

Update on TCEQ Management of Waste Units Located on SLR Properties

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Presentation to:



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POSGCD Office
Milano, Texas



TCEQ/Federal Management Programs

- Texas Risk Reduction Program (TRRP; TCEQ)
 - Regulated by Texas Administrative Code Chapter 350
 - Goes into effect with a release of a contaminant
 - Establishes response action requirements for remediation
- Industrial & Hazardous Waste Correction Action Program (IHW CAP: TCEQ)
 - Regulated by Texas Administrative Code Chapter 335
 - Oversee the cleanup of sites contaminated from industrial and municipal hazardous and industrial nonhazardous wastes.
- Coal Combustion Rule (CCR; EPA)
 - Texas Administrative Code 352 release legacy sites from TRRP and put legacy sites requirements under the CCR rule
 - General requirement is not action taken until monitoring detects compounds above background concentration

Water Management Units

#1) Sandow 4 Steam Electric Station (TRRP)

- Fuel release discovered 2011
- GW impacted with benzene & TPH

#2) Old Disposal Site No. 2 (IHW CAP)

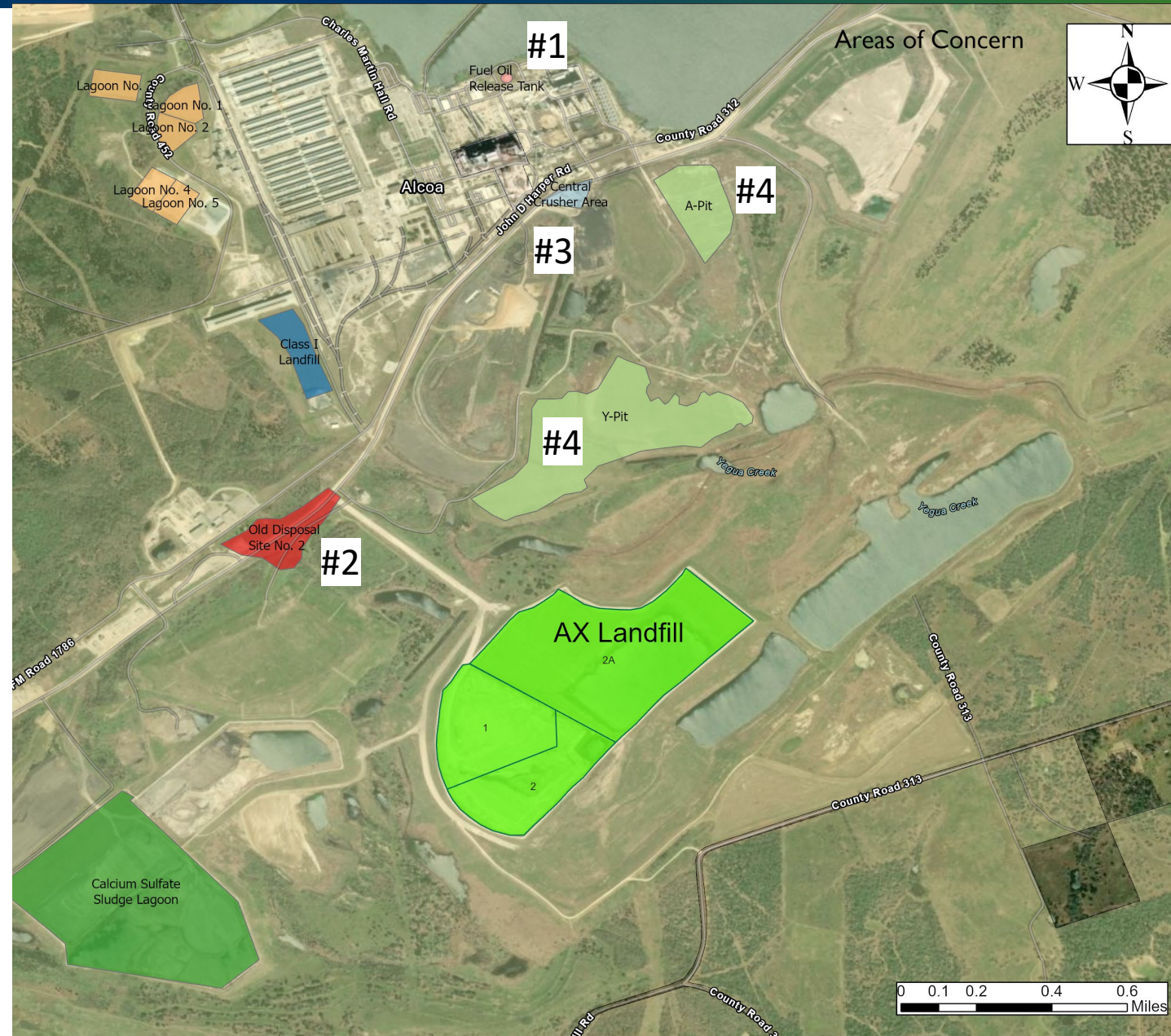
- Former mine pit filled with mine spoil and smelting process waste
- GW impacted by cyanide, fluoride, metals, sulfate, bicarbonate & carbonate

