590.14 feet above MSL
TOC Elev. : 592.89 feet above MSL
Groundwater Elev. : xxx feet above MSL
Riser Material : 2" Sch 40 PVC
Screen Material : 2" Sch 40 PVC, 0.010 slot
Coordinate N :
Coordinate E :
Logged By : E. Bulson

Depth in Feet	Surf. Elev. 590.14	DESCRIPTION	% RQD	% Recovery	Well Diagram:
0	590.14	Black and Dark Brown SILTY SAND, some COBBLES, slightly moist.			<p>Well Diagram components:</p> <ul style="list-style-type: none"> Protective Casing Concrete Seal Bentonite Grout Riser 2" Sch 40 PVC Screen, 0.010 slot 2" Sch 40 PVC Filter Sand
1	589.14				
2	588.14				
3	587.14				
4	586.14	White and Tan GRAVEL.			
5	585.14				
6	584.14	Black SILTY CLAY with Red brick pieces, moist.			
7	583.14				
8	582.14	Wet at 8 feet.			
9	581.14	Weathered BEDROCK and Gray SILTY CLAY.			
10	580.14				
11	579.14				
12	578.14	Tan DOLOMITE, cherty.			
13	577.14				
14	576.14				
15	575.14				
16	574.14				
17	573.14	End of Boring at 16 feet.			
18	572.14				
19	571.14				
20	570.14				
21	569.14				
22					

ATTACHMENT 2
Monthly Potentiometric Maps



ENVIRONMENTAL CONSULTATION & REMEDIATION

K P R G

KPRG and Associates, Inc.

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

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

POTENTIOMETRIC MAP 05/2021

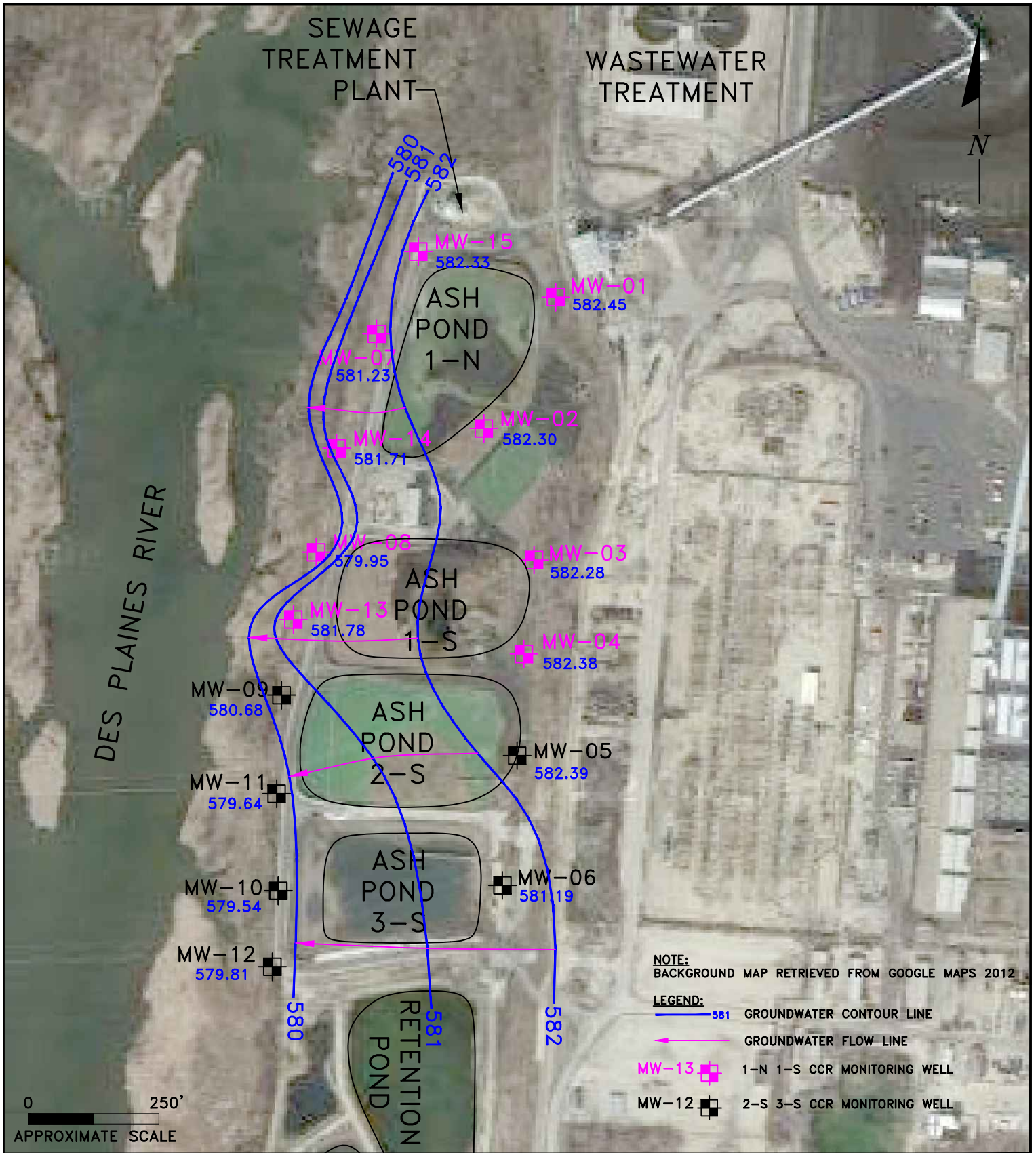
WILL COUNTY STATION, PONDS 1-N 1-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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

