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Basin Closure and Liner Installation

GEORGIA POWER PLANT YATES

Newnan, Georgia

Georgia Power Company required the removal of sediment from two unlined Boiler Cleaning Waste Basins (BCWB's) at their Plant Yates facility. Following the removal all sediments, a 60-mil HDPE liner needed to be installed prior to the plant's scheduled boiler maintenance activity. SBX Technologies, LLC was awarded the contract based past BCWB experience, excellent safety record and the ability to meet the time-critical schedule for the work.

Preliminary activities included installation of erosion controls, consolidation of standing water within one basin, haul road improvement and staging of sediment conditioning materials. A collection sump was installed to expedite the drainage and removal of standing water within the large basin. Water was then pumped to the smaller basin for subsequent treatment and analysis prior to discharge in accordance with the facility's NPDEA permit. This allowed removal activities to proceed on the large basin

The saturated sediment was temporarily stockpiled along the inside berm of the basin to allow additional gravity dewatering. Wood shavings were used to further condition the sediment prior to loading for disposal at the licensed disposal facility. Conditioning consisted of mixing wood shavings with the sediment as necessary to meet the Wet Paint Filter Test. Verification sampling was conducted to confirm all impacted sediment and sub-grade soils were removed.

Following the removal of all impacted material, any unsuitable sub-grade soils consisting of high organic or sandy material were removed as sub-grade preparation for the liner. Sub-grade preparation consisted of rough grading to the desired elevations, slopes and contours. Low areas were brought to the specified elevations in compacted lifts, with the final surface elevations being proof rolled with a smooth drum compactor. initiation of liner installation activities.

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An anchor trench was excavated along the top perimeter of the basin prior and final compaction tests were performed on the basin floor to ensure the sub-grade was suitable for liner installation. A "Z" spreader bar was attached to an excavator to facilitate liner deployment. The HDPE liner panels were installed vertically down the slope and across the pond floor overlapping the adjacent panel between 4 to 6 inches. After each deployment of 2 to 3 liner panels, a technician performed a trial test weld utilizing a fusion welder prior to field seaming each morning and afternoon. All pipe boot penetrations were performed utilizing an extrusion welder. All fusion weld seams were "air tested" and all extrusion weld seams were "vacuum box tested" as part of the project QA/QC program.

The liner trench was backfilled and compacted in 6-inch lifts during the morning to minimize the liner lifting from the bottom of the basin during cool periods. Following the completion of the liner installation in the large basin, all disturbed areas were graded to the final elevations and contours then seeded.

The small basin was remediated in the same manner as the large basin. The water stored in the small basin was analyzed to ensure it met the facility's NPDES criteria prior to being discharged. After all impacted sediments were removed, the small basin was backfilled, graded to provide proper drainage then seeded.

The project was completed approximately one week ahead of the targeted schedule. This allowed the facility to remain on schedule during boiler maintenance activities. The work was successfully completed with zero accidents, zero near-misses and no safety issues.