



# CCR LANDFILL CONSTRUCTION

## Project Scope Highlights

- 600,000 CY of Soil Excavation and Placement
- 26 ac. Low Permeability Soil Liner
- 5.5 Million SF of GCL, Geomembrane and Geocomposite Liner as a Dual-Containment System
- Install Leachate Collection & Leak Detection Systems
- Install Protective Cover over Liner
- 3,700 Linear Foot Hydro-Binder Ditch
- Construction of a 1,000,000 Gallon Leachate Storage Tank
- Cast in Place Concrete Structures
- Install 2,500 ft. Dual Contained HDPE Force Main Pipe



Subgrade Preparation

## Project Overview

Trans Ash was awarded the project to construct a purpose built CCR landfill in Eden, NC. This project was on a tight timetable to meet regulatory mandated dates for the clean closure of several retired CCR basins at the site. To accommodate the schedule, the project was divided into three cells allowing the landfill to be put into service prior to its full completion.

## Project Challenges and Solutions

The timing of the construction and the state mandated schedule created the following challenges:

- Trans Ash and the CCR basin/landfill operation contractor's work overlapped for much of the project. Consequently, the landfill construction space was restricted and required a detailed construction sequence to accommodate each task. Trans Ash worked cooperatively with the client to devise a construction plan that allowed for each task to be completed simultaneously.
- An onsite wetland, the proximity to the river and previous environmental issues contributed to this being a heavily scrutinized project by both the regulators and the public. Trans Ash's construction plan, extensive erosion control safeguards, containment systems and storm water management plan ensured environmental compliance.
- The clay available at the onsite borrow area did not meet the specifications in its natural state. Offsite soils were considered for the clay liner, but they have significant cost and logistical impacts. Trans Ash performed an analysis and determined that the most cost-effective strategy was to screen the onsite materials to meet the specifications. This also limited the impact to the local community.



Clay Liner Installation



Liner Installation



Drainage Layer Installation

- The landfill leachate collection system required a tie-in with the local municipality’s water treatment system. Trans Ash coordinated a strict tie-in schedule with the client, the certified subcontractor and the city to ensure there was no interruption of service to the surrounding community.
- Permitting delays, a late season start, winter work, a previously unidentified asbestos disposal site in the footprint of the work and coordination with other onsite contractors all had impacts to the construction schedule by limiting what work Trans Ash could accomplish at any given time. Trans Ash mitigated these impacts by close coordination with the owner; adapting our work schedule and crews to keep the project on schedule.
- Midway through the project, the onsite CCR removal contractor was replaced. The change limited the availability of CCRs that were to be used for the liner system protective cover. Trans Ash modified the construction schedule to accommodate the transition and worked with the new contractor to accelerate the work and finish the project on time.

*“Trans Ash’s ability to adapt the construction plan ensured environmental and engineering compliance as well as an on-time completion, allowing the overall closure of the facility to progress.”*



Perimeter Road, & Hydro-Binder Ditch Installation



Cell 3 Construction