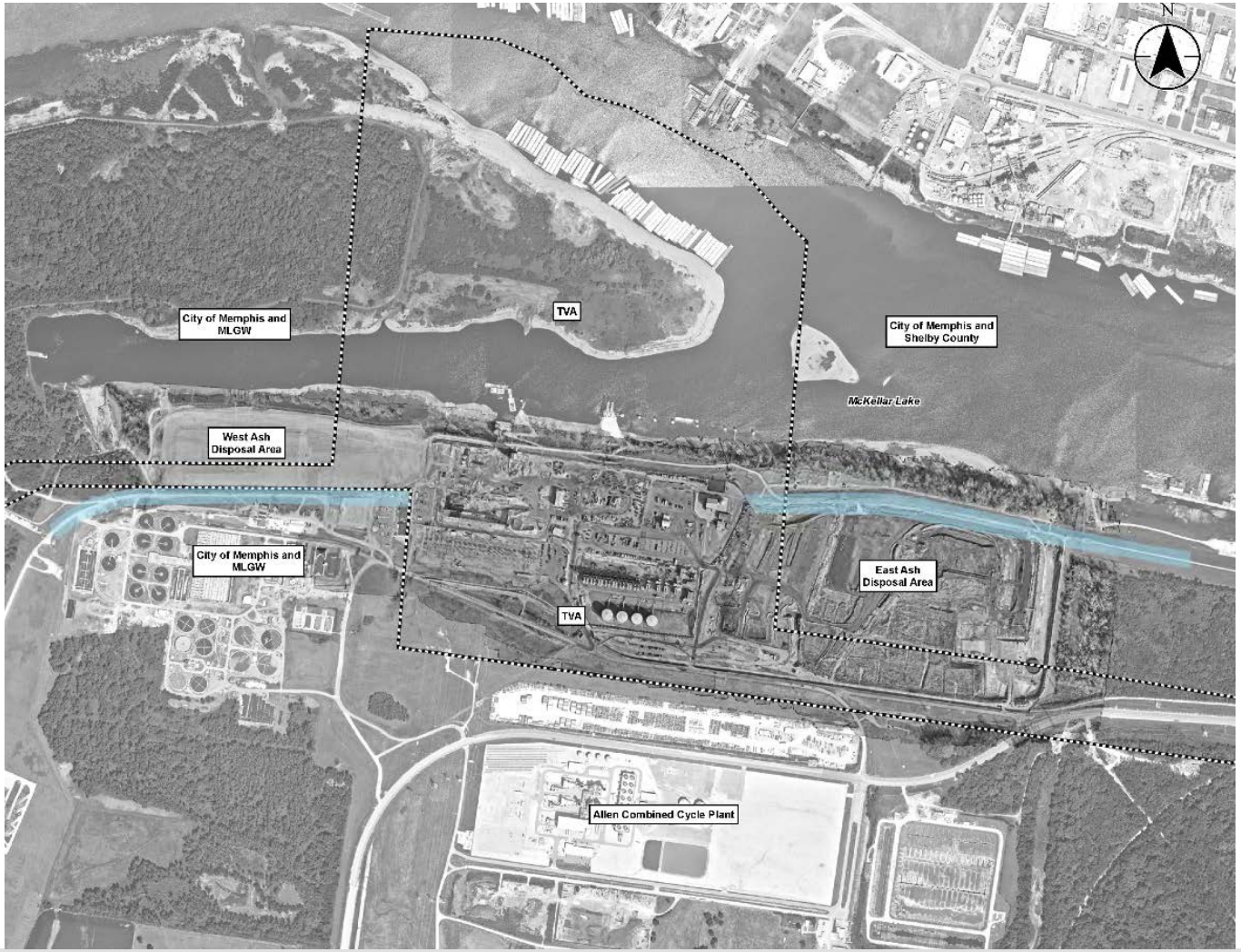
Department of
Environment &
Conservation

TVA Allen Fossil Plant
West Ash Disposal Area
Corrective Action/Risk Assessment Plan

