Luminant

Illinois Power Generating Company
1500 Eastport Plaza Drive
Collinsville, IL 62234

December 15, 2023
Illinois Environmental Protection Agency
DWPC – Permits MC#15
Attn: 35 I.A.C. § 845.650(e) Alternative Source Demonstration Submittal
1021 North Grand Avenue East
P.O. Box 19276
Springfield, IL 62794-9276

Re: Coffen Power Plant Ash Pond No 2; IEPA ID # W1350150004-02

Dear Mr. LeCrone:

In accordance with Title 35 of the Illinois Administrative Code (35 I.A.C.) Section (§) 845.650(e), Illinois Power Generating Company (IPGC) is submitting this Alternative Source Demonstration (ASD) for the sulfate and TDS exceedance observed at well G407 from the Quarter 2 2023 sampling event at the Coffeen Power Plant Ash Pond No. 2, identified by Illinois Environmental Protection Agency (IEPA) ID No. W1350150004-02.

This ASD is being submitted within 60 days from the date of determination of an exceedance of a groundwater protection standard (GWPS) for constituents listed in 35 I.A.C. § 845.600. As required by 35 I.A.C. § 845.650 (e)(1), the ASD was placed on the facility's website within 24 hours of submittal to the agency.

One hard copy is provided with this submittal.

Sincerely,

Dianna Tickner

Dianna Tickner
Sr. Director – Decommission and Demolition

Enclosures
Alternate Source Demonstration, Quarter 2 2023, Ash Pond No.2 Coffeen Power Plant, Coffeen Illinois

Geosyntec consultants

engineers | scientists | innovators

Alternative Source Demonstration - G407 Sulfate and Total Dissolved Solids

Coffeen Power Plant Ash Pond No. 2
(Unit ID #102)
IEPA ID: W1350150004-02
35 I.A.C. 845.650

Prepared for

Illinois Power Generating Company
134 Cips Lane
Coffeen, Ilinois 62017

Prepared by

Geosyntec Consultants, Inc.
500 W. Wilson Bridge Rd., Suite 250
Worthington, OH 43085

Project Number: GLP8029

December 2023

Geosyntec
consultants

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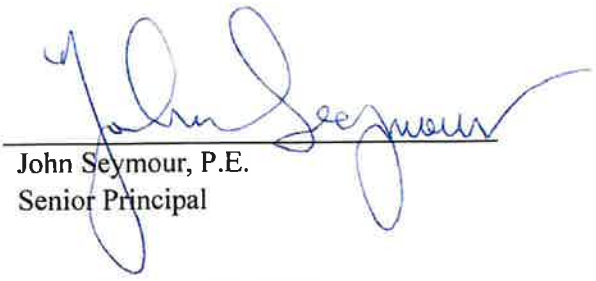
License No.: 062.040562
Expires: 11/30/2025



John Seymour, P.E.
Senior Principal

Project Number: GLP8029

December 2023

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ACRONYMS AND ABBREVIATIONS

ASD	Alternative source demonstration
AP2	Ash Pond No. 2
CCR	Coal combustion residuals
CPP	Coffeen Power Plant
DA	Deep aquifer
EPRI	Electric Power Research Institute
GWPS	Groundwater protection standard
HCR	Hydrogeologic site characterization report
IAC	Illinois Administrative Code
IEPA	Illinois Environmental Protection Agency
IPGC	Illinois Power Generating Company
LCU	Lower confining unit
LOE	Line of evidence
mg/L	milligrams per liter
NID	National Inventory of Dams
TDS	Total dissolved solids
UA	Uppermost aquifer
UCU	Upper confining unit
USEPA	United States Environmental Protection Agency

1. INTRODUCTION

Geosyntec Consultants, Inc. has prepared this alternative source demonstration (ASD) on behalf of Illinois Power Generating Company (IPGC) regarding the Ash Pond No. 2 coal combustion residuals (CCR) unit at the Coffeen Power Plant (CPP) near Coffeen, Illinois. The ASD is completed pursuant to Illinois Administrative Code (IAC) Title 35, Part 845 ("Standards for the Disposal of CCR in Surface Impoundments") and was completed by December 15, 2023, within 60 days of determination of the exceedances (October 16, 2023), as required by 35 I.A.C.§ 845.650(e). This report applies specifically to the CCR Unit referred to as Ash Pond No. 2 (AP2), identification (ID) number (No.) 102, IEPA ID No. W1350150004-02, and National Inventory of Dams (NID) ID No. IL50723 and was prepared in conformance with guidance provided in the Electric Power Research Institute (EPRI) guidance for development of ASDs at CCR sites (EPRI 2017), and the United States Environmental Protection Agency (USEPA)'s Solid Waste Disposal Facility Criteria: Technical Manual (USEPA 1993).

An exceedance of sulfate was identified above the site-specific groundwater protection standard (GWPS) of 400 milligrams per liter (mg/L) at monitoring well G407 following the Second Quarter 2023 sampling event. An exceedance of total dissolved solids (TDS) was identified above the site-specific GWPS of 1,200 mg/L at monitoring well G407 following the Second Quarter 2023 sampling event. TDS represents the mass of dissolved material in the water rather than a specific chemical constituent. The TDS exceedance at G407 is controlled by the elevated concentrations of sulfate.

Under 35 IAC 845.650(e), the owner or operator of a CCR surface impoundment may submit a demonstration that a source other than the CCR surface impoundment caused the contamination and the CCR surface impoundment did not contribute to the contamination, or that the exceedance of the groundwater protection standard resulted from error in sampling, analysis, or statistical evaluation, natural variation in groundwater quality, or a change in the potentiometric surface and groundwater flow direction.

Pursuant to 35 IAC 845.650(e), the lines of evidence (LOEs) documented in this ASD demonstrate that a source other than the CPP AP2 CCR unit was the cause of the GWPS exceedances for sulfate and TDS at downgradient monitoring well G407 and that AP2 did not contribute to the exceedance. Anthropogenic impacts associated with CPP operations was identified as the alternative source for elevated sulfate and TDS concentrations at G407.

2. BACKGROUND

2.1 Site Location and Description

The CPP, operated by the IPGC is located in Montgomery County, Illinois approximately two miles south of the City of Coffeen in Section 11, Township 7 North, and Range 7 East. The CPP is located between the two lobes of Coffeen Lake to the west, east, and south, and is bordered by agricultural land to the north. The CPP operated as a coal-fired power plant from 1964 to November 2019 and has five CCR management units. The approximately 1,100-acre Coffeen Lake was built by damming the McDavid Branch of the East Fork of Shoal Creek in 1963 for use as an artificial cooling lake for the CPP. The CPP and vicinity, including G407 and AP2, are located on a peninsula of land between two lobes of Coffeen Lake. Historically, coal mines were operated at depth in the vicinity of the CPP and a US Minerals processing facility is located to the north. An aerial view of the site is shown in shown in **Attachment 1**.

2.2 Description of the CCR Unit

Coffeen AP2 is an unlined surface impoundment with a surface area of approximately 60 acres, with berms up to 47 feet above the surrounding land surface. AP2 was removed from service and capped in the mid-1980s using a two-foot compacted clay and soil cap (Ramboll 2019).

AP2 was recapped starting in 2019 using a geomembrane cover system in accordance with a closure plan submitted to the Illinois Environmental Protection Agency (IEPA; AECOM, 2017). The cover system installation was completed on November 17, 2020. The geomembrane cap design addresses the potential for slope failure and water infiltration into the closed CCR unit by directing the drainage of surface water (i.e., precipitation) off the cover system.

2.3 Geology and Hydrogeology

Significant site investigation has been completed to fully characterize the geology, hydrogeology, and groundwater quality as provided in the AP2 Initial Operating Permit Application (Burns & McDonnell 2021) and the Hydrogeologic Site Characterization Report (HCR) for AP2 (NRT 2017). These materials are incorporated herein.

There are multiple layers of unlithified material present beneath AP2 and above bedrock which are categorized into hydrostratigraphic units listed below (from the surface downward) based on stratigraphic relationships and hydrogeologic characteristics:

- **Upper Confining Unit (UCU):** Composed of the Roxana and Peoria Silts (Loess Unit) and the upper clayey portion of the Hagarstown member which are classified as silts-clayey silts and gravelly clay below the surficial soil.

- **Uppermost Aquifer (UA):** Composed of the Hagarstown Member which is classified as primarily sandy-gravelly silts and clays with beds of sedimentary deposits. Beds consist of thin

(generally less than three feet in thickness), moderate to high permeability sand, silty sand, and sandy silt/clay units.

- **Lower Confining Unit (LCU):** Comprised of the Vandalia Member, Mulberry Grove Member, and Smithboro Member. The LCU in the vicinity of AP2 consists of thick (generally greater than 15 feet), very low permeability sandy to silty till or clay till.

- **Deep Aquifer (DA):** Comprised of sand and sandy silt/clay units of the Yarmouth Soil, which include accretionary deposits of fine sediment and organic materials, typically less than five feet thick and discontinuous across the CPP.

Bedrock is comprised of the Pennsylvanian-age Bond Formation, which consists of limestone and calcareous clays and shale. Geologic cross-sections modified from versions provided in the Hydrogeologic Characterization Report are provided as **Figure 1**. CCR within AP2 is underlain by the UCU in the majority of the footprint.

G407 is screened from 13.8 to 18.6 ft. bgs (604.6 to 600.0 ft elevation [North American Vertical Datum of 1988, NAVD88]). The boring log for G407, provided in **Attachment 2**, indicates that the lithology of the screened interval is a yellowish brown silt with little fine-to coarse-grained sand.

The potentiometric groundwater contours and generalized groundwater flow directions at the site are shown in **Attachment 3**. Groundwater flow in the vicinity of AP2 is generally to the south and east. The groundwater to the west of AP2 is separated from the groundwater flow regime under AP2 by a groundwater divide. More information regarding this groundwater divide is provided in Section 3.1.

The groundwater monitoring well network for AP2 consists of 11 monitoring wells: three background monitoring wells (G270, G280, G281) and eight compliance monitoring locations (G1001, G401, G402, G403, G404, G405, G406, G407) (**Attachment 1**). Monitoring wells within the network are screened in the UA from approximately elevations 600 to 610 ft.

Monitoring well G407 was originally included in the IEPA-approved Closure Plan monitoring well network, which consisted of fourteen groundwater monitoring wells used to monitor the UA, including three background wells (G270, G280, and G281) and eleven compliance wells (G154, G279, G401, G402, G403, G404, G405, G406, G407, G410, and G411) (NRT 2017). Monitoring wells G154, G279, G407, G410, and G411 were included in the IEPA groundwater monitoring plan to monitor sulfate in groundwater that could potentially be attributed to AP2. These wells were monitored in accordance with Water Pollution Control Permit 2020-EA-65027-1 Special Condition No. 6. An Addendum to the Groundwater Monitoring Plan (Ramboll 2021a) submitted with the Operating Permit (Burns & McDonnell 2021) noted that while G407 is on the opposite side of the groundwater divide from AP2, it would continue to be monitored due to the elevated concentrations of sulfate at that location.

3. G407 ASD LINES OF EVIDENCE

Monitoring well G407 and AP2 are located on opposite sides of a groundwater flow divide which presents a barrier to flow from AP2 toward G407. This groundwater divide is evidenced through groundwater potentiometric surface mapping and modeling, site topography, and groundwater chemistry at the site. This groundwater divide prevents groundwater underlying AP2 from migrating to G407; therefore, the sulfate and TDS exceedances are not attributed to AP2, as discussed below.

3.1 LOE #1 Groundwater Does Not Flow from AP2 to G407 due to the Presence of a Groundwater Divide

Compliance well G407 is located directly west of AP2 (**Attachment 1**). Groundwater flow from beneath AP2 has consistently been southeast. Potentiometric surface maps constructed by Ramboll since November 2016 (**Attachment 3**) indicate that groundwater flow from AP2 towards G407 has never been observed, regardless of season (Ramboll 2021b). Groundwater flow at G407 is predominantly southwest and is separated from groundwater flow beneath AP2 by a groundwater divide located near the western edge of AP2 and occasionally centered around G403. This groundwater divide is present in all potentiometric surface maps generated for the monitoring network between 2016 and 2023 (**Attachment 3)** and is likely related to thinning of the Hagarstown Beds under the western portions of AP2 (NRT 2017). The presence of the known groundwater divide indicates that the observed sulfate and TDS exceedances at G407 cannot be contributed to AP2, as G407 is not hydrologically downgradient of AP2.

The most recent groundwater modeling for AP1 and the historical modeling for AP2 completed by Ramboll indicate that at steady state the groundwater divide separates G407 and AP2 in alignment with the observed flow directions from groundwater measurements. CPP and the areas monitored by the well networks are located on a peninsula between two lobes of Coffeen Lake; groundwater naturally flows from the central portions of the peninsula toward the eastern and western lobes of Coffeen Lake. Groundwater potentiometric surface maps (**Attachment 3**) which include monitoring wells present throughout the peninsula clearly illustrate this flow pattern since monitoring under the 40 C.F.R. 257 regulations began in 2015. Calibration of the groundwater flow model also supports the presence of this flow pattern and the groundwater divide located between AP2 and G407 (**Attachment 4**).

Given the presence of this groundwater divide between AP2 and monitoring well G407, impacts from AP2 would not be observed at G407 and the sulfate and TDS exceedances should be attributed to an alternative source.

3.2 LOE #2 The Presence of a Surface Water Divide Further Supports the Presence of a Groundwater Divide

A surface water divide has also been noted in the vicinity of AP2. The CPP and vicinity, including G407 and AP2, are located on a peninsula of land between two lobes of Coffeen Lake. Topography of the land surface determines which direction precipitation (surface water) will drain towards lower elevations (Coffeen Lake). Connecting the high topographic areas within the peninsula defines the location of a surface water divide (**Figure 3**). Surface water present on the west side of

the divide drains toward the west lobe of Coffeen Lake and water that falls on the east side of the divide flows toward the east lobe of Coffeen Lake. As illustrated on **Figure 3**, G407 is located on the west side of the divide and AP2 is located on the east side of the divide; therefore, surface water from AP2 will not flow west in the direction of G407.

Shallow unconfined groundwater flow typically follows topography (flowing from high head to low head) and the attached groundwater potentiometric surface maps confirm that groundwater flows in the same direction as surface water (**Attachment 3**).

3.3 LOE #3 G407 Does Not Contain Elevated Levels of Boron, which is Indicative of AP2 Leachate

The co-located detection of elevated boron and sulfate concentrations has been noted as a key indicator of the presence of CCR constituents related to AP2 (NRT 2017). Boron concentrations at G407 are consistent with background, with reported values ranging between 0.06 and 0.15 mg/L for groundwater sampling events completed between March 2018 and May 2023 (**Figure 2**). This concentration range is substantially lower than concentrations observed at wells which are known to be impacted by AP2, such as G404, which exhibited boron concentrations two orders of magnitude greater than G407 (up to 15.0 mg/L) over the same time interval.

