

ATTACHMENT 1C.5

Former Antimony Processing Building,
Storage Yard and Gas Utility Line Area
South Terrace Arroyo Assessment Area



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Introduction

Historically, the Antimony Processing Building was located in the southeastern portion of the Site. The processing building was later demolished. Soil that had sloughed onto the asphalt parking surfaces and building foundations from demolition activities contained concentrations of constituents of concern (COCs) at concentrations above protective concentration levels (PCLs) for direct contact for commercial industrial soils ($C/I_{\text{TotSoilComb}}$) for antimony, arsenic, cadmium, lead, and mercury. The response action for this area is to sweep up and remove impacted soils.

The Storage Yard adjoins the southern side of the former Antimony Processing Building. The Storage Yard is an open area without pavement; however, several concrete pads are located within the footprint. The Storage Yard also adjoins a utility right-of-way for a buried high-pressure gas line in an area with relatively clean fill over Category II soil and slag material. TCT collected characterization soil samples from the Storage Yard and analyzed the samples for volatile organic compounds (VOCs), semi-volatile compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and metals (RAP Appendix 2.5). For VOCs, no results were reported above detection limits in any soil samples. Several SVOCs detected in soil included PAHs, including acenaphthalene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd) pyrene, phenanthrene, and pyrene, and phthalate esters including bis(2-ethylhexyl) phthalate, di-n-butyl phthalate, and di-n-octylphthalate. All concentrations of PAHs and phthalate esters were below their respective Tier 1 PCLs for direct contact in residential soil. Results for arsenic, copper, and lead exceeded their respective critical soil-to-groundwater-to-surface water ($^{SW-GW}\text{Soil}$) Protective Concentration Levels (PCLs) within the former Storage Yard and along the gas line right-of-way on the east side of the Storage Yard.

The response action for the Storage Yard is to remove remaining impacted soils in identified portions of the Storage Yard to prevent contact and migration from soil to groundwater. The compaction of native fill and re-vegetation is recommended for this area following excavation to $^{SW-GW}\text{Soil}$ PCLs. An institutional control will be placed for any development to preclude ponding on the cover. Along the eastern edge of this area, the presence of the gas line prohibits excavation to PCLs. A low permeability cover will be installed in this area to prevent infiltration of stormwater through soils with concentrations of COCs above their respective $^{SW-GW}\text{Soil}$ PCLs.

Information on the Storage Yard is noted in the following sections of the RAP:

- RAP Worksheet 1.0, page 24 – Exposure pathways
- RAP Worksheet 2.0, page 3 – Protective Concentration Level Exceedence Zone based on concentrations of arsenic and lead in surface soil
- RAP Worksheet 2.0, page 8 – Low Permeability Cover
- RAP Appendix 2.5 – Summary of characterization activities (“Soil Sample Results, Rubber Pond and Storage Yard”)
- RAP Attachment 2A.14 – Figures showing location of storage yard and gas utility line

Regulatory Approval

- Letter from TCEQ from dated December 27, 2016 regarding Approval of the following documents: Response to TCEQ comments dated September 19, 2016, dated November 22, 2016; Response to TCEQ e-mail comments dated December 7 and 20, 2016; and Revised Response Action Plan, dated August 16, 2016

Response Action

In 2015, TCT removed approximately 800 cy of stockpiled impacted soils from asphalt and concrete surfaces at the former Antimony Processing Building. Following this removal, TCT used a water truck to spray the area and

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moisten remaining loose material then used industrial road sweepers to sweep remaining loose material. In several areas where soil was exposed within the asphalt/concrete-surfaced area, TCT used an excavator to remove 1 to 2 feet of soil. TCT disposed of this stockpiled material, swept, and disposed the material in Cell 4.

Between July 2015 and January 2016, TCT excavated a 1-foot to 10-foot thick layer of soil within the Storage Yard and transported the material to the South Pad to use as subgrade material. After excavation, TCT collected a 5-point composite sample from each 50-foot by 50-foot grid square, shown on Figure 1 of this attachment and submitted the samples for laboratory analysis. The results are summarized in Table 1 of this attachment.

The ^{SW-GW}Soil PCLs were identified as the critical PCLs for this portion of the site. Confirmation soil sample results show that the concentrations of copper exceed the PCL in two grid squares, and that the concentration of iron exceeds the PCL in one grid square. At soil sample location D18, iron was detected at 19,900 milligram per kilogram (mg/kg). The surrounding concentrations of iron at grid squares C17 to C19, D17, D19, and E17 to E19 ranged from 10,300 mg/kg to 14,600 mg/kg. Thus, the result at grid square D18 was considered a suspected outlier as compared to the other measured results. An outlier evaluation was performed using the Dixon test at 95 percent confidence using the USEPA (2015) statistical software ProUCL. As indicated in Table 2, the result was confirmed to be statistically significant at 95 percent confidence, indicating that the iron result at soil sample location D18 is an outlier. Thus, no further response action is warranted at this sample location.

Regarding the copper exceedance at grid squares B21 and C22 (collected on January 14 and 13, 2016, respectively), copper was reported at a concentration of 1,410 mg/kg and 910 mg/kg, respectively. These grid squares will be further excavated in 2017 until confirmation sampling indicates the achievement of the ^{SW-GW}Soil PCLs.

Along the eastern side of the Storage Yard, a 440-volt powerline located on the ground surface is scheduled for removal in 2017. Following the powerline removal, TCT will compact surface soil in the Storage Yard and revegetate the area. In the utility right-of-way, TCT will install a low permeability surface sealant.

Supporting Documentation Included in This Attachment

- Table 1 Summary of Confirmation Analytical Results, Storage Yard
- Table 2 Outlier ProUCL Output (Dixon's Outlier Test), Iron
- Figure 1 Storage Yard Confirmation Sample Locations

References

USEPA. 2015. ProUCL Version 5.1.002, Technical Guide, Statistical Software for Environmental Applications for Data Sets with and without Nondetect Observations. U.S. Environmental Protection Agency, Office of Research and Development, Washington, DC. EPA/600/R-07/041. October.