#3) Central Crusher Area (IHW CAP)

- Former mine pit filled with mine spoil and smelting process waste
- GW impacted by cyanide, fluoride, arsenic, barium, chromium, lead, mercury, selenium & sodium

#4) A-Y Pits (IHW CAP)

- A/Y-Pit for fly ash waste disposal & mine spoil
- Groundwater impacted by boron & selenium



Water Management Units

#5) Calcium Sulfate Lagoons (IHW CAP)

- Three surface impoundments for CCR byproduct and asbestos
- Groundwater impacted by fluoride, chloride, aluminum, calcium, selenium, silver & sulfate

#6) Class I Landfill (IHW CAP)

- Former landfill
- Petroleum hydrocarbons, metals, cyanide, fluoride & PAHs

#7) AX Landfill (CCR)

- Active landfill for fly ash, bottom ash and other combustion by-products
- Arsenic, Chromium, Cobalt, Lithium, Radium & Sulfate



Status of Management Sites: Long-term Monitoring In-Progress

- Update on monitoring results available at

<https://www.luminant.com/ccr/>

- provides site investigation history
 - provides measured groundwater parameter
 - same site provided to POSGCD in June 2019

- TCEQ sites exceedances are measured relative to established background concentrations specific to a site

Groundwater Contamination from Texas Coal Ash Dumps

New Data Reveal Pollution Leaking from 100 Percent of Coal Power Plants With Available Records