As shown in **Figure 4,** boron concentrations at G407 are comparable to other unimpacted wells within the monitoring network, including the background wells (G270, G280, and G281) and compliance well G403, which is located cross-gradient of AP2 near the center of the groundwater flow divide. Monitoring locations which are located on the same side of the flow divide as AP2 and downgradient of the unit, such as G404 and G405, tend to exhibit much higher boron concentrations which are indicative of impacts from AP2. These results support the presence of the groundwater divide between AP2 and G407.

The lack of elevated boron concentrations at G407 on the west side of the groundwater divide suggests that the sulfate and associated TDS exceedances observed in groundwater at G407 are not attributable to impacts from AP2. Instead, the presence of elevated sulfate may be attributed to a host of anthropogenic sources at the site, such as the historical mining activities, coal storage activities, construction of engineered features such as railroad beds or parking lots, material handling, or similar.

4. CONCLUSIONS

It has been demonstrated that the sulfate and TDS exceedances at G407 are not due to a release from the AP2 CCR unit and that the unit has not contributed to the exceedance, but instead the exceedance is attributed to a source other than AP2. The following summarizes the three LOEs used to support the sulfate and TDS demonstration:

1. Groundwater beneath AP2 does not flow to G407, as demonstrated by temporally consistent potentiometric surface maps of groundwater elevation across the site and groundwater flow modeling showing a groundwater divide between AP2 and the well of concern.

2. The presence of a surface water divide between AP2 and G407 provides further support for the presence of the groundwater divide which prevents potential migration of groundwater from underneath AP2 to the well of concern. Therefore, G407 is not impacted by the AP2 unit.

3. Groundwater at G407 does not contain elevated boron that would indicate impacts from AP2 leachate. The lack of elevated boron at G407 compared to wells in the immediate vicinity of G407 provides further evidence in support of the presence of the groundwater divide between the unit and G407.

The GWPS exceedances of sulfate and TDS at G407 are not attributable CPP AP2, as the groundwater divide at the CPP prevents migration of groundwater along that flow path. Instead, the exceedances are attributed to impacts from anthropogenic industrial activities that have historically occurred at the CPP. This demonstration fulfills the requirements of both 35 IAC 845.650(e) and the technical manual for the Municipal Solid Waste Landfill federal regulatory program (Code of Federal Regulations, Title 40, Section 258).

5. REFERENCES

AECOM. 2017. *Closure and Post-Closure Care Plan for the Coffeen Ash Pond No. 2 at Illinois Power Generating Company Coffeen Power Station*. January.

Burns & McDonnell. 2021. *Initial Operating Permit, Coffeen Ash Pond 2.* October.

Illinois Environmental Protection Agency (IEPA). 2016. *Dynegy Midwest Generation, Inc. – Baldwin Energy Complex: Baldwin Fly Ash Pond System Closure – NPDES Permit No. IL000043*, letter from William Buscher (IEPA) to Rick Diericx (Dynegy Operating Company), dated August 16, 2016.

Natural Resource Technology, Inc. (NRT). 2017. *Hydrogeologic Site Characterization Report, Ash Pond 2, Coffeen Power Station, Coffeen, Illinois*. January.

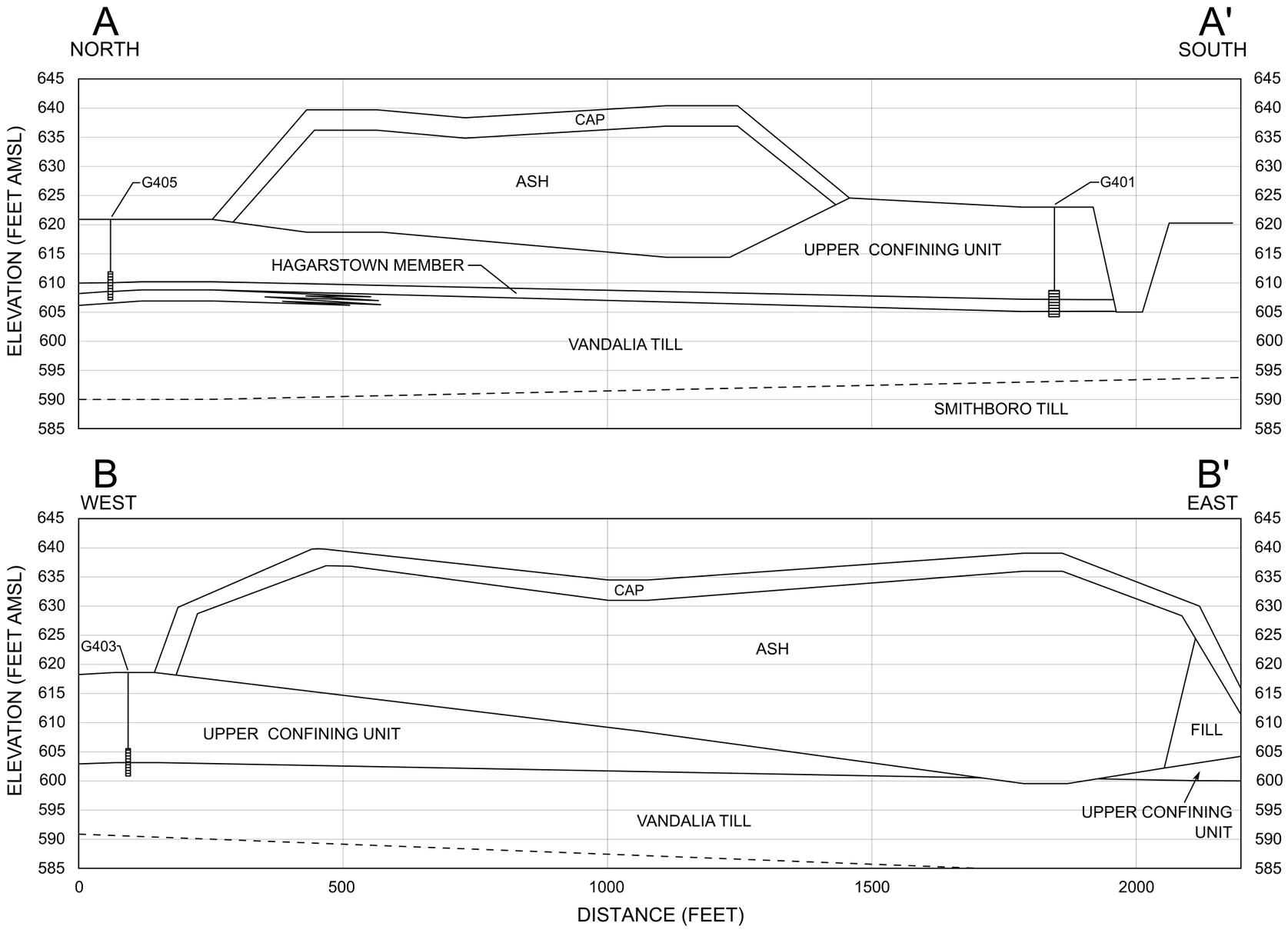
Ramboll. 2021a. *Groundwater Monitoring Plan Addendum for Ash Pond No. 2. Coffeen Power Plant, Coffeen, IL.* Ramboll Americas Engineering Solutions, Inc. October.

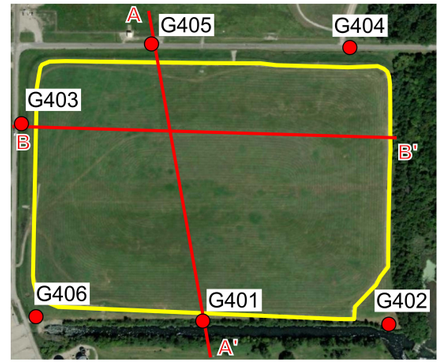
Ramboll. 2021b. *Hydrogeologic Site Characterization Report, Ash Pond No. 1, Coffeen Power Plant, Coffeen, Illinois*. Ramboll Americas Engineering Solutions, Inc. October.

Ramboll. 2023. *35 I.A.C. § 845.610(B)(3)(D) Groundwater Monitoring Data and Detected Exceedances – Quarter 2, 2023. Ash Pond No. 2, Coffeen Power Plant, Coffeen, Illinois.* Ramboll Americas Engineering Solutions, Inc. October.

United States Environmental Protection Agency (USEPA). 1993. *Criteria for Solid Waste Disposal Facilities: A Guide for Owners/Operators*. March.

FIGURES





VERTICAL SCALE IN FEET: 20

HORIZONTAL SCALE IN FEET: 200

VERTICAL EXAGGERATION = 10

Legend

- Monitoring Wells
- Pond Outline
- Well Screen

Notes

- Well locations are approximate
- Geologic cross-sections modified from Hydrogeologic Monitoring Plan (Natural Resource Technology, 2017)
- Cap thickness is approximate

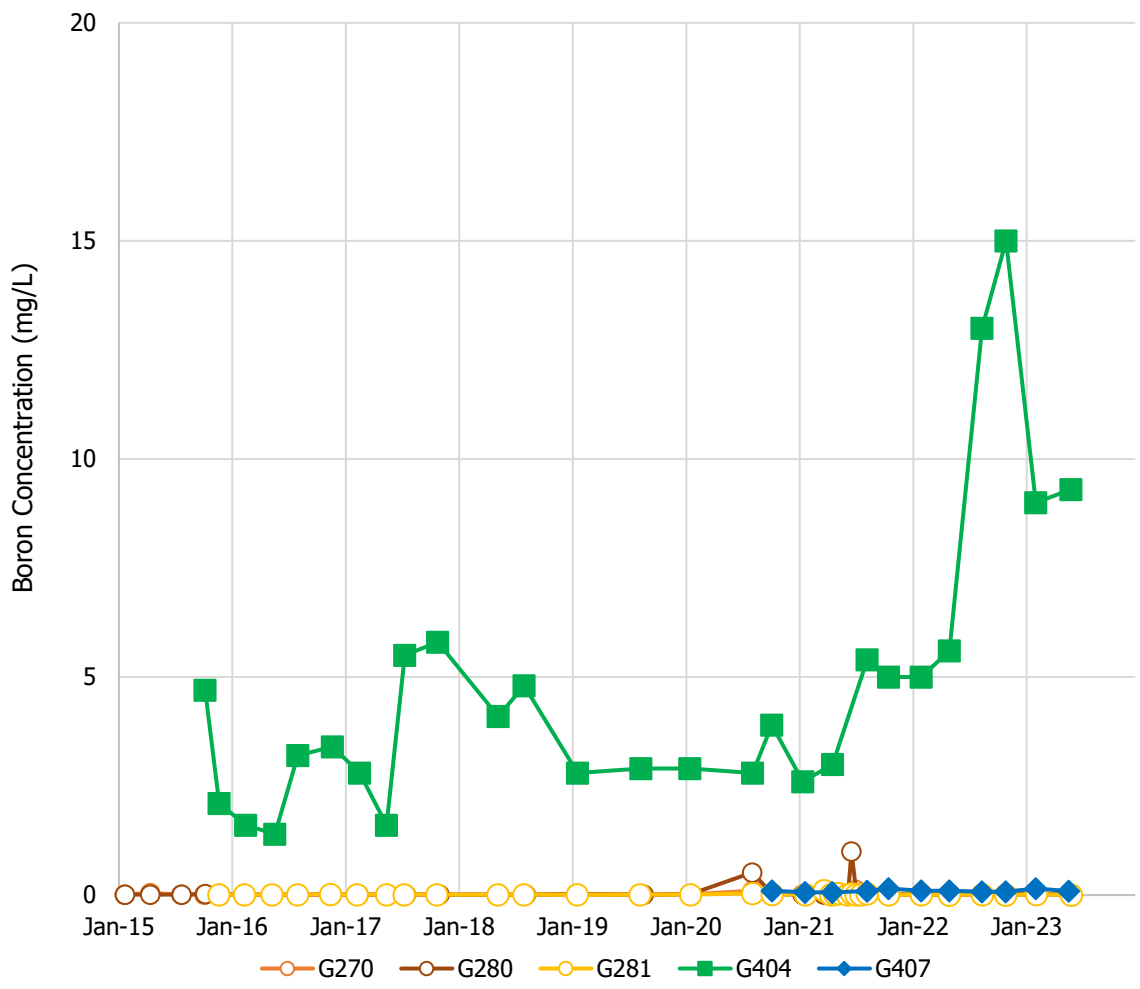
Ash Pond No. 2 Geologic Cross-Section

134 Cips Lane
Coffeen, Illinois

Geosyntec consultants

Columbus, OH | November 2023

Figure 1



Notes: Total boron results are shown for unfiltered samples in units of milligrams per liter (mg/L). Monitoring wells G270, G280, and G281 are background wells, denoted on the graph by hollow symbology. Monitoring well G404 has been identified as previously impacted by Ash Pond 2.

