



## **Seagull Environmental Technologies, Inc.**

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### **PHASE II ENVIRONMENTAL SITE ASSESSMENT**

#### **1900-1904 West College Street Site**

**Date of Report:** March 14, 2018

**Acres:** Approximately 0.58 acre

#### **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 1900-1904 West (W.) College Street site in Springfield, Missouri. For the purposes of this Phase II ESA, the 1900-1904 W. College Street site will hereafter be referred to as the “subject property” or “site.” The site is a 0.58 acre property near downtown Springfield. Two single-story residential dwellings are present at the site and one is currently uninhabited. The subject property is currently owned by Mr. Peter Sterpe. Proposed plans include demolition of the two residential properties and the construction of a fire station. Phase II ESA activities at the site were conducted on February 16, 2018. The primary purpose of the Phase II ESA was to confirm or eliminate recognized environmental conditions (REC) specified in the Phase I ESA report for the site, determine the nature of any soil or groundwater contamination, and assess threats to human health and the environment posed by any contamination in soil and groundwater. In addition, the Phase II ESA would identify and quantify asbestos-containing materials (ACM) and lead-based paint (LBP) in the site building.

The Phase II ESA included collection of three soil samples (including one duplicate sample). The soil samples were submitted for laboratory analysis of volatile organic compounds (VOC), total petroleum hydrocarbons (TPH)–gasoline range organics (GRO)/diesel range organics (DRO)/oil range organics (ORO), polynuclear aromatic hydrocarbons (PAH), and lead. For evaluation purposes, the soil sample results from this Phase II ESA were compared to their respective Missouri Risk-Based Corrective Action (MRBCA) Default Target Levels (DTL). These default values have been established by the Missouri Department of Natural Resources (MDNR) to represent protective concentration thresholds for common

environmental contaminants, regardless of land use, soil properties, and relevant exposure pathways. Additionally, the soil sample results were also compared to MRBCA Tier 1 Risk-Based Target Levels (RBTL) for residential and non-residential land use (for soil type 2 [silty]), based on the predominant subsurface soil type). For the asbestos inspection, suspected ACM was sampled to quantify asbestos in the material. Paint-covered surfaces were screened with an x-ray fluorescence (XRF) spectrometer to determine the presence and quantity of LBP. Findings and recommendations from the Phase II ESA were as follows:

### Soil

Soil samples collected from the site contained low levels of contaminants. Specifically, the soil samples contained VOCs and lead. One VOC, acetone, was detected in the samples at concentrations that ranged from 0.016 to 0.052 milligrams per kilogram (mg/kg). Acetone is a common laboratory contaminant. The detected concentrations of acetone were well below its MRBCA DTL of 4.20 mg/kg.

All three soil samples (including the duplicate sample) contained concentrations of lead above its MRBCA DTL of 3.74 mg/kg. Lead was detected at a concentration of 27 mg/kg at SB-2 (from 10 to 12 feet bgs) and 34 mg/kg at SB-1 (from 15 to 17 feet bgs). Sample SB-1-15-17 contained a concentration of lead above the USGS average for lead in Greene County, Missouri, soils, which is 33.1 mg/kg; however, none of the lead concentrations exceeded their MRBCA Tier 1 RBTLs established for residential and non-residential surface and subsurface soil, which are 260 and 660 mg/kg, respectively.

### Asbestos-Containing Materials

Fifteen bulk material samples were submitted to Quantem for analysis of asbestos. The EPA defines ACM as any material containing asbestos at a concentration above 1%. No materials associated with the residence were determined to contain asbestos.

### Lead-Based Paint

LBP was identified on several interior and exterior components associated with the residences. Specifically, LBP was identified on the exterior siding, window frames, window, door frame, soffit, fascia, fascia support, sunroom walls and doorframe, and basement entry walls of the 1904 building and exterior siding, soffit, fascia, window frame, and window of the 1900 building. XRF readings from those components ranged from 1.24 to >5.00 milligrams per square centimeter (mg/cm<sup>2</sup>). Overall, the exterior LBP identified was found to be damaged and the interior LBP was found to be in good condition. Future

demolition or renovations (including abatement and disposal activities) that could disturb the LBP should be conducted in accordance with applicable local, state, and federal regulations.