



Estimated costs & pollutant reductions for treatment options at Merrimack Station

Ronald Jordan to: Sharon DeMeo
Cc: John King, Jezebele Alicea, Jan Matuszko

09/13/2011 07:56 AM

From: Ronald Jordan/DC/USEPA/US
To: Sharon DeMeo/R1/USEPA/US@EPA
Cc: John King/R1/USEPA/US@EPA, Jezebele Alicea/DC/USEPA/US@EPA, Jan Matuszko/DC/USEPA/US@EPA

History: This message has been forwarded.

Sharon,

The table below presents estimated costs and pollutant removals for three technology options for treatment of FGD wastewater. These costs/removals are presented for a system sized to treat the FGD purge from Merrimack Station and are based on data collected during the ongoing rulemaking effort to revise the effluent guidelines for the steam electric power generating point source category. The primary data sources for the cost estimates are responses to an industry survey distributed by EPA's Office of Water in 2010, and information obtained by treatment equipment vendors. The pollutant reduction estimates are based on data collected during EPA's recent detailed study of the industry and subsequent wastewater sampling conducted to support the effluent guidelines rulemaking.

Technology Option	Capital Cost (2010 \$)	Annual O&M Cost (2010 \$)	Annualized Cost (2010 \$)	Pollutant Reductions (lbs/yr)
Chemical Precipitation	\$4,869,000	\$430,000	\$889,000	16,900
Chem Precip + Biological	\$9,823,000	\$727,000	\$1,654,000	639,000
Chem Precip/Softening + Evaporation	\$27,949,000	\$1,524,000	\$4,162,000	830,000

NOTES:

1. Estimated costs do not reflect offsetting cost reductions associated with ceasing operation of an existing settling pond or avoiding installation of a settling pond to comply with the current effluent guidelines requirements at 40 CFR part 423.
2. Estimated pollutant removals are shown incremental to treatment that would be achieved by a settling pond. The following analytes have been excluded from the pollutant removal estimates due to data limitations or to avoid potential double-counting of pollutant removals: ammonia, BOD, calcium, chloride, hexavalent chromium, TKN, sodium, sulfate, total dissolved solids (TDS), and total suspended solids (TSS).
3. Annualized costs are the sum of operating and maintenance (O&M) costs and annualized capital costs, using a 7% interest rate and 20-year service life for the equipment.

Please let me know if you have any questions.

Ron

Ron Jordan
Engineering and Analysis Division (4303T)
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460
(202) 566-1003
<http://www.epa.gov/waterscience>