AP2 Monitoring Well Network Boron Time Series

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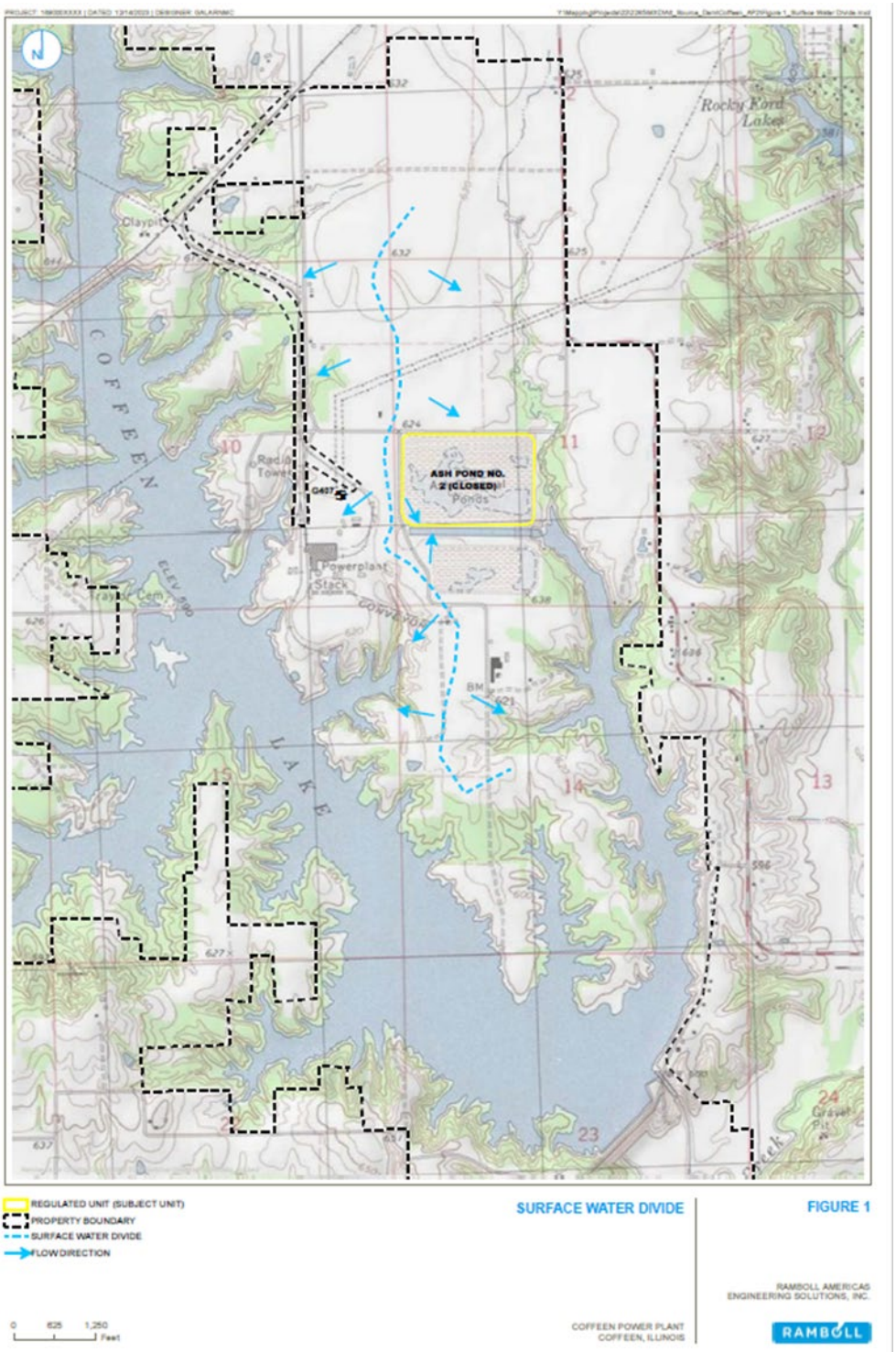
Figure **2**



Surface Water Divide

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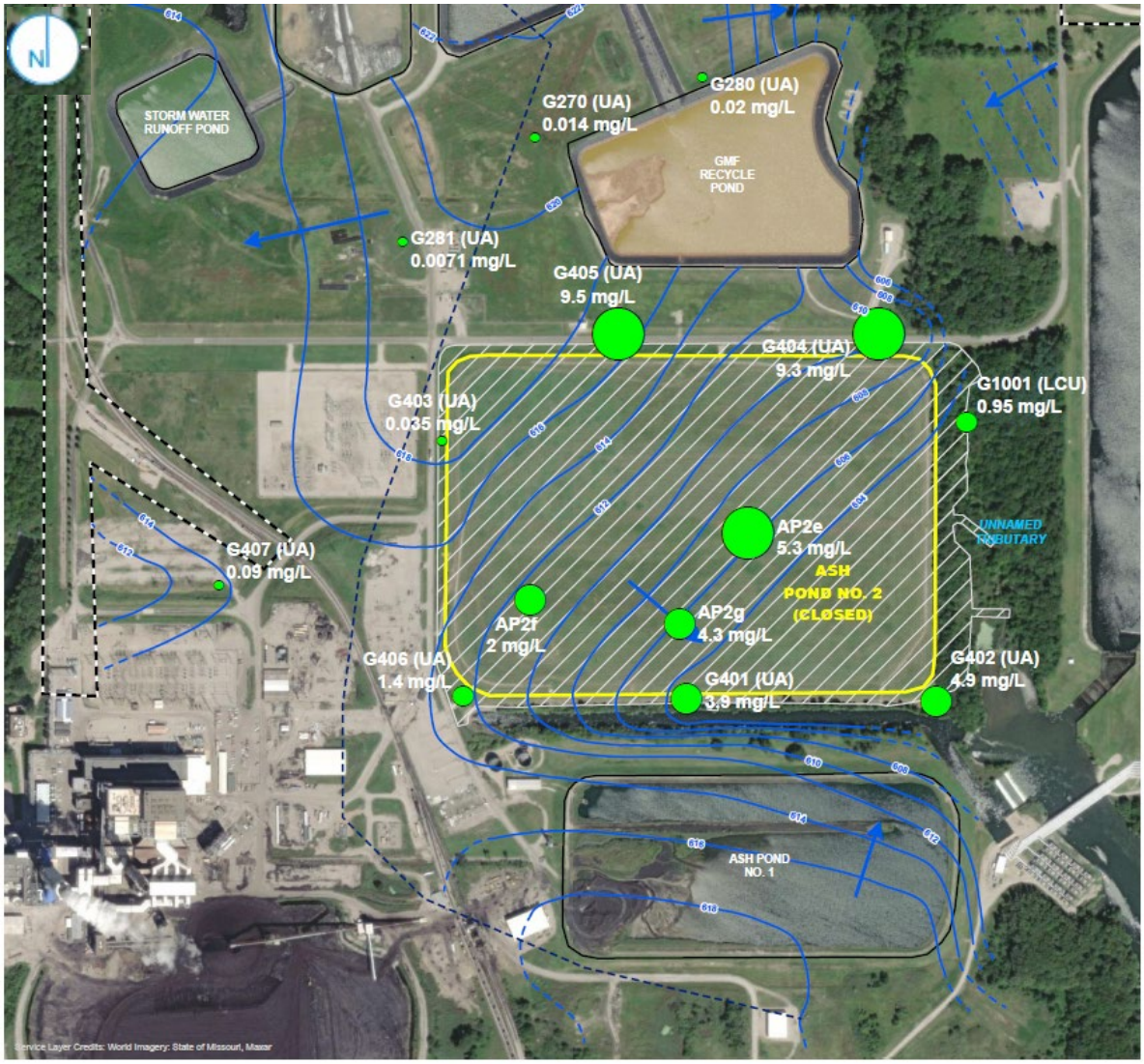
Figure **3**



GROUNDWATER DIVIDE
GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION

REGULATED UNIT (SUBJECT UNIT)
SITE FEATURE
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

POTENTIOMETRIC SURFACE MAP
MAY 30, 2023

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

Notes:
1: Boron concentrations from AP2 porewater samples and the Q2 2023 sampling event correspond with the radius of green circles on the figure. Boron concentration values are provided beneath location names.
2: AP2 porewater samples were collected in 2016.
3: Elevations in parentheses were not used for contouring.
4: Elevation contours shown in feet, North American Vertical Datum of 1988 (NAVD88).

Boron Distribution Relative to Groundwater Flow Direction

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Columbus, OH | December 2023

Figure
4

ATTACHMENT 1
Proposed 845 Groundwater Monitoring Network

PROJECT: 1690000XXX | DATED: 10/6/2021 | DESIGNER: STOLZSD

Y:\Mapping\Projects\22\22185\MXD\845_Operating_Permit\Coffeen\AP2_GMP\Figure 2-1_Proposed Monitoring Well Network.mxd

COMPLIANCE WELL
BACKGROUND WELL
MONITORING WELL
STAFF GAGE

PART 845 REGULATED UNIT (SUBJECT UNIT)
SITE FEATURE
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

0 200 400 Feet

PROPOSED 845 GROUNDWATER MONITORING WELL NETWORK

ADDENDUM TO THE GROUNDWATER MONITORING PLAN
ASH POND NO. 2
COFFEEN POWER PLANT
COFFEEN, ILLINOIS

FIGURE 2-3

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

ATTACHMENT 2

G407 Boring Log and Well Construction Diagram

FIELD BORING LOG

CLIENT: Natural Resources Technology, Inc.
Site: Coffeen Power Station - Ash Pond 2
Location: 134 CIPS Lane, Coffeen, IL 62017
Project: 16E0080
DATES: Start: 8/16/2016
Finish: 8/16/2016
WEATHER: Rain, (mid-70s)

CONTRACTOR: Bulldog Drilling, Inc.
Rig mfg/model: CME-750 ATV Drill
Drilling Method: 4 1/4" Hollow Stem Auger
FIELD STAFF: Driller: J. Dittmaier
Helper: M. Hill
Eng/Geo: K. Theesfeld

BOREHOLE ID: G407
Well ID: G407
Surface Elev: 618.35 ft. MSL
Completion: 20.00 ft. BGS
Station: 2,513,705.87N
2,513,705.87E

TOPOGRAPHIC MAP INFORMATION:
Quadrangle: Coffeen
Township: East Fork
Section 10, **Tier** 7 N.; **Range** 3 W.

WATER LEVEL INFORMATION:
▼ = 16.00 - During Drilling
▼ =
▽ =

SAMPLE Number	Recov / Total (in) % Recovery	Type	TESTING Blows / 6 in N - Value RQD	Moisture (%)	Dry Den. (lb/ft³)	Qu (tsf) Qp (tsf) Failure Type	Depth ft. BGS	Lithologic Description	Borehole Detail	Elevation ft. MSL	Remarks
1A	12/24 50%	ss	4-3 3-3 N=6	14		3.50	0	Very dark gray (10YR3/1), wet, medium, SILT with some organics. [Fill]		618	
							1	Gray (10YR6/1), wet, loose, SAND with some gravel and little clay. [Fill]			
2A	20/24 83%	ss	2-2 4-4 N=6	18		1.50	2	Yellowish brown (10YR5/6) with 5% dark yellowish brown (10YR3/6) mottles, moist, very stiff, SILT with some clay and trace very fine- to fine-grained sand.		616	
							3	Brown (10YR5/3) with 10% yellowish brown (10YR5/6) mottles, moist, stiff, SILT with some clay, little fine- to coarse-grained sand, and trace small gravel.			
3A	23/24 96%	ss	1-2 3-4 N=5	19		1.75	4	Brown (10YR5/3) with 25% yellowish brown (10YR5/6) mottles, moist, stiff, CLAY with some silt, trace fine-grained sand and trace small gravel.		614	
4A	24/24 100%	ss	1-3 3-5 N=6	19		1.50	6	Brown (10YR5/3) with 10% yellowish brown (10YR5/6) mottles, moist, stiff, CLAY with some silt, little fine- to coarse-grained sand and trace small gravel.		612	
5A	21/24 88%	ss	1-2 4-4 N=6	19		0.50	8	Yellowish brown (10YR5/6) with 25% brown (10YR5/3) mottles, moist, medium, CLAY with few silt, few fine-grained sand, and trace small gravel.		610	
6A	22/24 92%	ss	1-2 2-1 N=4	17			10	Yellowish brown (10YR5/8) with 5% gray (10YR5/1) mottles, moist, very loose, fine-grained SAND with some clay and trace small gravel.		608	
7A	24/24 100%	ss	7-29 33-17 N=62	8			12	Gray (10YR5/1) with 25% yellowish brown (10YR5/8) mottles, moist, very dense, fine-grained SAND		606	
							14	Brown (10YR5/3), moist, hard, SILT with some clay and little fine- to coarse-grained sand.		604	
8A	24/24 100%	ss	3-7 12-17 N=19	12		4.50		Yellowish brown (10YR5/4) with 5% yellowish brown (10YR5/6) and 5% black (10YR2/1) mottles, SILT with some clay and little fine- to coarse-grained sand.			
							▼ 16			602	
9A	24/24 100%	ss	4-9 14-20 N=23	13		4.00		Yellowish brown (10YR5/4) with 5% yellowish brown (10YR5/6), 5% dark gray (10YR4/1) and 5% black (10YR2/1) mottles, moist, hard, SILT with little fine- to coarse-grained sand and trace small gravel.			
							18			600	
10A	24/24 100%	ss	2-8 14-19 N=22	14		4.50		Yellowish brown (10YR5/4) with 5% yellowish brown (10YR5/6), 5% dark gray (10YR4/1) and 5% black (10YR2/1) mottles, wet, stiff, SILT with little fine- to coarse-grained sand and little small gravel.			
							20	Dark grayish brown (10YR4/2) with 10% dark yellowish brown (10YR3/6) mottles, moist, hard, CLAY with some silt, little fine- to coarse-grained sand and trace small gravel.			

End of Boring = 20.0 ft. BGS

NOTE(S): G407 installed in boring.

Illinois Environmental Protection Agency — Well Completion Report

Site #: _____ County: Montgomery Well #: G407

Site Name: Coffeen Power Station - Ash Pond 2 Borehole #: G407

State Plane Coordinate: X 2,513,705.9 Y 872,973.4 (or) Latitude: 39° 3' 41.665" Longitude: -89° 24' 7.213"

Surveyed By: Gary C. Rogers IL Registration #: 035-002957

Drilling Contractor: Bulldog Drilling, Inc. Driller: J. Dittmaier

Consulting Firm: Hanson Professional Services Inc. Geologist: Rhonald W. Hasenyager, LPG #196-000246

Drilling Method: Hollow stem auger Drilling Fluid (Type): none

Logged By: Kristen L. Theesfeld Date Started: 8/16/2016 Date Finished: 8/16/2016

Report Form Completed By: Suzanna L. Keim Date: 8/24/2016

ANNULAR SPACE DETAILS

Type of Surface Seal: Concrete

Type of Annular Sealant: High-solids bentonite

Installation Method: Tremie

Setting Time: >24 hours

Type of Bentonite Seal -- (Granular) Pellet Slurry (choose one)

Installation Method: Gravity

Setting Time: 15 minutes

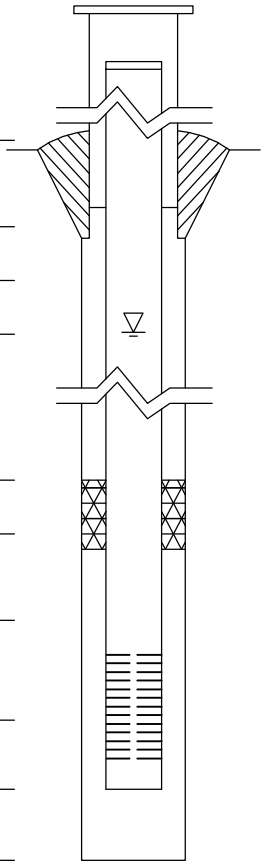
Type of Sand Pack: Quartz Sand

Grain Size: 10-20 (sieve size)

Installation Method: Gravity

Type of Backfill Material: Quartz Sand (if applicable)

Installation Method: Gravity



	Elevations (MSL)*	Depths (BGS) (0.01 ft.)
Top of Protective Casing	621.70	-3.35
Top of Riser Pipe	621.32	-2.97
Ground Surface	618.35	0.00
Top of Annular Sealant	616.35	2.00
Static Water Level (After Completion)		
Top of Seal	607.50	10.85
Top of Sand Pack	605.50	12.85
Top of Screen	604.57	13.78
Bottom of Screen	599.74	18.61
Bottom of Well	599.31	19.04
Bottom of Borehole	598.35	20.00

