



GYPSUM COMPLEX MODIFICATIONS

Project Scope Highlights

- Construct two geomembrane lined channels to dewater gypsum slurry
- Mass earthwork including 180,000 cubic yards of cut and fill
- Install two cast-in-place outfall structures
- Install 42" diameter HDPE discharge piping
- Install precast manholes for 42" HDPE discharge piping
- Install 16" HDPE slurry piping
- Install 16" header and valve system
- Install rip-rap channel lining for liner protection
- Install 10" perforated underdrain system



Header and Valve System

Project Overview

Regulatory changes mandated that an existing gypsum basin be converted to a dry stack, while maintaining the ability to receive sluiced gypsum and collect marketable material. To achieve the project goals, Trans Ash proposed a lined ditch to collect the material. The client and their engineer designed two geomembrane sluice channels and associated piping networks. The installation retained the functionality of a basin while allowing the remainder of the area to be converted to a dry stack.

Project Challenges and Solutions

- All work was to take place at an active coal fired power plant. This included activities to tie in at the plant proper, and at the gypsum basin. All routine operations were to be uninterrupted, with final connections being completed during an outage. Trans Ash worked with the client and coordinated the project plan to ensure there were no costly, interruptions to plant operation.
- Weather restraints required the completion of the project during non-favorable winter months. This included the installation of compacted fill, liner, cast-in-place concrete, and HDPE piping. To minimize the weather impact, Trans Ash maintained a flexible schedule that included weekends when the weather was favorable. This approach kept the project on schedule.
- Trans Ash, having extensive experience operating gypsum dewatering ditches, was able to assist the client and design engineer in the design of the channels including the optimal length, depth, and width. This assured the final product performed as intended



Mass Earthwork



Manhole Installation



Cast-in-Place Concrete Installation



HDPE Pipe Installation



Final Channel

“Leveraging their past project knowledge, Trans Ash was able to suggest an innovative solution that reduced construction costs and shortened the construction schedule.”



Liner Installation



Final Grading