Second Semiannual Report on the Progress of Remedy Selection

TVA Cumberland Fossil Plant, CCR Units, Cumberland City, Stewart County, Tennessee

July 15, 2020

Prepared for:

Tennessee Valley Authority
Chattanooga, Tennessee

Prepared by:

Stantec Consulting Services Inc.

1.0 Introduction

In accordance with 40 CFR § 257.97(a), the Tennessee Valley Authority (TVA) has prepared this second semiannual report to document progress toward remedy selection and design at the Bottom Ash Pond, Gypsum Storage Area, and Dry Ash Stack coal combustion residuals (CCR) units at the Cumberland Fossil Plant (CUF) in Cumberland City, Stewart County, Tennessee. The Bottom Ash Pond, Dry Ash Stack, and the Gypsum Storage Area are referred to as the CCR Units for purposes of this report. These CCR Units share a common, multiunit groundwater monitoring well network.

1.1 Regulatory Background

On April 17, 2015, the United States Environmental Protection Agency (U.S. EPA) published a rule that sets forth national criteria for the management of CCR produced by electric utilities. The requirements can be found in Title 40, Code of Federal Regulations (CFR) Part 257, Subpart D. The rule includes requirements for monitoring groundwater and assessing corrective measures if constituents listed in Appendix IV of the rule are detected in groundwater samples collected from downgradient monitoring wells at statistically significant levels (SSLs) greater than established groundwater protection standards (GWPS).

In January 2019, TVA completed an evaluation of whether there were SSLs over established GWPS as defined in 40 CFR § 257.95(h) for one or more Appendix IV constituents in accordance with 40 CFR § 257.95(g). At the CUF CCR Units, assessment monitoring in 2018 detected SSLs greater than the GWPS for cobalt and lithium at monitoring wells CUF-212 and 93-3, respectively. Since this time, TVA has updated the statistical analysis.

- In late 2019, TVA recalculated the statistical analysis after incorporating additional groundwater monitoring data from the second assessment monitoring event. The same SSLs were observed at the same monitoring wells as previously identified; however, a new SSL for cobalt at monitoring well CUF-211[1] was also observed in late-2019.

- In mid-2020, TVA updated the statistical analysis after incorporating results from the second assessment monitoring retest event from 2019, and the first semiannual groundwater monitoring event and retest event in 2020. The same SSLs were observed at the same monitoring wells as previously identified; however, the SSL for cobalt at monitoring well CUF-211 observed in late-2019 was not observed in mid-2020. An SSL for molybdenum was observed at monitoring well CUF-209[2] that was not previously observed in 2018 or 2019.

As of the date of this report, TVA has not completed a demonstration that a source other than the CCR Units associated with wells CUF-211, CUF-212 and 93-3 caused the SSLs, as allowed under 40 CFR § 257.95(g)(3)(ii).

[1] Cobalt concentrations at monitoring well CUF-211 are delineated horizontally by monitoring wells 93-2R to the southeast and CUF-209 to the northwest. The potential remedial technologies to address the SSLs observed at monitoring wells CUF-212, and 93-3 presented in the Assessment of Corrective Measures Report (Stantec, 2019) also apply to the SSL periodically observed for cobalt at monitoring well CUF-211.

[2] Molybdenum concentrations at monitoring well CUF-209 are delineated horizontally by monitoring wells CUF-211 to the southeast and CUF-208 to the north. The potential remedial technologies to address the SSLs observed at monitoring wells CUF-212, and 93-3 presented in the Assessment of Corrective Measures Report (Stantec, 2019) also apply to the new SSL for molybdenum at monitoring well CUF-209.

In accordance with 40 CFR § 257.96(a), TVA prepared the 2019 Assessment of Corrective Measures (ACM) Report for the CCR Units at CUF, placed it in the facility operating record on July 15, 2019, and uploaded it to the TVA CCR Rule Compliance Data and Information website on August 14, 2019. The ACM Report provided an assessment of the effectiveness of potential corrective measures in achieving the criteria provided in 40 CFR § 257.96(c).

Following preparation of the ACM Report, TVA began the remedy selection process. Semiannual reports are required pursuant to 40 CFR § 257.97(a) to document progress toward remedy selection and design. The CCR Rule contemplates that more investigation and consideration may be needed to evaluate and design the remedy before making the final selection. TVA placed the first Semiannual Report on the Progress of Remedy Selection into the facility operating record on January 15, 2020 pursuant to 40 CFR § 257.97(a) and § 257.105(h)(12). TVA provided notification of the availability of the semiannual report describing the progress in selecting and designing the remedy and placed it on the TVA CCR Rule Compliance Data and Information website on February 14, 2020 in accordance with 40 CFR § 257.106(h)(9) and § 257.107(h)(9). TVA will continue to review new data as it becomes available and implement changes to the groundwater monitoring and corrective action program as necessary to maintain compliance with 40 CFR § 257.90 through § 257.98.