* Referenced to a National Geodetic Datum

WELL CONSTRUCTION MATERIALS

(Choose one type of material for each area)

Protective Casing	SS304	SS316	PTFE	PVC	OTHER: (Steel)
Riser Pipe Above W.T.	SS304	SS316	PTFE	(PVC)	OTHER:
Riser Pipe Below W.T.	SS304	SS316	PTFE	(PVC)	OTHER:
Screen	SS304	SS316	PTFE	(PVC)	OTHER:

CASING MEASUREMENTS

Diameter of Borehole	(inches)	8.0
ID of Riser Pipe	(inches)	2.0
Protective Casing Length	(feet)	5.0
Riser Pipe Length	(feet)	16.75
Bottom of Screen to End Cap	(feet)	0.43
Screen Length (1st slot to last slot)	(feet)	4.83
Total Length of Casing	(feet)	22.01
Screen Slot Size **	(inches)	0.010

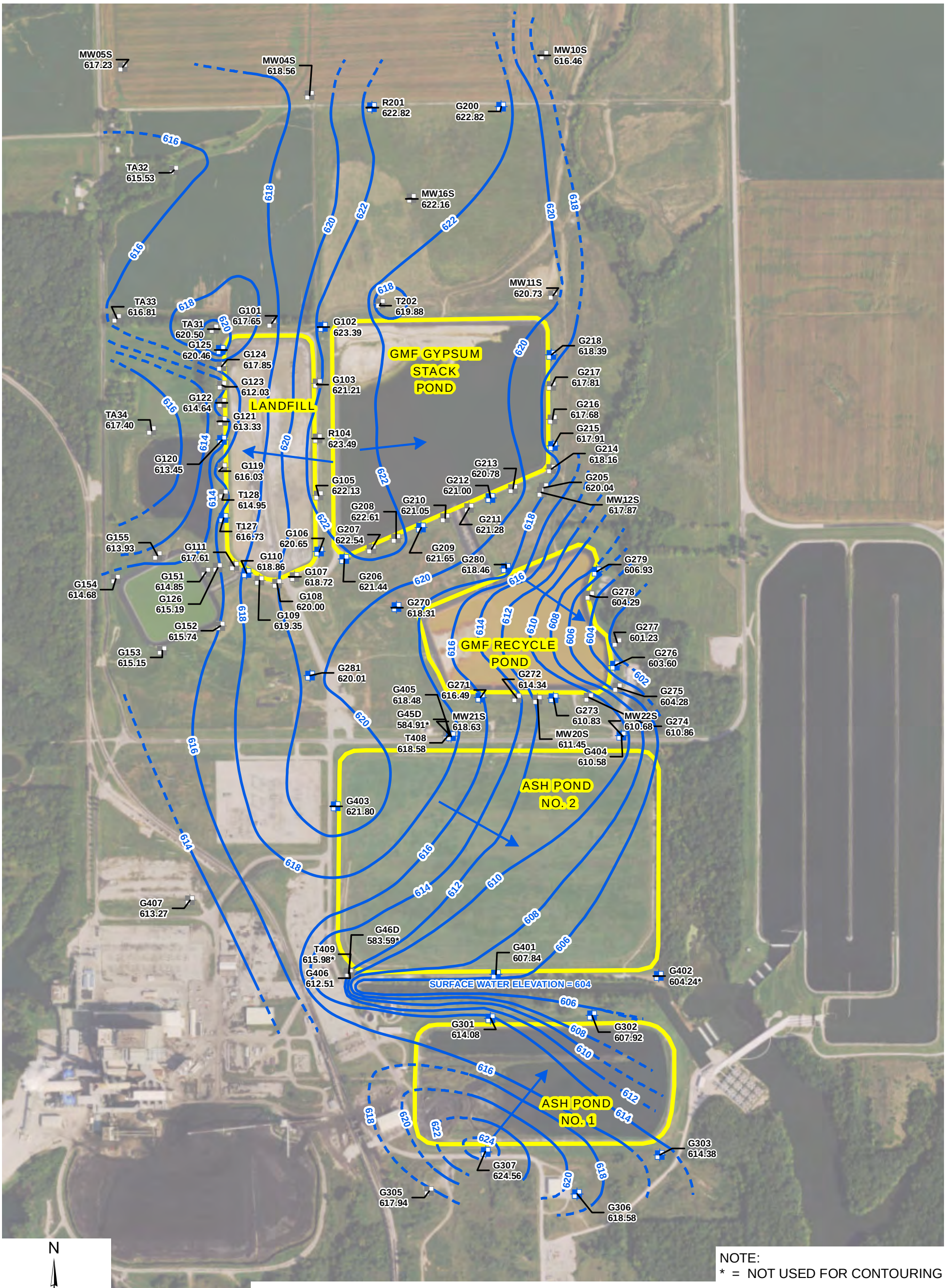
Well Completion Form (revised 02/06/02)

**Hand-Slotted Well Screens Are Unacceptable

ATTACHMENT 3
Compiled Potentiometric Surface Maps

GROUNDWATER ELEVATION CONTOUR MAPS
MONITORING PERIOD 2016 - 2023

LOCATION: COFFEEN POWER PLANT
UNIT NAME: ASH POND NO. 2



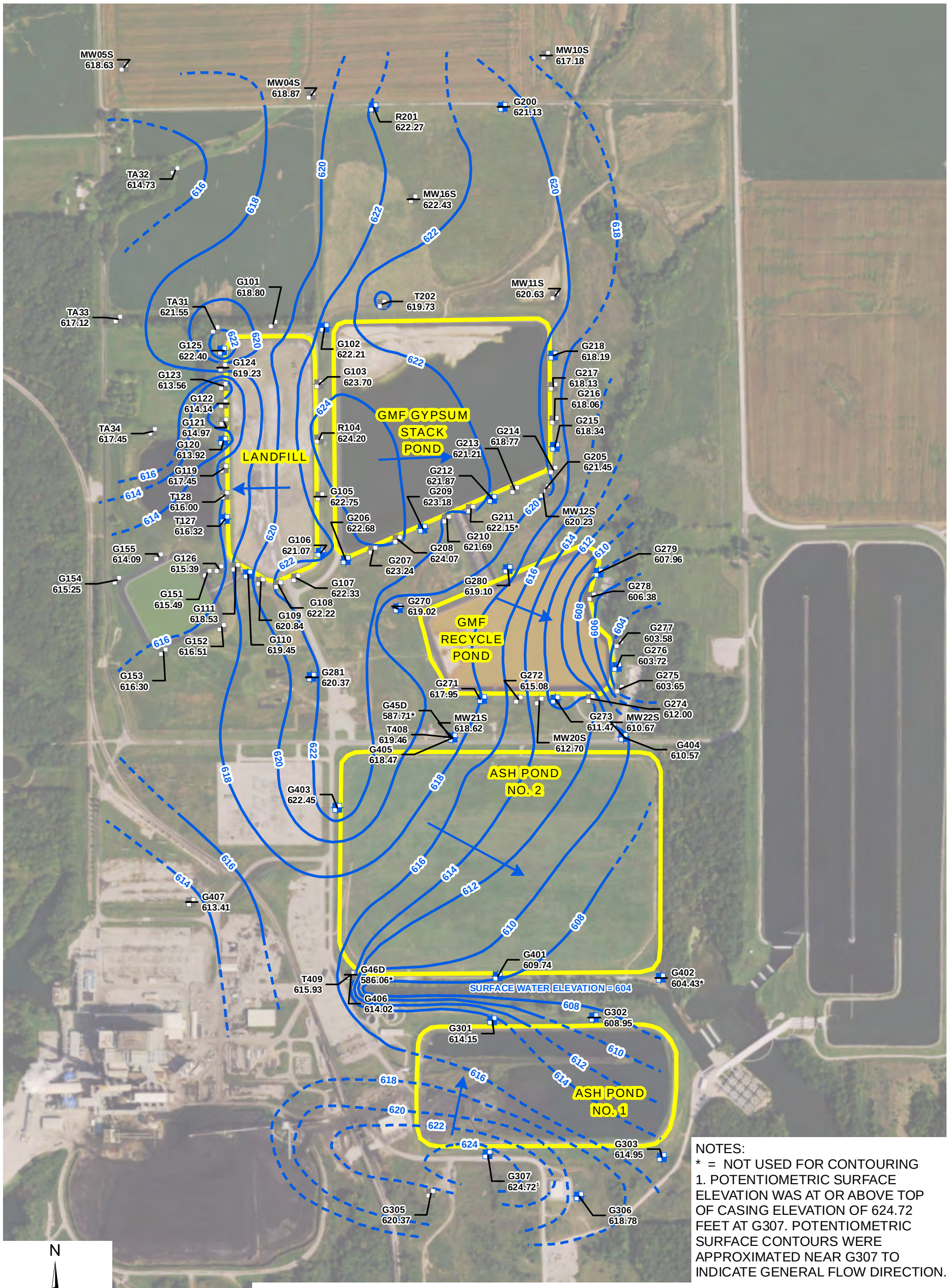
DRAWN BY/DATE:
SDS 3/3/17
REVIEWED BY/DATE:
TBN 3/3/17
APPROVED BY/DATE:
JJW 8/30/17

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105) UPPERMOST AQUIFER UNIT GROUNDWATER ELEVATION CONTOUR MAP
ROUND 5: NOVEMBER 12, 2016
DYNEGY CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

PROJECT NO: 2285

FIGURE NO: 1

Natural Resource Technology
AN OBG COMPANY



NOTES:
* = NOT USED FOR CONTOURING
1. POTENTIOMETRIC SURFACE ELEVATION WAS AT OR ABOVE TOP OF CASING ELEVATION OF 624.72 FEET AT G307. POTENTIOMETRIC SURFACE CONTOURS WERE APPROXIMATED NEAR G307 TO INDICATE GENERAL FLOW DIRECTION.

N

0 300 600

SCALE IN FEET

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- CCR MONITORED UNIT
- POTENTIOMETRIC SURFACE CONTOUR
- INFERRED POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

DRAWN BY/DATE:
SDS 4/14/17
REVIEWED BY/DATE:
TBN 4/14/17
APPROVED BY/DATE:
JJW 8/30/17

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105) UPPERMOST AQUIFER UNIT GROUNDWATER ELEVATION CONTOUR MAP
ROUND 6: FEBRUARY 4, 2017
DYNEGY CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

PROJECT NO: 2285

FIGURE NO: 1

Natural Resource Technology
AN OBG COMPANY

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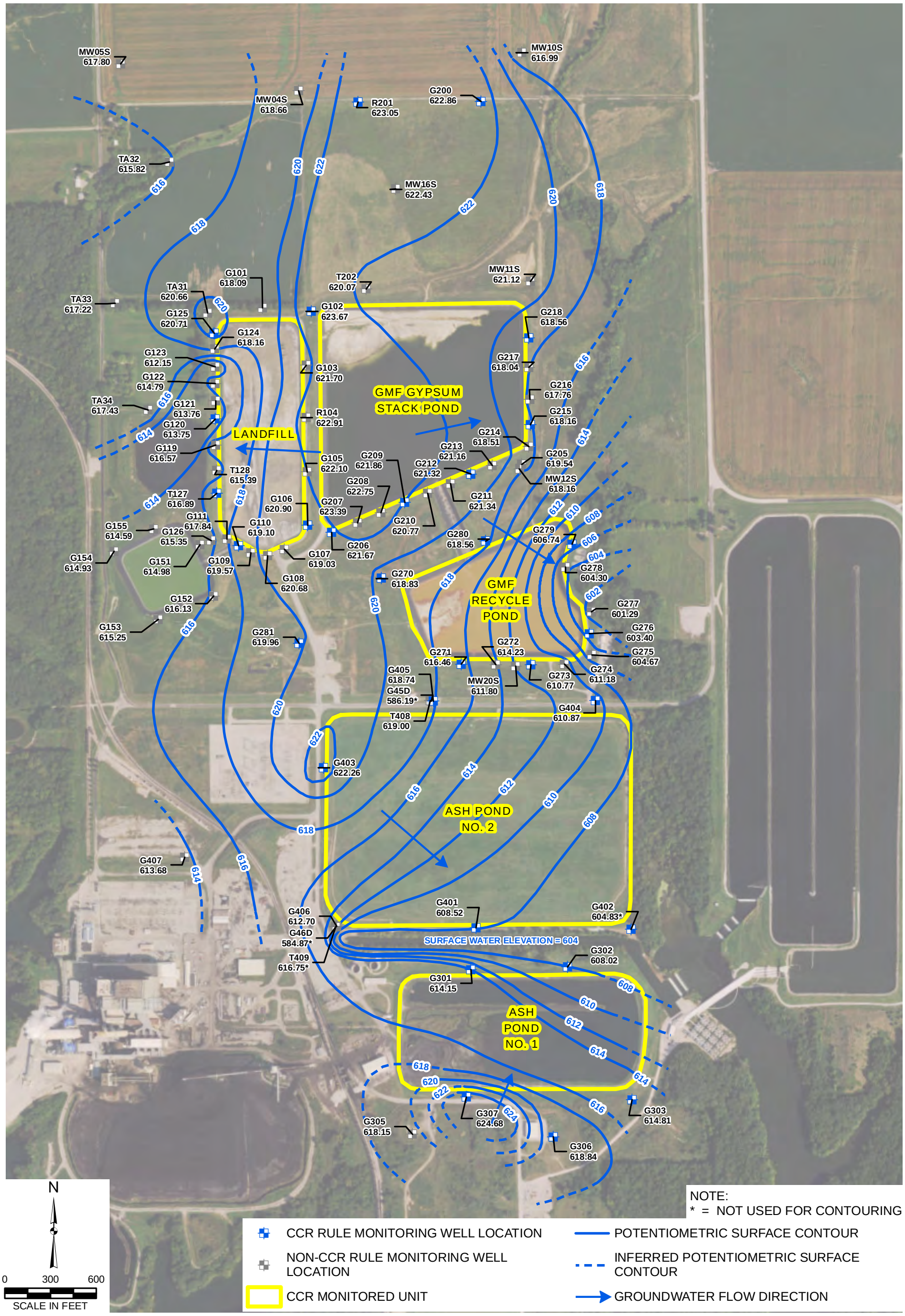

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REVIEWED BY/DATE:
TBN 7/12/17
APPROVED BY/DATE:
JJW 8/30/17

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105) UPPERMOST AQUIFER UNIT GROUNDWATER ELEVATION CONTOUR MAP
ROUND 7: MAY 13, 2017
DYNEGY CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