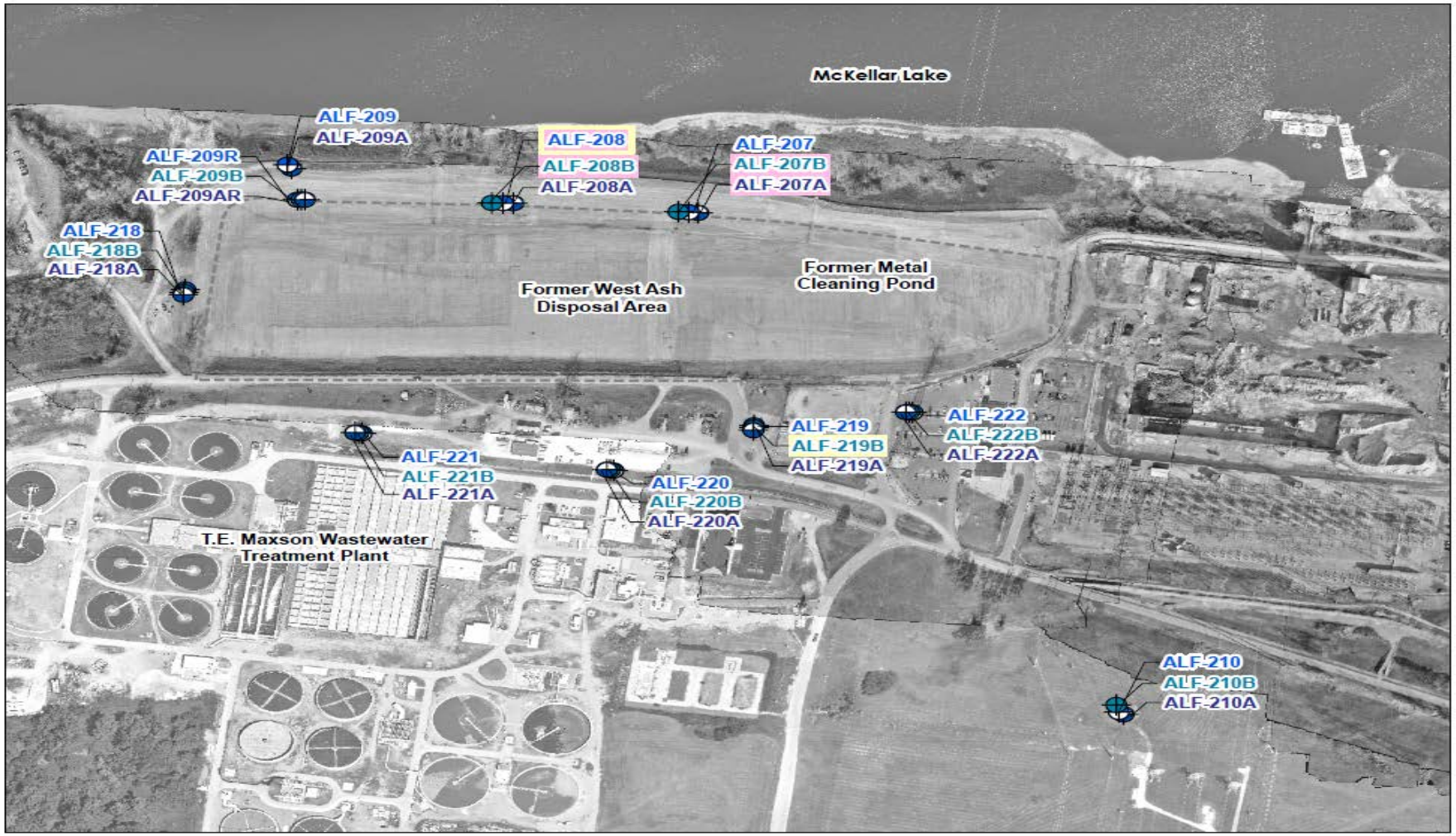
Agenda

- Welcome and Introductions
- Commissioner's Order OGC15-0177
- Environmental Assessment Report
- Corrective Action/Risk Assessment Plan

TVA Allen Fossil Plant (ALF)



TVA ALF West Ash Disposal Area (WADA)



OGC15-0177 (Commissioner's Order) August 6, 2015

Order Has Two Purposes

1. Establish transparent and comprehensive process for the Investigation, assessment, and remediation of unacceptable risks, resulting from the management and disposal of coal combustion residuals (CCR) at the TVA's coal-fired power plants in Tennessee.

