COMMENTS OF
THE UTILITY WATER ACT GROUP (UWAG)
ON EPA'S PROPOSED EFFLUENT LIMITATION
GUIDELINES AND STANDARDS FOR THE STEAM ELECTR C
POWER GENERATING POINT SOURCE CATEGORY
(40 C.F.R. Part 423)
RIN 2040-AF14
Docket ID Nos. EPA-HQ-OW-2009-0819 and
EPA-HQ-RCRA-2013-0209
78 Fed. Reg. 34,432 (June 7, 2013)

September 20, 2013

to treat the nonchemical waste. Otherwise the equipment cost would have been higher and the time longer than 22 months.

2. Cost of Treating Water Washes for Copper and Iron

Instead of separating water washes from other low volume wastes, a plant could decide to treat the combined low volume wastes to meet the iron and copper limits. One coal-fired plant provided UWAG the results of a study of how much it would cost to treat nonchemical metal cleaning wastes, combined with other low volume waste, by chemical precipitation. These estimated costs are for total combined site generation of all low volume wastes from all units onsite, using a single chemical precipitation treatment system. The costs represent base flow design (all combined low volume waste water) for two scenarios, one with zero redundancy and the other at 150% design flow to provide some redundancy.

To treat the combined low volume wastestream by chemical precipitation is estimated to cost over $39 million:

	Design Capacity	**Design Capacity + 50% Redundancy**
Capital Costs	$39,142,852	$53,772,667
Operation and Maintenance	$4,459,963	$4,770,174

The costs would be significantly higher if the plant were required to separate metal cleaning washwater from the combined low volume wastestream.

The table below itemizes costs actually incurred at yet another power station to install a collection and treatment system to achieve the 1.0 mg/L copper and iron limits for nonchemical metal cleaning water washes. The station has three generating units. A metal cleaning wastewater collection system was installed on each unit with piping to direct the wastewater to a common treatment system. Solids generated in the system are sent to the station's existing solid waste processing system. The treated effluent is sampled to demonstrate compliance

before being piped to and mixed with the station's low volume wastewater collection/treatment system for discharge.

Some of the infrastructure for this project was available at the station but needed to be repaired, re-purposed, or modified. Had the operator not been able to re-purpose this equipment, use the existing solid waste processing system, and use covered areas for equipment that needed to be indoors, the capital expenditures would have been much greater.

Equipment/Product/Task	**Cost**
Internal & External Engineering Cost	$ 475,235
Exiting Tank Retrofits & Refurbishment - Clarifier Tank & Clean Effluent Tank (Chemical Clean Tank)	$ 1,148,568
Collection Package Civil - Collect Trenches and Wash Sump Construction; Neutralization Basin Closure	$ 1,615,712
Material & Equipment Purchases - Pump Sumps (Qty-4); Sludge Recycle Pumps (Qty-2) Sludge Disposal Pumps (Qty-2); Clarifier Conversion Internals; Rake Drive Reaction Tank	$ 2,568,508
Electrical & Control & Instrumentation Install VFDs (Qty-8); MCCs; AllenBradley PLC w/HMI; Remote I/O; Chemical Skids (Qty-2); Instrumentation (All); Cable; Conduits; Lighting	$ 1,022,971
Mechanical Install Installation of Interconnecting Piping; Supports; Reaction Tank, Clarifier Tank-Walkways-Rake-Truss	$ 1,735,273
Reaction Tank Foundation - Concrete and Steel Supports	$ 222,204
Metal Wash Startup Support/Training	$ 5,394
Metal Wash Startup Support/Training	$ 2,343
Total of Current Expenditures	$ 8,796,208
Additional Planned Improvements	$ 350,000
Planned Total Expenditures	**$ 9,145,208**