Overview

The South Carolina Public Service Authority (Santee Cooper) is implementing the April 17, 2015 U.S. Environmental Protection Agency (U.S. EPA) Federal Coal Combustion Residuals (CCR) Rule (40 CFR §257 and 261) for Cross Generating Station's Bottom Ash Pond, located in Berkeley County, South Carolina. In addition to Federal CCR Rule regulations, the Ash Pond is also regulated by South Carolina Department of Health and Environmental Control (SCDHEC) under National Pollutant Discharge Elimination System (NPDES) Permit #SC0037401.

Assessment monitoring conducted in 2018 identified the presence of beryllium, cobalt, lithium, and more recently detected radium-226/228 in one or more downgradient wells at a statistically significant level exceeding the established groundwater protection standard (GWPS). The GWPS are set as:

- Maximum Contaminant Level (MCL) of 0.004 mg/L for beryllium;
- Site-specific standard (derived from background concentrations) of 16.8 pCi/L for a combination of radium-226 and radium-228;
- EPA Regional Screening Level (RSL) of 0.006 mg/L for cobalt; and
- EPA Regional Screening Level (RSL) of 0.04 mg/L for lithium.

As a result, Santee Cooper initiated the corrective measures assessment process including conducting a nature and extent characterization, continuing groundwater sampling, and issuing a corrective measures assessment report. Haley & Aldrich completed the corrective measures assessment which proposed six alternatives and discussed how each met the threshold criteria and the balancing criteria.

This Remedy Selection Report concludes the corrective measures assessment process and will subsequently initiate the corrective measures implementation phase of the CCR Rule.

Purpose

This Remedy Selection Report is for Cross Generating Station's Bottom Ash Pond. The groundwater corrective measures remedy selected shall:

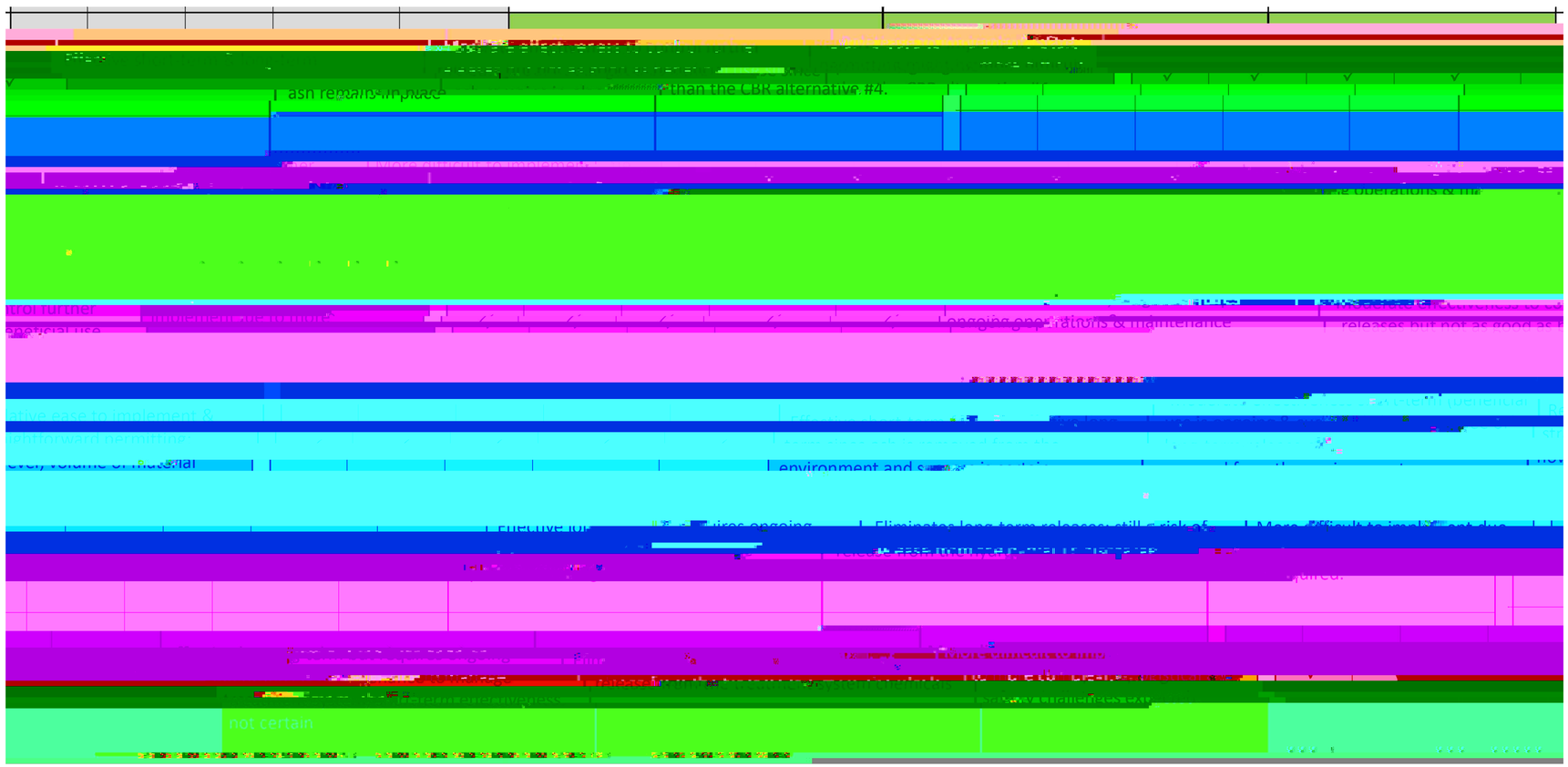
(i) Be protective of human health and the environment;
(ii) Attain the groundwater protection standard;
(iii) Control the source(s) of releases to reduce or eliminate further releases into the environment;
(iv) Remove as much of the contaminated material that was released from the CCR units as is feasible;
(v) Comply with the standards for management of wastes.

USEPA is in the process of modifying certain CCR Rule requirements and, depending upon the nature of such changes, assessments made herein could be modified or supplemented to reflect such future regulatory revisions. See Federal Register (March 15, 2018; 83 FR 11584).

Remedy Selection, Interim Steps, Implementation & Schedule

The Bottom Ash Pond presents materials management challenges that may impact the implementation and closure times for the CBR alternative. CCRs in the Bottom Ash Pond will be dewatered to remove free water before being hauled to, and placed in, the existing on-site lined Class 3 Landfill. After removal of the CCRs and any residual materials from the Pond, the existing liner and revetment material will be evaluated. If there is residual CCR contamination of the liner and revetment materials, they will be disposed of in either the on-site Cross Class 3 landfill, assuming permit approval by SC DHEC, or an off-site permitted landfill, whichever option is most feasible.

Technical and logistical challenges of implementing a large-scale CCR removal project have been considered. Removal activities require dewatering and temporary staging/stockpiling of material for drying prior to transportation, which may affect productivity and increase removal duration. During periods of rain and inclement weather, the removal schedule will be negatively impacted. Excavation and construction safety during the removal duration is another concern due to heavy equipment (e.g., bulldozers, excavators, front end loaders, and off-road trucks) and dump truck operations around the active station site. The factors outlined in §257.97(d) were considered in the development of the schedule for design, implementation, and completion of the selected remedy.


than the CBR alternative #4.
not certain