At least 30 days prior to final groundwater remedy selection pursuant to the CCR Rule, a public meeting will be held with interested and affected parties to discuss the results of the corrective measures assessment in accordance with 40 CFR § 257.96(e). The selected remedy must meet the requirements of 40 CFR § 257.97(b) and must consider the evaluation factors set forth in 40 CFR § 257.97(c). Once a final remedy is chosen, a final report describing the remedy and how it meets the standards set forth in 40 CFR § 257.97(b) will be prepared. The owner/operator must provide a schedule for implementing the selected remedy that considers the factors set forth in 40 CFR § 257.97(d).

1.2 Summary of State Required Investigation and Remedy Selection Process

TVA is currently conducting environmental investigations of the CCR disposal areas at CUF, including the CCR Units, under the oversight of the Tennessee Department of Environment and Conservation (TDEC) through the TDEC Commissioner's Order, OGC 15-0177 (TDEC Order), issued on August 6, 2015. Once the environmental investigation (EI) is complete, TVA will submit environmental assessment reports (EARs) that provide an analysis of the extent of CCR contamination, including groundwater contamination, at CUF to TDEC for approval. Then, as part of the TDEC Order process, TVA will submit Corrective Action/Risk Assessment (CARA) Plans that specify actions that TVA plans to take at a site, including corrective measures for groundwater remediation, to TDEC for approval. TDEC must approve the CARA Plans, including the CCR Unit closure methodologies, selected final remedy(s) and corrective measures for groundwater remediation. The TDEC Order process includes a public comment period for the public to provide comments on the CARA Plans.

1.3 Report Contents

This second semiannual progress report provides a summary of CUF site characteristics, the groundwater assessment monitoring program, the findings of the ACM process, and the current progress of selecting and designing a final remedy for the statistically significant GWPS exceedances.

2.0 Site Background and Characteristics

CUF is located in Cumberland City, Stewart County, Tennessee. The facility lies on the south bank of Cumberland River and adjacent to Wells Creek. **Figure 1** shows an overview map of CUF including the CCR Units. Construction of CUF began in 1968 and operations commenced in 1972. CUF currently continues to operate as a coal-fired power generation facility. The coal combustion process at CUF has resulted in the production of fly ash, bottom ash, and gypsum.

The Bottom Ash Pond, Dry Ash Stack, and the Gypsum Storage Area are referred to as the CCR Units for purposes of this report. These CCR Units share a common, multiunit groundwater monitoring well network. The current area of the Bottom Ash Pond encompasses approximately 5.3 acres, the Dry Ash Stack encompasses approximately 115 acres, and the Gypsum Storage Area encompasses approximately 155 acres. These units are surrounded with perimeter dike systems. Bottom ash is sluiced to the Bottom Ash Pond, reclaimed, and then spread and compacted within the Dry Ash Stack. The Bottom Ash Pond also receives effluent from lined settling channels and a nearby plant that processes gypsum slurry. Effluent from the Bottom Ash Pond is then conveyed to the Stilling Pond. TVA is in the process of constructing a Bottom Ash Dewatering (BADW) System and flue-gas desulfurization (FGD) wastewater treatment plant to process bottom ash and gypsum fines. TVA lined the perimeter of the drainage ditch along the eastern and southern sides of the Gypsum Storage Area and installed piping in the ditch between the Gypsum Storage area and Dry Ash Stack in 2019 and 2020. These activities are expected to reduce potential stormwater infiltration into the CCR Units.

Surplus gypsum material is stored at the Gypsum Storage Area for later use by the wallboard plant adjacent to the site. Smaller particles from a gypsum dewatering process are pumped to TVA's fines dipping area in the corner of the bottom ash pond where they are dipped, allowed to decant and eventually hauled and placed on the gypsum stack in a specified area.

2.1 Conceptual Site Model Summary

The hydrogeologic conceptual site model (CSM) is one of the primary tools that can be used to support decisions on corrective measures. This section of the report provides a summary of the hydrogeologic CSM. The geology and hydrogeology of the CUF site have been characterized during implementation of multiple investigations. These investigations provide an understanding of site geology and the presence of water-bearing zones in which groundwater and potential contaminants would be present and potentially migrating.

CUF is located within the Wells Creek Basin, which is a meteor impact structure. The subsurface geology at CUF is characterized by two hydro-stratigraphic units which include the alluvium and bedrock. The alluvium can be further differentiated into alluvial silts and clays and alluvial sands and gravels. The CUF site overlies eight bedrock formations that primarily consist of limestone, dolomite and shale. The alluvial sand and gravel is considered the upper-most aquifer and groundwater from this hydro-stratigraphic unit is monitored in accordance with 40 CFR § 257.91. A typical cross-section view of the subsurface geology is shown on **Figure 2**. Groundwater flow direction at the CCR Units is generally to the southwest toward Wells Creek. **Figure 3** presents a generalized groundwater flow direction map for CUF.

2.2 Potential Receptor Review

The two largest public water suppliers in Stewart County are the Dover Water Department and the North Stewart Utility District (CDC, 2019). The Dover Water Department withdraws its water from the Cumberland River. The Dover water treatment plant is located approximately 14.4 miles downstream of CUF. The North Stewart Utility District withdraws its water from the Brandon Spring, which is within the Cumberland River and is located approximately 20 miles downstream of CUF. The City of Erin's Water Department provides potable water to Cumberland City. The City of Erin's water supply is sourced from the Cumberland River at its confluence with Yellow Creek (approximately 3.7 miles northeast (upstream) of CUF Plant.

