

COPANO SITE (BEDS 1-4) FINDINGS OF ENVIRONMENTAL ASSESSMENTS

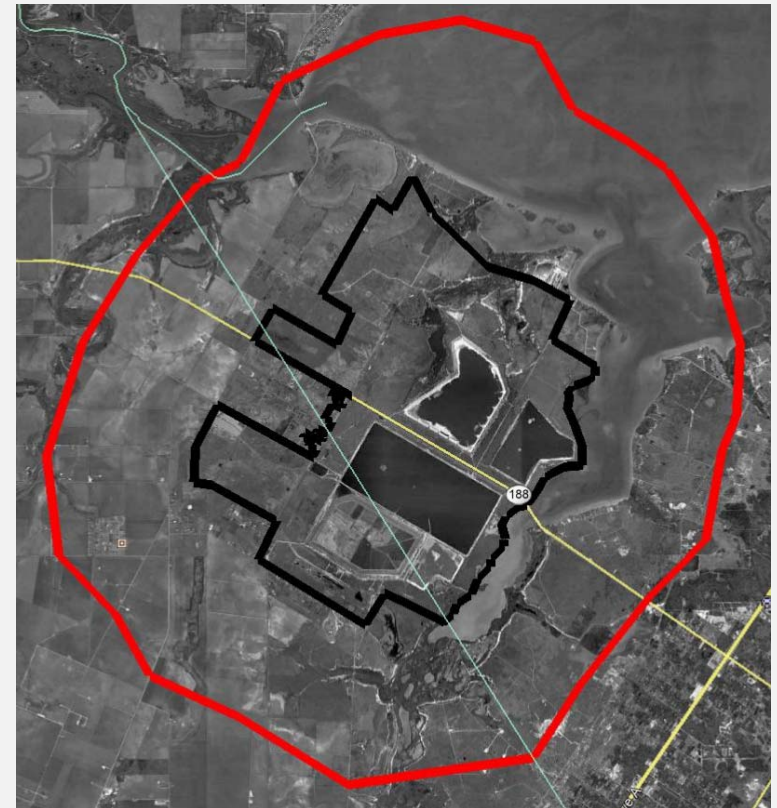
Virtual Public Meeting

December 15, 2020

Let us know you are here by typing in your name and sending a greeting using the Q&A window.

Welcome!

- Invites were sent to landowners of properties within two miles of the Copano site and to local public officials.
- Information for the virtual public meeting:
 - All attendee microphones will be muted.
 - Questions from online attendees can be typed and asked using the Q&A window on the Teams Live Event platform.
 - We will answer as many questions as time allows.
 - Phone attendees will not be able to ask questions but will be able to hear the presentation.
 - Questions or comments can also be submitted by going to www.copanobeds.com or leaving a voicemail on the Copano Beds hotline at (361) 920-6013.



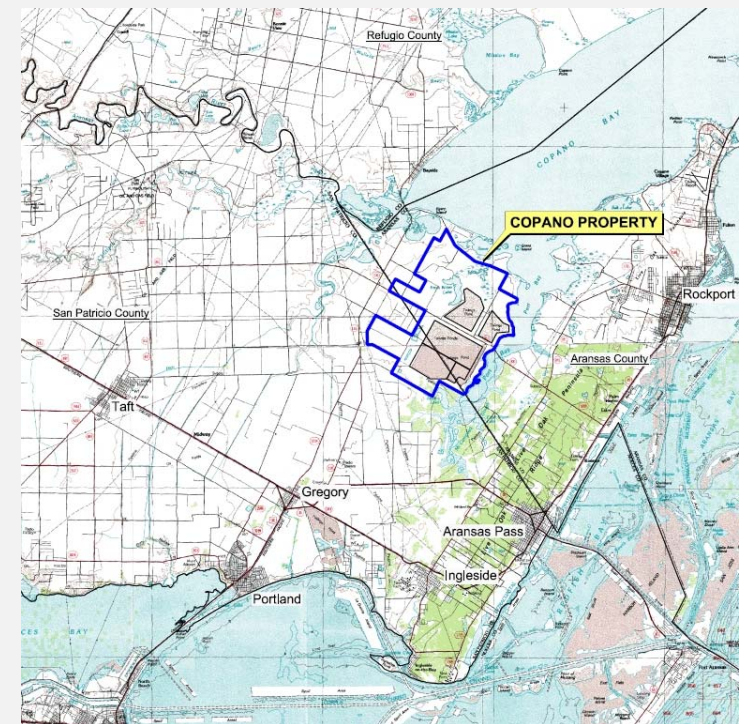
Welcome!

CE Ranch LLC is hosting a virtual public meeting in cooperation with the Texas Commission on Environmental Quality (TCEQ) to discuss the Affected Property Assessment Report (APAR) prepared by Golder Associates, Inc. The report contains an evaluation of results of sample analyses of soil, groundwater, surface water and sediment at the Copano site.