PROJECT NO: 2285

FIGURE NO: 1

Natural Resource Technology
AN OBG COMPANY

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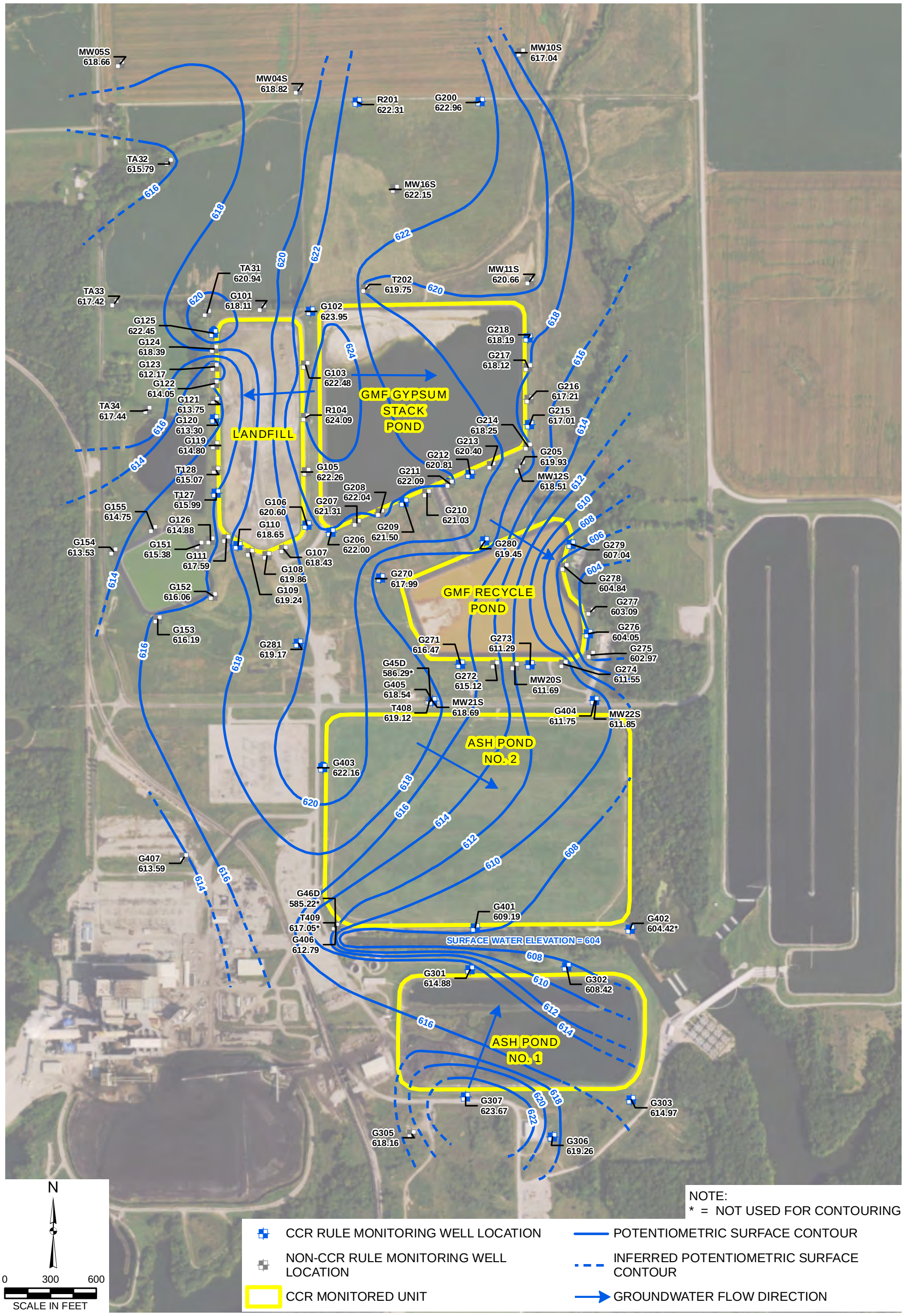

N

0 300 600

SCALE IN FEET

NOTE:
* = NOT USED FOR CONTOURING

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- CCR MONITORED UNIT
- POTENTIOMETRIC SURFACE CONTOUR
- INFERRED POTENTIOMETRIC SURFACE CONTOUR
- GROUNDWATER FLOW DIRECTION

DRAWN BY/DATE:
SDS 8/12/17
REVIEWED BY/DATE:
TBN 8/10/17
APPROVED BY/DATE:
JJW 8/30/17

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105) UPPERMOST AQUIFER UNIT GROUNDWATER ELEVATION CONTOUR MAP
ROUND 8: JULY 8, 2017
DYNEGY CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

PROJECT NO: 2285

FIGURE NO: 1

Natural Resource Technology
AN OBG COMPANY

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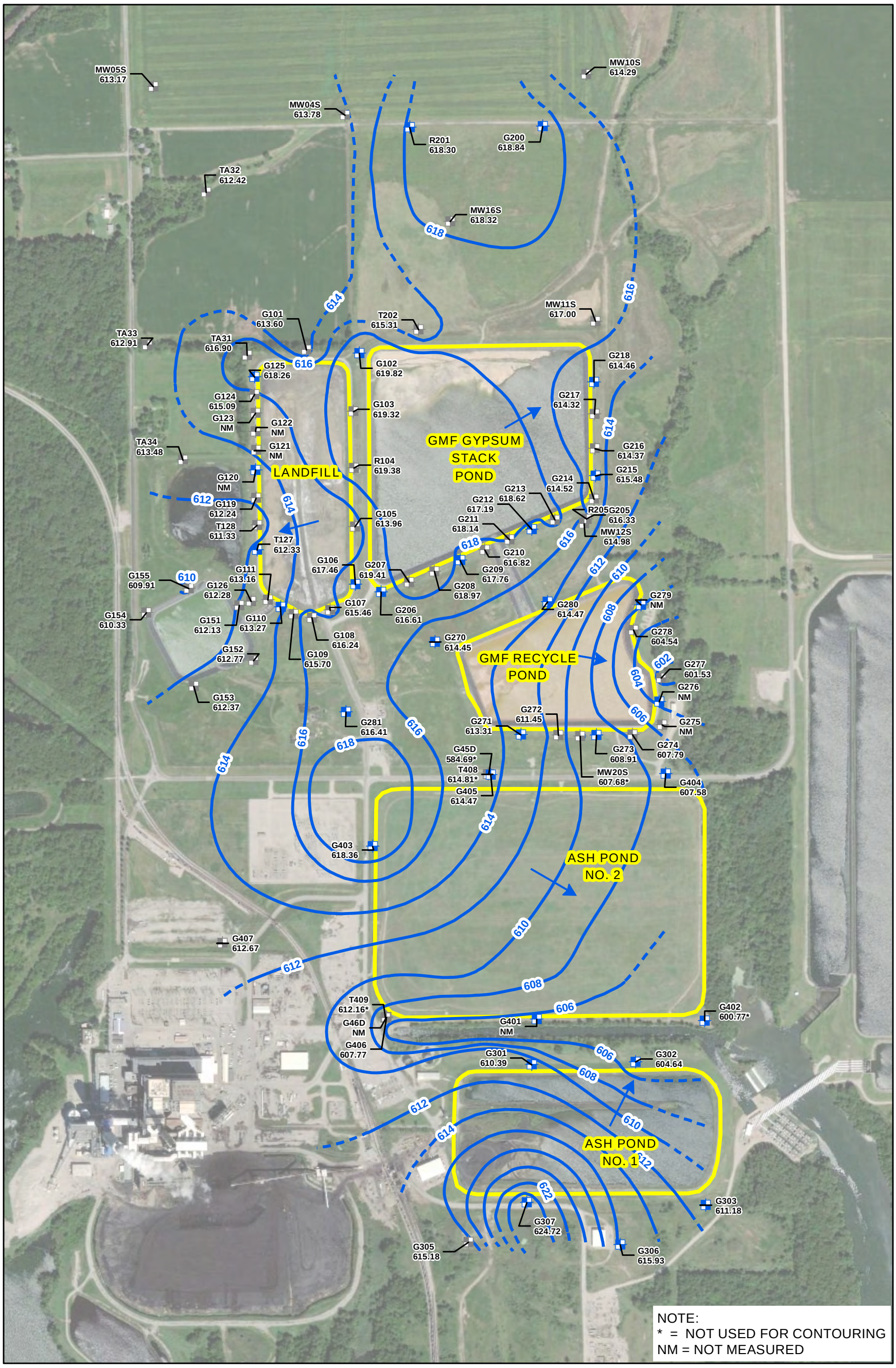

LEGEND

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- CCR MONITORED UNIT

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105)
GROUNDWATER ELEVATION CONTOUR MAP
OCTOBER 21, 2017

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

0 150 300 600
Feet

N

FILE_NO. 70099
DATE 8/1/2018

O'BRIEN & GERE ENGINEERS, INC.

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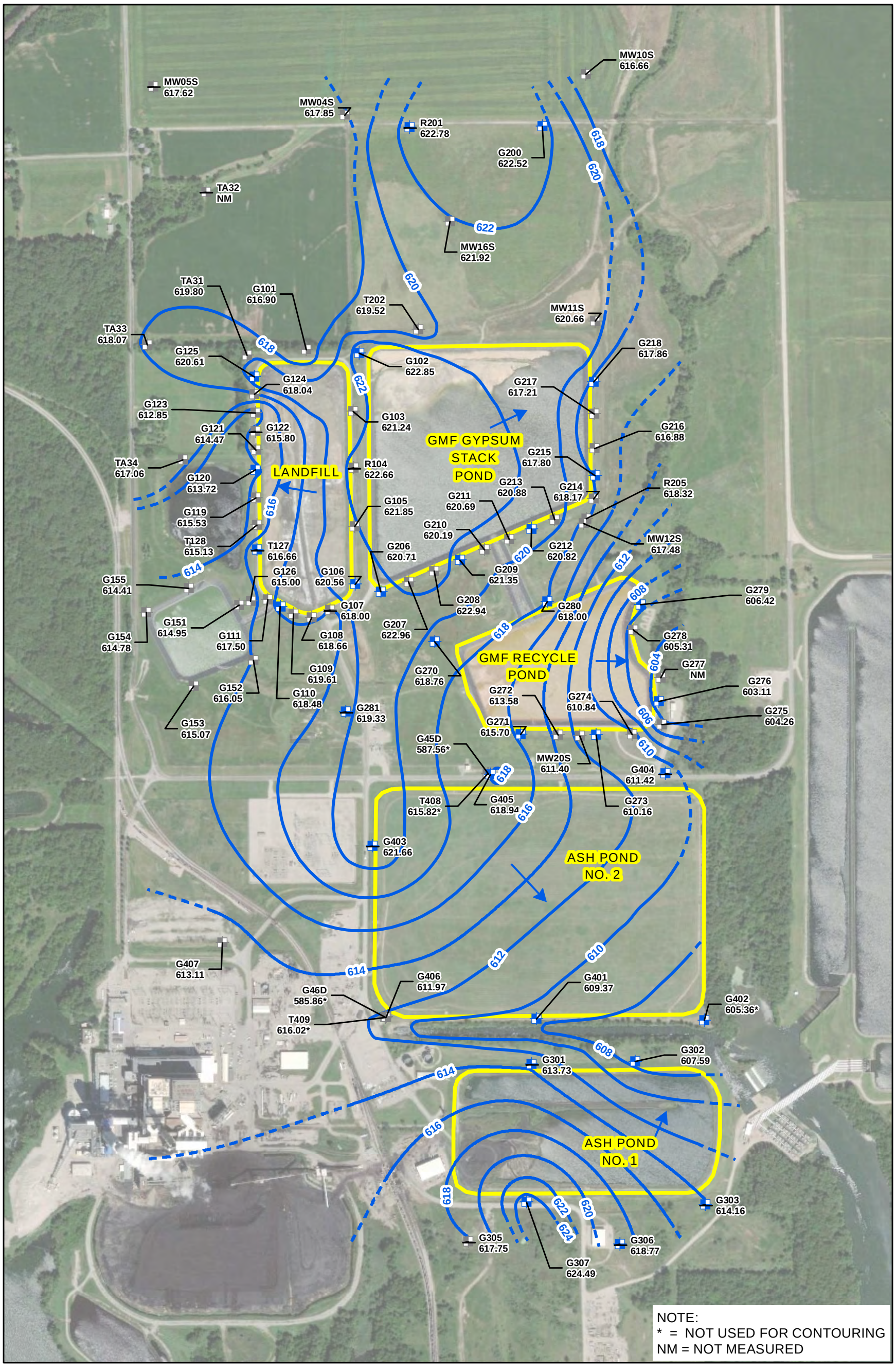

LEGEND

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- CCR MONITORED UNIT

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105)
GROUNDWATER ELEVATION CONTOUR MAP
MAY 8, 2018

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

0 150 300 600
Feet

N

FILE_NO. 70099
DATE 8/1/2018

O'BRIEN & GERE ENGINEERS, INC.

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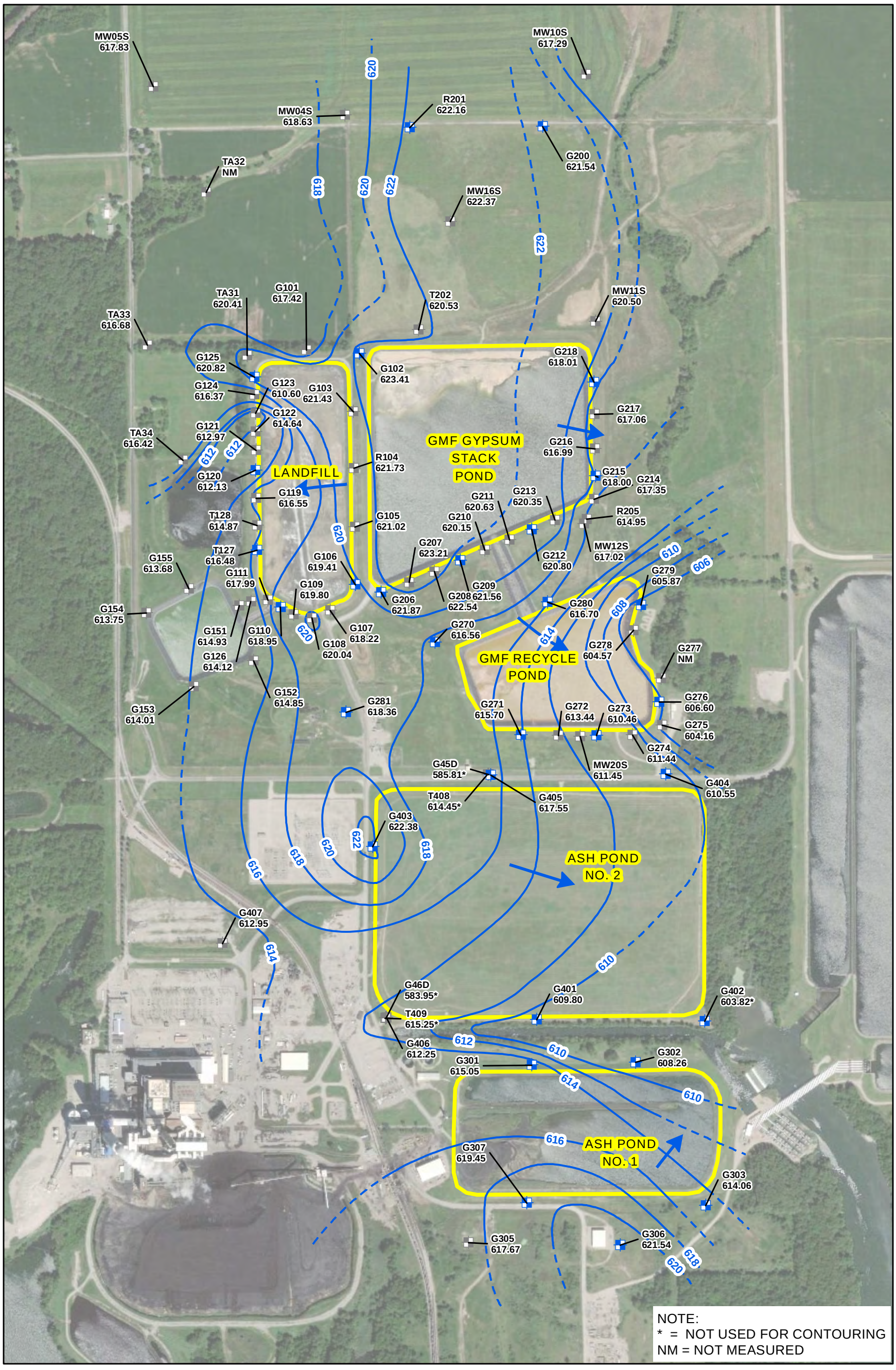