POTENTIOMETRIC MAP 06/2021

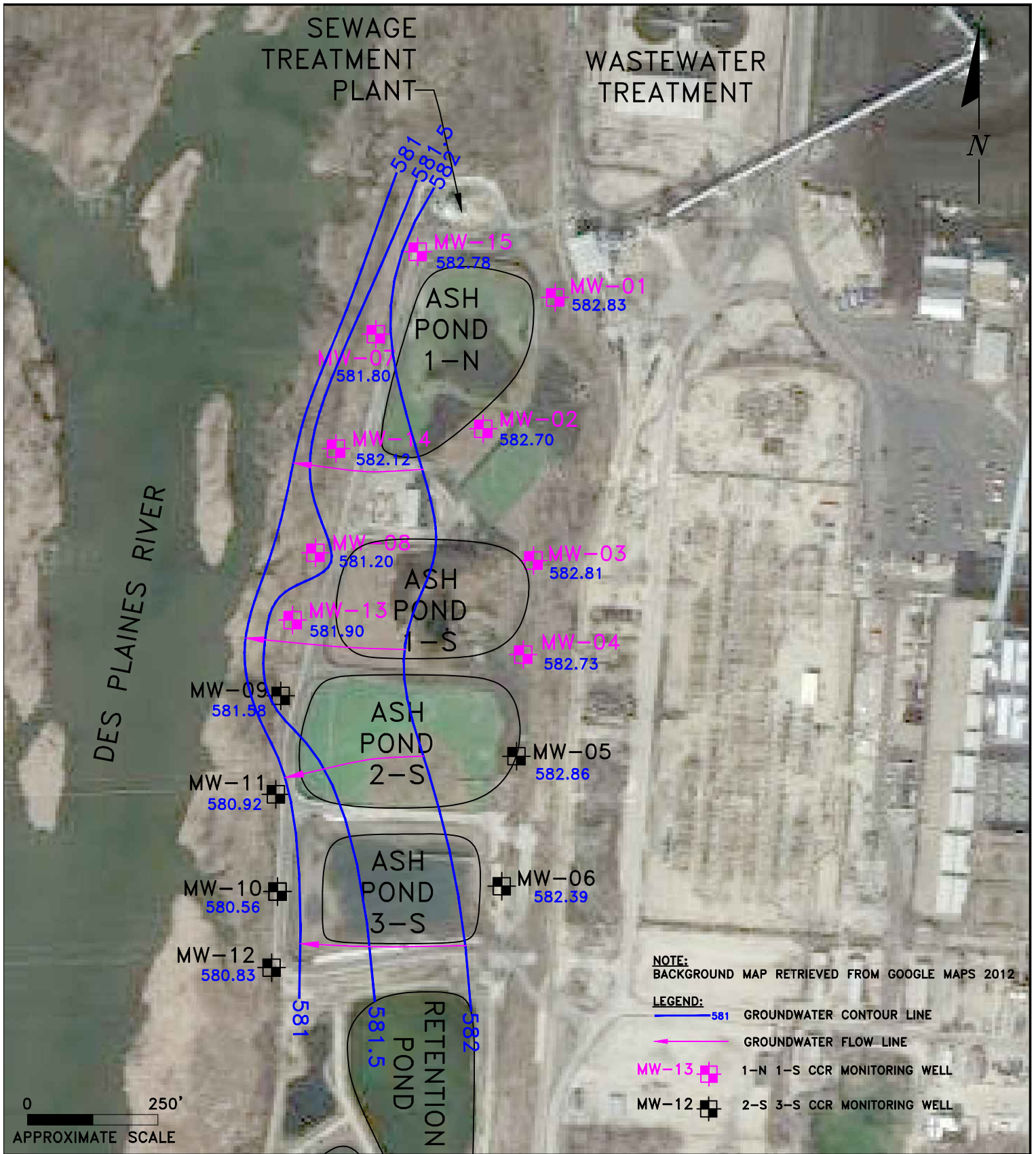
WILL COUNTY STATION, PONDS 1-N 1-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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

POTENTIOMETRIC MAP 07/2021

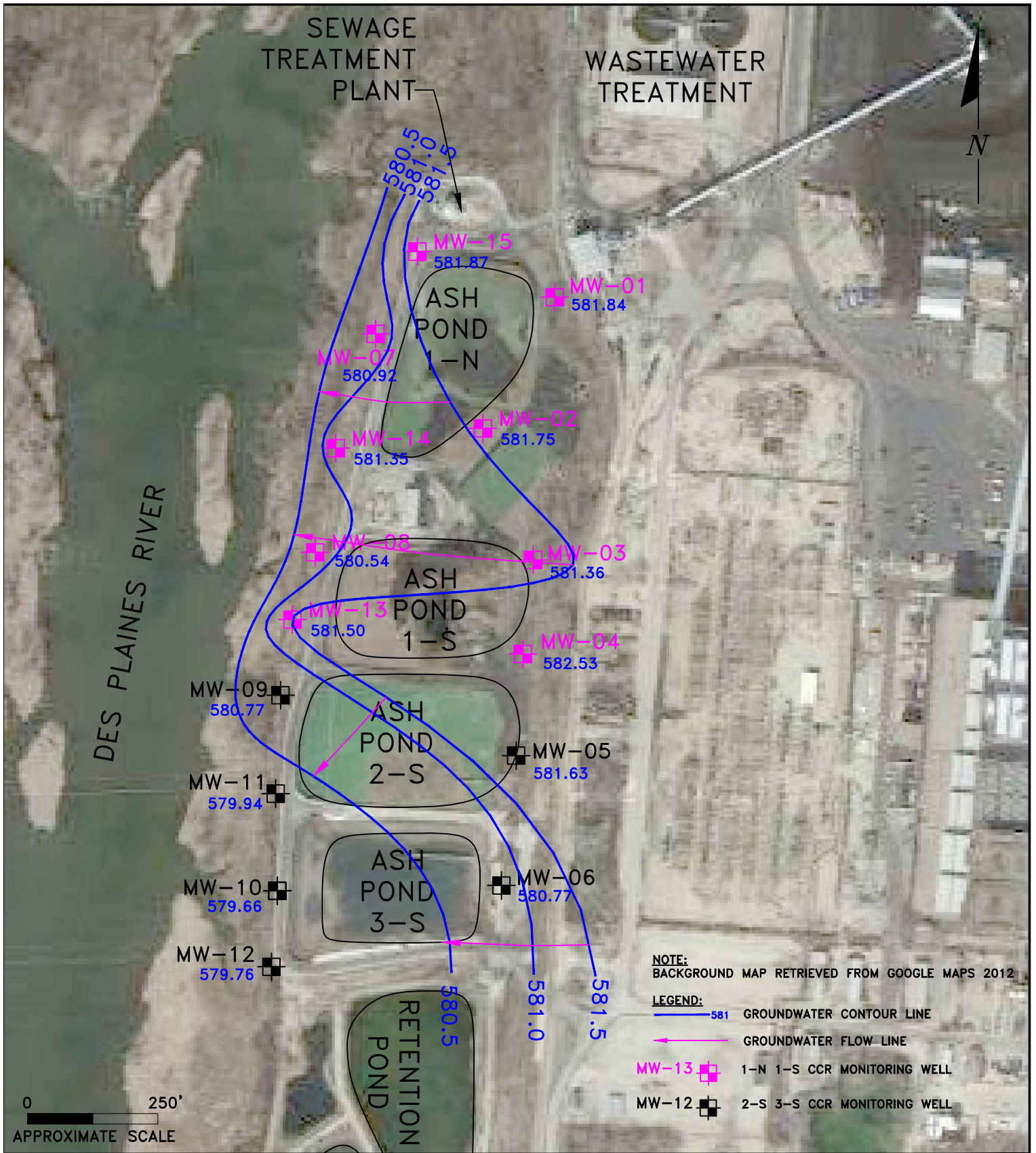
WILL COUNTY STATION, PONDS 1-N 1-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 08/2021

