

REINHOLD ENVIRONMENTAL Ltd.



**2013 APC Round Table
& Expo Presentation**

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- Steve Wolsiffer – Reinhold Environmental
- Ron Laws – Duke Energy
- Roger Ferguson - Ameren
- Greg Bielawski – Babcock & Wilcox
- Tony Licata – Licata Energy

- Impacts of more frequent Startup & Shutdown
 - long shutdowns require consideration for exercising/rotating equipment such as fans, ball mills, large pumps, etc.
- Impacts of Load Following & Low Load operation
 - Absorber Inlet Nozzle solids buildup
- Foaming
 - Related to FGD inlet particulate loading
 - May also be related to organics such as lube or hydraulic oils, etc.
- pH & ORP Probe Life
 - Calibrate regularly
 - Watch for sample line pluggage due to scale ingestion
- Corrosion (walls, spray hdrs, other)
- Lining maintenance
 - Pay close attention to manufacturers installation requirements by establishing rigorous QA/QC requirements
 - Try to avoid lining installation during the winter months
 - Insure good structural support for lining system (no oil canning, no wall to floor movement, no excessive wall flexure, etc.)

- Mist Eliminators (cleanliness, life, upgrades for lower carryover, wash headers, wash water strainers)
 - Water balance issues can curtail ME wash cycles, monitor ME wash cycles during low load operations
- Scaling and Buildup (inlet, other)
 - Most inlet issues are related to low load operation (Absorber droplets carried back into Absorber Inlet due to gas buoyancy differences)
- Absorber Pumps (liners, impellers, wear, mech seals)
 - There are some very good pump enhancements on the market from third party suppliers
- Absorber tank screens?
- Spray Nozzle (plugging, wear, life, erosion induced)
 - Inspect Victaulic Nozzle couplings regularly for crevice corrosion under seal and seal wear and degradation
- Piping Systems (FRP vs CSRL), life & replacement - HDPE is a viable alternative
- Valves, isolation & control
- Dampers
 - For chain driven guillotine dampers, inspect the drive chains regularly for slack chains
- Mixers (absorber, other)
 - Erosion damage
 - Seal issues
 - Shaft bow for side mounted agitators

- Safety
- Chemistry monitoring & control
- Ball Mill System
- Dewatering Hydroclone tuning & wear
- Belt Filters (blinding, cloth life, vacuum pumps)
- Access (internal, external), weather protection
- Duct expansion joints