



EXAMPLE PROJECT

Crossville Coal Ash Monofill

QE² performed design and permitting services for Smith Mountain Solutions, LLC to develop a coal combustion products (CCP, also known as fly ash) monofill. The site will provide a safe, environmentally sustainable means to dispose of CCP while reclaiming the mine site to natural pre-mining conditions. Other benefits include long-term monitoring and maintenance of a previously mined site, which are known to be environmental and public hazards, and the creation of jobs and cash infusion into the local economy and government. The ash monofill facility is located on the site of a former coal mining operation (Crossville Coal and Cumberland Coal). The area has been previously mined and filled under regulation by the Office of Surface Mining and Reclamation and Enforcement (OSMRE). The Facility is under agreement to accept coal combustion products (CCP or coal ash). CCP, including fly ash, bottom ash, boiler slag, and gypsum, are produced during electrical power generation activities by combustion of coal and must be removed and either temporarily stored for later use, hauled to a landfill, or transported to an off-site utilization project.

The site for the disposal facility consists of a partially reclaimed surface coal mine. The proposed coal ash monofill will be constructed in phases. Phase I will be approximately 30.5 acres with approximately 2.82 million cubic yards of air space for fill placement. Phase II is a proposed future expansion area consisting of approximately 59 acres. The disposal area design includes provision for a liner system, leachate collection system, and a final cap and cover system consisting of a membrane liner, drainage layer, and overburden cover. The filling of ash in Phase II will commence (upon TDEC approval of permit modification) as Phase I is filled to its final closure grade. Other integral components of the Phase I and Phase II coal ash landfill include: the surface water run-off basins for collecting surface water run-off from the landfill and haul roads. Select monitoring points from previous mining operations will be maintained to monitor groundwater and surface water. Final capping and closure will include installing multiple geomembrane and textile protective layers and a vegetative cover of native forest species. Long term benefits will include protecting surface and groundwater from mine drainage, safe long-term placement of CCR, and ecological and economic enhancement.

