ATTACHMENT 1C.6.1

Lower Parker Brothers Arroyo Category II Removal Activities
Parker Brothers Arroyo Assessment Area

ARCADIS

Lower Parker Brothers Arroyo Category II Removal Activities
Parker Brothers Arroyo Assessment Area

Introduction

As described on page 1 in Worksheet 1.0 of the Response Action Plan (RAP), the objective of this Response Action is to control sources of contamination to groundwater through excavation and placement of identified Category I material into the Cell 4 Waste Control Unit (WCU), capping soil and lining drainages where Category II materials are present including the lower Parker Brothers Arroyo (lower PBA) channel.

Another objective was to construct a lined, stabilized channel in the LPBA to control potential entrainment of soil in stormwater to sediment of the Rio Grande (RAP, Worksheet 1.0, page 5).

The PBA AA is divided into the upper PBA and the lower PBA (or UPBA and LPBA) by the Union Pacific Railroad (UPRR) tracks as illustrated on Figure 3 in the RAP. Response actions in the PBA include excavation and removal of slag in the LPBA channel and from the footprint of the Cell 4 WCU; construction of Cell 4 for final disposal placement of Category I materials; and placement of impermeable liners and channel stabilization (articulated concrete block, rip-rap, closure turf and hydro-turf) over the both upper and lower PBA channels (RAP, Worksheet 1.0, page 12).

The excavation of the Cell 4 WCU, as well as the LPBA channel, required that material be temporarily stockpiled on the plant site. Category I material was segregated and ultimately disposed of in the completed Cell 4 WCU. Category II material and other soils were placed onsite as a base for the evapotranspirative (ET) soil cover on the plant site. The extent of excavation of the slag material from the LPBA was determined by visual inspection of the material during removal activities. Samples of the soil were collected to document the conditions after soil removal was completed. Once slag removal was complete, clean backfill was placed to bring the channel to grade, a low-permeability liner was installed within the lower channel, and the channel was stabilized with stone riprap, gabion drop structure, and articulated concrete block (see LPBA Channel CQA Report in Attachment 1C.6.3).

Texas Custodial Trust submitted the following documents to Texas Commission on Environmental Quality (TCEQ) regarding these activities:

- Letter to TCEQ dated December 7, 2012 regarding East Borrow Source Environmental Sampling Procedures for Interim Channel Backfill and East Category I Landfill Removal Plan

The following section of the RAP describe the Response Actions associated with the LPBA Category II removal activities:

- RAP Worksheet 1.0, page 1 - Control of sources of contamination to groundwater through excavation and placement of identified Category I material, and capping soil and lining drainages where Category II materials are present
- RAP Worksheet 1.0, pages 5 and 6 - Stabilized channel in the upper and lower PBA to control potential entrainment of soil in storm water to sediment of the Rio Grande
- RAP Worksheet 1.0, page 12 - Response actions in the PBA include excavation and removal of slag in the PBA channel
- RAP Worksheet 1.0, page 35 – Exposure pathways and protective concentration level exceedance (PCLEZ) zone in soil at LPBA
- RAP Worksheet 2.0, page 4 - Soil removals have been performed from six areas in the PBA
- RAP Worksheet 2.0, page 12 - The lower PBA channel had slag and impacted soil excavated prior to construction of the lined, stabilized channel
- RAP Attachment 2A-1 – Figure Landfill Samples

- RAP, Attachment 2A-3 - Letter to TECQ dated Nov. 29, 2011 regarding Interim Channel Project Including Impacted Soil Removal Amendment in Parker Brothers Arroyo (revised)

Regulatory Approval

- Letter from TCEQ dated December 5, 2011 regarding Approval on Interim Channel Soil Removal in Parker Brothers Arroyo

Response Actions

As detailed in the November 29, 2011 letter to TCEQ, soil samples were taken from 12 borings and six test pits. Analytical results indicated an upper layer of soil containing elevated concentrations of arsenic and lead. Removal of this layer would be the most immediate and cost-effective first step in improving groundwater quality due to surface water infiltration or groundwater flow through the material.

Slag, plus an additional 3-foot thick layer of soil, was excavated and placed on the plant site to be managed as Category II material. Following completion of the excavation, soil samples were collected and analyzed for metals to document concentrations of constituents of concern (COCs) remaining in soil left in-place. The soil analytical results were compared to commercial/industrial (C/I) $^{Tot}Soil_{Comb}$ protective concentration levels (PCLs), and all concentrations were below their respective C/I $^{Tot}Soil_{Comb}$ PCLs.

Following the removal of the Category II slag and soil from the LPBA channel, the area was backfilled with soil from the East Borrow Source as discussed in the December 7, 2012 letter mentioned above. That letter to TCEQ describes procedures to ensure that only clean native soil is used as structural backfill material.

The Response Action as described in the RAP is complete.

Supporting Documents Included in This Attachment

- Letter from TCEQ dated December 5, 2011 regarding Approval on Interim Channel Soil Removal in Parker Brothers Arroyo