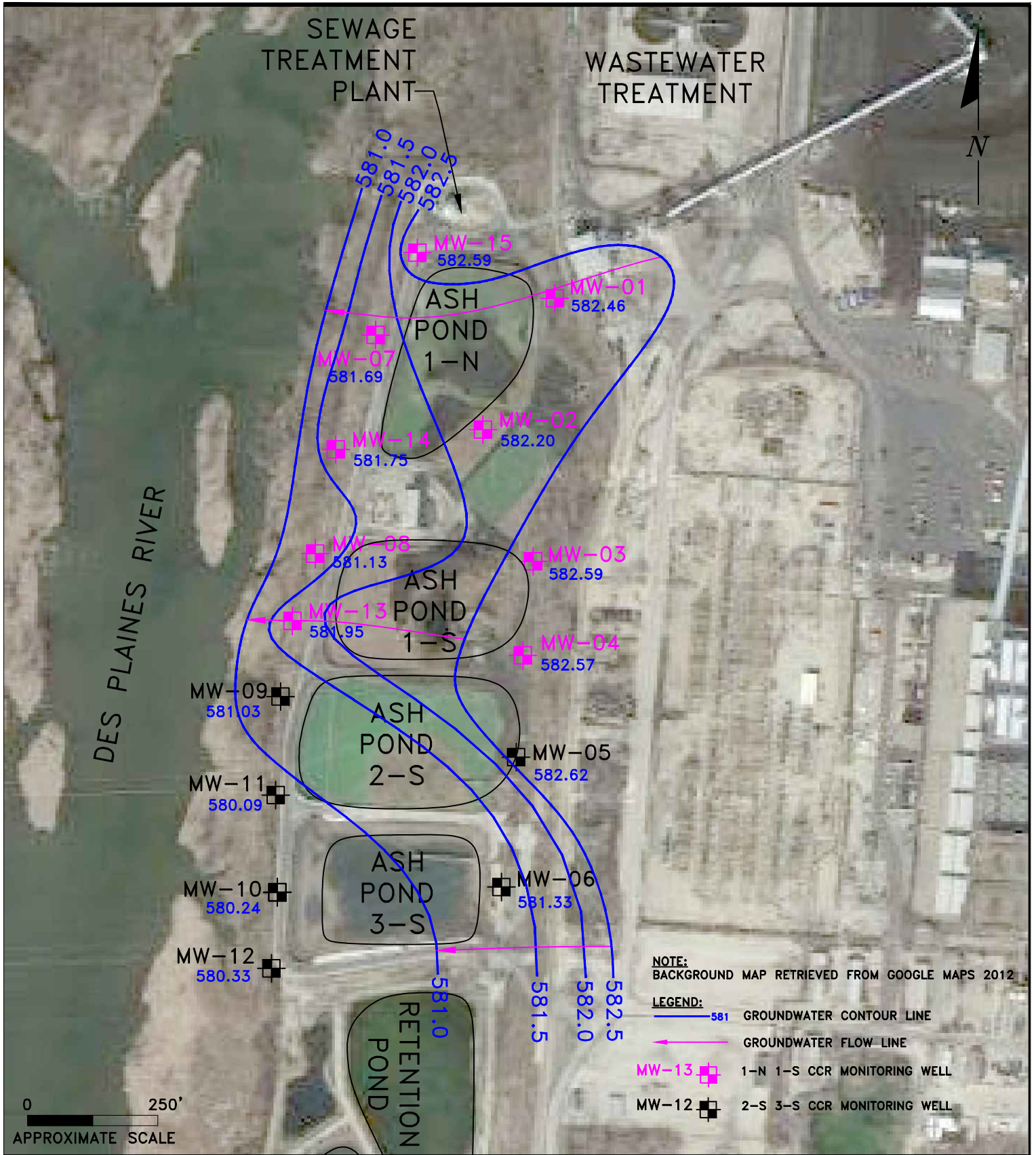
WILL COUNTY STATION, PONDS 1-N 1-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 11/2021

**WILL COUNTY STATION, PONDS 1-N 1-S,
ROMEOWILLE, ILLINOIS**

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

KPRG and Associates, Inc.

**ILLINOIS CCR COMPLIANCE
ASH PONDS 2 SOUTH and 3 SOUTH
ANNUAL GROUNDWATER MONITORING and
CORRECTIVE ACTION REPORT - 2021**

**Midwest Generation, LLC
Will County Station
529 Old Romeo Rd.
Romeoville, Illinois**

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 monitoring wells associated with Ash Ponds 2 South (2S) and 3 South (3S) located at the Midwest Generation, LLC (Midwest Generation) Will County Generating Station. The wells sampled were selected to meet the monitoring requirements of the State CCR Rule for the Ash Ponds 2S and 3S. The CCR monitoring well network around these ponds consists of six monitoring wells (MW-05, MW-06, MW-09, MW-10, MW-11, and MW-12). Wells MW-05 and MW-06 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 – Will County 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:
 - Boron: MW-05 (4th quarter)
 - Chloride: MW-09 and MW-12 (2nd through 4th quarters)
 - pH: MW-5 (3rd quarter)
 - Total dissolved solids: MW-05 (2nd and 4th quarters), MW-10 (4th quarter), MW-12 (3rd and 4th quarters)
 - Arsenic: MW-05 (3rd quarter), MW-09 (3rd quarter), MW-10 and MW-11 (2nd through 4th quarters)
 - Lithium: MW-06 (3rd quarter)
 - Barium: MW-10 (2nd quarter), MW-11 (2nd quarter), MW-12 (2nd through 4th quarters)

- Lead: MW-10 (2nd and 4th quarters)
- Radium: MW-05 and MW-10 (3rd and 4th quarters), MW-06 (4th quarter), MW-09 (2nd and 4th quarters), MW-10 (3rd and 4th quarters), MW-11 (2nd through 4th quarters), MW-12 (3rd quarter)

Wells MW-05 and MW-06 are the upgradient 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:
 - Boron: MW-05 (4th quarter)
 - Chloride: MW-09 (2nd through 4th quarters), MW-12 (4th quarter)
 - pH: MW-05 (3rd quarter)
 - Arsenic: MW-10 (2nd and 4th quarters)

Wells MW-05 and MW-06 are the upgradient wells.

- Section 845.610(e)(4)(E through H) – Ash Ponds 2S and 3S are currently not in corrective action.

2.0 ANNUAL STATUS SUMMARY

As discussed in Section 1.0 the CCR monitoring well network around Ash Ponds 2S and 3S consists of six monitoring wells (MW-05, MW-06, MW-09, MW-10, MW-11, and MW-12). Wells MW-05 and MW-06 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 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 – Will County 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 Agency.

Key activities for the upcoming year include:

- Receipt of an approved Application for Initial Operating Permit which will facilitate finalization of the proposed statistical background concentrations and the proposed site-specific GWPSs. Once these are accepted/finalized by the Agency, formal groundwater data comparisons and evaluations can be made based on quarterly monitoring results relative to these comparison criteria.
- 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 for the most recent round of groundwater sampling (4th quarter 2021) is provided on Figure 2.

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

Water levels were recorded from the specified CCR monitoring wells as part of each sampling event. Water levels were not recorded for September, October and December due to a miscommunication with plant personnel relative to the new State CCR Rule requirements for monthly water level measurements. It is noted however, that groundwater flow conditions in the vicinity of Ash Ponds 2S and 3S have been being monitored on a regular basis since 2011. Since monitoring began, the flow conditions have been found to be consistent with flow direction to the west, and the flow conditions before September 2021 and after December 2021 do not show a significant variation. The available water levels are summarized in Table 4. Potentiometric surface maps for each round of available

water levels are provided in Attachment 1. As noted above, groundwater flow beneath Ash Ponds 2S and 3S is consistently in a westerly direction. In accordance with Section 845.640(c)(2), groundwater flow direction and seepage velocity estimates for each round of water levels are provided in Table 5.

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:

- Boron: MW-05 (4th quarter)
- Chloride: MW-09 and MW-12 (2nd through 4th quarters)
- pH: MW-5 (3rd quarter)
- Total dissolved solids: MW-05 (2nd and 4th quarters), MW-10 (4th quarter), MW-12 (3rd and 4th quarters)
- Arsenic: MW-05 (3rd quarter), MW-09 (3rd quarter), MW-10 and MW-11 (2nd through 4th quarters)
- Lithium: MW-06 (3rd quarter)
- Barium: MW-10 (2nd quarter), MW-11 (2nd quarter), MW-12 (2nd through 4th quarters)
- Lead: MW-10 (2nd and 4th quarters)
- Radium: MW-05 and MW-10 (3rd and 4th quarters), MW-06 (4th quarter), MW-09 (2nd and 4th quarters), MW-10 (3rd and 4th quarters), MW-11 (2nd through 4th quarters), MW-12 (3rd quarter)

Wells MW-05 and MW-06 are upgradient wells.