Main findings of the assessment work to be discussed today include:

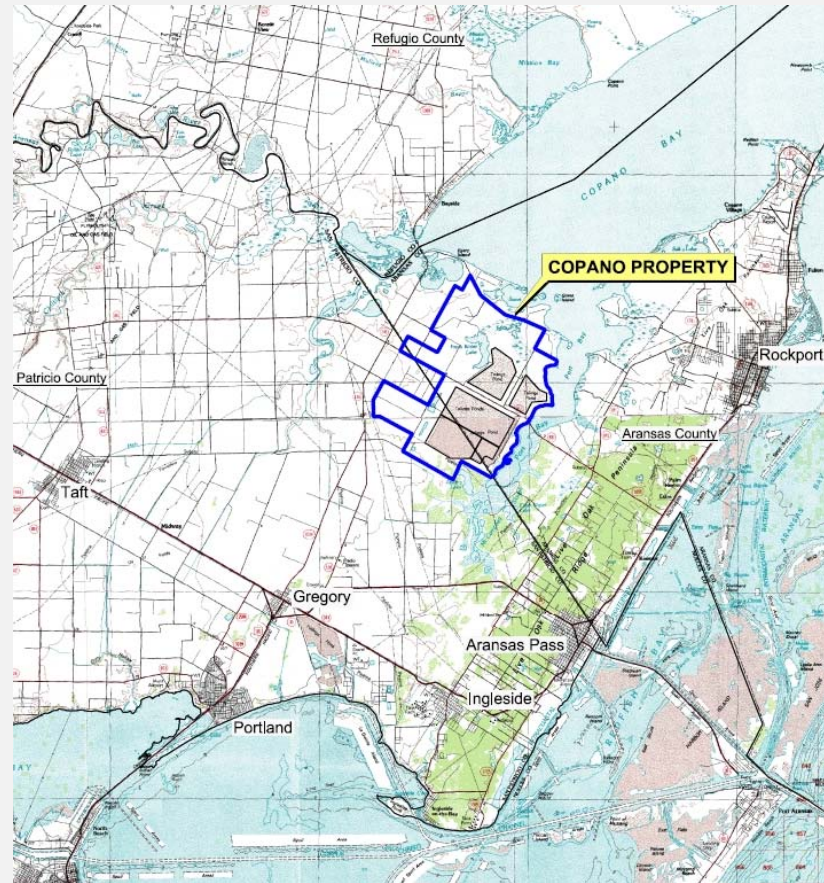
- **Soils: No contamination to surrounding land.**
- **Groundwater: No contamination in groundwater beneath and adjacent to the Site.**
- **Surface Water and Sediment: No contamination in nearby water bodies.**

=> Based on the results of this site-specific environmental assessment work, there is no impact from the Copano Site.

