

ATTACHMENT D
Slide Presentation
TRRP Tier 2 PCL Evaluation for Benzene at AOC-63

Background: AOC 63

Soil/Rubble Pile with empty drums identified during post-wide RCRA Facility Investigation (RFI)

Investigations in 2007 have included a geophysical survey and a subsurface investigation



Key Investigation Data and Issues: AOC 63

March 2007

- Exploratory excavations at the site indicate no evidence of buried material or disturbed subsurface soils. Groundwater was not observed. Soil samples are collected for laboratory determination of volatile organic compound (VOC), semi-volatile organic compound (SVOC), metals and explosives concentrations.
- With exception of low levels of benzene at each of the locations sampled, all chemical analytes are either not detected or are detected at levels below Texas Risk Reduction Program (TRRP) (30 TAC 350) Tier 1 lookup table values protective of human health and the environment.
- Review of contaminant conditions with respect to ecological risk benchmark values indicates no threat to ecological receptors.
- Benzene concentrations in soil exceed Tier 1 soil-to-water protective concentration level (PCL) for ingestion of groundwater (^{GW}Soil_{ing}), residential land use, 30-acre source area.

June 2007

- Re-sampling confirms presence of benzene above Tier 1 ^{GW}Soil_{ing} PCL. Follow-on analysis by synthetic precipitation leaching procedure (SPLP): no detectable benzene (sample reporting limits 0.000225 milligrams per liter (mg/l); TRRP drinking water PCL for benzene is 0.005 mg/l).

July 2007

- During review with TCEQ and EPA, TCEQ indicates use of SPLP results as the basis for determining no further action will require Agency pre-approval as a Tier 3 PCL.

Soil Attenuation Model (SAM)

The SAM is a TCEQ approved method of determining site-specific Tier 2 PCLs for protection of groundwater.

Utilizes same equations used by TCEQ in determining TRRP Tier 1 lookup table concentrations.

Tier 1 default values are revised with available site-specific information.

Provides conservative estimate of contaminant leaching characteristics and potential effect on groundwater.

Site-Specific SAM Parameter Inputs

Category 1 Groundwater

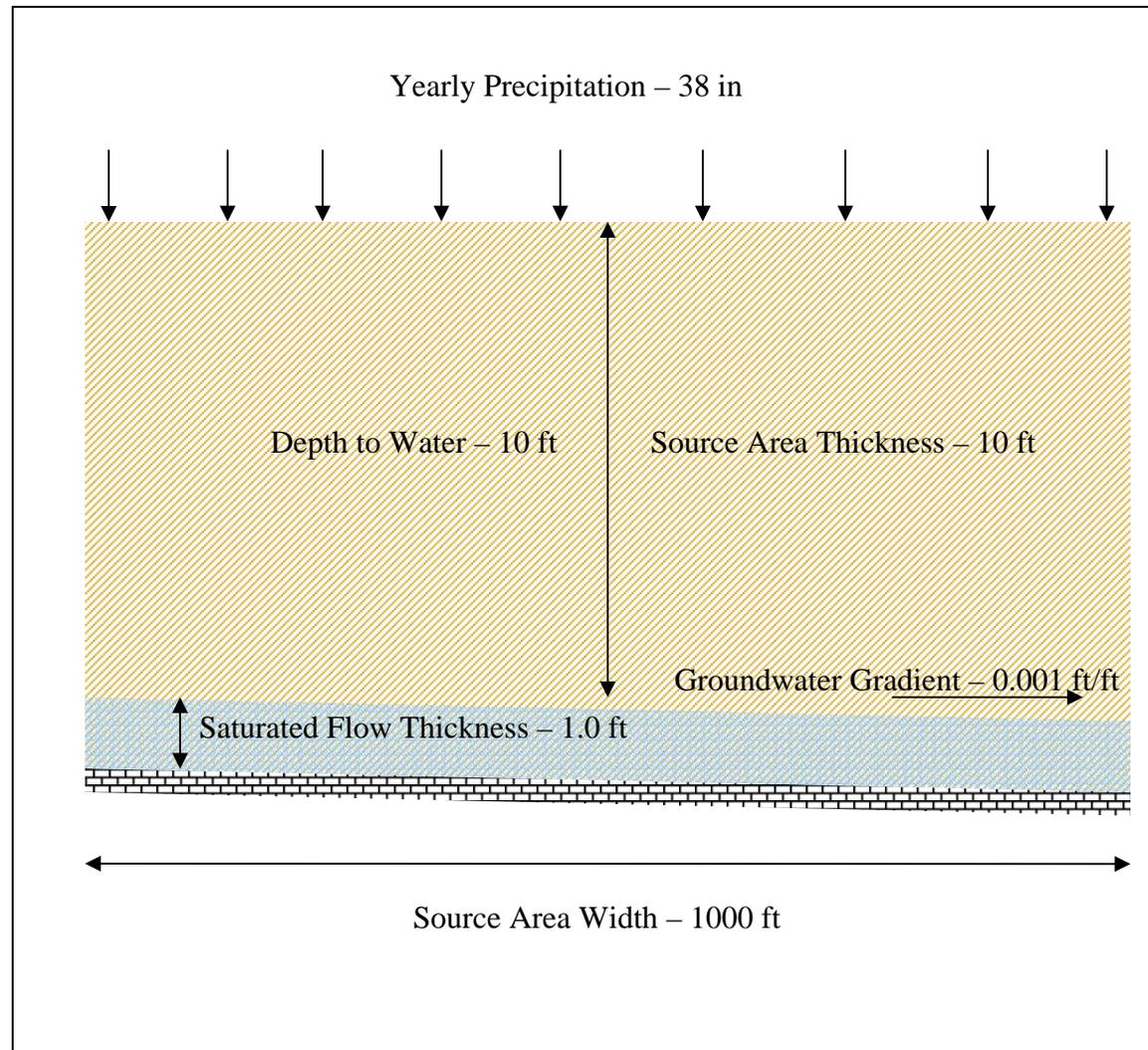
Depth to water and saturated thickness assume perched water flow at top of bedrock

Soil-water partitioning coefficient (Kd) based on SPLP benzene results

Hydraulic conductivity based on typical values for observed soil type

pH from CSSA Background Metals Report

All other soil geotechnical properties (e.g, bulk density, volumetric air and water content) based on Tier 1 default values



Next Action

Request for Concurrence on Proposed Technical Approach

- Letter to TCEQ presenting brief investigation history, comprehensive soil sample results, site-specific parameter assumptions for input to SAM, and derived Tier 2 ^{GW}Soil_{Ing} PCL for benzene.