TABLES

Table 2. Groundwater Turbidity - Ponds 2S and 3S, Midwest Generation, LLC, Will County Generating Station, Romeoville, IL.

Well ID	Date	Turbidity (NTU)
MW-05	2/23/2021	0.63
	4/10/2021	1.28
	4/25/2021	2.41
	5/24/2021	3.78
	6/11/2021	2.4
	6/28/2021	2.89
	7/12/2021	3.93
	8/4/2021	1.35
	8/24/2021	3.5
	9/24/2021	3.59
MW-06	11/23/2021	4.45
	2/23/2021	0.31
	4/10/2021	11.17
	4/25/2021	15.04
	5/24/2021	5.18
	6/11/2021	2.96
	6/29/2021	4.06
	7/12/2021	6.43
	8/4/2021	3.5
	8/24/2021	7.0
MW-09	9/24/2021	4.2
	11/23/2021	6.38
	3/1/2021	0.86
	4/10/2021	6.91
	4/25/2021	2.08
	5/25/2021	14.12
	6/11/2021	2.39
	6/29/2021	2.97
	7/12/2021	3.94
	8/4/2021	0.0
MW-10	8/25/2021	19.9
	9/24/2021	3.67
	11/23/2021	19.07
	2/25/2021	172.14
	4/10/2021	29.99
	4/25/2021	34.77
	5/25/2021	44.14
	6/11/2021	92.03
	6/29/2021	29.35
	7/12/2021	23.45
MW-11	8/4/2021	47.68
	8/26/2021	27.5
	9/24/2021	542
	11/23/2021	312.05
	4/10/2021	269.25
	4/25/2021	60.28
	5/25/2021	9.56
	6/11/2021	77.09
	6/29/2021	7.43
	7/12/2021	39.12
MW-12	8/4/2021	9.53
	8/26/2021	11.4
	9/24/2021	9.68
	11/23/2021	1.85
	4/10/2021	31.67
	4/25/2021	15.04
	5/25/2021	28.65
	6/11/2021	6.1
	6/29/2021	13.04
	7/12/2021	12.99

Table 3. Proposed Site-Specific Groundwater Protection Standards - Will County Station Ponds 2S/3S.

Upgradient Well(s)	Parameter	Section 845.600 Standards	Interwell Background Prediction Limit	Proposed GWPS
MW-05 and MW-06	Antimony	0.006	0.003	0.006
MW-05 and MW-06	Arsenic	0.01	0.005	0.01
MW-06*	Barium*	2.0	0.109	2.0
MW-05 and MW-06	Beryllium	0.004	0.001	0.004
MW-06*	Boron*	2.0	4.739	4.739
MW-05 and MW-06	Cadmium	0.005	0.0005	0.005
MW-05 and MW-06*	Chloride*	200	166	200
MW-05 and MW-06	Chromium	0.1	0.0005	0.1
MW-05 and MW-06	Cobalt	0.006	0.001	0.006
MW-05 and MW-06	Combined Radium 226 + 228 (pCi/L)	5.0	0.601	5.0
MW-05	Fluoride	4.0	0.820	4.0
MW-05 and MW-06	Lead	0.0075	0.0005	0.0075
MW-05 and MW-06	Lithium	0.04	0.020	0.04
MW-05 and MW-06	Mercury	0.002	0.0002	0.002
MW-05	Molybdenum	0.10	0.172	0.172
MW-05	pH (standard units)	6.5-9.0	6.7-9.4	6.5-9.4
MW-05	Selenium	0.05	0.056	0.056
MW-05*	Sulfate*	400	1053	1053
MW-05 and MW-06	Thallium	0.002	0.002	0.002
MW-06*	Total Dissolved Solids*	1200	988	1200
MW-05	Calcium	NE	313.4	313.4
MW-05	Turbidity (NTU)	NE	6.33	6.33

All values are in mg/L (ppm) unless otherwise noted.

* - Limited to original 8 background samples.

NE - Not Established

Bold - Proposed Site-specific Groundwater Protection Standard based on Section 845.600(a)(2)

Table 4. Groundwater Elevations - Midwest Generation, LLC, Will County Station Ponds 2S/3S, Romeoville, IL.

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-05	11/9/2015	592.87	9.99	582.88
	2/16/2016	592.87	9.91	582.96
	5/24/2016	592.87	9.94	582.93
	8/9/2016	592.87	10.09	582.78
	10/25/2016	592.87	9.02	583.85
	1/31/2017	592.87	9.81	583.06
	5/9/2017	592.87	9.63	583.24
	6/27/2017	592.87	10.26	582.61
	9/6/2017	592.87	10.48	582.39
	11/16/2017	592.87	10.02	582.85
	2/28/2018	592.87	9.48	583.39
	5/1/2018	592.87	9.94	582.93
	10/2/2018	592.87	10.64	582.23
	5/28/2019	592.87	8.73	584.14
	12/5/2019	592.87	9.92	582.95
	5/22/2020	592.87	9.39	583.48
	11/3/2020	592.87	10.48	582.39
	5/24/2021	592.87	10.21	582.66
6/7/2021	592.87	10.48	582.39	
7/12/2021	592.87	10.01	582.86	
8/23/2021	592.87	11.24	581.63	
11/19/2021	592.87	10.25	582.62	
MW-06	11/9/2015	593.18	9.96	583.22
	2/16/2016	593.18	11.37	581.81
	5/24/2016	593.18	11.37	581.81
	8/9/2016	593.18	11.54	581.64
	10/25/2016	593.18	11.37	581.81
	1/31/2017	593.18	11.24	581.94
	5/9/2017	593.18	10.86	582.32
	6/27/2017	593.18	11.55	581.63
	9/6/2017	593.18	11.77	581.41
	11/16/2017	593.18	11.49	581.69
	2/28/2018	593.18	10.91	582.27
	5/1/2018	593.18	11.47	581.71
	10/2/2018	593.18	11.89	581.29
	5/28/2019	593.18	10.18	583.00
	12/5/2019	593.18	11.51	581.67
	5/22/2020	593.18	10.55	582.63
	11/3/2020	593.18	11.86	581.32
	5/24/2021	593.18	11.85	581.33
6/7/2021	593.18	11.99	581.19	
7/12/2021	593.18	10.79	582.39	
8/23/2021	593.18	12.41	580.77	
11/19/2021	593.18	11.85	581.33	
MW-09	11/9/2015	592.87	11.38	581.49
	2/16/2016	592.87	11.03	581.84
	5/24/2016	592.87	11.35	581.52
	8/9/2016	592.87	11.43	581.44
	10/25/2016	592.87	10.74	582.13
	1/31/2017	592.87	11.15	581.72
	5/9/2017	592.87	10.45	582.42
	6/27/2017	592.87	11.66	581.21
	9/6/2017	592.87	11.95	580.92
	11/14/2017	592.87	11.54	581.33
	2/27/2018	592.87	10.13	582.74
	5/1/2018	592.87	11.39	581.48
	10/2/2018	592.87	11.91	580.96
	5/28/2019	592.87	9.65	583.22
	12/5/2019	592.87	11.17	581.70
	5/26/2020	592.87	9.67	583.20
	11/3/2020	592.87	11.90	580.97
	5/25/2021	592.87	12.02	580.85
6/7/2021	592.87	12.19	580.68	
7/12/2021	592.87	11.29	581.58	
8/23/2021	592.87	12.10	580.77	
11/19/2021	592.87	11.84	581.03	

Table 4. Groundwater Elevations - Midwest Generation, LLC, Will County Station Ponds 2S/3S, Romeoville, IL.

