



EMERGENCY SPILLWAY IMPROVEMENT

Project Scope Highlights

- Installation of two emergency spillways
- Installation of two concrete cutoff walls
- Installation of articulated concrete block matts
- Demolition and abandonment of piping and structural framing
- Installation of HDPE process piping
- Levee compliance grading
- Access road installation

Project Overview

As the result of a regulatory inspection, a Midwest utility company was required to install two emergency spillways located in existing CCR basins. The project included the reinforcement of existing spillways, site grading, road improvements, and modifications of process piping systems.

Project Challenges and Solutions

Several items were encountered throughout the life cycle of this project and created the following challenges:

- Due to regulatory time frame, the project was required to be completed during the winter season, leading to the possibility of weather delays. To mitigate this challenge additional equipment was mobilized to ensure proper compaction of material, and the work schedule was adjusted to include additional hours when the weather was favorable.
- The CCR basins remained in operation during the installation of the emergency spillways. This created the challenge of excavating the spillway, while retaining water within the basin. To mitigate this, the basins were drawn down as much as possible to allow excavation while still keeping them in operation. Additionally, coffer dams were deployed in areas where the drawdown was insufficient to allow for the scope of work.
- The design called for the installation of aggregate below the water level of one of the basins where a drawdown or coffer dam was not possible. This challenge was overcome through the use of GPS excavators with waterproof components. Using this equipment, Trans Ash was able to install the aggregate below the water level, within design tolerances, both safely and effectively.



Subgrade Preparation



Aggregate and Geogrid Installation

- Due to the expedited schedule, the design of the spillways was completed concurrently with installation. Trans Ash was able to work jointly with the design engineer to complete the design and create suitable installation methods

“Trans Ash was able to work with both the client and the design engineer to finalize the design concurrently with construction.”



Articulated Concrete Block Installation



Cutoff Wall Installation



Completed Emergency Spillway #1



Completed Emergency Spillway #2