



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

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

#### **600 North Benton Avenue Site**

#### **600 North Benton Avenue, Springfield, Missouri**

**Date of Report:** April 17, 2020

**Acres:** Approximately 0.5 acre

#### **SITE BACKGROUND**

Seagull was tasked by the City of Springfield – Planning and Development Department to conduct a Phase II Environmental Site Assessment (ESA) of the 600 North Benton Avenue Site in Springfield, Missouri. The physical address of the Eden Village site is 600 North (N.) Benton Avenue Site. The site is a 0.5-acre lot, consisting of one approximately 5,000 square-foot, one-story building; an asphalt parking lot; and a grassy area.

The purpose of this Phase II ESA was to confirm or eliminate recognized environmental conditions (REC) specified in the Phase I ESA for the site (Seagull 2019), determine the nature and extent of any soil and groundwater contamination and assess threats to human health and the environment posed by contamination in those media. In addition, the purpose of the Phase II ESA was to identify and quantify asbestos-containing materials (ACM) and lead-based paint (LBP) in the site building. Suspected ACM was sampled for laboratory analysis to quantify asbestos in structural materials, and paint-covered surfaces were screened with an x-ray fluorescence spectrometer (XRF) to determine the presence and quantity of LBP. Finally, an inventory of other potentially hazardous materials on the property was compiled based on observations by the inspection team. Phase II ESA activities at the site were conducted on March 26, 2020. Specifically, five soil samples (including one field duplicate) were collected from four borings for laboratory analysis of volatile organic compounds (VOC), total petroleum hydrocarbons (TPH)–gasoline range organics (GRO)/diesel range organics (DRO)/oil range organics (ORO), and metals regulated under the Resource Conservation and Recovery Act (RCRA). Attempts to collect groundwater samples as part of the Phase II ESA were unsuccessful. For evaluation purposes,

sample results from this Phase II ESA were compared to Missouri Risk-Based Corrective Action (MRBCA) Default Target Levels (DTL) and MRBCA Tier 1 Risk-Based Target Levels (RBTLs) for residential and non-residential land use. In addition, 39 bulk samples of suspected ACM were collected to ensure that each distinct layer of material was represented in the samples. Seagull performed a routine LBP inspection, which involved a systematic screening of paint-covered surfaces.

### Soil

Soil samples collected from the site contained low levels of contaminants. Specifically, the soil samples contained VOCs, TPH-GRO/DRO/ORO, and RCRA metals. One VOC, acetone, was detected in the samples at concentrations that ranged from 0.0089 J to 0.022 milligrams per kilogram (mg/kg) — all below MRBCA standards. It should also be noted that acetone is a common laboratory contaminant. TPH-GRO was detected in one sample at 1.6 mg/kg; TPH-DRO was detected in four samples at 13, 9.4, 11, and 9 mg/kg; and TPH-ORO was detected in three samples at 18, 9.8, and 8.7 mg/kg. All detected concentrations of TPH were below their respective MRBCA standards. Each of the soil samples contained detectable concentrations of at least six Resource Conservation and Recovery Act (RCRA) metals. Two RCRA metals — arsenic and lead — were detected in all 5 samples at concentrations that exceeded their respective MRBCA Default Target Levels (DTLs). All five samples contained detected concentrations of arsenic that were above the USGS average for arsenic in Greene County, Missouri, soils, which is 8.13 mg/kg. Two samples, SB-1-10-12 and SB-3-10-12, contained concentrations of lead that were above the USGS average for lead in Greene County, Missouri, soils, which is 61.55 mg/kg. Two RCRA metals — arsenic and lead — were detected at concentrations that exceeded their respective MRBCA DTLs. However, neither of the metals were detected above their respective Tier 1 RBTLs established for residential or non-residential subsurface soil (if established). The detected concentrations of VOCs, PAHs, TPH-GRO/DRO/ORO, and RCRA metals do not pose a risk to future use and/or redevelopment of the site.

### Asbestos-Containing Materials

None of the materials associated with the building were determined to contain asbestos.

### Lead-Based Paint

Lead based paint (LBP) was identified on one interior component and four exterior components associated with the site building. The identified LBP was found to be in good (intact) and poor condition. Specifically, LBP was identified on metal columns in rooms 1 and 2, and in the basement of the site

building. The X-ray fluorescence (XRF) readings for lead from the metal columns were 1.41 and 1.21 milligrams per square centimeter (mg/cm<sup>2</sup>), respectively. In addition, LBP was identified on all exterior windows and window frames, north side door frame, east storage shed door, and west storage shed door frame. The XRF readings for lead from those exterior components were greater than (>) 5.00, 2.18, > 1.00, and 1.09 mg/cm<sup>2</sup>, respectively. Concentrations equal to or greater than ( $\geq$ ) 1.0 mg/cm<sup>2</sup> are considered LBP. 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.

#### Other Hazardous Materials

Seagull inventoried non-structural items at the site that were potentially hazardous or could require special handling for disposal. Those materials included, but were not limited to, containers of paint and household cleaning materials, thermostats and fluorescent bulbs (mercury), electrical lighting ballasts (polychlorinated biphenyls), a class ABC fire extinguisher, and exit signs (heavy metals and/or radionuclides). Any of those materials that cannot be reused as intended should be disposed of appropriately during future demolition or renovation activities.