3.0 Groundwater Assessment Monitoring Program

Groundwater assessment monitoring for the CCR Units is conducted at CUF in accordance with 40 CFR § 257.95.

3.1 Groundwater Monitoring Well Network

In compliance with 40 CFR § 257.91, two background wells (CUF-201 and CUF-202) were established and five monitoring wells (CUF-209, CUF-211, 93-2R, CUF-212 and 93-3) were installed downgradient and within the containment dikes of the CCR Units and comprise the multiunit well network for the CCR Units. The locations of these monitoring wells are presented on **Figure 1**.

3.2 Groundwater Characterization

Groundwater assessment monitoring was conducted during 2018 and 2019, and at the time of this report, the first semiannual assessment monitoring event and retest event in 2020 had been conducted. Cobalt, lithium, and molybdenum, Appendix IV constituents, were detected at SSLs above a GWPS. The following summarizes the 2018, 2019, and 2020 Appendix IV SSLs at the CUF CCR Units.

- Cobalt
    - An SSL for cobalt was identified at monitoring well CUF-212 in 2018, 2019 and for the first semiannual assessment monitoring event and retest event in 2020, and at monitoring well CUF-211 in 2019
    - The GWPS for cobalt is 6 µg/L
- Lithium
    - An SSL for lithium was identified at monitoring well 93-3 in 2018, 2019, and for the first semiannual assessment monitoring event and retest event in 2020
    - The GWPS for lithium is 40 µg/L
- Molybdenum
    - An SSL for molybdenum was identified at monitoring well CUF-209 for the first semiannual assessment monitoring event and retest event in 2020; however, this SSL was not identified in 2018 or 2019
    - The GWPS for molybdenum is 100 µg/L

Data from existing CCR network wells have been utilized to characterize the nature and extent of a release from the CCR Units as required by 40 CFR § 257.95(g)(1). The potential treatment zone to address the extent of cobalt, lithium, and molybdenum above GWPS along the unit perimeter is illustrated on **Figure 4**. Under the CCR Rule, work is being performed and additional wells are being installed that will further inform the evaluation and selection of the remedy(s) under 40 CFR § 257.97 (**Figure 5**).

4.0 Assessment of Corrective Measures

TVA prepared the 2019 ACM Report for the CCR Units and placed it in the operating record on July 15, 2019. The report was posted to the TVA CCR Rule Compliance Data and Information website on August 14, 2019. The ACM Report provided an assessment of the effectiveness of potential corrective measures in achieving the criteria provided in 40 CFR § 257.96(c).

4.1 Planned Source Control Measures

The objectives of corrective measures under 40 CFR § 257.96(a) are to "prevent further releases [from the CCR units], to remediate any releases, and to restore affected areas to original conditions." Ultimately, in accordance with 40 CFR § 257.97(b)(3), the selected corrective measure must at a minimum "[c]ontrol the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents of appendix IV to this part into the environment."

The Preamble (80 Fed. Reg. 21302, 21406) to the CCR Rule discusses that source control measures may include modifying operational procedures. To achieve TVA's commitment to convert from wet to dry handling of CCR and to comply with regulatory requirements and timeframes under the CCR Rule, TVA will close the CCR Units. The final closure method for the CCR Units at CUF will be determined based on the outcome the TDEC Order EI and will be in accordance with 40 CFR § 257.102. Closing of the CCR Units will limit water infiltration through the CCR and reduce further releases.

TVA will stop using and initiate closure of the Bottom Ash Pond. Construction of a temporary lined basin is complete and will facilitate dewatering and closure of the Bottom Ash Pond. Flows to the Bottom Ash Pond have been redirected to the temporary lined basin beginning in June 2020 and flows to the Bottom Ash Pond will cease in accordance with the requirements of 40 CFR § 257.101(a)(1). TVA has initiated placement of intermediate cover over portions of the landfill to limit the working area. TVA is in the process of constructing a Bottom Ash Dewatering (BADW) System and flue-gas desulfurization (FGD) wastewater treatment plant to process bottom ash and gypsum fines. TVA lined the perimeter of the drainage ditch along the eastern and southern sides of the Gypsum Storage Area and installed piping in the ditch between the Gypsum Storage area and Dry Ash Stack in 2019-2020. These activities are expected to reduce potential stormwater infiltration into the CCR Units. The final closure method for the CCR Units at CUF will be determined based on the outcome of the TDEC Order EI and will be in accordance with 40 CFR § 257.102.

Section 4.2 of the ACM Report describes the plan for closing the CCR Units at CUF. These measures will reduce the potential for migration of CCR constituents to groundwater and reduce releases to groundwater. Subsequent groundwater assessment monitoring will be conducted to track changes in groundwater conditions as a result of these closures and operational changes. These data will also be considered in the selection and design of a remedy in accordance with 40 CFR § 257.97.