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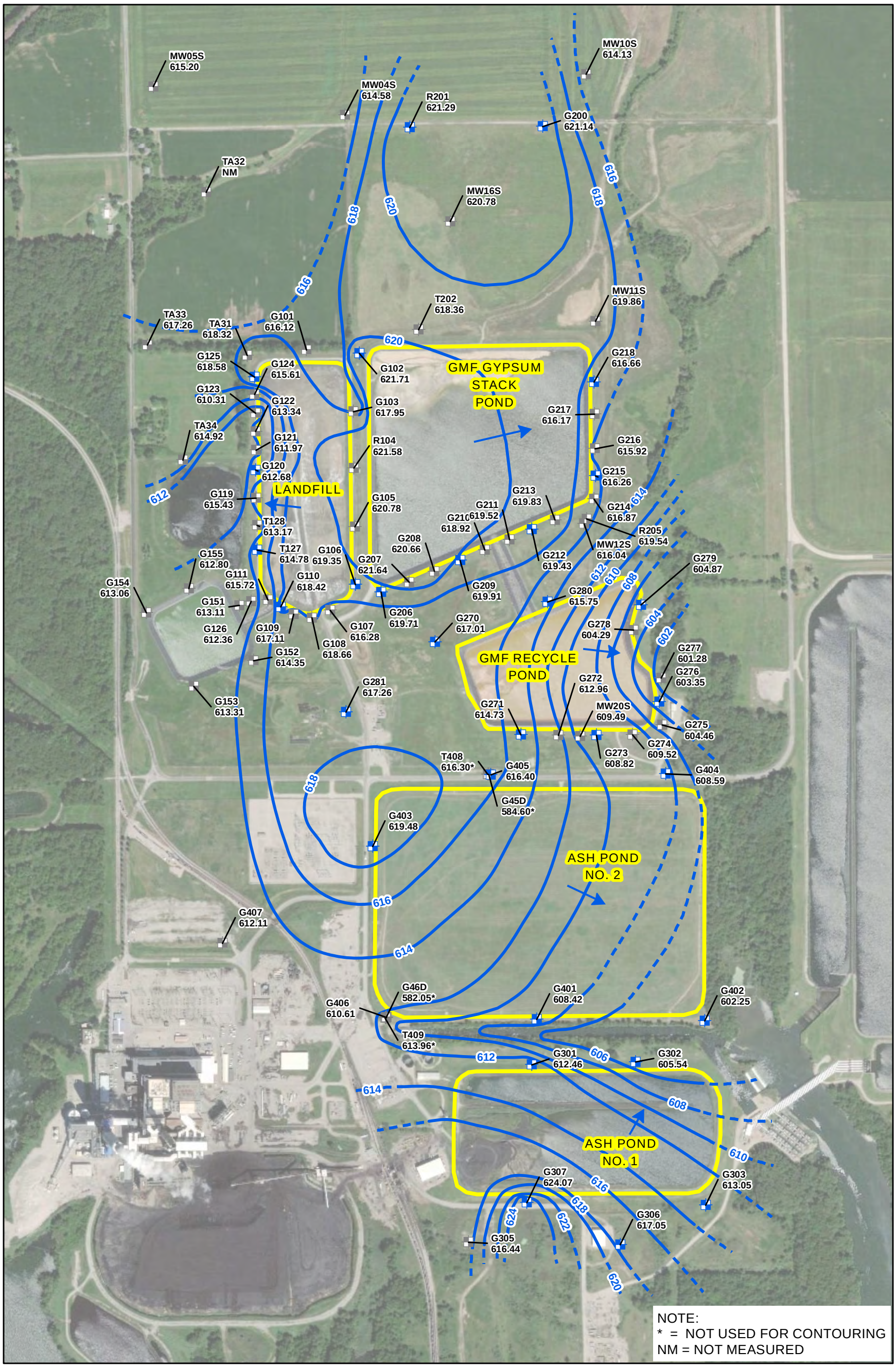

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LEGEND

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- CCR MONITORED UNIT

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105)
GROUNDWATER ELEVATION CONTOUR MAP
OCTOBER 23, 2018

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

0 150 300 600
Feet

N

O'BRIEN & GERE ENGINEERS, INC.

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MW05S 615.78
MW04S 614.79
R201 622.17
MW10S 614.62
G200 621.98
TA32 --
MW16S 621.50
MW11S 620.19
T202 618.69
TA31 619.21
G101 617.08
TA33 617.66
G125 619.01
G102 622.00
G218 617.21
G124 616.37
G123 612.58
G103 620.82
G217 617.10
G122 612.94
G121 611.93
R104 622.43
G216 616.96
TA34 615.85
LANDFILL
GMF GYPSUM STACK POND
G215 618.03
G213 620.81
G211 620.22
G214 618.57
G120 612.87
G119 616.00
G210 620.82
R205 619.54
T128 613.94
G105 621.22
MW12S 616.79
T127 615.13
G106 621.63
G207 620.30
G212 621.13
G111 617.03
G209 621.80
G279 606.79
G155 613.56
G126 612.83
G110 619.96
G208 622.28
G280 616.24
G154 613.66
G151 613.93
G206 618.82
G107 618.23
G278 605.40
G109 618.20
G108 620.52
G270 618.46
GMF RECYCLE POND
G277 603.38
G153 614.36
G152 614.59
G281 618.19
G276 604.00
G271 617.40
MW20S 610.15
G275 605.91
G274 611.23
T408 617.01*
G45D 586.96*
G272 615.43
G273 610.28
G404 608.98
G405 616.81
G403 620.51
ASH POND NO. 2
G407 612.31
G406 611.86
G401 608.36
G402 602.37
G46D 583.17*
T409 614.78*
G301 613.23
G302 607.29
ASH POND NO. 1
G303 614.33
G305 616.83
G307 624.43
G306 618.37

NOTE:
* = NOT USED FOR CONTOURING
NM = NOT MEASURED

- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- CCR MONITORED UNIT

COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105)
GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 15, 2019

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

0 150 300 600
Feet

N

O'BRIEN & GERE ENGINEERS, INC.

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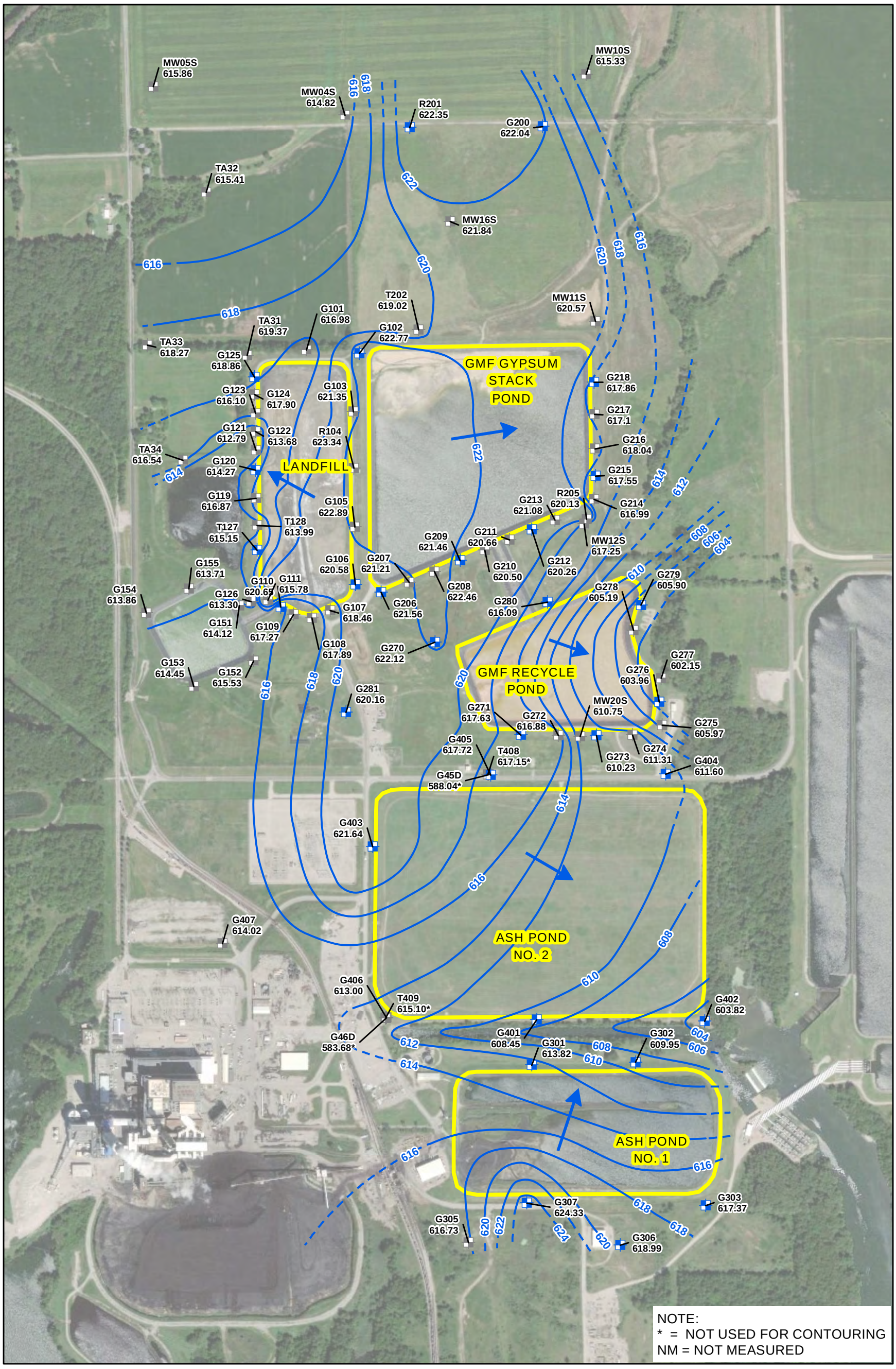

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CCR RULE MONITORING WELL LOCATION

NON-CCR RULE MONITORING WELL LOCATION

GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)

INFERRED GROUNDWATER ELEVATION CONTOUR

GROUNDWATER FLOW DIRECTION

CCR MONITORED UNIT

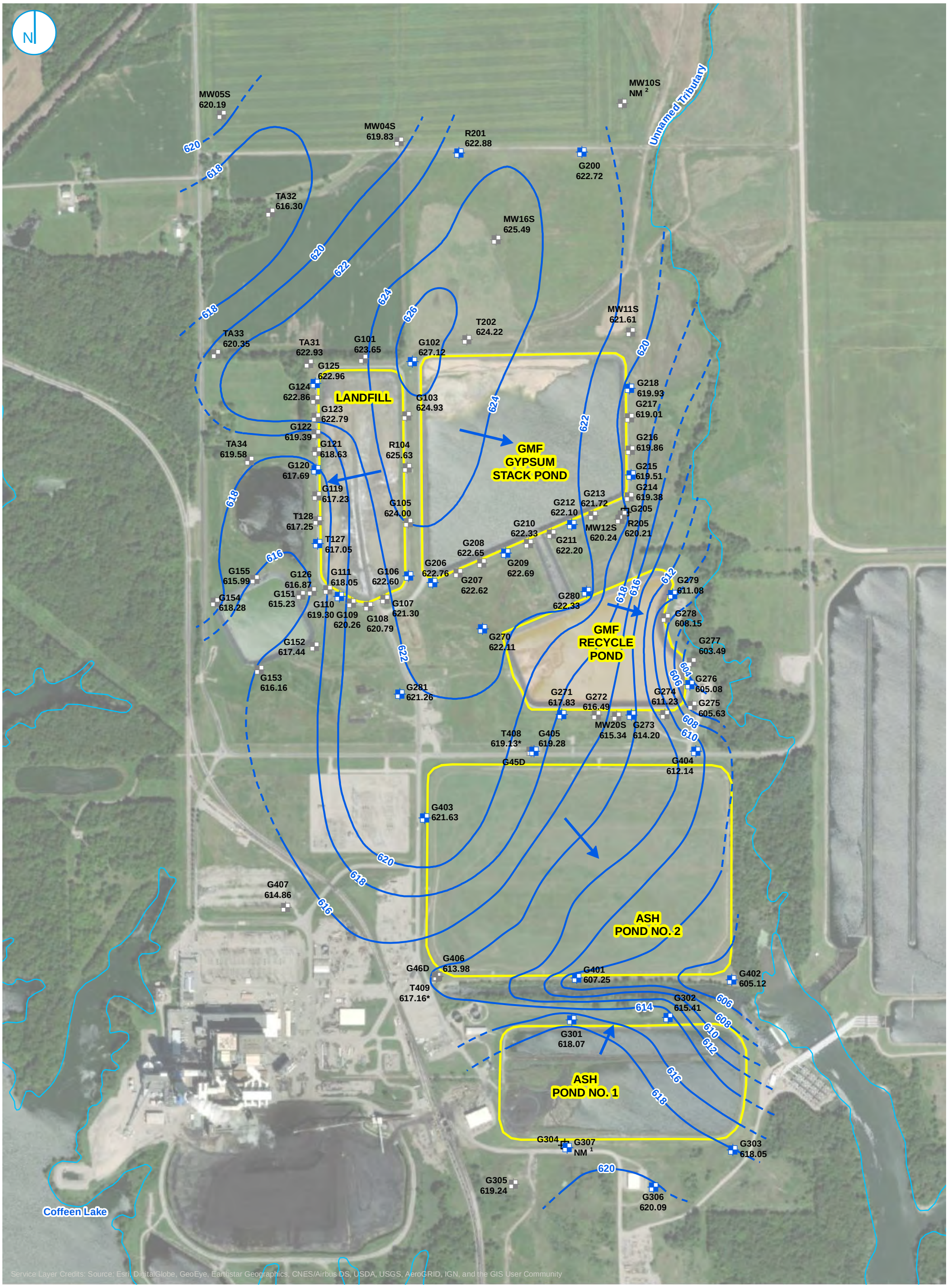
COFFEEN ASH POND NO. 1 (UNIT ID: 101), COFFEEN ASH POND NO. 2 (UNIT ID: 102), COFFEEN GMF GYPSUM STACK POND (UNIT ID: 103), COFFEEN GMF RECYCLE POND (UNIT ID: 104) AND COFFEEN LANDFILL (UNIT ID: 105)
GROUNDWATER ELEVATION CONTOUR MAP
AUGUST 5, 2019

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

0 150 300 600
Feet

N

O'BRIEN & GERE ENGINEERS, INC.