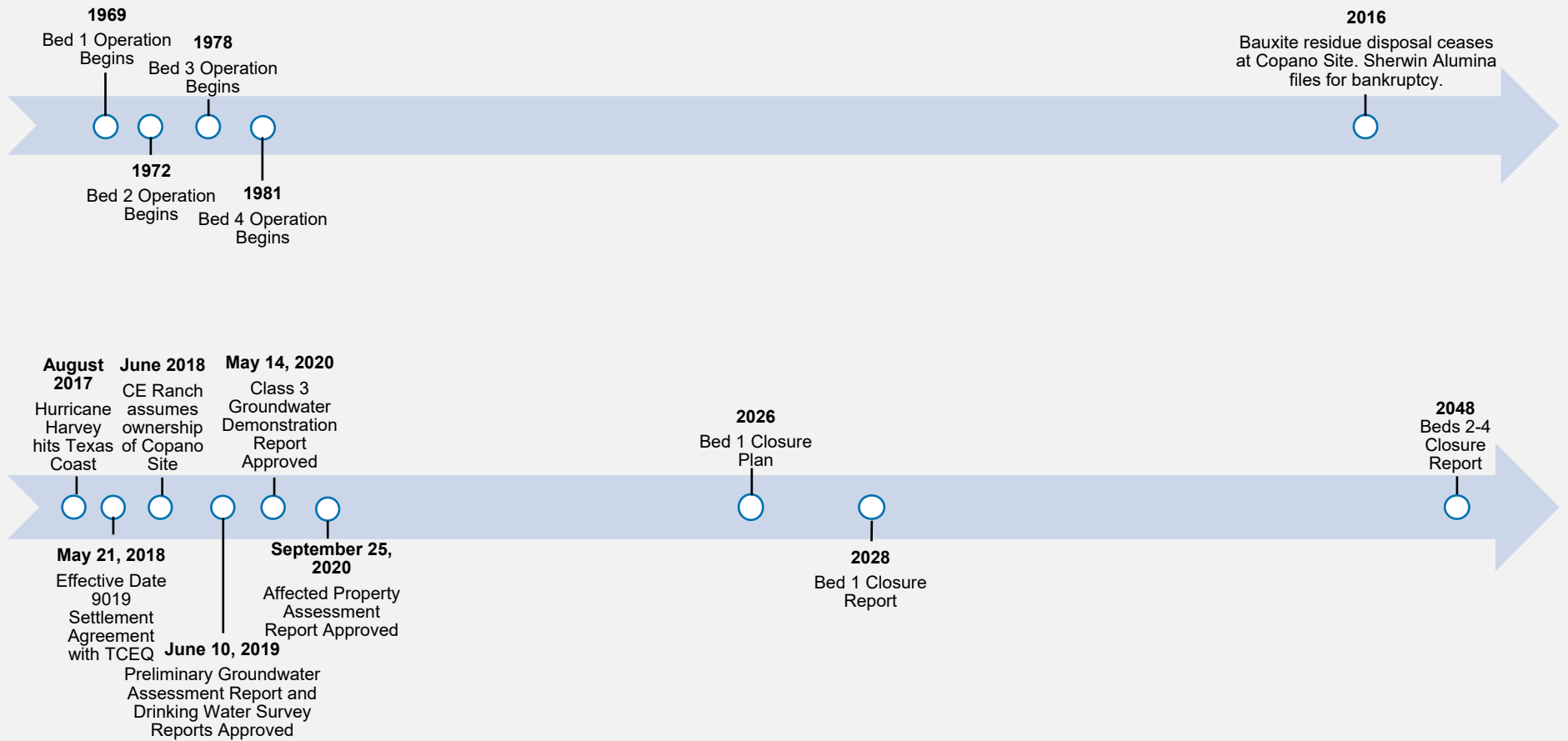


Meeting Agenda

- Timeline for the Copano Site
- Overview of the TCEQ 9019 Settlement Agreement Requirements Related to Environmental Assessments
- Review of Previous Investigations and Studies
- Affected Property Assessment Report Findings
- Review of Current Site Activities
- Q&A Session

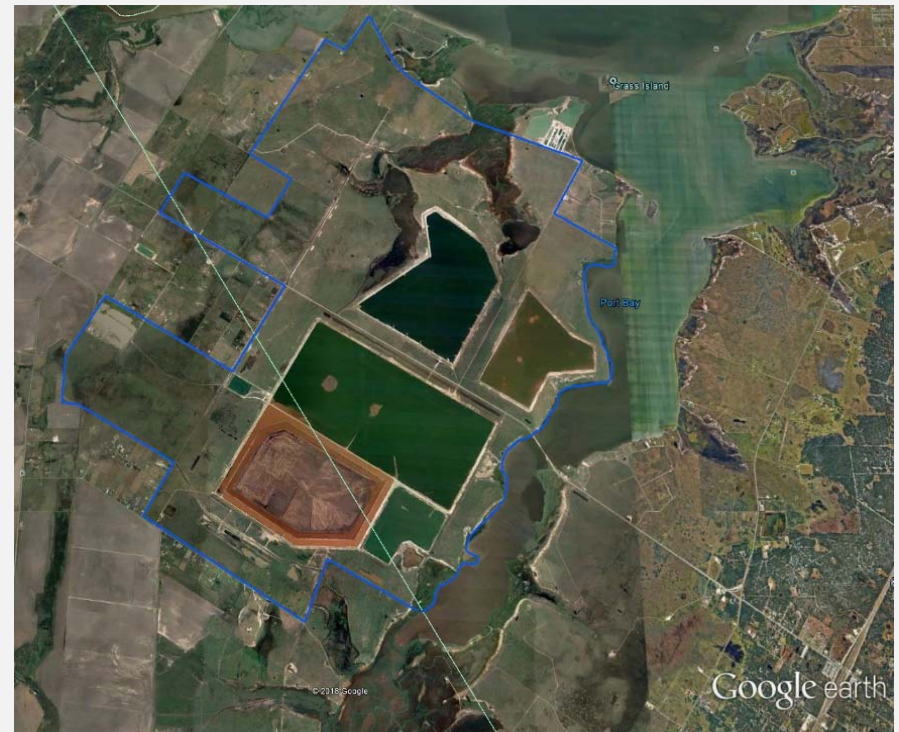


Timeline



Key 9019 Settlement Agreement Requirements

- CE Ranch assumed ownership and responsibility for the Copano Site in June 2018. The entire Site extends over approximately 11,000 acres. The four Bauxite Residue Disposal Areas (Beds 1, 2, 3 and 4) cover approximately 3,100 acres.
- The 9019 Settlement Agreement that was entered into with TCEQ outlines various environmental and other requirements.
- Specifically, the Agreement requires:
 - Section 4.8 – Preliminary Groundwater Assessment Report (PGAR)
 - Section 4.9 – Drinking Water Survey Report (DWSR)
 - Section 4.12 - Affected Property Assessment Report (APAR)
- The PGAR and DWSR were approved by TCEQ in June 2018
 - Complete reports and summaries are on the Copano Beds website
- The APAR is the main subject of this presentation.
 - Complete report and summary also on the Copano Beds website.