Groundwater assessment monitoring as required by 40 CFR § 257.96(b) will continue until a final remedy is selected. Long-term groundwater assessment monitoring is a component of the corrective measures implementation.

4.2 Potential Remedial Technologies

Subject to all necessary environmental reviews, the CCR Units will be closed in accordance with the requirements set forth in 40 CFR § 257.102.

In addition to source control measures, three primary strategies were evaluated to address groundwater exhibiting concentrations of cobalt, lithium and molybdenum above the GWPS including:

- Monitored Natural Attenuation (MNA);
- Hydraulic Containment and Treatment; and
- Enhanced In-situ Treatment (EIST).

The ACM Report provides a more detailed description of these corrective measures. The effectiveness of each potential corrective measure was assessed in accordance with 40 CFR § 257.96(c).

5.0 Selection of Remedy: Current Progress

A remedy to address SSLs in groundwater will be selected in accordance with 40 CFR § 257.97. Upon selection of a remedy, the owner or operator must prepare a final report (i.e., Remedy Selection Report) describing the selected remedy and how it meets the standards specified below pursuant to 40 CFR § 257.97(b)(1)-(5). Remedies must: (1) Be protective of human health and the environment; (2) Attain the groundwater protection standard as specified pursuant to §257.95(h); (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent feasible, further releases of constituents in appendix IV to this part into the environment; (4) Remove from the environment as much of the contaminated material that was released from the CCR unit as is feasible, taking into account factors such as avoiding inappropriate disturbance of sensitive ecosystems; (5) Comply with standards for management of wastes as specified in §257.98(d).

In support of the remedy selection process, additional investigation is needed and is described below.

5.1 Data Requirements for Design of Groundwater Corrective Action

To further refine the targeted area for corrective measures, develop remedial cost estimates and finalize the alternative for the CCR Units, additional data may be required to address potential data gaps. The characterization of the horizontal extent of cobalt, lithium, and molybdenum downgradient of the CCR Units is being further refined by the investigation required under the TDEC Order work and CCR rule.

Current activities planned to further evaluate site conditions:

- Twelve additional exploratory soil borings will be installed in proximity to downgradient monitoring wells 93-3, CUF-212, CUF-211, and CUF-209 to further delineate dissolved cobalt, lithium, and molybdenum concentrations in groundwater. Exploratory boring locations are illustrated on **Figure 5**.

- The locations of four additional monitoring wells to be installed directly downgradient of monitoring wells 93-3, CUF-212, CUF-211, and CUF-209 as facility boundary wells will be based on the results of the exploratory soil borings.

- Potential replacement monitoring wells might be installed proximal to monitoring wells 93-3 and CUF-212 based on the results of the exploratory soil borings.

- Slug testing will be performed at the newly installed well locations surrounding the CCR Units to further characterize hydraulic conductivity.

- Three temporary monitoring wells have been installed at the Gypsum Storage Area and three temporary monitoring wells have been installed at the Dry Ash Stack. The temporary wells are being used to sample CCR material and pore water, and to analyze water level responses within the CCR Units.

Potential future activities to further evaluate MNA:

- Groundwater Flow Modeling – Numerical modeling of groundwater flow based on expanded groundwater elevation data gained from the ongoing EI and additional hydrogeologic characterization efforts might be used to further refine the understanding of groundwater flow direction and velocity.

- Groundwater Fate and Transport Modeling – The refined groundwater flow model might be linked to a fate and transport model to further evaluate the estimated time for natural attenuation mechanisms to reduce the cobalt and molybdenum concentrations to below GWPS.

Potential future activities to further evaluate hydraulic containment and treatment:

- Groundwater Flow Modeling – The numerical groundwater flow model might be used to evaluate hydraulic containment, as appropriate. A calibrated groundwater model might be used to evaluate a variety of approaches (e.g., vertical wells, horizontal wells, physical barriers) and to estimate the groundwater extraction rates necessary to contain an identified target zone. The objective of hydraulic containment modeling would be to incorporate groundwater extraction scenarios to optimize hydraulic containment of cobalt-, lithium-, and molybdenum-impacted groundwater while balancing extracted groundwater treatment requirements.

- Groundwater Treatability Study - For ex-situ treatment of extracted groundwater, treatability studies would be needed to evaluate technologies for the treatment of cobalt, lithium, and molybdenum.

- Supplemental Hydraulic Properties Evaluation – This evaluation could be necessary if the existing understanding of the hydraulic characteristics of the subsurface are not sufficient to evaluate hydraulic capture geometry and potential groundwater recovery rates. If needed, installation of new wells and performance of pumping tests to evaluate hydraulic capture geometry and potential groundwater recovery rates would feed back into the groundwater flow modeling simulations for groundwater extraction. This data would inform the feasibility, design, and implementation of groundwater recovery systems.

Potential future activities to evaluate Enhanced In-situ Treatment:

- A geochemical investigation might be conducted to evaluate groundwater, pore water and aquifer solids associated with the CCR Units.