2. Coordination of Implementation of the federal CCR rule to insure compliance with Tennessee laws and regulations that govern the management and disposal of CCR.

Commissioner's Order Process

- Site Investigation Conference
- Environmental Investigation Plan (EIP)
- EIP Implementation / Environmental Assessment Report (EAR)
- Corrective Action/Risk Assessment (CARA) Plan
  - Within 60 days of TDEC EAR approval, TVA will submit a CARA Plan to specify all actions TVA plans to take at the site based on information in the EAR
  - Opportunity for public to comment – Public comment period (August 2025)
- CARA Plan Implementation

TVA ALF WADA CARA Plan Differences

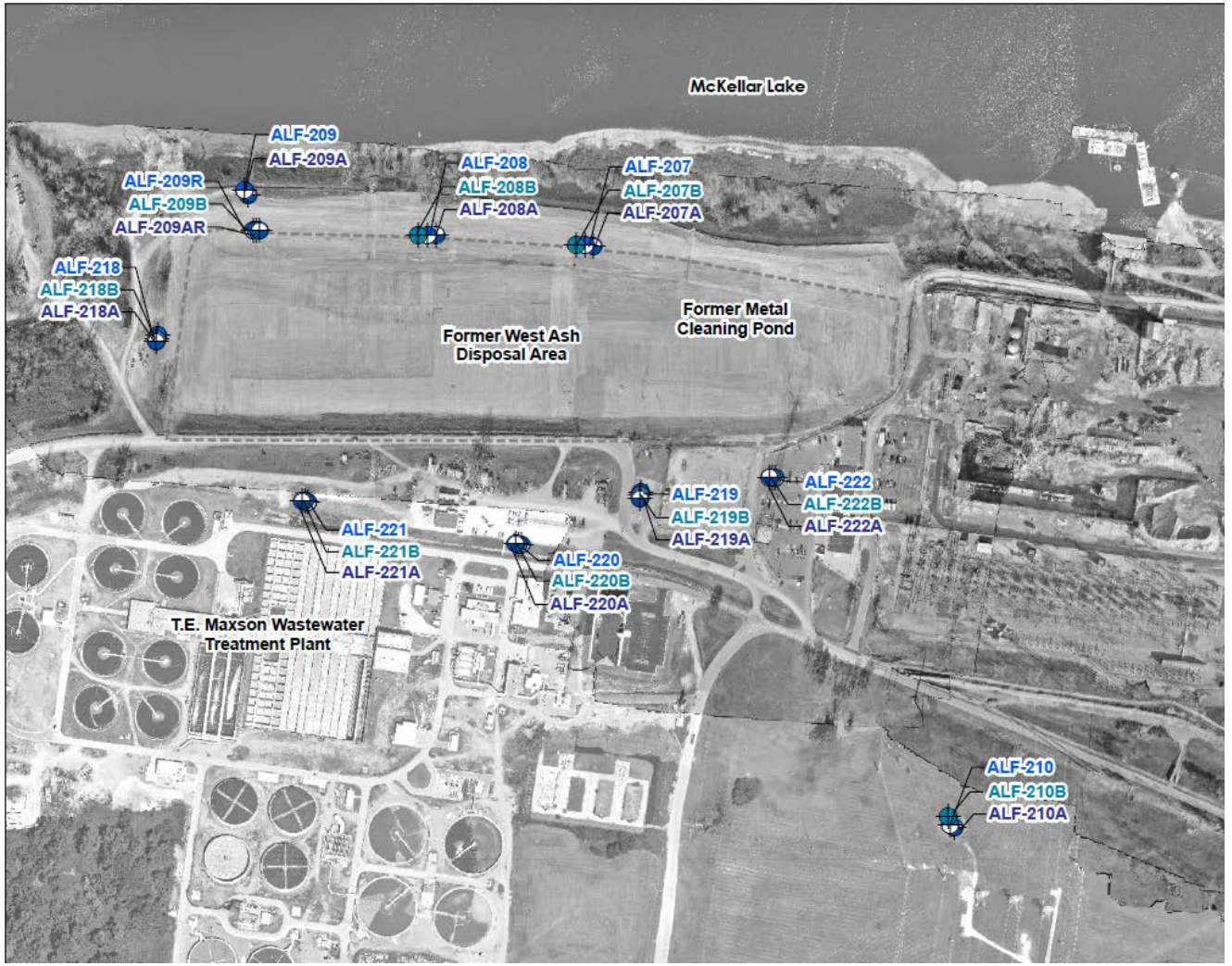
- East Ash Disposal Area (EADA) under TDEC Division of Remediation (DoR); Record of Decision (ROD) issued – Closure by Removal (CBR) remedy selected.
- While not subject to DoR investigation; TVA decided to perform CBR at WADA as well to help facilitate future site redevelopment.
- Interim Response Action (IRA) is being implemented at EADA to address groundwater quality.
- TDEC Order process for WADA to address groundwater quality.