Well ID	Date	Top of Casing Elevation (ft above MSL)	Depth to Groundwater (ft below TOC)	Groundwater Elevation (ft above MSL)
MW-10	11/9/2015	590.96	10.65	580.31
	2/16/2016	590.96	10.43	580.53
	5/24/2016	590.96	10.72	580.24
	8/9/2016	590.96	11.12	579.84
	10/25/2016	590.96	10.73	580.23
	1/31/2017	590.96	10.37	580.59
	5/9/2017	590.96	9.78	581.18
	6/27/2017	590.96	11.09	579.87
	9/6/2017	590.96	11.20	579.76
	11/15/2017	590.96	10.76	580.20
	2/27/2018	590.96	9.54	581.42
	5/1/2018	590.96	10.64	580.32
	10/2/2018	590.96	11.12	579.84
	5/28/2019	590.96	9.02	581.94
	12/5/2019	590.96	10.28	580.68
	5/27/2020	590.96	8.89	582.07
	11/3/2020	590.96	10.68	580.28
	5/24/2021	590.96	11.06	579.90
6/7/2021	590.96	11.42	579.54	
7/12/2021	590.96	10.40	580.56	
8/23/2021	590.96	11.30	579.66	
11/19/2021	590.96	10.72	580.24	
MW-11	11/9/2015	590.69	10.28	580.41
	2/16/2016	590.69	10.15	580.54
	5/24/2016	590.69	10.25	580.44
	8/9/2016	590.69	10.66	580.03
	10/25/2016	590.69	10.42	580.27
	1/31/2017	590.69	9.91	580.78
	5/9/2017	590.69	9.21	581.48
	6/27/2017	590.69	10.48	580.21
	9/6/2017	590.69	10.73	579.96
	11/15/2017	590.69	10.43	580.26
	5/1/2018	590.69	10.18	580.51
	10/2/2018	590.69	10.59	580.10
	5/28/2019	590.69	8.32	582.37
	12/5/2019	590.69	9.85	580.84
	5/26/2020	590.69	8.09	582.60
	11/3/2020	590.69	10.58	580.11
	5/24/2021	590.69	10.76	579.93
	6/11/2021	590.69	11.05	579.64
7/12/2021	590.69	9.77	580.92	
8/23/2021	590.69	10.75	579.94	
11/19/2021	590.69	10.60	580.09	
MW-12	11/9/2015	590.81	10.15	580.66
	2/16/2016	590.81	10.24	580.57
	5/24/2016	590.81	10.31	580.50
	8/9/2016	590.81	10.73	580.08
	10/25/2016	590.81	10.45	580.36
	1/31/2017	590.81	10.16	580.65
	5/9/2017	590.81	9.88	580.93
	6/27/2017	590.81	10.62	580.19
	9/6/2017	590.81	10.61	580.20
	11/15/2017	590.81	10.20	580.61
	5/1/2018	590.81	10.30	580.51
	10/2/2018	590.81	10.77	580.04
	5/28/2019	590.81	9.17	581.64
	12/5/2019	590.81	10.15	580.66
	5/22/2020	590.81	9.88	580.93
	11/3/2020	590.81	10.49	580.32
	5/24/2021	590.81	10.65	580.16
	6/7/2021	590.81	11.00	579.81
7/12/2021	590.81	9.98	580.83	
8/23/2021	590.81	11.05	579.76	
11/19/2021	590.81	10.48	580.33	

MSL - Mean Sea Level
 TOC - Top of Casing

Table 5. Groundwater Flow Direction and Estimated Seepage Velocity/Flow Rate - Will County Generation Station. Ponds 2S and 3S.

DATE	Groundwater Flow Direction	K _{avg} (ft/sec)*	Average Hydraulic Gradient (ft/ft)	Porosity (unitless)**	Estimated Seepage Velocity (ft/day)
5/24/2021	West	2.315E-04	0.0049	0.2	0.49
6/7/2021	West	2.315E-04	0.0048	0.2	0.48
7/12/2021	West	2.315E-04	0.0029	0.2	0.29
8/23/2021	West	2.315E-04	0.0043	0.2	0.43
11/19/2021	West	2.315E-04	0.0047	0.2	0.47

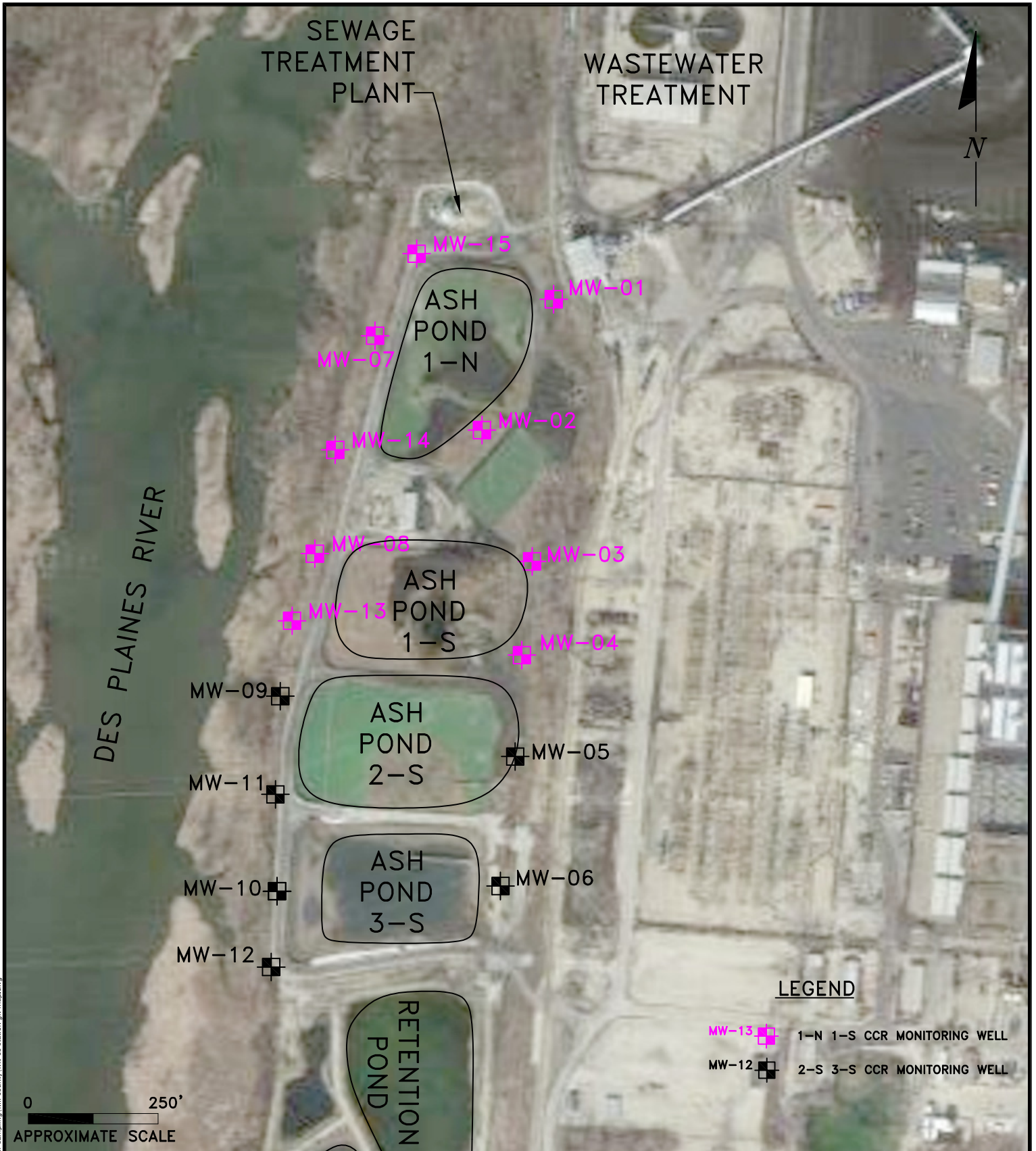
* K_{avg} - K values from re-evaluation of slug test data as part of groundwater modeling in support of Application for Construction Permit per Illinois State CCR Rule.

