



Seagull Environmental Technologies, Inc.

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PHASE II ENVIRONMENTAL SITE ASSESSMENT

1901 North Park Avenue - Community Garden Site

Date of Report: August 17, 2015

Assessment Funding: 2014 EPA Brownfields Assessment Grant

Acres: Approximately 2.25 acres

SITE BACKGROUND

Seagull Environmental Technologies, Inc. (Seagull) was tasked by the City of Springfield – Planning and Development Department to conduct a Phase II Environmental Site Assessment (ESA) of the 1901 North (N.) Park Avenue - Community Garden site in Springfield, Greene County, Missouri. The site is an undeveloped commercial property that encompasses approximately 2.55 acres in a primarily residential area of Springfield. The subject property is comprised of two parcels of land. The two parcels (identified in this report as the north parcel and the south parcel) are west of the N. Park Avenue and West Thoman Street intersection. The north parcel is adjacent to (south of) residences on West Atlantic Street and is 1.72 acres in size. The north parcel is a grass-covered field. The south parcel is adjacent to (north of) a Burlington Northern Santa Fe (BNSF) railroad corridor and is approximately 0.83 acre in size. Sampling activities conducted as part of this Phase II ESA were only conducted on the north parcel. The subject property is currently owned by Habitat for Humanity of Springfield, Missouri. The 1901 N. Park Avenue site will hereafter be referred to as the “subject property” or “site.”

Phase II ESA activities were conducted at the site on July 30, 2015. The purpose of the Phase II ESA was to determine whether any threats exist to human health or the environment where a community garden is planned. Phase II ESA activities included the collection of four surface soil samples (including one soil field duplicate) for analysis of polynuclear aromatic hydrocarbons (PAH), organochlorine pesticides, and metals regulated under the Resource Conservation and Recovery Act (RCRA). For evaluation purposes, soil sample results were compared to their respective Missouri Risk-Based Corrective Action (MRBCA) standards established by the Missouri Department of Natural Resources (MDNR). Findings and recommendations from the Phase II ESA were as follows:

Surface soil samples collected within the area proposed for use as a community garden contained PAHs and RCRA metals. Organochlorine pesticides were not detected in the samples. In general, the detected concentrations of PAHs and RCRA metals are low and likely present minimal risk to future site use. Twelve PAH compounds were detected at concentrations that ranged from 0.0081 J to 0.090 milligrams per kilogram (mg/kg). All of the detected concentrations of PAHs were well below their respective MRBCA standards. It should be noted that PAHs are ubiquitous in the environment; therefore, the detection of PAHs in surface soil is not uncommon.

All of the soil samples contained detectable concentrations of the eight RCRA metals. Two RCRA metals — arsenic and lead — were detected at concentrations that exceeded their respective MRBCA Default Target Levels (DTL). Arsenic was detected in all four samples at concentrations above its MRBCA DTL and Tier 1 Risk-Based Target Level (RBTL) established for residential surface soil of 3.89 mg/kg. The detected concentrations of arsenic ranged from 6.5 to 9.4 mg/kg. The average concentration for arsenic in Greene County soils is 8.13 mg/kg. Based on this established average concentration, it is likely the detected arsenic concentrations are naturally occurring and present minimal risk to future use of the site. Lead was detected in all four samples at concentrations above its MRBCA DTL of 3.74 mg/kg. The detected concentrations of lead ranged from 54 to 110 mg/kg. None of the lead concentrations exceeded its MRBCA Tier 1 RBTL established for residential surface soil, which is 260 mg/kg.

Sample results from this Phase II ESA indicate surface soil within the area proposed for use as a community garden does not contain contaminants above levels of concern.