TVA ALF WADA CARA Plan Differences

- WADA CARA Plan follows same template as other TDEC Order sites.
- CBR already selected in ROD so WADA CARA Plan doesn't have as many sections/appendices as the other TDEC Order sites.
- WADA CBR activities completed in November 2023. Post closure groundwater monitoring on going.

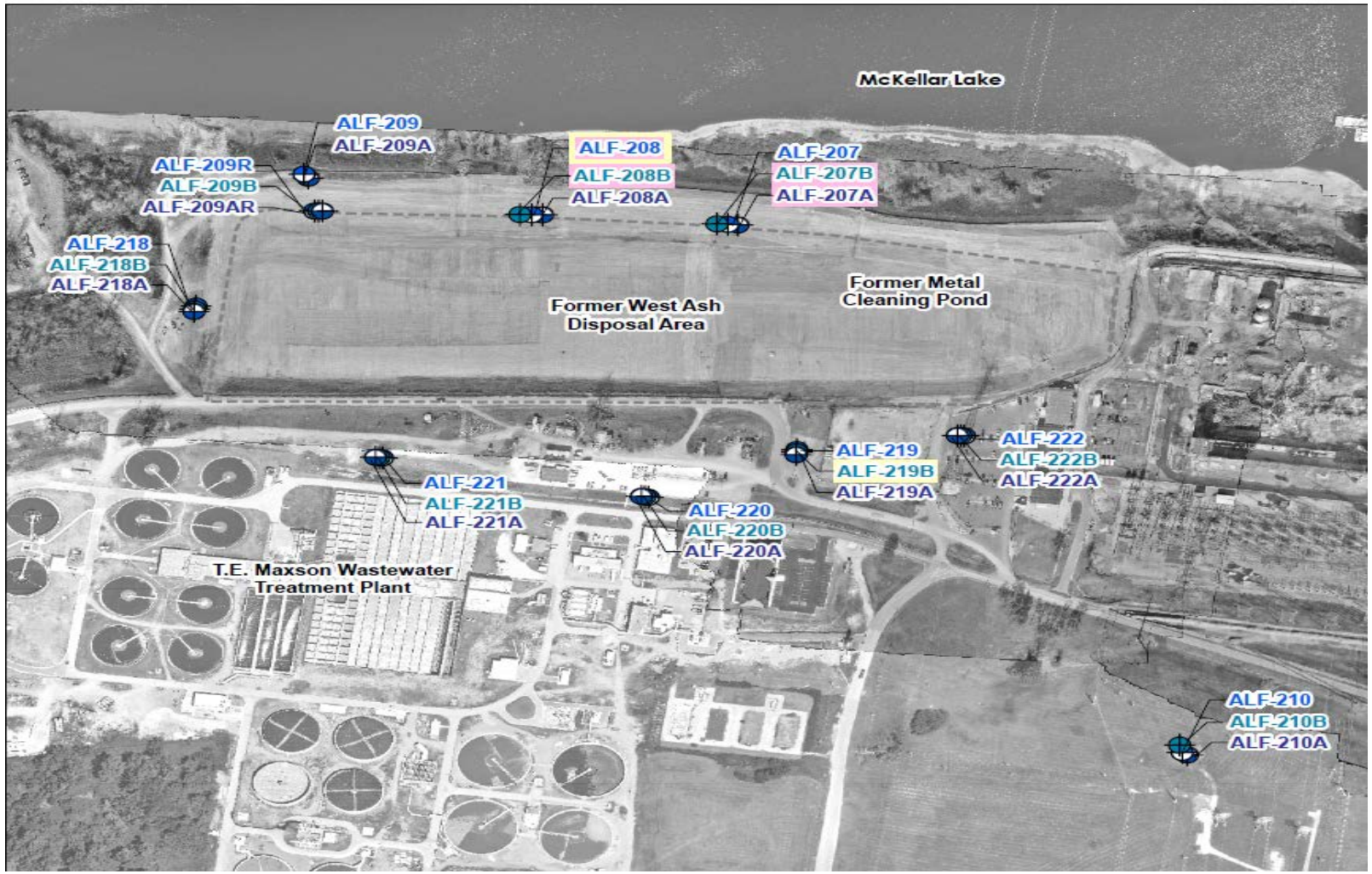
TVA ALF WADA EAR Summary of Findings

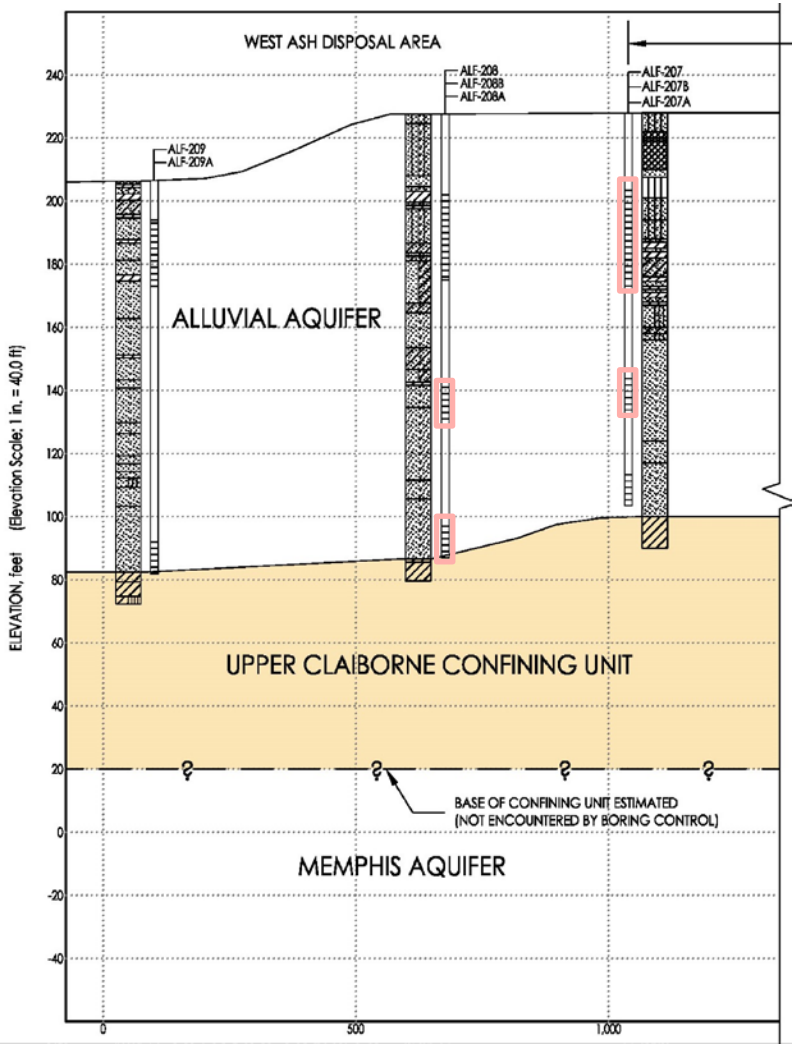
- The monitoring wells were installed in the shallow, intermediate, and deep intervals of the Alluvial aquifer.
- The blue clay zone recognized at the EADA has not been encountered at the former WADA.



