SLUDGE SEDIMENT BASIN RETROFIT

Project Scope Highlights

- Dewatered and removed CCR's from two concrete lined basins.
- Demolished, removed and disposed of rip rap and concrete to offsite landfill.
- Installed a new 2 ft. geologic buffer of low permeability clay from an offsite source.
- Installed a new geosynthetic liner system consisting of a 60 mil HDPE geomembrane and 12 oz non-woven geotextile.
- Installed 5,500 CY of 4,000 PSI concrete over entire footprint of the liner system.
- Constructed a new concrete pump station.
- Installed 2,500 ft. of HDPE piping used for effluent and return water.
- Utilized a temporary bypass pump and Port-A-Dam system to maintain plant operations.

Concrete Liner Demolition

Project Overview

Changing regulatory requirements mandated an upgrade to the liner system for an existing sludge sediment basin at a coal fired power plant in Clover, VA. The work first required the removal of the existing liner system and protective concrete cover. The basins were then retrofitted with a new liner system which met the new requirements.

Project Challenges and Solutions

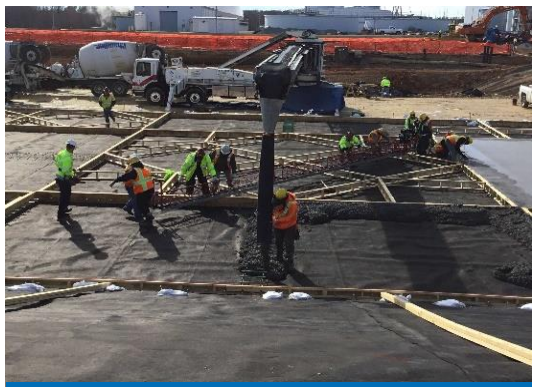
Permits and weather were the most significant challenges to this project:

- Due to permitting delays, the majority of the project was executed in the fall and winter months. The weather encountered during this time of year caused setbacks in the schedule. Trans Ash was able to work closely with the owner to reevaluate the schedule and modify the task priority list.
- During demolition, CCRs were found outside the limits of the existing liner system. This impacted the quantity of existing onsite clay that was planned to be reused. Fortunately, the borrow source for the new clay liner was adequate enough to provide material to account for the negative balance and subgrade fill.
- Several large rain events caused project delays. The low permeability clay borrow source was located on the opposite side of the river from the project site. During a flood event, the bridge used for crossing the river was closed and haul trucks had to be rerouted. This caused a significant impact to the haul distance. Additional trucks were mobilized to ensure production rates were maintained.

Subgrade Preparation

Electrical Duct Bank Install

Geosynthetic Liner System Install



Concrete Liner Install

- During the electrical system replacement, an existing duct bank was found in an unexpected location. This caused the duct bank to be relocated earlier in the project than originally anticipated, which impacted the liner system installation phasing. Trans Ash worked jointly with the design engineer and owner to implement the best solution to this problem.

"Trans Ash was able to work closely with the owner to modify the schedule as permit delays impacted the project. This allowed the plant continual use of the basin complex throughout the project."

Completed Pump Station

Completed Sludge Sediment Basin

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