- Groundwater Treatability Study – For in-situ treatment of groundwater, bench-scale treatability studies might be conducted on representative groundwater samples prior to selecting a groundwater corrective measure for implementation to address cobalt, lithium, and molybdenum concentrations.

5.2 Semiannual Reporting, Public Meeting, Remedy Selection and Final Report

Progress toward the selection and design of the remedy will be documented in semiannual reports in accordance with 40 CFR § 257.97(a). Semiannual reports will be placed into the facility operating record pursuant to 40 CFR § 257.105(h)(12). TVA will provide notifications of the availability of the semiannual reports describing the progress in selecting and designing the remedy and will place the reports on the TVA CCR Rule Compliance Data and Information website in accordance with 40 CFR § 257.106(h)(9) and § 257.107(h)(9) respectively 30 days after placement in the facility operating record. At least 30 days prior to selecting a remedy, a public meeting to discuss the results of the corrective measures assessment will be conducted as required by 40 CFR § 257.96(e). A final report will be prepared after the remedy is selected. This final report will describe the remedy and how it meets the standards specified in 40 CFR § 257.97(b) and 257.97(c). Recordkeeping requirements specified in 40 CFR § 257.105(h), notification requirements specified in 40 CFR § 257.106(h), and internet requirements specified in 40 CFR § 257.107(h) will be complied with as required by 40 CFR § 257.96(f).

July 15, 2020

Attachments:

Figures

Figure 1 – Map with CCR Unit Background and Downgradient Monitoring Wells

Figure 2 – Conceptual Cross-Section

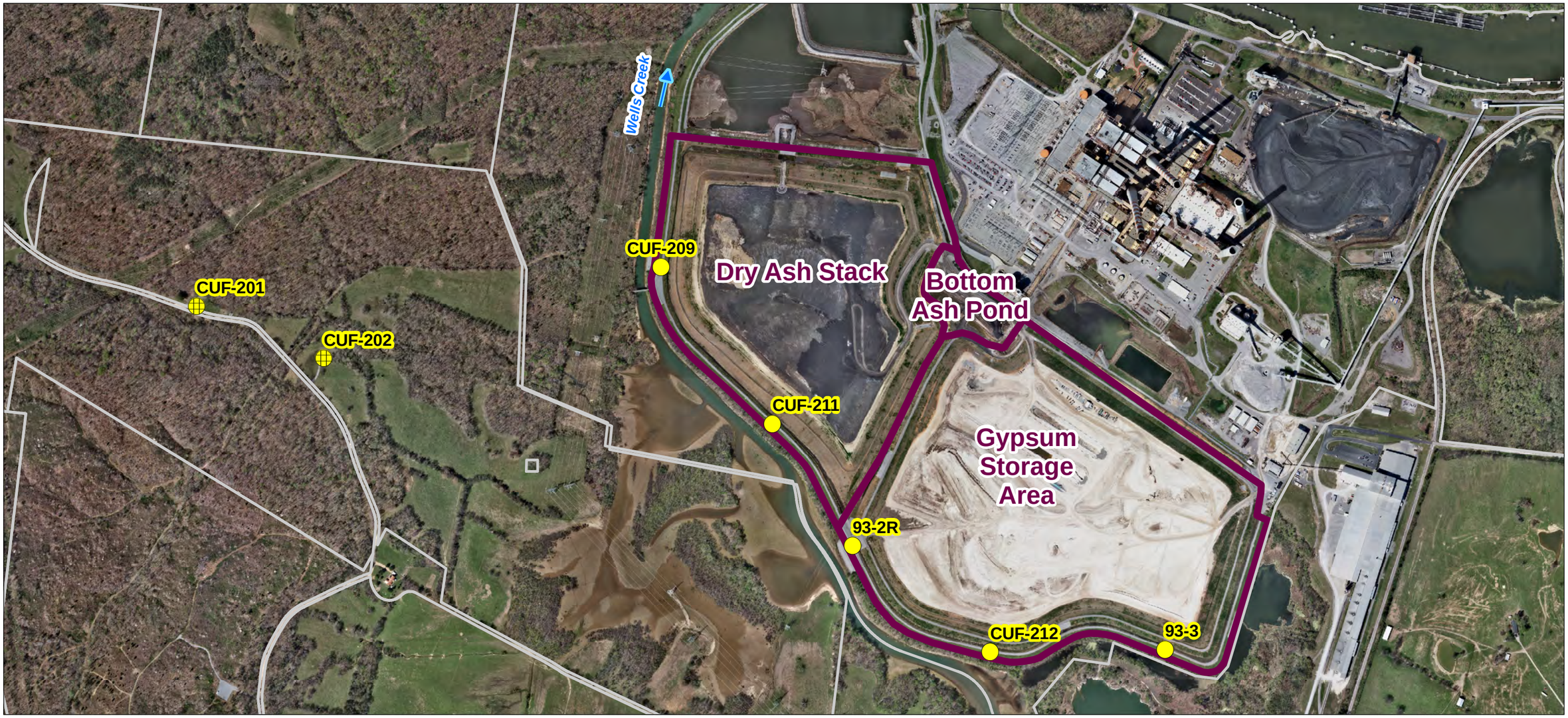
Figure 3 – Generalized Groundwater Flow Direction Map