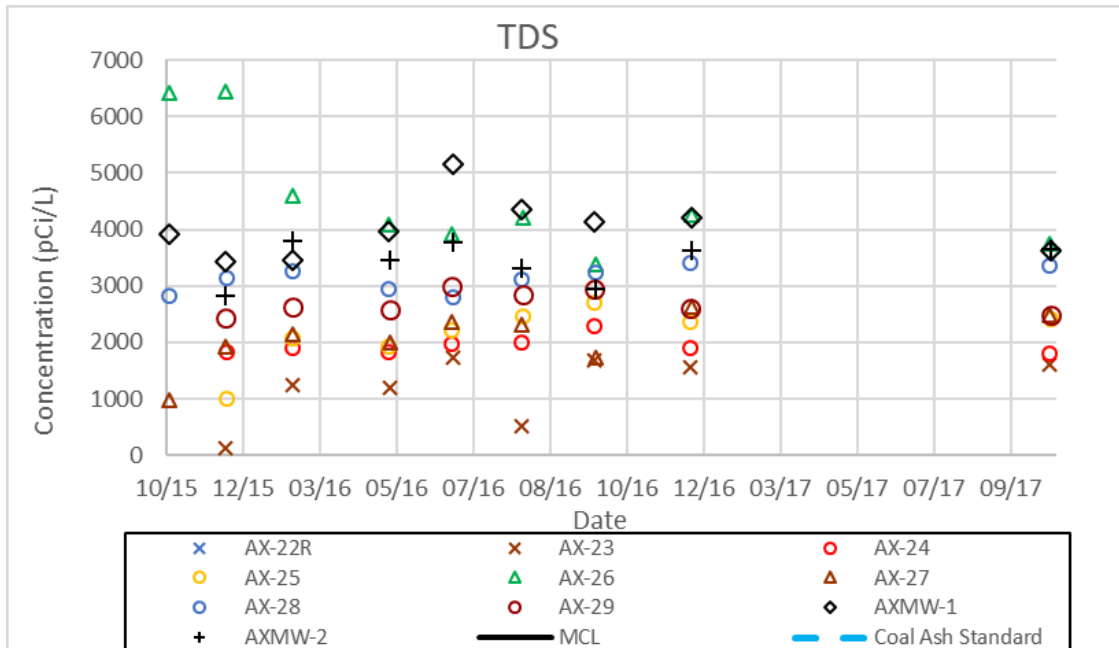
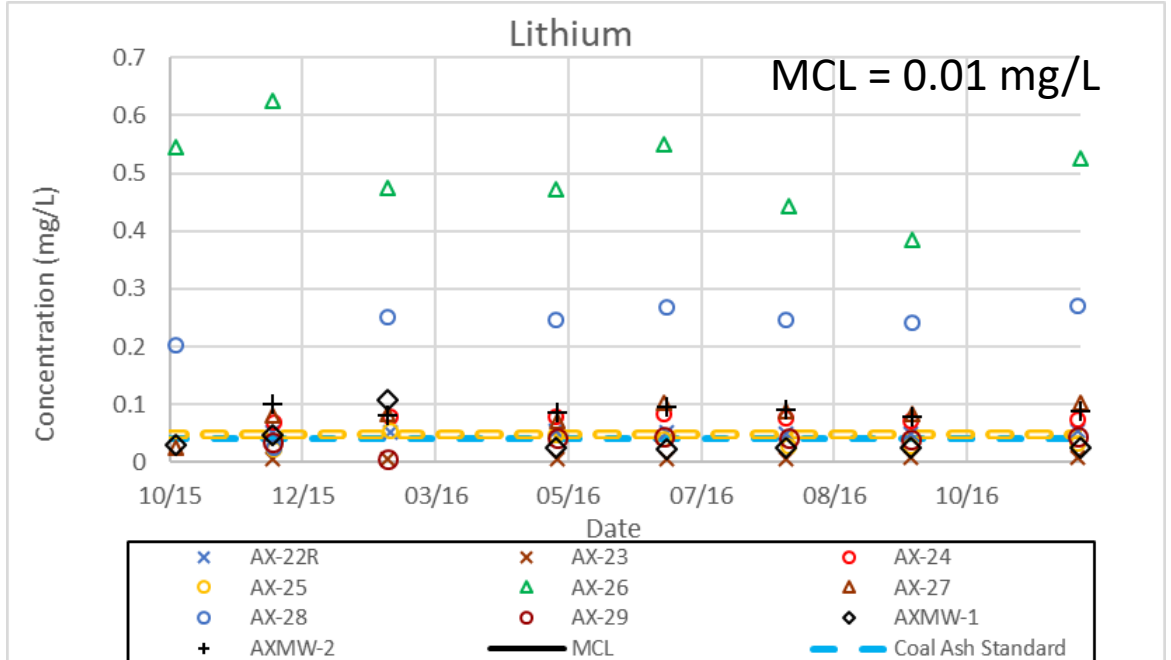
