flue gas desulfurization (FGD) solutions

SUEZ provides a complete range of FGD wastewater treatment solutions to meet selenium, mercury and arsenic ELG limits

- Overall process guarantee
- Treatability studies and piloting
- Proven experience with > 40 FGD installations
Increasing FGD wastewater treatment requirements

Coal power plant FGD wastewater is a subject to stringent regulations from both local authorities and EPA’s Effluent Limitation Guidelines (ELGs). Power plant operators are facing various challenges related to FGD wastewater such as corrosiveness and abrasiveness that requires careful selection of materials as well as complex selection of chemicals to target specific effluent requirements.

The composition of FGD wastewater varies widely, based on scrubber type and coal and limestone used and is characterized by:

- Extremely high solids (1-3%)
- Supersaturation with gypsum
- High chloride content
- High concentration of heavy metals

Your solution for new and existing FGD facilities

SUEZ is at the leading edge of Flue Gas Desulfurization wastewater treatment. With unparalleled operating and design experience, SUEZ is able to provide state-of-the-art FGD wastewater systems enabling you to meet the most stringent effluent requirements. SUEZ’s team is ready to provide cost-effective solutions, including design, equipment supply, installation, and follow-up service support.

Based on your needs you can choose from a comprehensive range of treatment options including:

- Physical / chemical
- Biological
- Zero liquid discharge
- Trace metals removal

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>UNITS</th>
<th>MONTHLY AVERAGE LIMITATION</th>
<th>TECHNOLOGY OPTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mercury (Hg)</td>
<td>ng/L</td>
<td>356</td>
<td>Physical / Chemical + Filtration</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>µg/L</td>
<td>12</td>
<td>Biological</td>
</tr>
<tr>
<td>Arsenic (As)</td>
<td>µg/L</td>
<td>8</td>
<td>Physical / Chemical + Filtration</td>
</tr>
<tr>
<td>Nitrate (NO3)</td>
<td>mg/L</td>
<td>4.4</td>
<td>Biological</td>
</tr>
</tbody>
</table>

benefits

- Manage risk with overall process guarantee
- Experience is key—over 40 FGD installations worldwide
- Demonstrated knowledge of material selection required for FGD treatment
- High efficiency in a small footprint with DensaDeg® Clarifier
- Decision making support via bench and full scale piloting options
- Streamlined process to save space and money
Your choice of options to meet selenium, mercury and arsenic ELG limits

Phys/Chem steps to treat FGD Stream

Traditional Process Flow

- equalization tank
- desaturation tank
- lime
- Organosulfide
- heavy metal precipitation tank
- Ferric Chloride
- coagulation tank
- polymer
- clarification
- sludge

Alternate Process Flow

- equalization/desaturation tank
- heavy metals tank
- lime
- Organosulfide
- Ferric Chloride & polymer
- clarification

Too many steps?  Your process could become as simple as this...

Treatment options to comply with ELGs

- Biological Treatment
- Trace Metals Removal
- S.M.A.R.T.Z Process™ for ZLD

reuse/recycling
integrated treatment solutions
As a full treatment line specialist, SUEZ draws upon a broad portfolio of proven technologies to help industries and municipalities meet their water and wastewater treatment challenges. We provide integrated equipment solutions and services for a wide range of applications:

- industrial water and wastewater
- municipal drinking water
- municipal wastewater
- biosolids management

We also offer global expertise in the design, build, operation and maintenance of water treatment plants and systems, all delivered to your specific demands.

piloting
SUEZ in North America offers pilot systems and services for this and many other of our product offerings. Pilot studies are a practical means of optimizing physical-chemical and biological process designs and offer the client several benefits, such as:

- proof of system reliability
- optimal design conditions for the full-scale system
- raw water lab analysis
- regulatory approval

Please contact us if you would like to learn more about pilot studies for this system.

services
Aftermarket
SUEZ in North America sells parts and components for most SUEZ brand equipment as well as parts for demineralizers, thickeners, nozzles, pressure filters, and valves. We offer reliable spare parts at competitive prices. We maintain records of previous installations to quickly identify your requirements. Many items are shipped directly from stock for quick delivery.

Rebuilds, Retrofits and Upgrades
SUEZ in North America offers cost-effective rebuilds and upgrades for SUEZ provided systems, no matter what year they were built. If you are interested in an economical alternative to installing a whole new system, contact us for a proposal.

FGD Tune-ups
SUEZ provides ELG tune up visits to evaluate whether or not your site is ready to comply with new regulations and can help you choose the best treatment option based on your specific needs.