** - Porosity estimate from Groundwater, Freeze and Cherry, 1979.

Table 6. CCR Groundwater Sample Collection Summary for 2021 - Will County Generating Station Ponds 2S/3S

Well ID	Number of Groundwater Sampling Events	Dates Groundwater Sampling Events
MW-5 (Upgradient)	3	5/24/2021
		8/24/2021
		11/23/2021
MW-6 (Upgradient)	3	5/24/2021
		8/24/2021
		11/23/2021
MW-9 (Downgradient)	3	5/26/2021
		8/25/2021
		11/23/2021
MW-10 (Downgradient)	3	5/25/2021
		8/26/2021
		11/23/2021
MW-11 (Downgradient)	3	5/25/2021
		8/26/2021
		11/23/2021
MW-12 (Downgradient)	3	5/25/2021
		8/26/2021
		11/23/2021

FIGURES



T:\c-2020-projects\midwest-generation-groundwater-sampling\will-county\will-co-station-gw-map.dwg

ENVIRONMENTAL CONSULTATION & REMEDIATION

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

SITE MAP

WILL COUNTY STATION
ROMEOLVILLE, ILLINOIS

Scale: 1" = 250' Date: January 18, 2022

KPRG Project No. 12313.3

FIGURE 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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4Q2021 AREAL DISTRIBUTION MAP OF PARAMETERS ABOVE PROPOSED GWPSs

**WILL COUNTY STATION
 ROMEOVILLE, ILLINOIS**

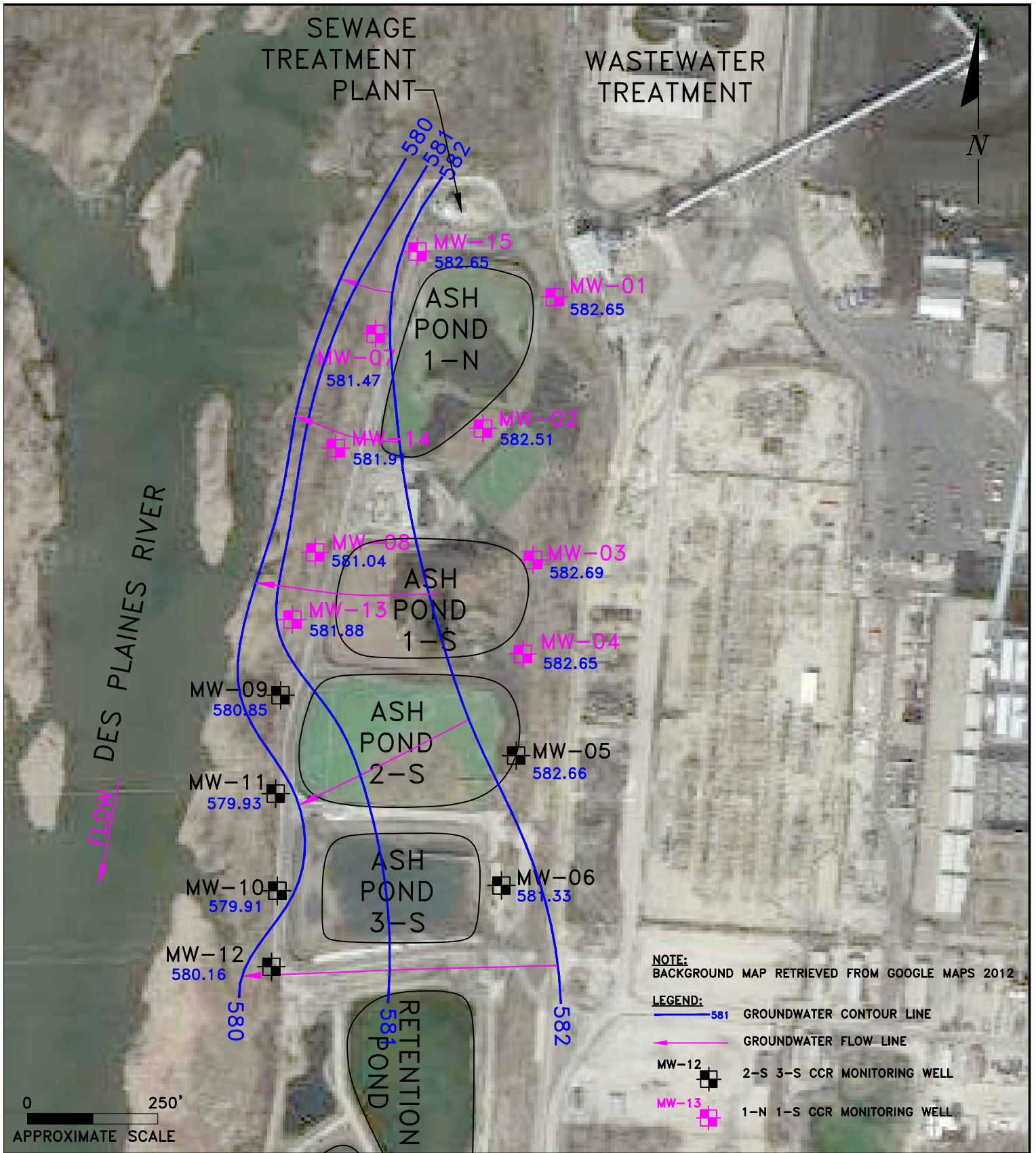
Scale: 1" = 128'