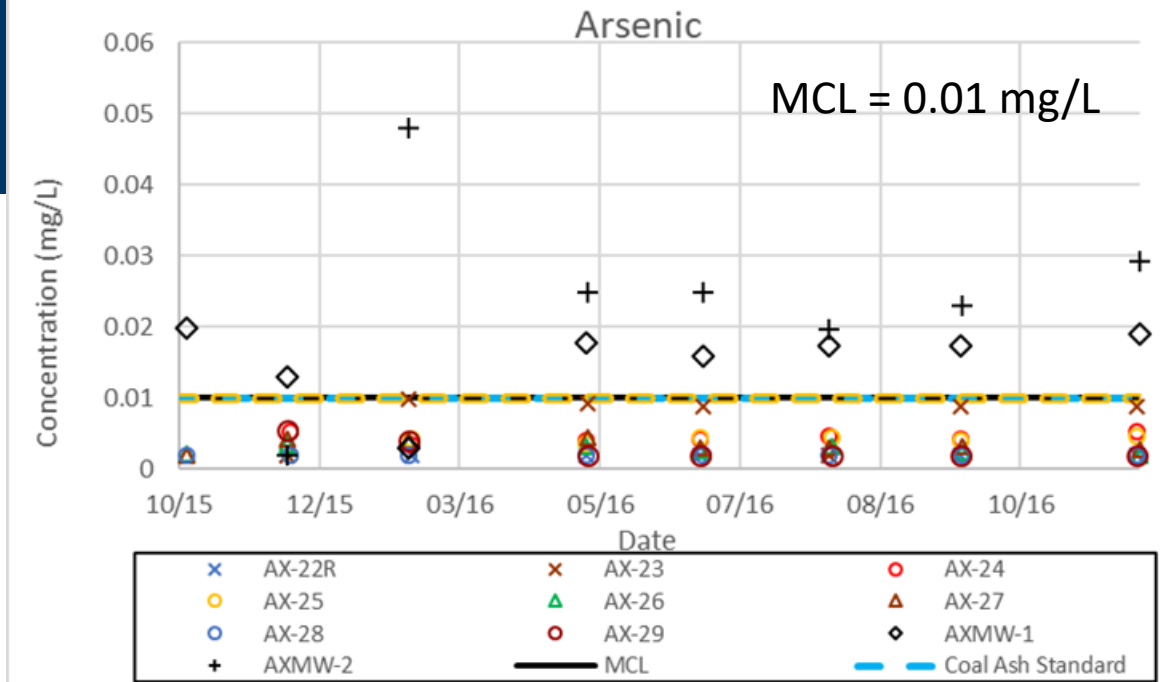