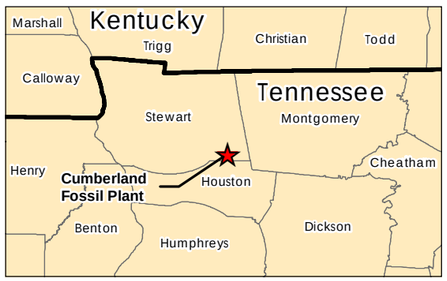
Figure 4 – Monitoring Wells and Limits of Constituents of Interest (COI) Impacts

Figure 5 – Proposed Boring Locations – TDEC Order and CCR Rule

FIGURE 1

MAP WITH CCR UNIT BACKGROUND AND DOWNGRADIENT MONITORING WELLS





Legend

- Background Well
- Downgradient Well
- TVA Property Boundary
- CCR Unit Area (Approximate)

0 800 1,600 Feet

(At original document size of 11x17)
1:9,600

N

Notes

1. Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet
2. Background: TVA Imagery flown by Tuck Mapping (c. 2017)

Project Location
Stewart County, Tennessee

Prepared by LMB on 2020-06-12
Technical Review by MD on 2020-06-12

Client/Project
Tennessee Valley Authority
Cumberland Fossil Plant

182603538

Figure No.
1

Title
Map with CCR Unit Background and Downgradient Monitoring Wells

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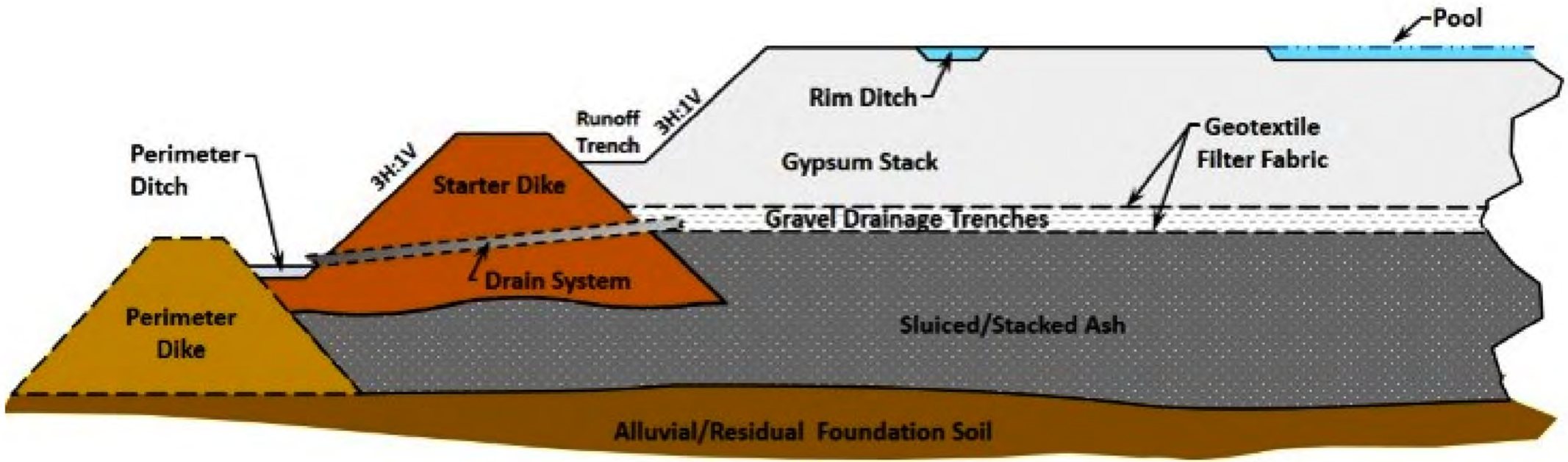
FIGURE 2
CONCEPTUAL CROSS SECTION