- CCR RULE MONITORING WELL LOCATION
- NON-CCR RULE MONITORING WELL LOCATION
- ABANDONED MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- CCR UNIT BOUNDARY
- SURFACE WATER FEATURE

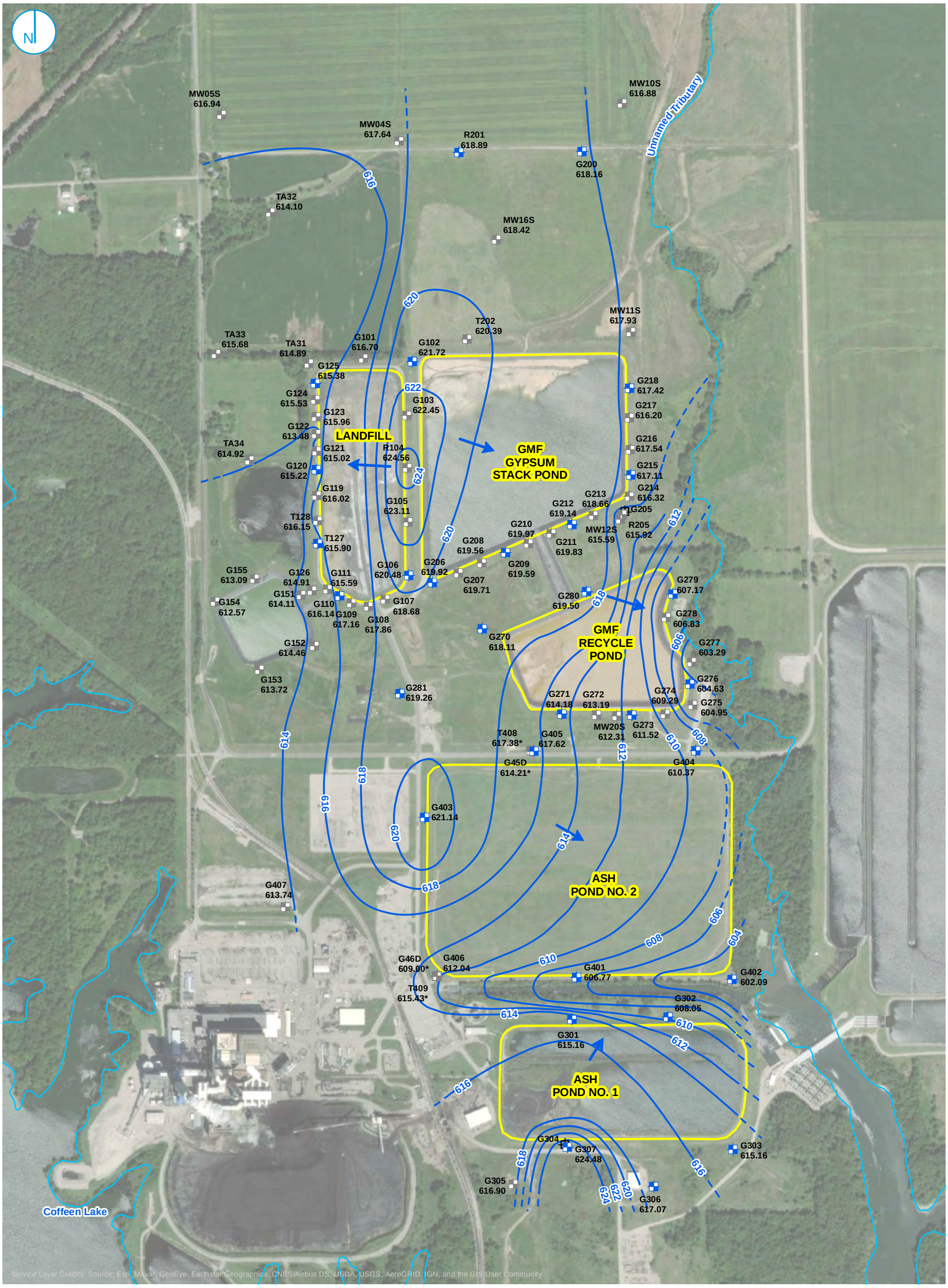
NOTE:
* = NOT USED FOR CONTOURING
NM = NOT MEASURED
[1] G307 WAS FROZEN DURING THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED.
[2] MW10S WAS DAMAGED PRIOR TO THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED.

0 300 600 Feet

GROUNDWATER ELEVATION CONTOUR MAP JANUARY 20, 2020

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

RAMBOLL US CORPORATION
A RAMBOLL COMPANY



CCR RULE MONITORING WELL LOCATION
NON-CCR RULE MONITORING WELL LOCATION
ABANDONED MONITORING WELL
GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION

CCR UNIT BOUNDARY
SURFACE WATER FEATURE

0 300 600 Feet

NOTE:
* = NOT USED FOR CONTOURING
NM = NOT MEASURED
[1] G307 WAS FROZEN DURING THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED.
[2] MW10S WAS DAMAGED PRIOR TO THE JANUARY 20, 2020 SAMPLING EVENT AND WATER LEVEL COULD NOT BE COLLECTED.

GROUNDWATER ELEVATION CONTOUR MAP AUGUST 10, 2020

CCR RULE GROUNDWATER MONITORING
COFFEEN POWER STATION
COFFEEN, ILLINOIS

RAMBOLL US CORPORATION
A RAMBOLL COMPANY

PROJECT: 169000XXXX | DATED: 2/21/2022 | DESIGNER: galarnmc

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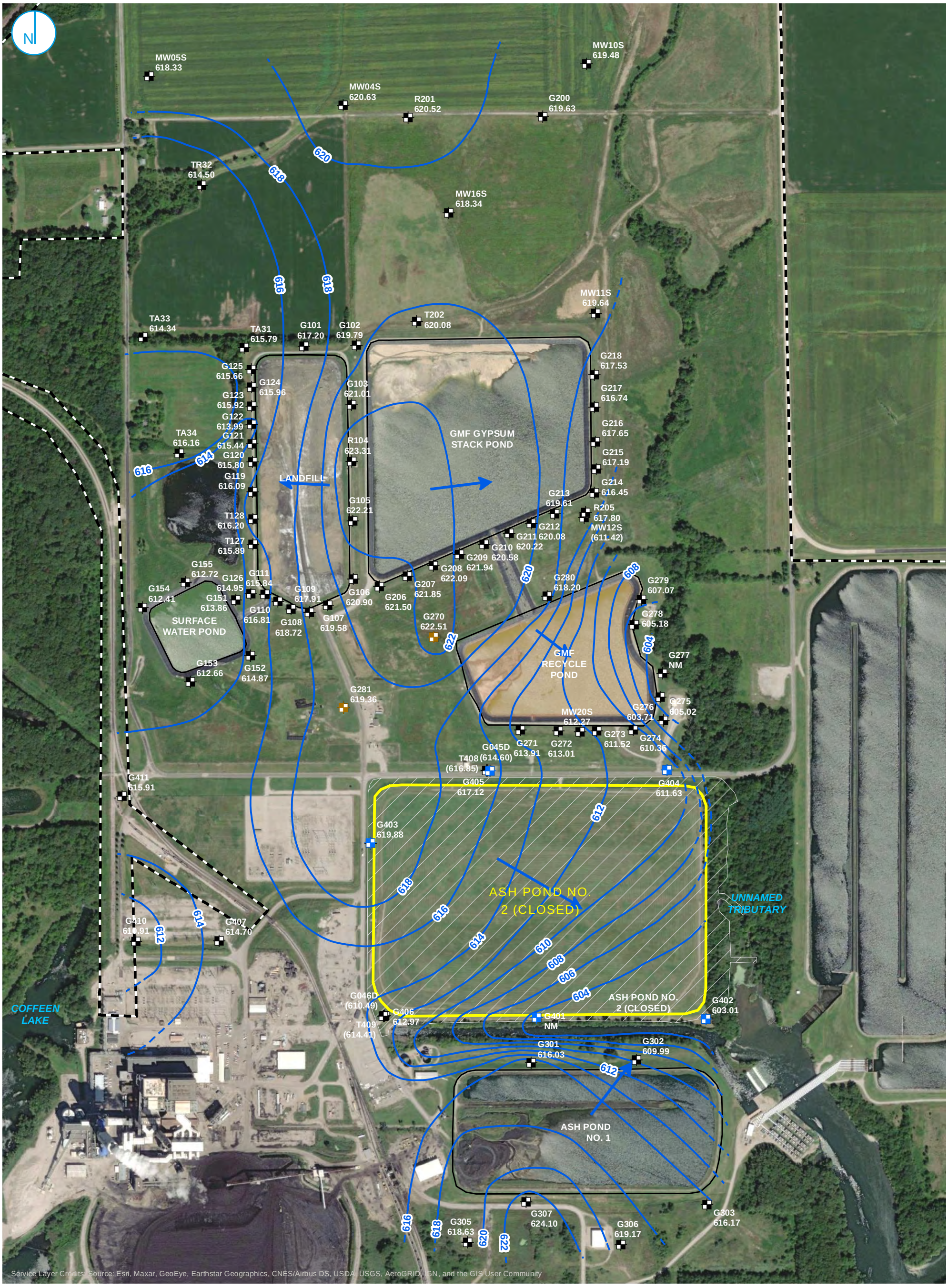


- BACKGROUND WELL
- COMPLIANCE WELL
- MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PART 257 REGULATED UNIT (SUBJECT UNIT)
- SITE FEATURE
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY

0 275 550 Feet

NOTE:

ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.

NM = NOT MEASURED

POTENTIOMETRIC SURFACE MAP JANUARY 20, 2021

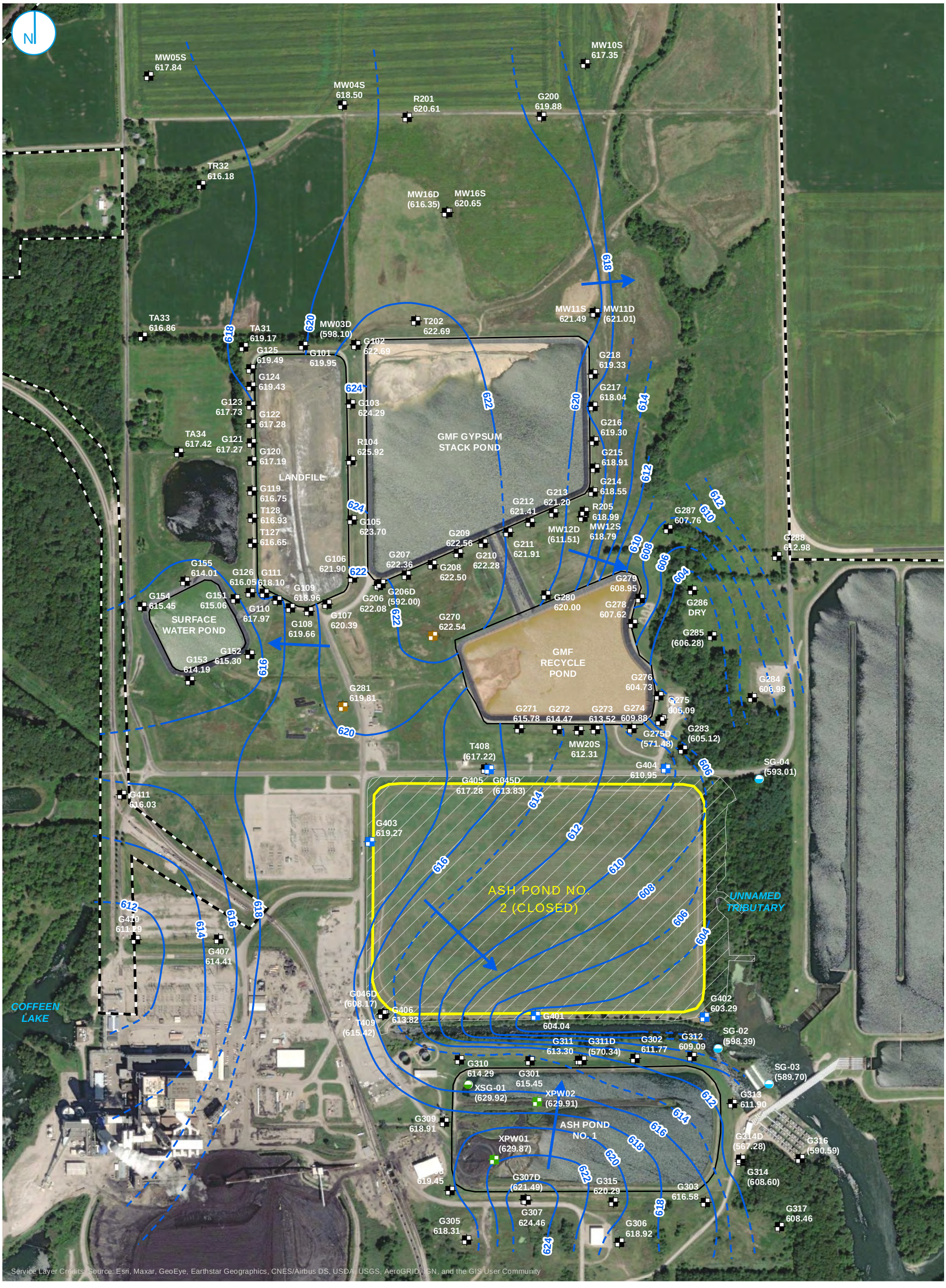
2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO.2

