PROCESS WATER BASIN CONSTRUCTION
NEW JOHNSONVILLE, TN

Project Scope Highlights

- 50,000 cubic yards of earthmoving
- Installed 20,000 square yards of geosynthetic
- Installed 4,000 cubic yards of concrete
- Installed cast in place pump station
- Water treatment plant modifications
- Installed 4,500 linear feet of HDPE force main
- Installed 4,900 linear feet of HDPE gravity pipe
- Installed 26 precast structures
- Installed 2,000 linear feet of duct bank

Pre-Drilling for Sheeting Installation

Project Overview

Two process water basins were constructed to provide long term treatment of process flows at a retired, coal fired, power plant. This work scope included modifications to the existing water treatment plant, and the installation of a pump station to direct all process flows to the newly constructed basins. Lastly, the basins required the installation of a new discharge line, including a new NPDES outfall.

Project Challenges and Solutions

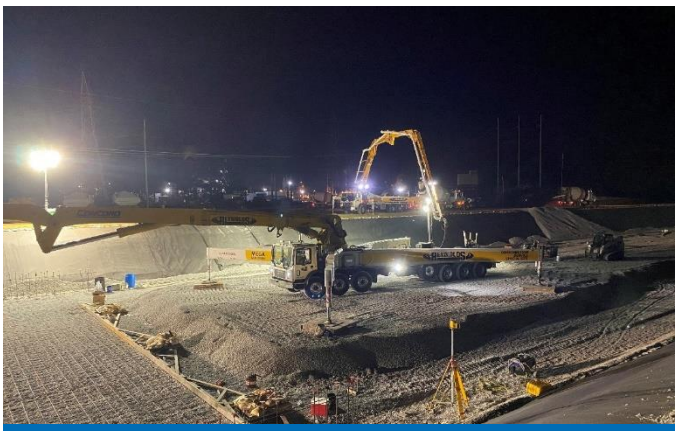
Several items were encountered throughout the project life cycle, creating the following challenges:

- Permitting delays pushed the project into less favorable working months. Trans Ash expedited the earthwork of the first cell to allow for concrete installation throughout the winter. When spring arrived, Trans Ash quickly completed the earthwork on the second cell to allow for the concrete subcontractor to continue work without a shut down.
- A pump station, approximately 20 feet deep, was to be installed between a pond and natural gas plant which would not allow for the slopes to be laid back. Trans Ash partnered with a geotechnical subcontractor to install a sheeting wall. This allowed for the installation to take place in the smaller footprint, while also keeping the excavation stable and prevent water migration from the adjacent pond.
- The project site was covered by multiple, overhead powerlines which crossed the active work area. To mitigate the concern of a powerline strike, all equipment was equipped with SigAlarms, to alert the operator of a powerline in proximity. Physical powerline “goal posts” were also installed at road crossings to indicate to the operator that the machine could contact the powerline. Alternative construction techniques were also used to limit impact to the utilities including the use of Jack and Bore Pipe Installation.

Geosynthetic Installation

- Over 9,400 linear feet of pipe was to be installed per OSHA standards at depths of up to 20 feet. This required multiple installation techniques including jack and bore, directional drilling, open cut, and utilizing a trench box. All sections of pipe to be installed were analyzed to determine which technique offered the most efficient and safe installation process.

"Even after a delayed start that pushed the project into winter, Trans Ash was able to meet the regulatory deadlines of the project. By expediting the earthwork and working cooperatively with us to prioritize the critical path tasks, the project was completed on time and on budget."



Concrete Pour

Forming Concrete Wall

Completed Process Water Basins

Completed Pump Station

TransAsh
617 Shepherd Drive
Cincinnati, Ohio 45215
Phone: 513.733.4770