Legend

(At original document size of 11x17)
Image Not To Scale

TVA

Project Location
Stewart County, Tennessee

Prepared by MB on 2020-06-12
Technical Review by MD on 2020-06-12

Client/Project 182603538
Tennessee Valley Authority
Cumberland Fossil Plant

Figure No.
2

Title
Conceptual Cross-Section

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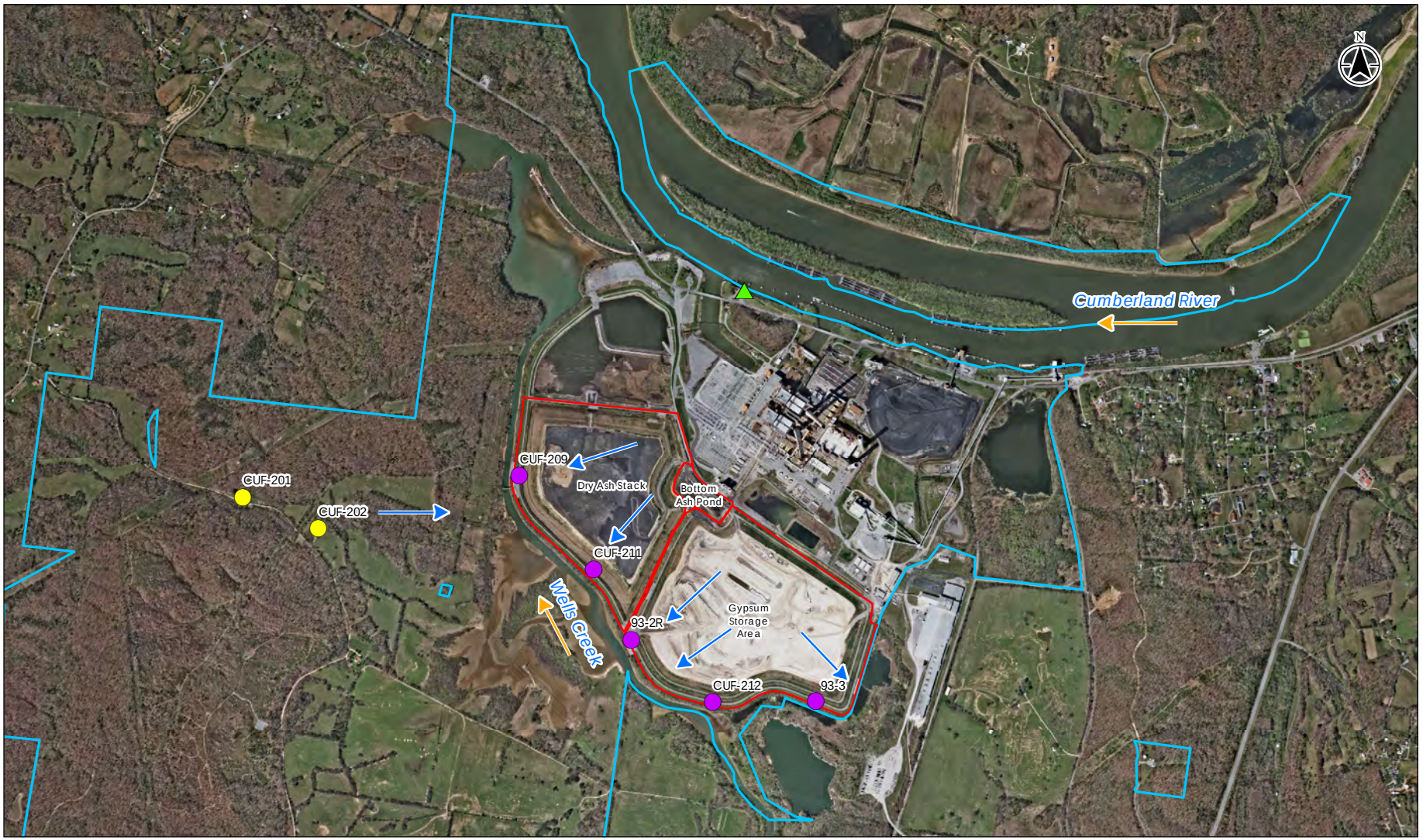
FIGURE 3
GENERALIZED GROUNDWATER FLOW DIRECTION MAP



- Staff Gauge
- Background Well
- Downgradient Well
- Groundwater Flow Direction
- Surface Water Flow Direction
- CCR Unit Subject to CCR Rule
- TVA Property Boundary

0 1,000 2,000 Feet

1:24,000 (At original document size of 8.5x11)

Notes
1. Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet
2. Imagery Source: Tucker Mapping Solutions, INC (Flown April 8, 2017)

Groundwater flow directions are based on groundwater elevations from CCR and Non-CCR monitoring wells.

Project Location	182603538
Cumberland City Stewart County, Tennessee	Prepared by LMB on 2020-07-15 Technical Review by WSW on 2020-07-15 Independent Review by MD on 2020-07-15