JANUARY 17, 2019

- Several TCEQ sites have backgrounds values similar to Central Crusher Area established in 2105 (arsenic background = 0.041 mg/L and MCL = 0.01 mg/L, also cyanide, fluoride, barium, chromium, lead, mercury, selenium, sodium, alkalinity)
- AX Landfill monitored for Boron, Calcium, Chloride, Fluoride, pH, Sulfate, Total Dissolved Solids

AX Landfill Concentrations Reported in 2019

- In 2019, arsenic and several other parameters above Maximum Contaminant Levels (MCLs) but below background levels



Reports Related to All Management Units

- TCEQ reports available at:
https://records.tceq.texas.gov/cs/idcplg?IdcService=TCEQ_SEARCH
 - Primary Consultant is Bullock, Bennet & Associates, LLC
 - Search ID ALCOA: 30132; SLR: 88209
- EPA Reports available at:
<https://www.slrcr.com/>
 - Primary Consultant is Bullock, Bennet & Associates, LLC
 - AX Landfill Application for Closure dated April 4, 2024 (1000 pages)

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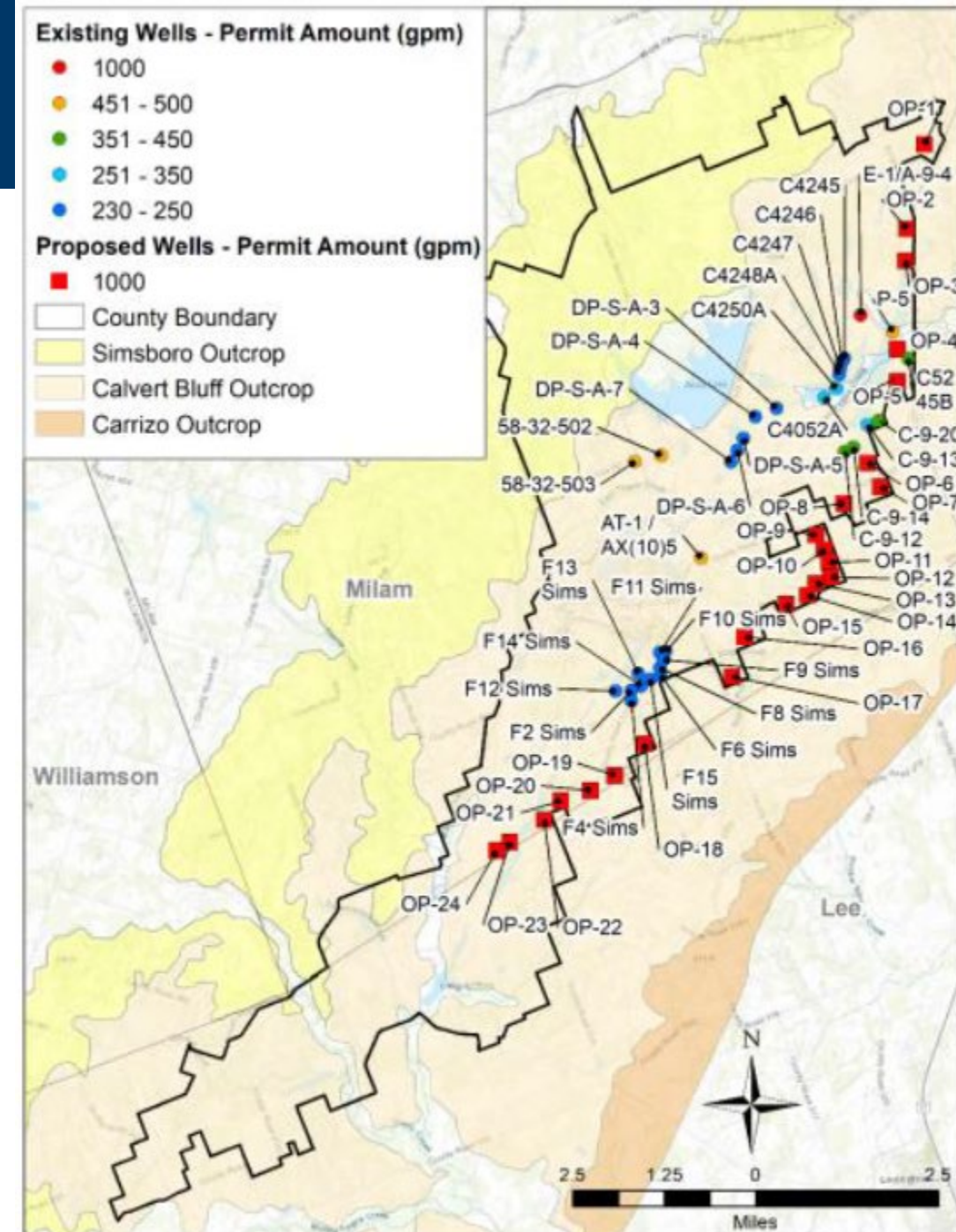
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General Assessment

- Regulatory Oversight
 - TCEQ has authority and mandate to regulate the sites
 - TCEQ has a well organized and transparent web sites to review monitoring data and correspondence
 - TCEQ does not perceive waste management units as a threat to groundwater resources
- Mining & Depressurization of Simsboro Aquifer
 - Depressurization of Simsboro was primarily to prevent heaving of the floor of the lignite mine
 - Lowest section of the Calvert Bluff contains primarily clays and lignite
 - Standard depressurization practice was to leave about 60 feet of Calvert Bluff above the Simsboro aquifer
 - Lower 60 feet of Calvert Bluff provides a very good barrier to vertical flow in Simsboro
 - Because of very low permeability of lower Calvert Bluff, high attenuation rate of heavy metals in clays, and caps used for closure – there good protection for Simsboro

General Assessment (Con't)

- SLR Operations
 - SLR wells will cause groundwater flow inward to their wells, no opportunity for significant water to exist SLR property
 - SLR wells will capture any potential leakage from waste sites before reaching SLR property boundary
 - SLR will be required to monitor water quality
 - When monitoring SLR wells for water levels, obtain samples and analyze for selected components



Statements of Significant Concern

- Pg 2 “In essence, behemoth dredging machines removed the Calvert Bluff and laid bare the top of the Simsboro (Figure 3). +
- Pg 5 “As mentioned earlier, my reading indicated that most landfills at the Alcoa-land have no protective lining below the landfills”
- Pg 5 “Another line of research provided data that support significant cross-flow of groundwater between the undisturbed Calvert Bluff and Simsboro.
- Pg 6 “Since the base of the pits used for the landfills is primarily formed mine spoil near the top of the Simsboro due to the Calvert Bluff being removed during lignite strip-mining, the Simsboro is exposed to contamination by anything in the landfill – including toxic chemicals.”
- pg 7 “Since contaminants move along the paths of groundwater flow which are primarily downslope, toxic chemicals entering the Simsboro at the Alcoa-land could be distributed to the Simsboro lying under up to 3,000 square miles of Central Texas counties. “

Question