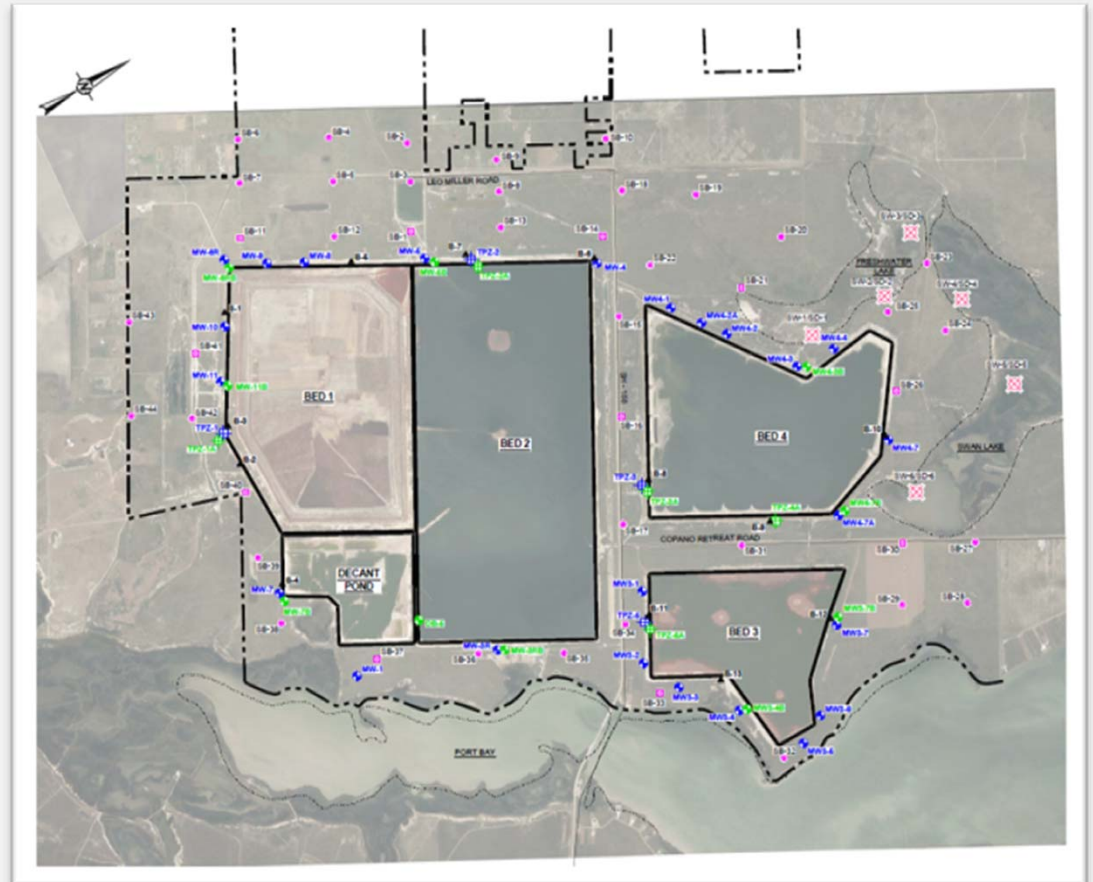
Previous Investigations and Studies

- Preliminary Groundwater Assessment Report:
 - Hydrogeologic assessment and monitoring well installation.
 - Groundwater sampling event; samples were collected from 34 Site monitoring wells and analyzed for parameters indicative of potential impact from past industrial activities at the Site.
 - General chemistry, metals (aluminum, antimony, arsenic, chromium, lead, mercury, nickel, thallium, and vanadium) and radium, uranium and fluoride.
 - Based on TCEQ criteria and the groundwater sample results, radium, uranium, and fluoride were identified to be the important constituents of concern or “COCs” at the Site and to be further evaluated
 - PGAR approved by TCEQ in June 2019.
- Drinking Water Survey Report was submitted and approved by TCEQ in June 2019. The DWSR documented that no privately-owned water wells were located within a 0.25-mile radius of the Site.
- The next step in the process was to prepare and implement a work plan for the APAR including determination of the groundwater classification for the Site.
- In May 2020, the Class 3 Groundwater Resource Classification Report was approved by TCEQ.



