

CASE STUDY

Virginia Electric & Power Company, Chesterfield Station Virginia, United States



Flue Gas Desulfurization

Wastewater Treatment System



Richmond, VA

Flue Gas Desulfurization Wastewater Treatment System

Virginia Electric & Power Company

- Regulated Electric Utility Company
- Fortune 500 Company with over \$15 Billion in revenue
- Power distribution and generation

Virginia Electric & Power Company, Goals and Challenges

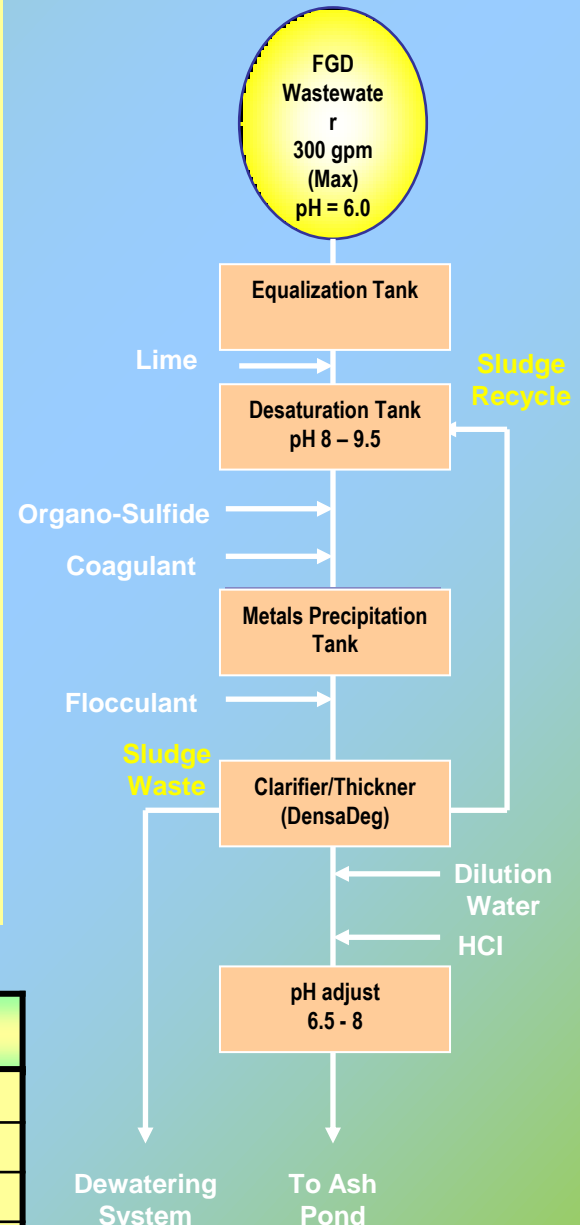
- Clean Air Act required SO₂ abatement
- Limited space available
- Completely indoors (small footprint)

Degremont Technologies Solution

- Standard Degremont Technologies – Infilco FGD WWTP
- System Design Conditions
 - a. Flow – 300 gpm
 - b. TSS – 20,000 mg/l
 - c. TDS – 20,000 – 60,000 mg/l
 - d. Chlorides – 30,000 mg/l
- The WWTP is designed to meet and/or exceed:
 - a. Twenty (20) heavy metal effluent requirements
 - b. Six (6) general process requirements
 - c. 99% operational reliability
- The WWTP is designed for a future biological treatment system that will be able to meet effluent requirements for:
 - a. Nutrient control
 - b. Selenium control

Virginia Electric & Power Company Benefits

- Operator friendly design
- Able to handle upset condition with no loss of performance



Parameter	Removal Efficiency
TSS	99.9 %
Ag	90 %
Al	99.5 %
As	96.7 %
Cd	95 %
Cu	95 %

Parameter	Removal Efficiency
Cr	70 %
Fe	99.7%
Hg	90 %
Ni	75 %
Pb	90 %
Zn	98 %