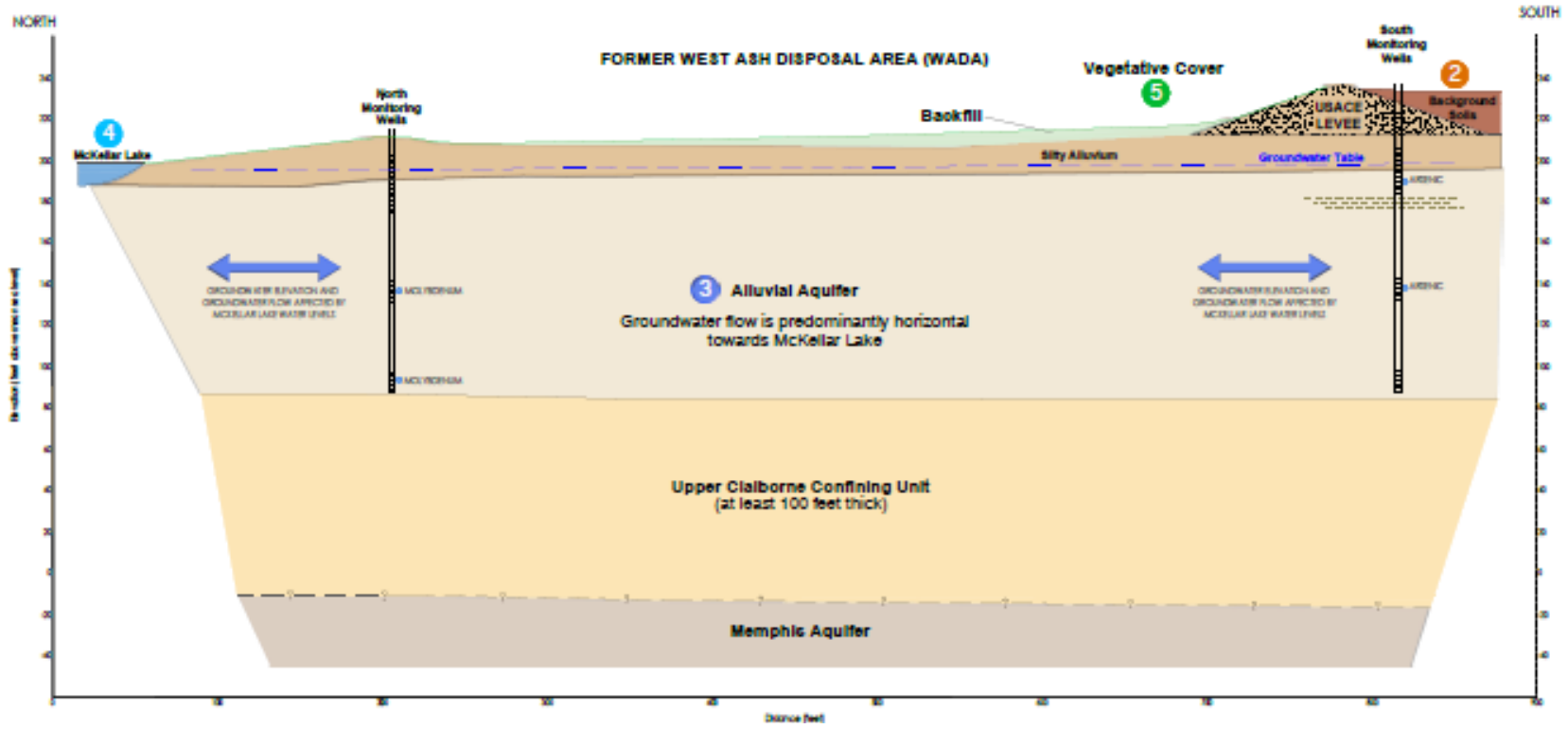
- To evaluate the thickness of the upper Claiborne confining unit, two deep stratigraphic soil borings were advanced to approximately 260 ft below ground surface (100ft into upper Claiborne).