Affected Property Assessment Report

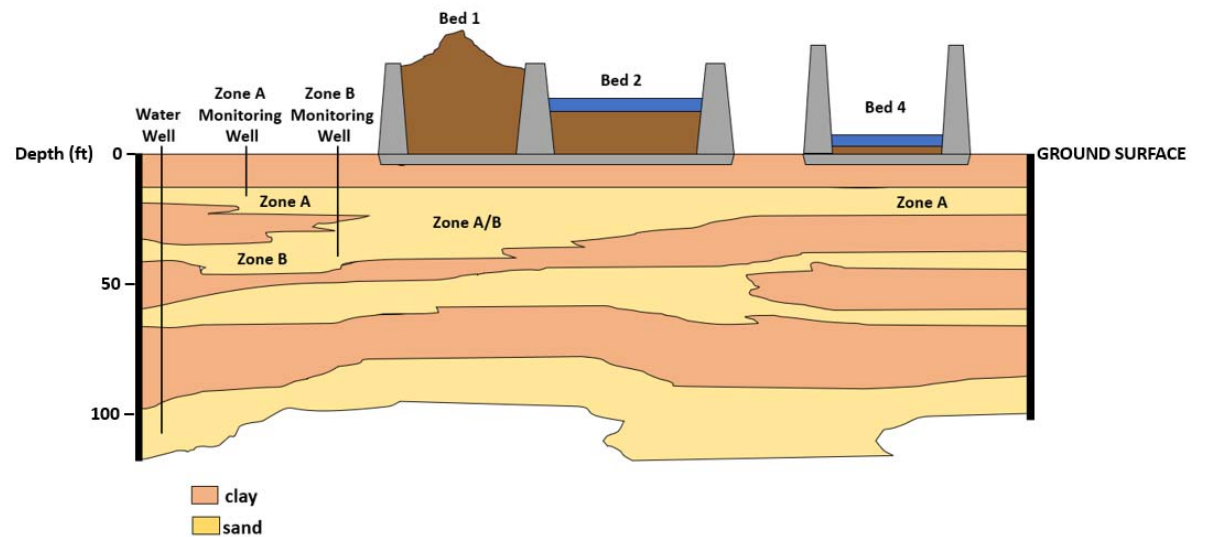
- The APAR specifically addresses the potential impacts to the Site from bauxite residue materials contained in Beds 1, 2, 3 and 4.
- The APAR scope of work was conducted in phases, with each phase reviewed and approved by TCEQ. Key tasks included:
 - Confirmation of the conceptual model for the Site
 - Soil sampling from areas surrounding Beds 1-4
 - Four quarterly sampling events of groundwater monitoring wells
 - Sampling of surface water and sediment from nearby surface water bodies
- Based on the past industrial activities and initial assessments, the APAR investigation focused on evaluation of concentrations of metals, radium, uranium, and fluoride (i.e., the Site constituents of concern) in soil, groundwater, surface water, and sediment.
- Evaluation of risk of potential impacts to ecological receptors, e.g., wildlife associated with the Site was also conducted.



Affected Property Assessment Report

Geology/Groundwater and Conceptual Model

- Information about the Site's subsurface geology and hydrogeology was developed through review of historical information and Site-specific investigations
 - The top of the saturated clayey/sandy soils within Zones A and B is approximately 20 feet and 40 feet below the bottom of the beds, respectively.
 - The beds sit atop a thick clay layer and their levees were constructed using clay sourced on-site.
 - The bed levees were "keyed" into the underlying clay to prevent leakage.
 - An underdrain system is operational in Bed 1 to collect fluids retained in the bauxite residue to allow for collection and evaporation.
- There is no surface water discharge from the Site.
- Evaporation exceeds rainfall in this region.