Date: January 13, 2022

KPRG Project No. 12313.3

FIGURE 2

ATTACHMENT 1
Monthly Potentiometric Maps



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 05/2021

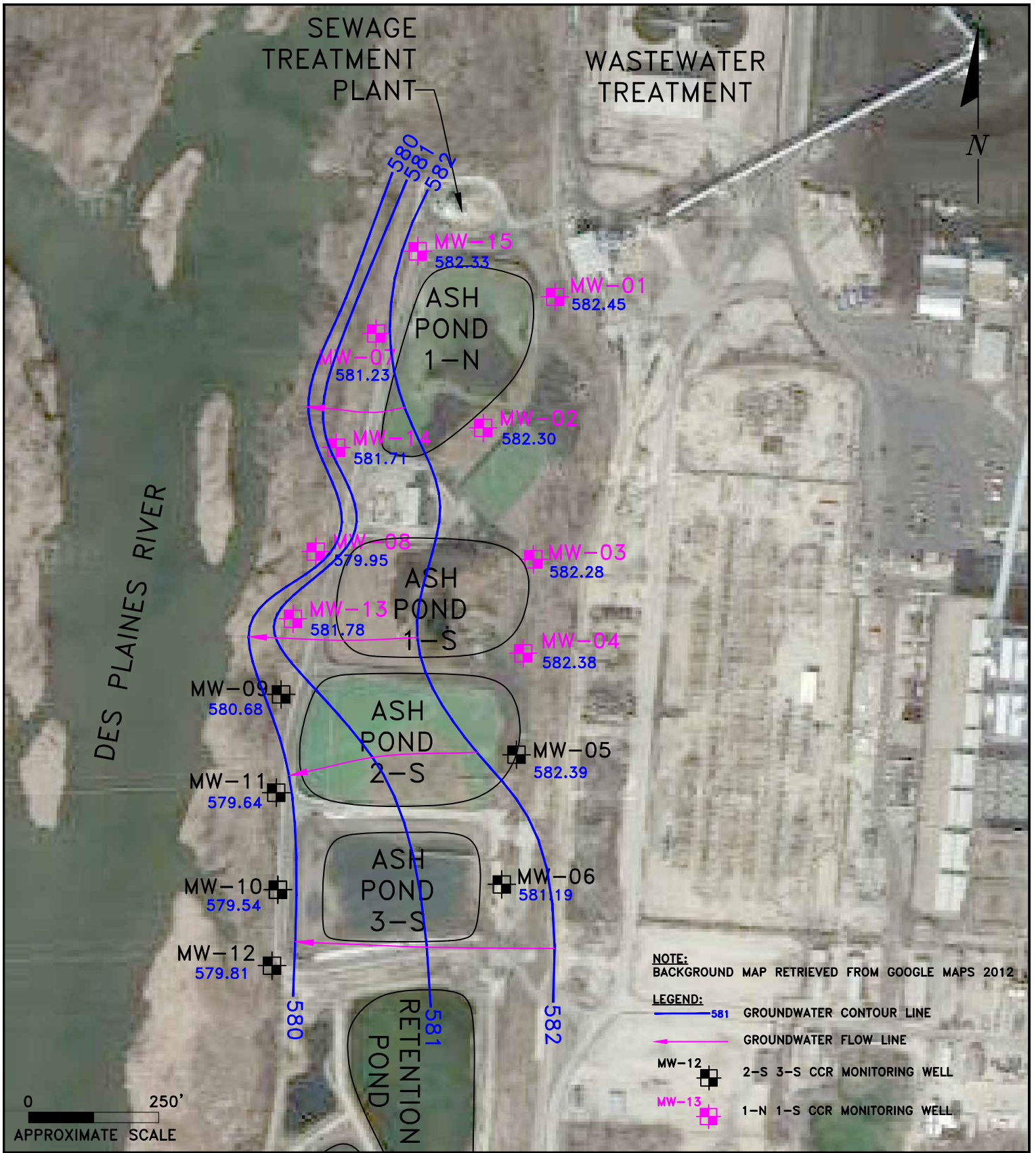
WILL COUNTY STATION, PONDS 2-S 3-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 06/2021

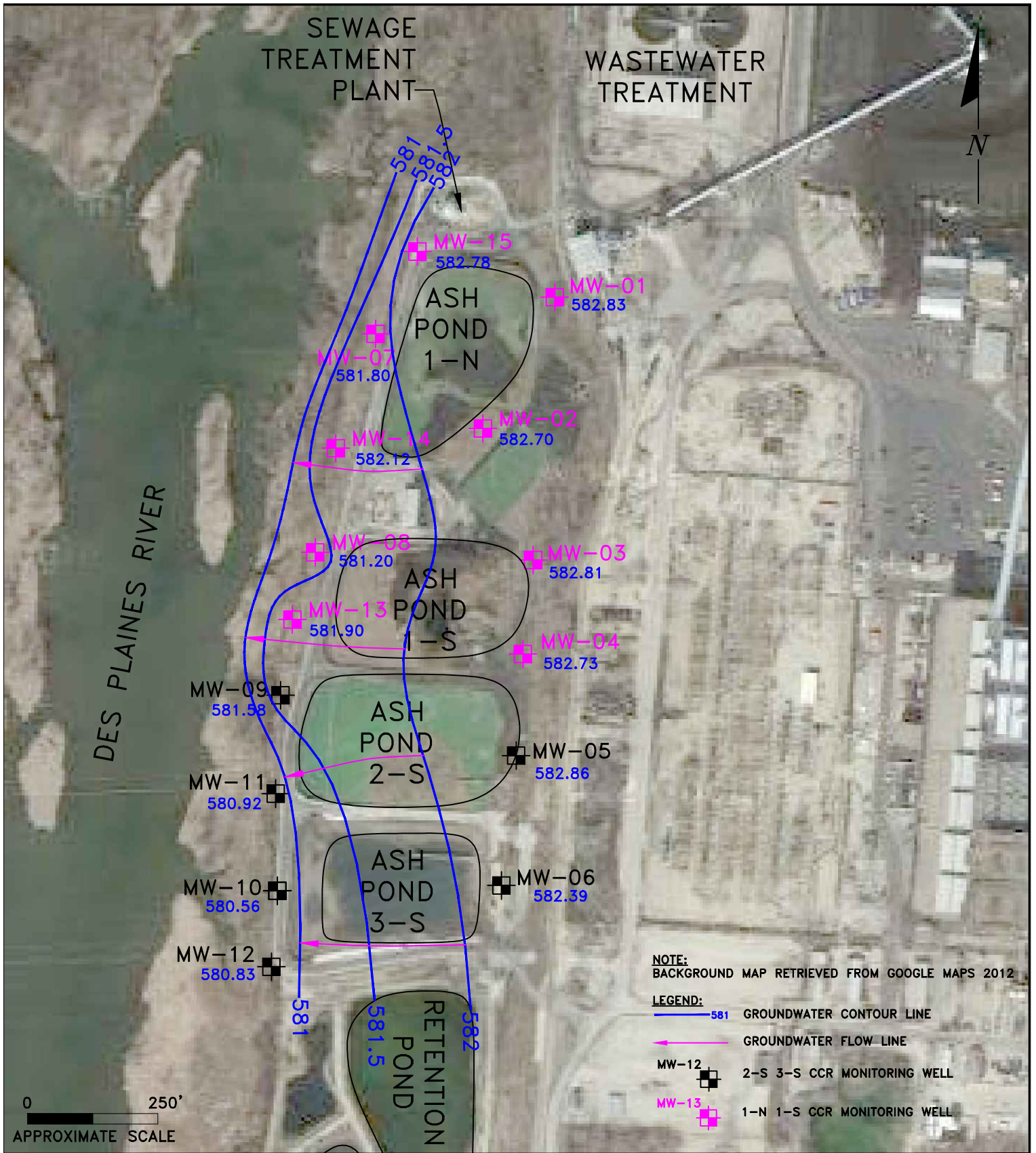
WILL COUNTY STATION, PONDS 2-S 3-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