TVA ALF WADA EAR Summary of Findings





TVA ALF WADA EAR Summary of Findings



1 **CCR Material:**
- CCR material has been removed from the former WADA and the area graded with clean backfill.

2 **Soil:**
- CCR material is not present in background soils.
- Soil concentrations within the former WADA footprint after CCR material removal were consistent with background soil concentrations.

3 **Groundwater Quality:**
- Groundwater flow is at a low gradient and influenced by seasonal fluctuations of McKellar Lake levels.
- The following CCR constituents have been detected at concentrations statistically above screening levels: arsenic,and molybdenum. Most were present along the north side of the former WADA (i.e., ALF-207 and ALF-208 well clusters).
- Groundwater conditions near the former WADA will be further evaluated prior to the developing the Corrective Action / Risk Assessment (CARA) Plan.

4 **Surface Water:**
- McKellar Lake has been impacted by industrial activities within the area not related to the former WADA.
- During the EI, no active seeps or areas of interest were observed onsite.

5 **Ecology:**
- The ALF Plant is located within a developed industrial park.
- The former WADA is covered with sod and is not expected to routinely support unique or rare wildlife species.

TVA ALF WADA EAR Summary of Findings

Summary of Findings Requiring Further Evaluation in the CARA Plan		
CCR Unit	Groundwater Constituent(s)	Monitoring Well(s)
Former WADA	Molybdenum	ALF-207B, ALF-207A, ALF-208, and ALF-208B
	Arsenic	ALF-208 and ALF-219B

TVA ALF WADA CARA Plan Objectives

- The CARA Plan shall specify all actions TVA plans to take at the site, and the basis of those actions. Corrective measures may include (1) soil, surface water, and groundwater remediation; (2) risk assessment and institutional controls; or (3) no further corrective action. As appropriate for the site, the final approved CARA Plan shall include:
- Method(s) TVA proposes to restore any natural resources damaged as a result of the CCR wastewater treatment and on-site CCR disposal
- A plan to ensure that public and private water supplies are protected
- TDEC also requires that the CARA Plan include a schedule of activities to be completed and a public input process