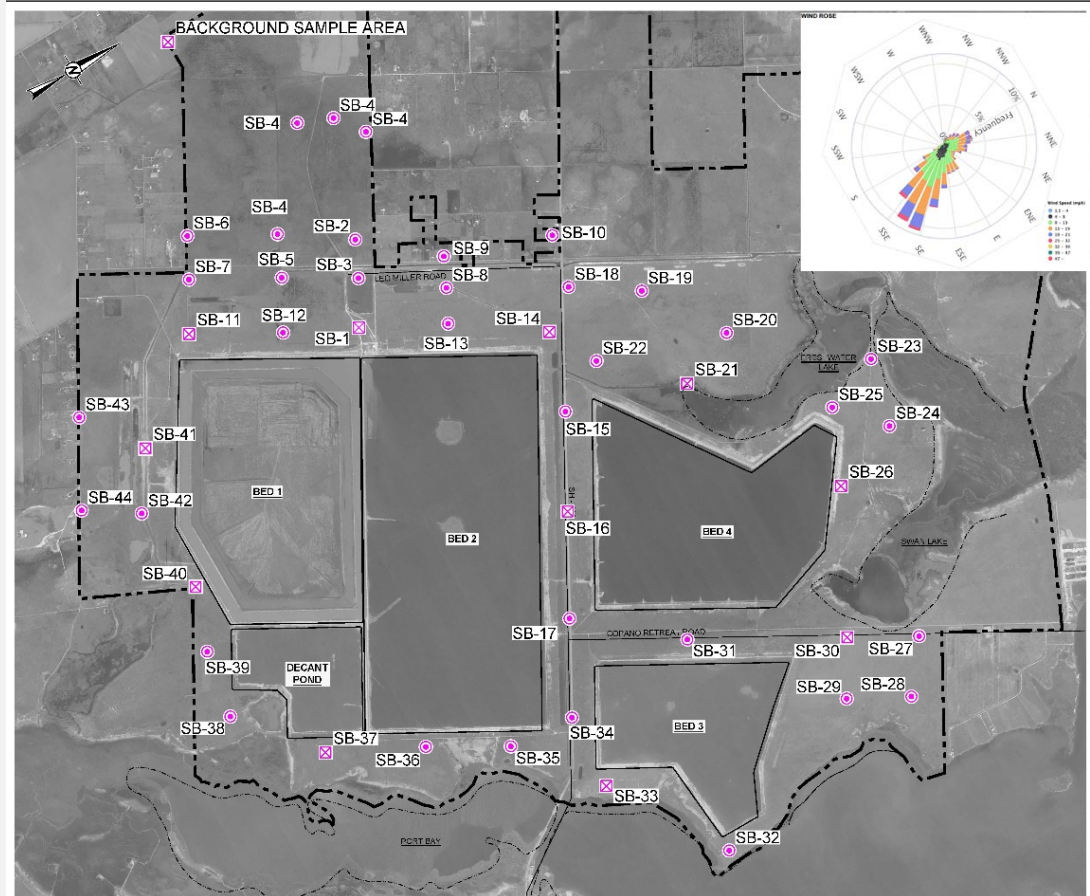


Affected Property Assessment Report

Soil Assessment

- Surface soil samples from 44 locations were collected from 0-12 inches below ground level and analyzed for the Site COCs; the majority of samples were collected at prevalent downwind locations.
- Ten (10) soil samples were collected from a historically undeveloped background area located >1.5-miles west of Bed 1.
- No evidence of contamination was observed during sampling.
- Concentrations of metals, radium, and uranium in the soil samples were below specific risk-based criteria established by the TCEQ.

=> The assessment concluded that surface soil has not been contaminated by any activities at the Site.



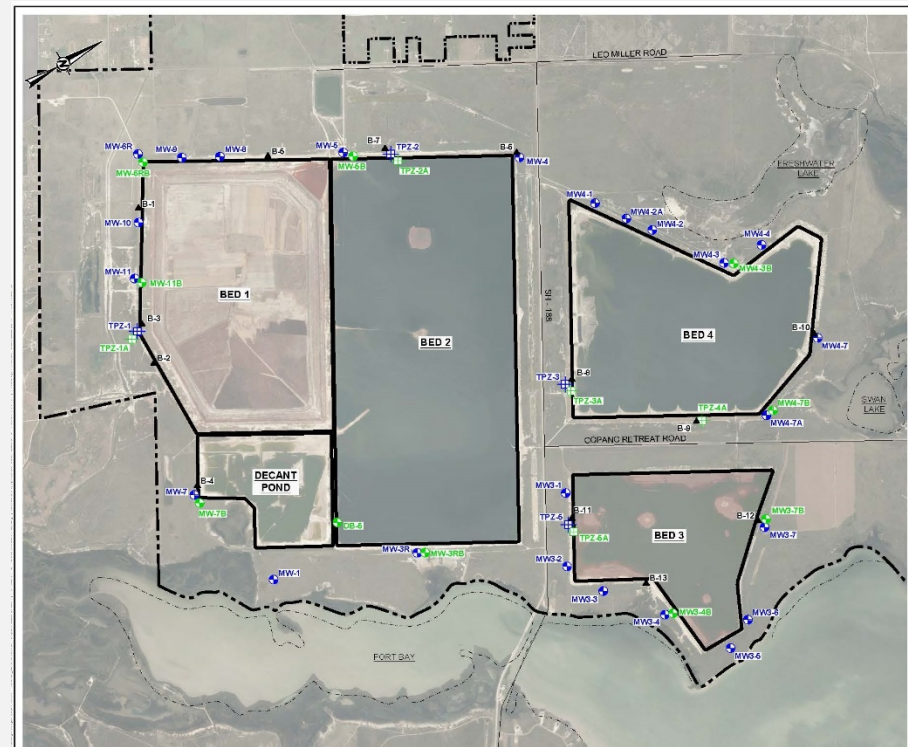
*Surface soil samples were collected and analyzed using standard industry procedures and analytical methods approved by the TCEQ.

Affected Property Assessment Report

Groundwater Assessment

- Groundwater samples from 34 monitoring wells were collected over four consecutive quarters
- Groundwater samples were collected from Zone A and Zone B groundwater-bearing units and analyzed for the Site COCs
- No evidence of contamination was observed during sampling
- Water level measurements were consistent during all sampling events and did not depict any evidence of impact from the overlying beds
- Concentrations of metals, radium, uranium, and fluoride in the groundwater samples were less than Class 3 criteria established by the TCEQ.

=> The assessment concluded that groundwater is not contaminated by any activities at the Site.