COFFEEN POWER PLANT

COFFEEN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL



Service Layer Credits: Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

BACKGROUND WELL
COMPLIANCE WELL
PORE WATER WELL
MONITORING WELL
STAFF GAGE, CCR UNIT
STAFF GAGE, RIVER

GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
PART 257 REGULATED UNIT (SUBJECT UNIT)
SITE FEATURE
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

0 275 550 Feet

NOTE:
ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
NM = NOT MEASURED

POTENTIOMETRIC SURFACE MAP AUGUST 16, 2021

2021 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO.2

COFFEEN POWER PLANT
COFFEEN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 5/23/2022 | DESIGNER: galarnmc

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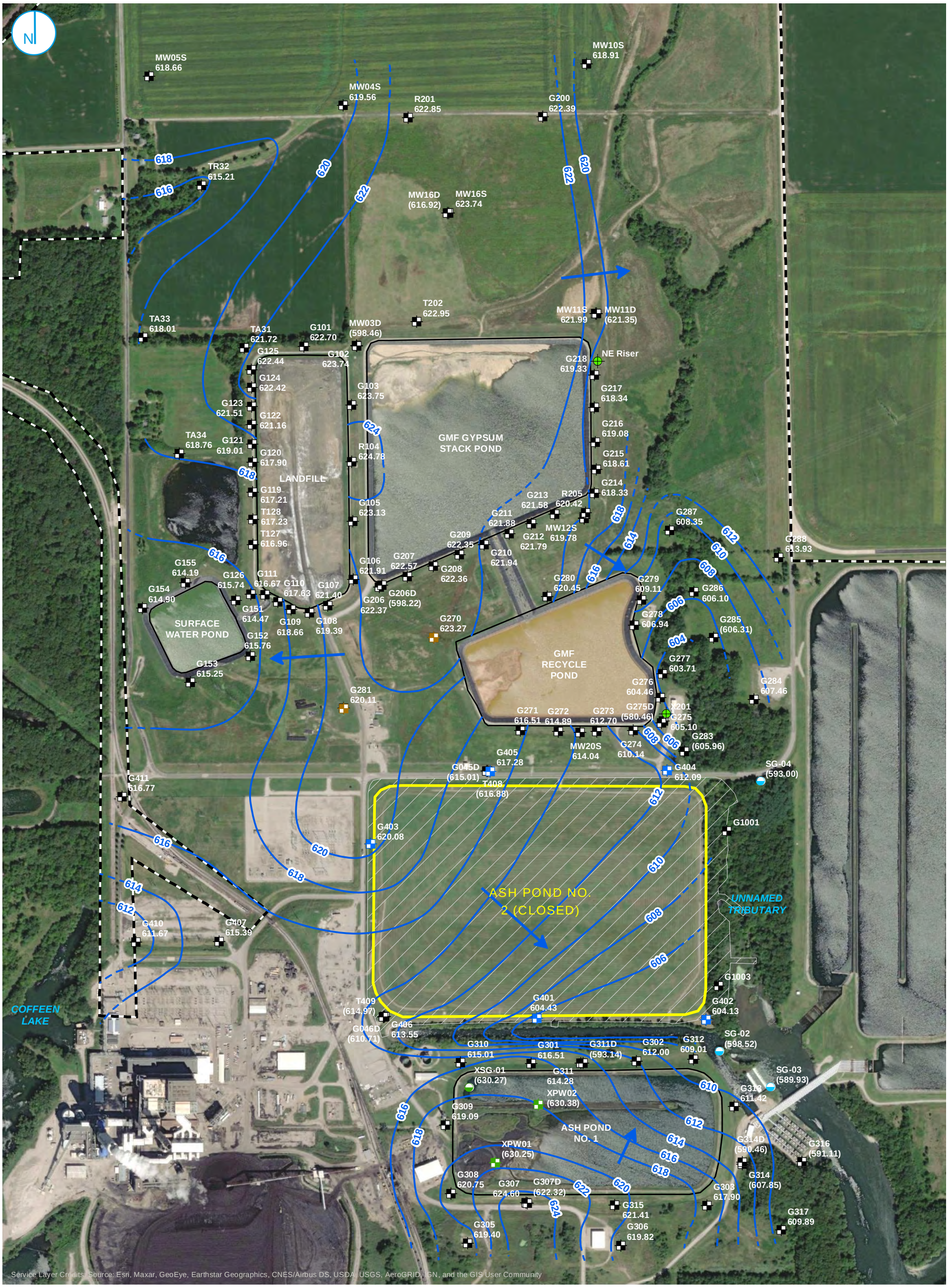

- BACKGROUND WELL
- COMPLIANCE WELL
- PORE WATER WELL
- LEACHATE WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER
- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- PART 257 REGULATED UNIT (SUBJECT UNIT)
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY

0 275 550 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

POTENTIOMETRIC SURFACE MAP FEBRUARY 7, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO. 2

COFFEEN POWER PLANT
COFFEEN, ILLINOIS

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 12/8/2022 | DESIGNER: galarnmc

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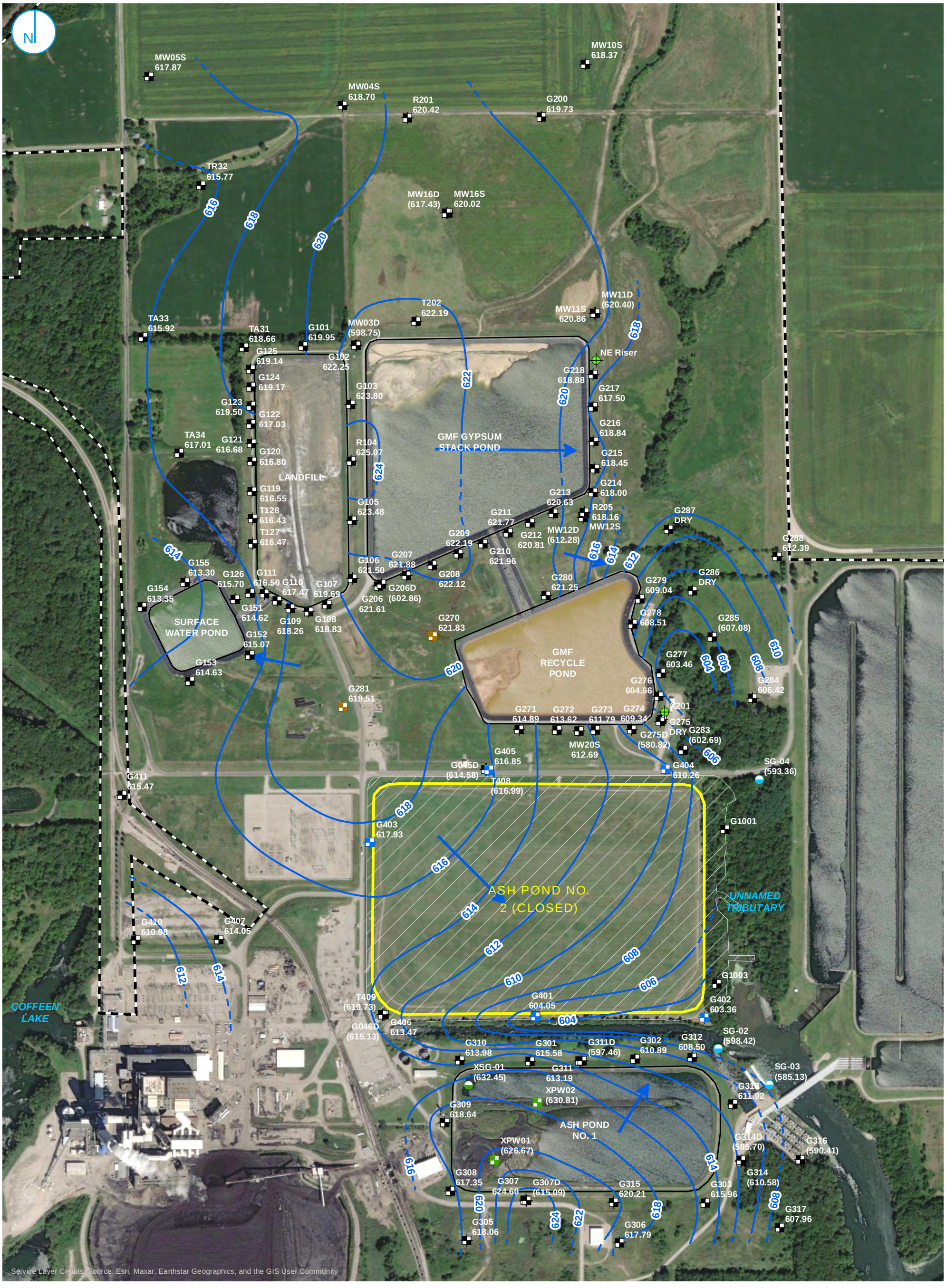

BACKGROUND WELL
COMPLIANCE WELL
PORE WATER WELL
LEACHATE WELL
MONITORING WELL
STAFF GAGE, CCR UNIT
STAFF GAGE, RIVER

GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
INFERRED GROUNDWATER ELEVATION CONTOUR
GROUNDWATER FLOW DIRECTION
PART 257 REGULATED UNIT (SUBJECT UNIT)
SITE FEATURE
LIMITS OF FINAL COVER
PROPERTY BOUNDARY

0 275 550 Feet

NOTES:

1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

POTENTIOMETRIC SURFACE MAP AUGUST 23, 2022

2022 ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT ASH POND NO. 2

COFFEEN POWER PLANT
COFFEEN, ILLINOIS

RAMBOLL AMERICAS ENGINEERING SOLUTIONS, INC.

RAMBOLL

PROJECT: 169000XXXX | DATED: 11/15/2023 | DESIGNER: egreaves

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- COMPLIANCE MONITORING WELL
- BACKGROUND MONITORING WELL
- SOURCE SAMPLE LOCATION
- PORE WATER WELL
- LEACHATE WELL
- MONITORING WELL
- STAFF GAGE, CCR UNIT
- STAFF GAGE, RIVER

- GROUNDWATER ELEVATION CONTOUR (2-FT CONTOUR INTERVAL, NAVD88)
- INFERRED GROUNDWATER ELEVATION CONTOUR
- GROUNDWATER FLOW DIRECTION
- LIMITS OF FINAL COVER
- PROPERTY BOUNDARY
- REGULATED UNIT (SUBJECT UNIT)

POTENTIOMETRIC SURFACE MAP
MAY 30, 2023

0 325 650 Feet

NOTES:
1. ELEVATIONS IN PARENTHESES WERE NOT USED FOR CONTOURING.
2. ELEVATION CONTOURS SHOWN IN FEET, NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88)

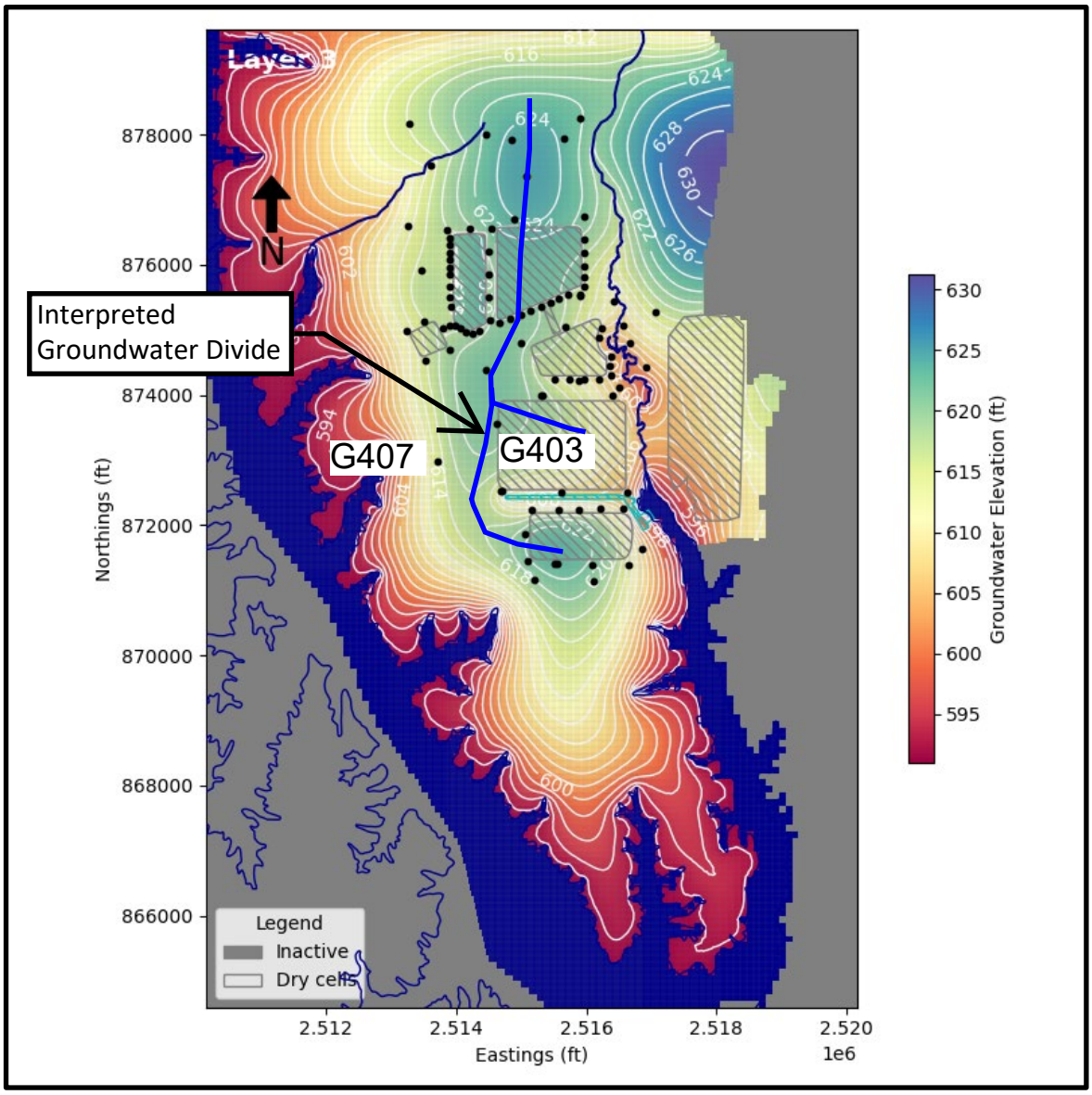
ASH POND NO. 2
COFFEEN POWER PLANT
COFFEEN, ILLINOIS

RAMBOLL AMERICAS
ENGINEERING SOLUTIONS, INC.

RAMBOLL

ATTACHMENT 4

Coffeen Power Plant Groundwater Model Output



SIMULATED STEADY STATE GROUNDWATER LEVEL CONTOURS FROM UA (LAYER 3) FROM THE CALIBRATED MODEL

GROUNDWATER MODELING REPORT
ASH POND NO. 1
COFFEEN POWER PLANT
COFFEEN, ILLINOIS

RAMBOLL