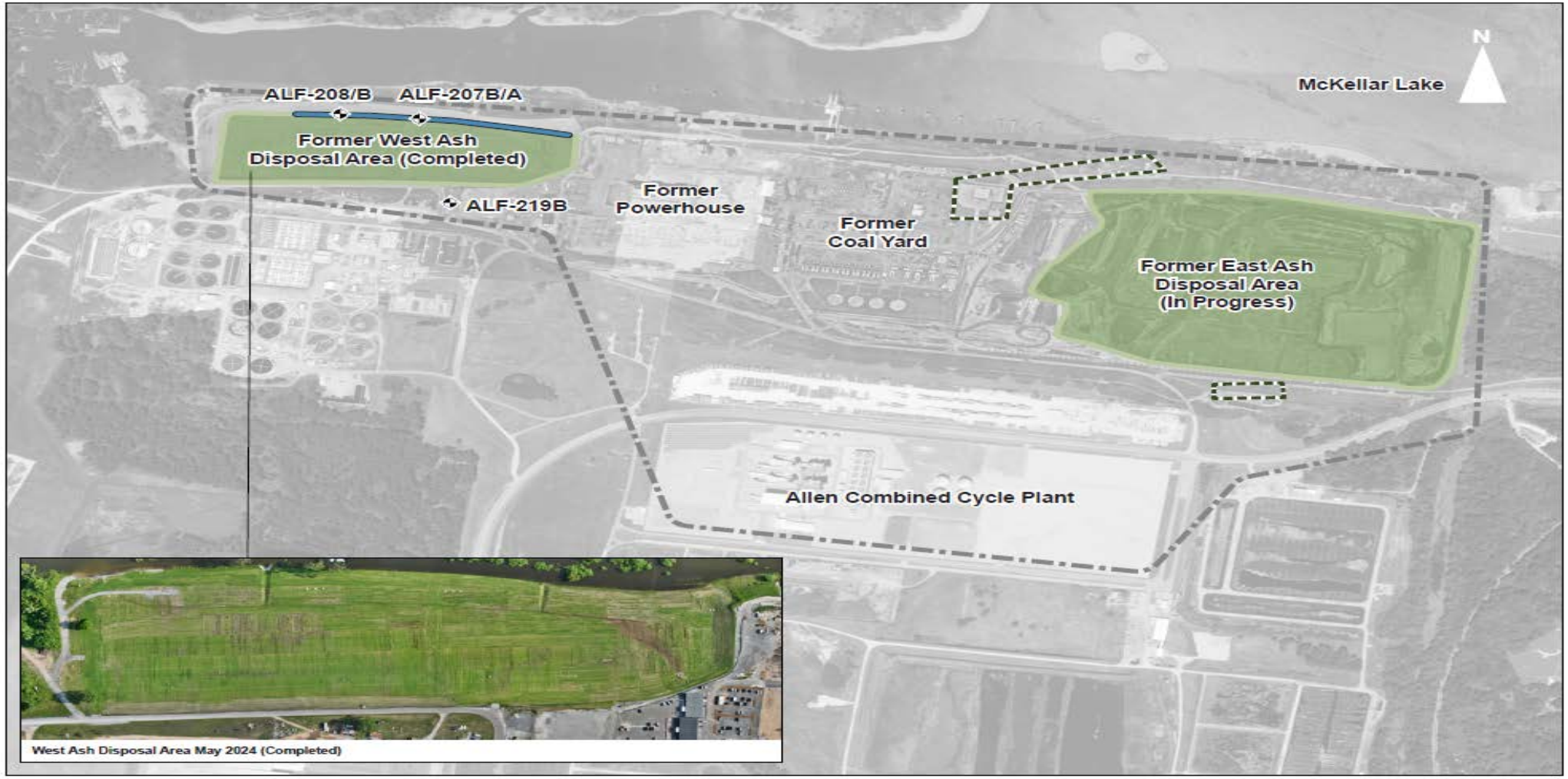
TVA ALF WADA Basis for CARA Recommendations

- An initial evaluation indicates that monitored natural attenuation (MNA) could be an effective corrective action for groundwater, but there are currently insufficient post-removal groundwater data to support a complete MNA evaluation.
- Groundwater extraction and treatment is a reliable, proven technology for hydraulic control that is expected to attain Groundwater Protection Standards (GWPS) within a few years after implementation. Additionally, a groundwater treatment facility is present onsite that can be used to treat and discharge the extracted groundwater from the former WADA.
- Closure has been completed for the former WADA and provides the source control to facilitate groundwater corrective action.

TVA ALF WADA Basis for CARA Recommendations

- TVA will implement the approved corrective action in conjunction with an adaptive management process.
- This will allow for TDEC approved adjustments of the corrective action if needed during implementation to account for new information and changing site conditions.
- There are currently no unacceptable risks to offsite human receptors.
- MNA is a widely accepted remedial approach that relies on natural processes to reduce constituent concentrations in groundwater.
- To support a complete MNA evaluation, TVA will continue to collect groundwater data during the CARA Plan finalization and detailed design processes.
- If future data confirm that MNA will be an effective corrective action, TVA will coordinate with and obtain approval from TDEC to implement MNA as the corrective action.

TVA ALF WADA Corrective Action Summary



TVA ALF WADA CARA Plan Next Steps

- TVA ALF WADA CARA Plan available for download at: https://www.tn.gov/environment/program-areas/solid-waste/notices/tva-cara.html
- Public comments can be sent to TDEC.CCR@tn.gov during the 45-day comment period ending Thursday, September 25, 2025.
- TVA will address public comments and submit an updated ALF WADA CARA Plan to TDEC with responses to comments and any changes for review and approval.

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Thank You