

Coal Pile Runoff Treatment System

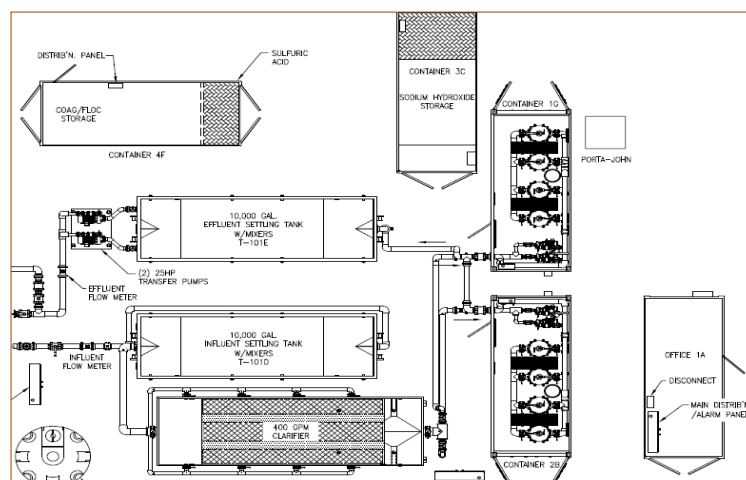
Project Location	Virginia
GWTT Scope	System Build
Flow Rate	275 GPM
Contract Value	\$350K
Project Duration	6 Months
Contaminants	TSS, Dissolved Metals

Key Project Details:

- Project was part of phased realignment of a low-volume waste water treatment program
- Project parameters of concern were pH and TSS
- Secondary function of the project was to conduct a pilot test to evaluate impact of the treatment on dissolved metals concentrations
- Initial treatment technology included pH adjustment and mechanical filtration
- Treatment plant consisted of two trains

Project Challenges:

- Influent pH very low (2-3 SU)
- High concentration of dissolved solids; especially iron that precipitated when pH was raised to meet discharge limits; this resulted in a high volume sludge production which had to be addressed with additional treatment equipment and processes
- Very narrow pH range for discharge (7-8 SU)



Coal Pile Runoff Water Treatment System Project Narrative

GWTT constructed the coal pile runoff treatment system based on client specifications, using pH adjustment and mechanical filtration for treatment. The coal pile runoff project was part of a larger project to treat and reroute low-volume wastewater due to closure of the ash ponds.

After analysis, it was determined that raising the pH precipitated a large volume of iron hydroxide sludge that was not adequately removed by mechanical filtration alone. GWTT mobilized a clarifier and a sludge tank to address the sludge issue and meet discharge requirements.

It was ultimately determined that the coal pile runoff could be discharged to the equalization basin without treatment.

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