

ATTACHMENT 1C.2.1

Category I and Category II Material Removal Activities
East Property Assessment Area



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Category I and Category II Material Removal Activities East Property Assessment Area

Introduction

The East Property Assessment Area (East Property AA) includes localized areas where Category I (Cat I) material (primarily waste construction debris and soil containing elevated concentrations of metals) and Category II (Cat II) material (primarily slag) were placed during historical operations at the former smelter. As described on page 7 of Worksheet 1.0 in the Response Action Plan (RAP; Arcadis 2016e), one Response Action was to control sources of contamination to groundwater by excavating Cat I material in the East Property and placing it in the Cell 4 waste control unit (WCU) and excavating Cat II material and placing it in the Cat II Stockpile/Material Storage Area.

Texas Custodial Trust (TCT) submitted the following documents regarding this response action:

- Letter to Texas Commission on Environmental Quality (TCEQ) dated December 7, 2012 regarding East Borrow Source Environmental Sampling Procedures for Interim Channel Backfill and East Category I Landfill Removal Plan
- Letter to TCEQ dated June 6, 2013 regarding East Category I Landfill Confirmation Sampling Results, Former ASARCO Smelter Site, El Paso, Texas
- Letter to TCEQ dated January 23, 2014 regarding Location of Category II/III Stockpile on East Property (RAP Attachment 2A-6)

The Response Action for the removal of Cat I and II material from the East Property AA is described in the following sections in the RAP:

- RAP Worksheet 1.0 (pages 3, 7, and 20); Worksheet 2.0 (pages 2 and 6)
- RAP Figure 15 East Property AA Response Action
- RAP Attachment 2A-5.1 Excavation and Sampling Work Plan for Category I Materials, East Property Waste and Slag Piles
- RAP Attachment 2A-5.2 Figure - North and East Property Excavation Areas
- RAP Attachment 2A-5.3 Figure - East Property, XRF sampling locations
- RAP, Attachment 2A-6, Letter to TCEQ Regarding Location of Category II/III Stockpile on East Property dated January 23, 2014

Regulatory Approval

The following letters from TCEQ approve the protective concentration levels proposed by TCT for soil remaining on the East Property AA:

- Letter from TCEQ dated February 5, 2014 regarding Acknowledgment of Receipt and Notice to Proceed, Location and Configuration of Category II/III Stockpile on East Property, dated January 23, 2014 (RAP Attachment 2A-6)
- Letter from TCEQ dated April 18, 2014 regarding TCEQ Approval of Proposed Screening Levels for the East Property Category I, II, and III Material Excavations and Removals, dated February 19, 2014 (included in this Attachment to the 2016 Soil Response Action Completion Report [2016 Soil RACR])

Response Actions

Category I and II excavation areas are shown on Figure 1 in this Attachment to the 2016 Soil RACR. Cat I and Cat II materials were excavated as follows:

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- Cat 1 Excavation – East: Material hauled to Cell 4; confirmation sampling conducted from December 2013 to September 2014 (Table 1 and Figure 2 in this Attachment to the 2016 Soil RACR)
- Cat 1 Excavation – North (Area 4): Material hauled to Cell 4; confirmation sampling conducted from November 2013 to September 2014 (Table 2 and Figure 3 in this Attachment to the 2016 Soil RACR)
- Cat II Stockpile/Storage Area: This area was cleared to create a storage area for management of Cat II material. Existing piles consisting of Cat I waste and broken concrete were hauled to Cell 4 and the concrete pile, respectively. Cat II surface soil was excavated and temporarily stockpiled in adjacent areas. Following Cat II removal, confirmation sampling was performed from November 2013 to February 2014 (Table 3 and Figure 4 in this Attachment to the Soil RACR)
- Cat II Excavation: Material hauled to Cat II Stockpile/Storage Area; confirmation sampling conducted from March 2014 to October 2014 (Table 4 and Figure 5 in this Attachment to the 2016 Soil RACR)

During soil removal activities and characterization sampling within the East Property Cat II Removal Area, reported results for selenium in soil samples exceeded the Texas Risk Reduction Program protective concentration level for residential soil. This area is referred to as the “Se removal area” as shown on Figure 5 of this Attachment to the 2016 Soil RACR. TCT excavated selenium-impacted soil from this area and hauled the material to the Cat II Stockpile/Storage Area. Confirmation sampling to verify attainment of the residential direct contact ($^{Tot}Soil_{comb}$) PCL for selenium was conducted in July 2015 (Table 5 and Figure 6 in this Attachment to the 2016 Soil RACR).

In addition, TCT conducted a screening level ecological risk assessment (Appendix M of the Conceptual Site Model, Pathway Evaluation and Protective Concentration Level Report (Arcadis 2016a). Based on the lowest observable adverse effect level-based, less-conservative Hazard Quotients calculated in the SLERA (Arcadis 2016a), selenium was not considered to be a risk for the South Arroyo in the East Property AA.

Furthermore, as noted on pages 24 and 25 of Worksheet 1.0 in the RAP (Arcadis 2016e), the ecological ($^{Eco}Soil$) PCLs for surface soil in the South Arroyo were calculated for arsenic, cadmium, copper, lead, and zinc. Excavations were performed based on the aerial extent of arsenic in surface soil above the residential $^{Tot}Soil_{comb}$ PCL. Following excavations, 277 confirmation samples were collected on a 50-foot grid. Representative concentrations of COCs remaining in soil after excavation were calculated using the 95 percent Upper Confidence Limits (UCLs) on confirmation sample results. The representative concentration calculated for each constituent of concern was below both the human health-based and ecological-based PCLs. Therefore, the excavations of the Category II Material Removal Area in the South Arroyo achieve protection of ecological receptors through compliance with $^{Eco}Soil$ PCLs and no controls are required for this area. U.S. Environmental Protection Agency ProUCL Version 4.1 was used to calculate the 95 percent UCLs. The statistical printout from the ProUCL software is presented in Appendix 7 of the RAP.

This Response Action as described in the RAP is complete.

Supporting Documentation Included in This Attachment

- Letter from TCEQ dated April 18, 2014 regarding TCEQ Approval of Proposed Screening Levels for the East Property Category I, II, and III Material Excavations and Removals, dated February 19, 2014
- Table 1 Summary of Confirmation Analytical Results - Category I, North Property
- Table 2 Summary of Confirmation Analytical Results - Category II Stockpile
- Table 3 Summary of Confirmation Analytical Results - Category II, East Property
- Table 4 Summary of Confirmation Analytical Results - Se Area, East Property
- Figure 1 North and East Property Excavation Areas
- Figure 2 Category I Excavation - North
- Figure 3 Category II Stockpile
- Figure 4 Category II Excavation - East
- Figure 5 Se Removal Area