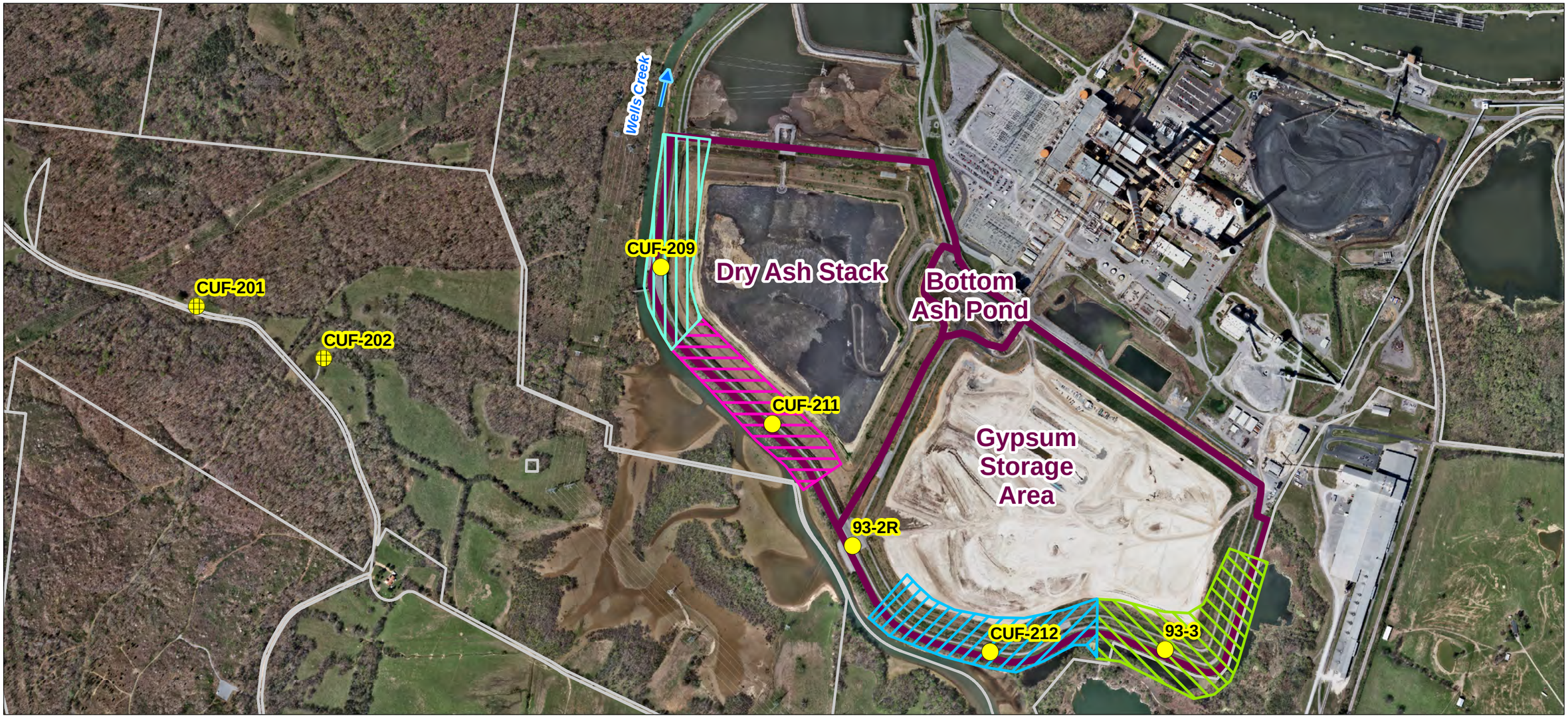
Client/Project
Tennessee Valley Authority
Cumberland Fossil Plant
CCR Rule

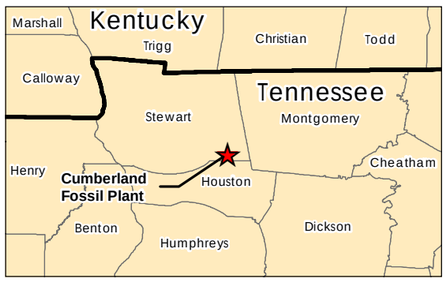
Figure No.
3

Title
Generalized Groundwater Flow Direction Map

FIGURE 4

MONITORING WELLS AND LIMITS OF CONSTITUENTS OF INTEREST (COI) IMPACTS





Legend

- Background Well
- Downgradient Well
- TVA Property Boundary
- CCR Unit Area (Approximate)
- Potential Cobalt Treatment Zone (CUF-212)
- Potential Lithium Treatment Zone (93-3)
- Potential Molybdenum Treatment Zone (CUF-209)
- Potential Cobalt Treatment Zone (CUF-211)

0 800 1,600 Feet

(At original document size of 11x17)
1:9,600

N

Notes
1. Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet
2. Background: TVA Imagery flown by Tuck Mapping (c. 2017)

Project Location
Stewart County, Tennessee

Prepared by MB on 2020-07-08
Technical Review by MD on 2020-07-08

Client/Project
Tennessee Valley Authority
Cumberland Fossil Plant

182603538

Figure No.
4

Title
Monitoring Wells and Limits of Constituents of Interest (COI) Impacts

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FIGURE 5
PROPOSED BORING LACTIONS – TDEC ORDER AND CCR RULE

Figure No.

5

Title

Proposed Boring Locations - TDEC Order and CCR Rule

Client/Project

Tennessee Valley Authority
Cumberland Fossil Plant

Project Location

Stewart County, Tennessee

182603538

Prepared by DMB on 2020-04-07
Technical Review by ME on 2020-04-07

0 300 600 900 1,200 Feet

1:3,600 (At original document size of 22x34)

Legend

- Downgradient Well
- Proposed Geotechnical Boring
- Proposed Monitoring Well
- Proposed Replacement Monitoring Well
- Proposed Soil Boring (CCR Rule)
- Construction Zone - Contact CM Before Entry
- CCR Unit Area (Approximate)
- 2019 Imagery Boundary

Notes

1. Coordinate System: NAD 1983 StatePlane Tennessee FIPS 4100 Feet
2. Imagery Provided by Tuck Mapping (c. 2017); 2019 Imagery provided by TVA and is dated 3/6/2019 and 12/11/2019
3. Final location of replacement monitoring wells will be determined based on field observations

Stantec TVA