

Worldwide Pollution Control Association

WPCA-Southern Company
Wastewater Treatment
Seminar

April 16 & 17, 2013

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Coordination of Waste Water Treatment with Other Environmental Programs

WPCA Waste Water Treatment Seminar

April 16-17, 2013

Atlanta, Georgia

**Bill Kennedy, P.E.
Strategic Engineering
Water Programs**

William.Kennedy@Duke-Energy.com



Why are we here?

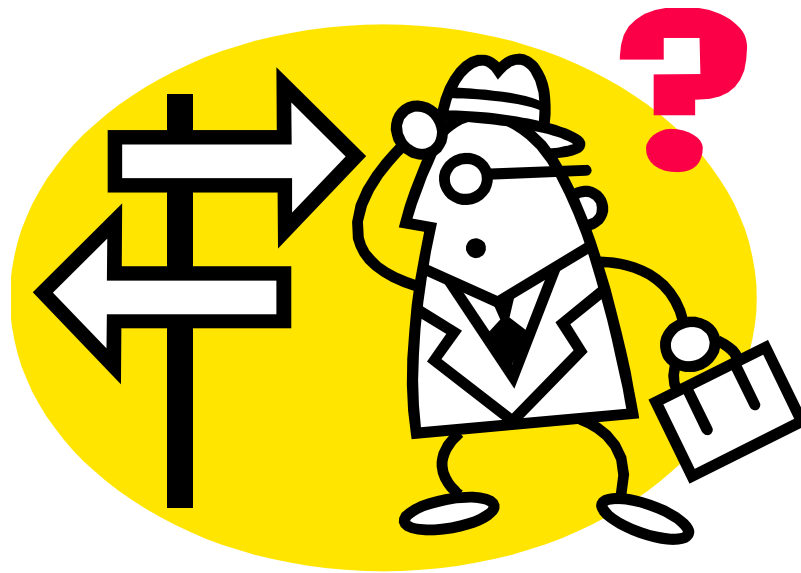
To make MW Safely

Why are we here?

To make MW Safely in Compliance with the CAA

... and RCRA

... and the CWA



What About Fuel?

Fuel Spec's – If we can buy it, we will burn it.

- Ash?
- Chlorides?
- Sulfur?
- Metals?

Testing:

- Fuels – CAPP, NAPP, ILB, PRB, Lignite, Coke, Biomass, Foreign sourced...
- Fuel Additives – Lime, Mag Hydroxide, Refined Coal...
- Flue Gas Additives – PAC, SO₃, Ammonia, Urea, DSI, Trona...
- NOx Reduction – Operation and Catalyst
- FGD Additives – DBA, other Organic Acids, Lime Stone, other Reagents, Hg readmission additives

Results:

Air – Hours

- Up the stack and we are done.

Water – Weeks

- Two – four days in the absorber (depending on load)
- Four to eight days in Physchem/Biochem
- Eight to twelve days in Wetlands
- Fourteen to twenty one days in Ash Basin

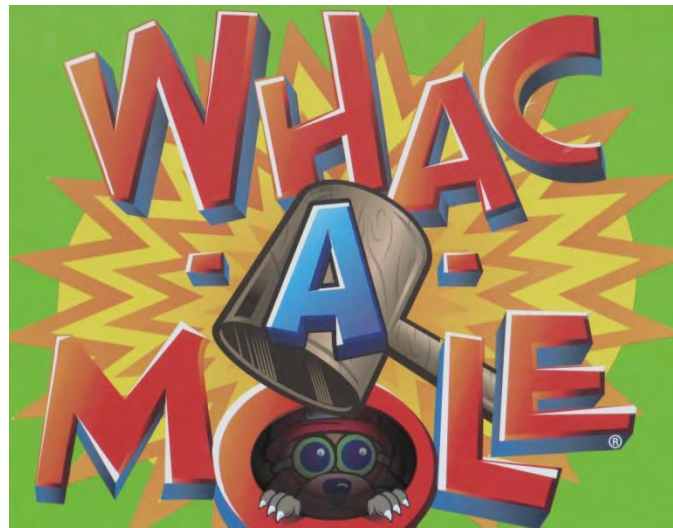
Waste – Months

- Time for leachate migration



What are the Impacts?

Constituents move from one waste stream to another, at times in a more difficult to treat form



What are the Impacts?

Fuels & Additives may change absorber ORP

- Increased absorber corrosion
- Increased dissolved metals in water
- Change in speciation to more difficult to treat form
- Additional cost of water treatment chemicals
- Modification to water treatment system

Fuel Additives may increase landfill leachate issues

- Change in salts may change pH of leachate causing previously sequestered constituents to mobilize

What are the Impacts?

Fuel Chloride

- Change in purge rate

Fuel Sulfur

- Change in ORP
- Change in constituents

Gypsum Quality/Sales

Ash Quality/Sales

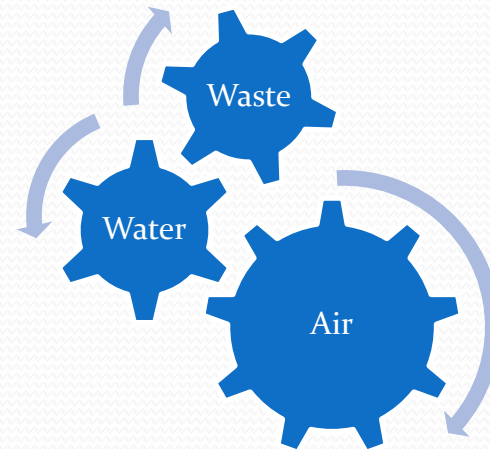
“Minor Change”



NOV or future limits

Case Studies/War Stories:

- MACT/HAPPS Compliance
- Higher Chlorides
- Higher Sulfur
- Bromine and DBPs
- Trona and the landfill



What Not to Do:

- Treat regulations as separate issues
- Treat unit operations as separate systems
- Operate the station like “we always have”
- Allow “minor changes” without appropriate review
- Ignore the impact of “routine” cleanings
- Assume that because it has not been an issue in the past it will not be one today or in the future

What to Do:

- Utilize corporate environmental resources
- Ensure SME's talk with one another
- Participate in users' groups
- Allow enough time in test plans to see stable results
- Use sufficiently sensitive test methods
- Communicate changes to all stake holders
- Treat the station holistically

Cr

Hg

Se

Br

Questions

Mn

As

Pb → Au

B

Yt