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POTENTIOMETRIC MAP 07/2021

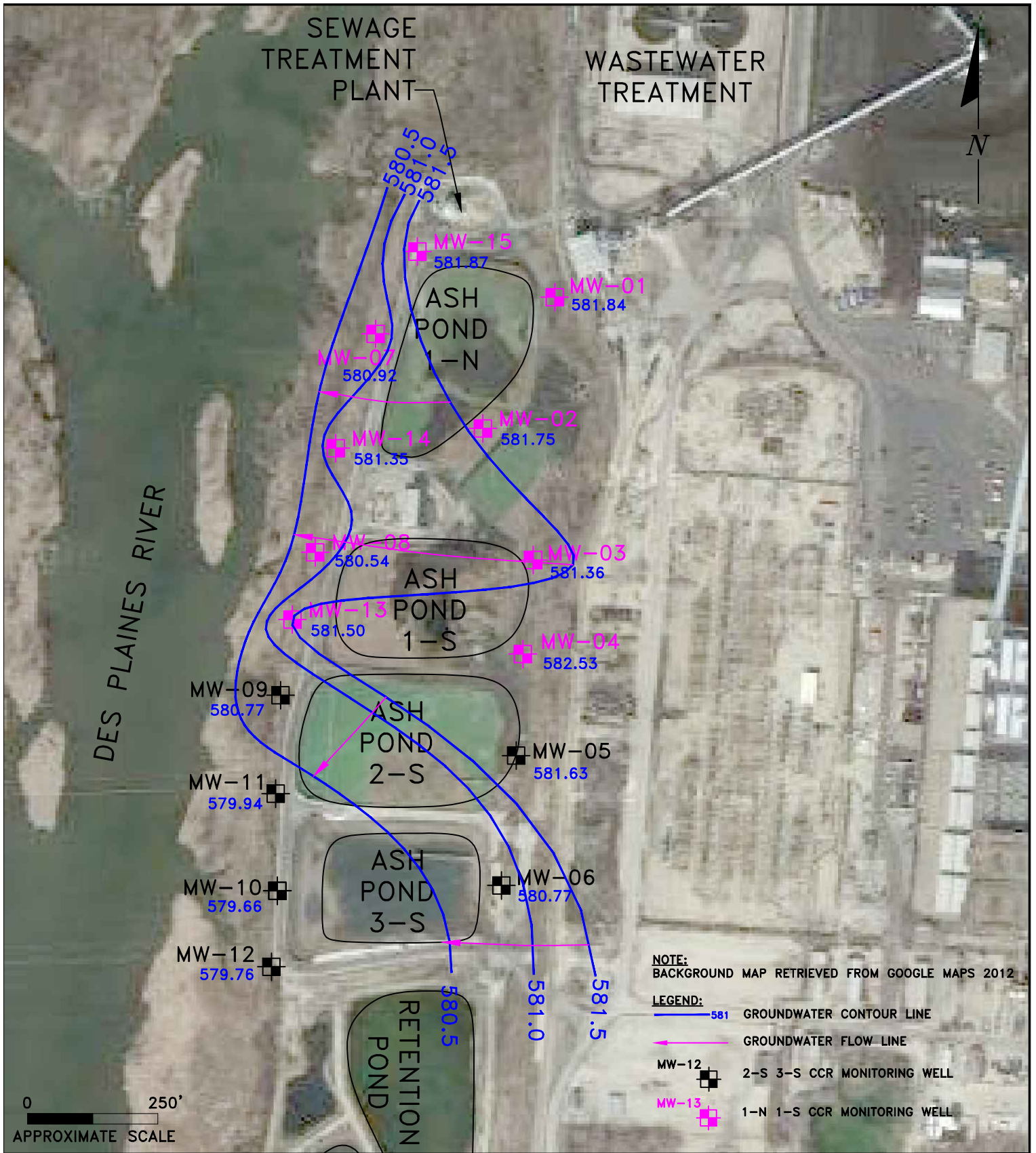
WILL COUNTY STATION, PONDS 2-S 3-S,
ROMEOWILLE, ILLINOIS

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 08/2021

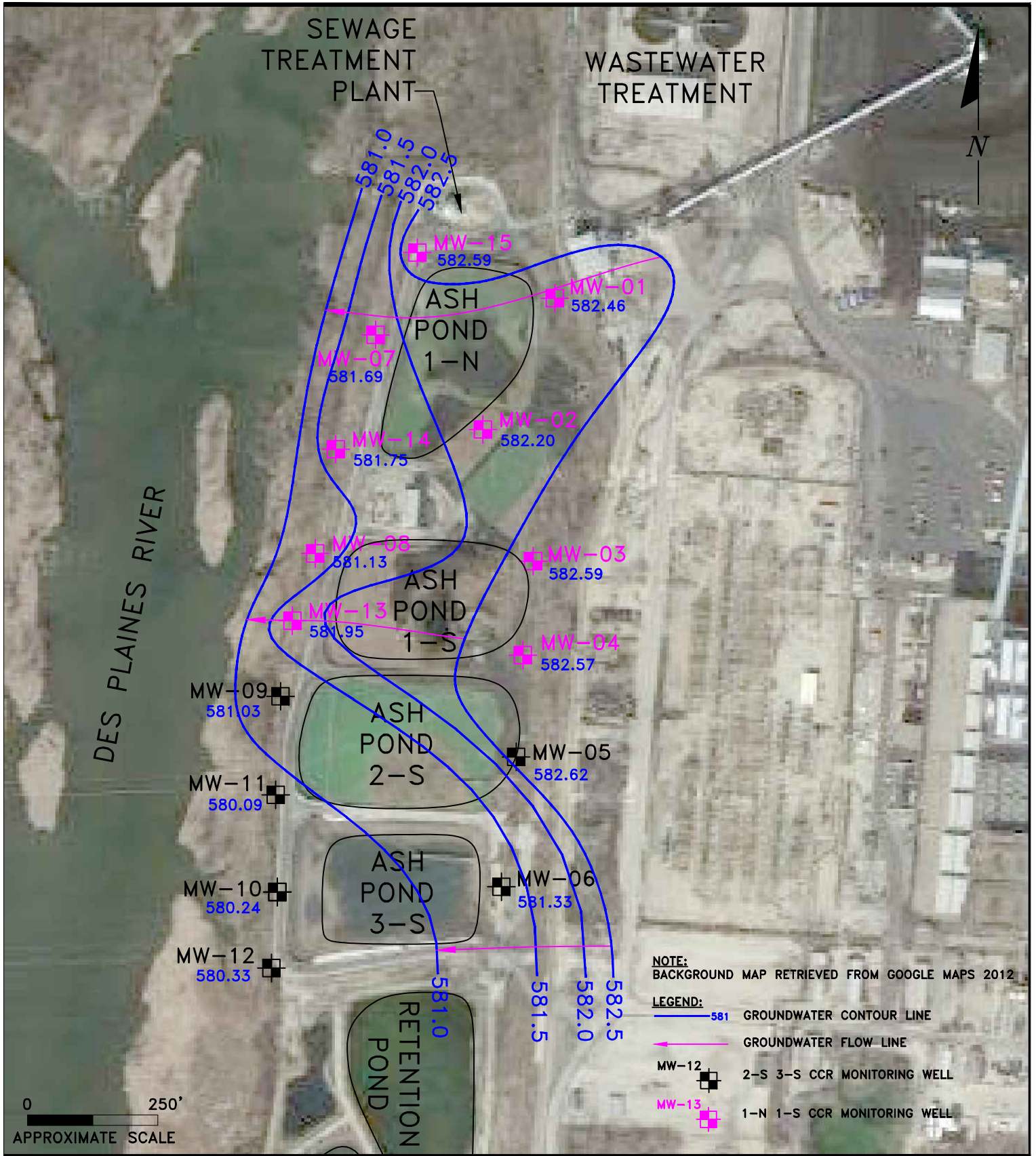
**WILL COUNTY STATION, PONDS 2-S 3-S,
ROMEOWILLE, ILLINOIS**

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1



ENVIRONMENTAL CONSULTATION & REMEDIATION

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POTENTIOMETRIC MAP 11/2021

**WILL COUNTY STATION, PONDS 2-S 3-S,
 ROMEOVILLE, ILLINOIS**

Scale: 1" = 250'

Date: January 18, 2022

KPRG Project No. 12313.3

ATTACHMENT 1