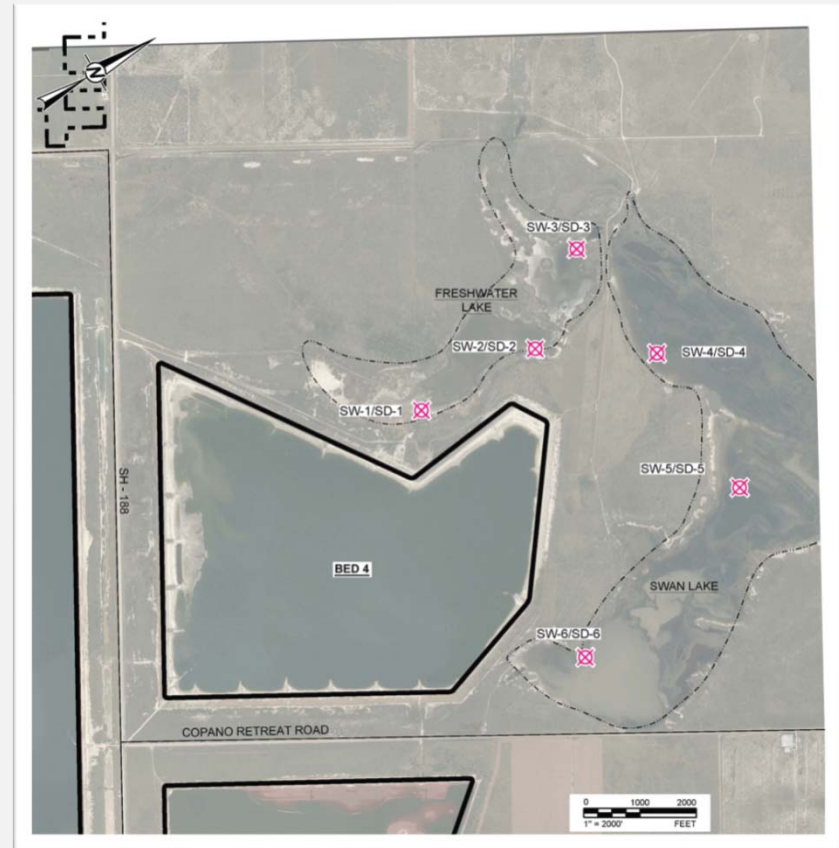
*Groundwater samples were collected and analyzed using standard industry procedures and analytical methods approved by the TCEQ.

Affected Property Assessment Report

Surface Water and Sediment Assessment

- Surface Water
 - Three surface water samples were collected from the downwind surface water bodies (Freshwater Lake and Swan Lake)
- Sediment
 - Three sediment samples were also collected near the shoreline of Freshwater Lake and Swan Lake
- No evidence of contamination was observed during sampling.
- Concentrations of metals, radium 226/228/combined, uranium, and fluoride were below the criteria established by the TCEQ.

=> The assessment concluded that surface water and sediment have not been contaminated by any activities at the Site.



Affected Property Assessment Report

Ecological Risk Assessment Review of Surface Soil, Surface Water and Sediment Data

- Surface soil, surface water and sediment sample results were evaluated to determine whether ecological receptors (i.e., wildlife - plants and animals) could be affected by the Site.
- Due to the low concentrations of the COCs in the sampled media, it was determined that there would be no effect to local wildlife.

=> The sample results concluded that no further ecological assessment was warranted.



*This Ecological Risk Assessment has been completed using the Texas ecological risk process as described in TCEQ's Texas Risk Reduction Program (TRRP) [TAC 350].

Affected Property Assessment Report

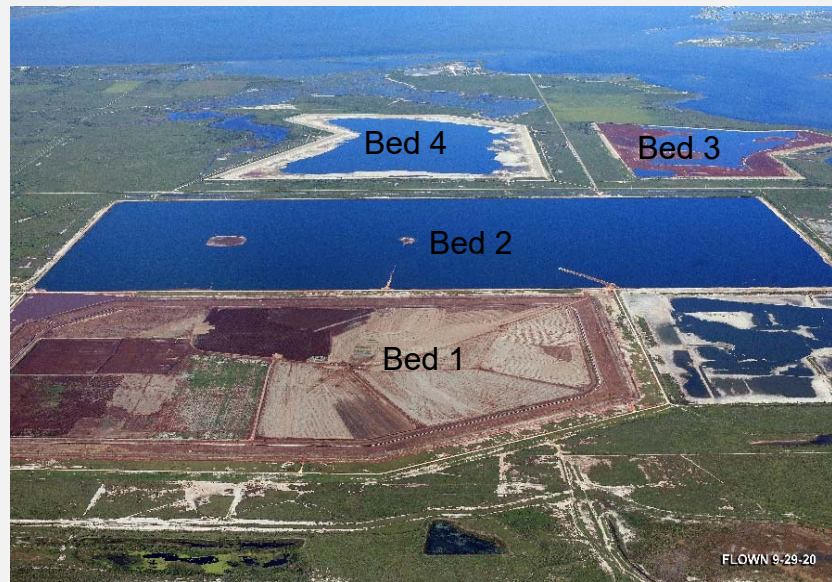
Conclusions that support the determination there is no impact from the Copano Site:

- The APAR was conducted to specifically address the materials contained and managed within the four beds at the Site in accordance with requirements of the 9019 Settlement Agreement.
- Assessment activities were conducted throughout the adjacent areas of the Site.
- Evaluation of concentrations of metals, radium, uranium, and fluoride in soil, groundwater, surface water, and sediment was conducted.
- No criteria established by the TCEQ were exceeded in any of the samples of soil, groundwater, surface water, and sediment collected during the APAR, i.e., no evidence of any contamination was detected.
- There are no ecological risks to wildlife receptors.

Current Copano Site Activities

Water and Stormwater Management

- All stormwater and water used for irrigation and/or dusting prevention stays onsite and is controlled via evaporation.
- Stormwater collection systems are in place to prevent discharge into the surrounding land or surface water bodies.
- An underdrain system is operational in Bed 1 to collect fluids retained in the bauxite residue for subsequent evaporation.



