

Plain Language Summary

Southwestern Electric Power Company (SWEPCO) operated the Pirkey Plant (Facility), a coal-combustion power facility located at 2400 FM 3251, Hallsville, Harrison County, Texas. In March 2023, power generation operations ceased. SWEPCO continues to operate a coal combustion residuals landfill and a leachate-holding pond at the Facility. Leachate is precipitation that percolates into the coal combustion residuals landfill and discharges at the base of the landfill. This fluid is continuously generated from the landfill and requires proper management to protect human health and the environment. SWEPCO proposes to construct and operate a Class I non-hazardous deep injection well on the Facility property to permanently dispose of the continuously generated landfill leachate and leachate currently being held within the landfill pond.

The Class I deep injection well will be constructed such that the leachate fluids previously generated during Facility operations will be injected into a formation at a depth of 5,910 feet below the ground surface or greater. An extensive geologic assessment has been performed to evaluate the capacity of the formation to receive the injected fluids, as well as confining units that will prevent the injected fluids from migrating upward. The injection well will be designed and constructed in strict accordance with state and federal regulations to target only the proposed injection interval. Continuous monitoring will be performed during the operational and post-operational life cycle of the project to detect potential leaks, and periodic tests will be performed on the injection well. The periodic tests consist of mechanical integrity tests, which ensure that the well is intact and that no corrosion or other degradation of materials has occurred, and pressure fall-off tests to ensure that the injection zone is still capable of receiving the fluids without becoming over-pressured. The deepest useable source of underground drinking water is located at approximately 673 feet below the ground surface at the facility. The zone where the wastewater will be injected is capped with approximately 250 feet of anhydrite, an impervious rock formation, which will trap the wastewater in the intended injection zone. More than 5,000 feet (approximately 1 mile) of rock separates the injection zone from the useable groundwater aquifer. This vertical separation from the useable groundwater to the injection zone and the low buildup pressure in the formation will help safeguard the underground source of drinking water from contamination.

By investing in the construction and operation of the deep injection well, SWEPCO intends to mitigate any potential impacts from the coal combustion residuals to the environment and to protect the public.