

Analysis of Brownfield Cleanup Alternatives (ABCA) Reports with Supplemental Assessment

1661 E. Trafficway (Federow Iron & Metal Company - East and West Parcels)

Date of Report: January 2010

Assessment Funding: EPA Brownfields Hazardous Substances Assessment Grant

Acres: 3 (west parcel) and 0.65 (east parcel)

Site Background

The subject area occupies approximately 3.65 acres of commercial and light industrial land east of downtown Springfield, Missouri. The property consists of two parcels bound on the north by an inactive rail spur and on the south by East Trafficway Street. The west parcel includes a former salvage yard and scrap metal recycling facility owned by Federow Iron and Metal Company. The east parcel is mostly comprised of vacant land with remnants of former salvage materials



Terranext, LLC completed a Phase II Targeted Brownfield Assessment of the property in April 2007. The Phase II documents metals and PAH concentrations in soil above Missouri Department of Natural Resources (MDNR) Default Target Levels (DTLs). Localized arsenic and petroleum concentrations above DTLs were also identified in groundwater. The Terranext Phase II report recommended additional investigation to fully characterize the extent of soil and groundwater impacts.

Findings

Terracon Consultants, Inc. completed a Supplemental Assessment, to gather additional data on the site. The Supplemental Assessment further evaluated the horizontal and vertical impact on the site. Several sampling locations from the Phase II and Supplemental assessment indicated the impact is primarily situated within the northern two thirds of the Federow West parcel. Less significant concentrations were identified closer to the southern and western property lines on the Federow West parcel. Several sampling locations from the Phase II and Supplemental Assessment indicated the impact is primarily situated within the northern two thirds of the Federow East parcel.

Upon review of the detected concentrations within the soil, the contaminants are commingled and lead is the driving contaminant as it is most widespread and represents the contaminant with the largest concentration variance above the applicable risk based target levels.

Phase II and Supplemental Assessment findings identify the subject property as a likely source of metals and PAH impacts above applicable RBTLs. Available data do not clearly document specific point sources; however, reported impacts are consistent with historical land use as a salvage and scrap metal recycling facility. Metals and PAH sources may exist in connection with previous railroad operations on adjoining property to the north. Four composite samples were submitted to the laboratory for Toxicity Characteristic Leaching Procedure (TCLP) arsenic, cadmium, and lead analysis. The TCLP results were below the CFR 261.24 Toxicity Characteristics of Hazardous Waste indicating that the on-site impacted soils are non-hazardous.

Terracon estimated cleanup costs for three (3) individual brownfield cleanup alternatives related to reported soil conditions for each parcel. Each of these estimates included mitigation of the impacted soils along with costs to clear trees, dense vegetation, and various solid waste materials from the surface in preparation of the soil cleanup.