Current Copano Site Activities

Dust Control

- Dusting events can occur on dry, flat surfaces during high wind conditions.
- Since 2018 dust control actions have been generally successful. These actions include promoting vegetative growth, scarifying exposed surfaces, covering with or applying water, regrading levees, and placing hay or other organic materials over exposed areas.



Current Copano Site Activities

Foam Control

- Foaming events can occur as organic matter decays within impounded surface water of beds 2, 3 and 4, and then wave action caused by high wind conditions agitates the water surface and causes foam to be generated and released.
- Since 2018, foam control actions have been generally successful. These actions include lowering the water levels in Beds 3 and 4 (see photos below), installing barriers, and applying defoamer to the interior sides of the levees.



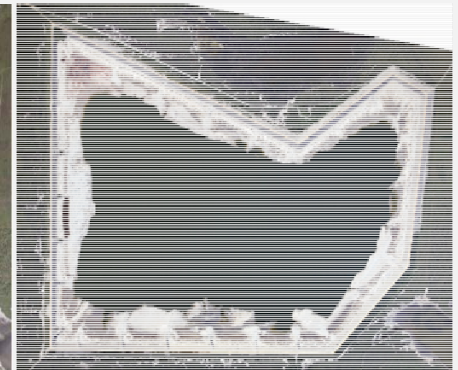
Bed 3
1/29/2020



Bed 3
9/29/2020



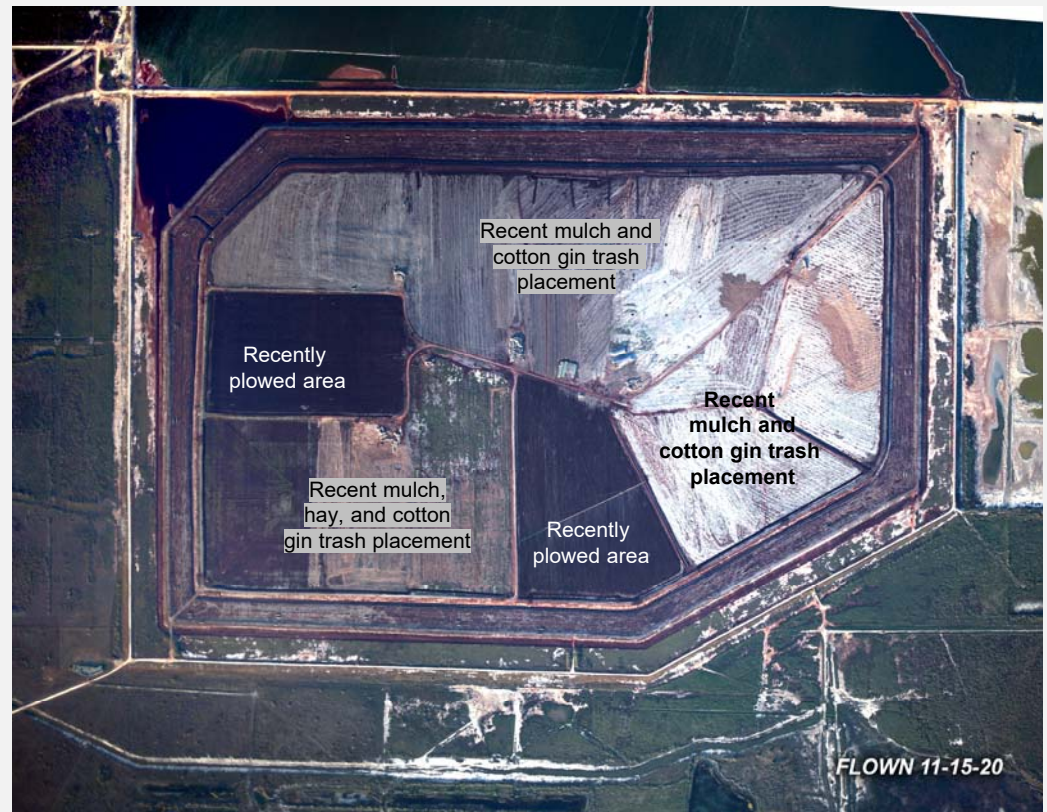
Bed 4
4/25/2019



Bed 4
9/29/2020

Other Copano Site Activities

- Since 2018, various actions have occurred to work towards creating a soil profile within the upper surface of Bed 1 in accordance with objectives of the Settlement Agreement to promote sustainable vegetative growth and acceptable stormwater runoff.
 - Application of organic materials such as woody mulch, hay, seed, and cotton-gin trash residuals continue to improve soil structure and add carbon, nitrogen, organic acids from decomposition and other nutrients.
 - Cultivation of top 48-inches; ripping, plowing and disking to mix and aerate the surface layer.
 - Irrigation water applied using former feed points to actively flush the upper layer of the residue to further neutralize the alkaline materials and enhance decomposition of the mulch, hay, and cotton gin residuals. Irrigation water includes beneficial reuse of the Effluent from the City of Aransas Pass WWTP and Basin Cleaning Water & Mud from SPMWD.
- In other areas of the site the cattle ranch and herd size have been improved, perimeter fencing has been repaired, roads maintained, and levees of the beds have been stabilized and improved.



Bed 1

ANY QUESTIONS?

