



# Seagull Environmental Technologies, Inc.

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## PHASE II ENVIRONMENTAL SITE ASSESSMENT

### **815 West (W.) Tampa Street Site, Springfield, Missouri**

**Date of Report:** June 26, 2020

**Acres:** Approximately 0.53 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 815 West (W.) Tampa Street site in Springfield, Missouri. The subject property encompasses 0.53 acres and contains an 8,016 square-foot commercial building with a drive-through and associated parking lots that is occupied by Volt Credit Union (formerly known as Community Credit Financial Union). In addition, the subject property also contains a parking lot that encompasses 0.62 acre to the north of the commercial building.

Phase II ESA activities at the site were conducted on May 21-22, 2020. 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 and extent of any soil or groundwater contamination, and assess threats to human health and the environment posed by any 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, and to identify any other potentially hazardous materials at the subject property.

The Phase II ESA included collection of five soil samples (including one field duplicate). The soil samples were submitted for laboratory analysis of volatile organic compounds (VOCs), total petroleum hydrocarbons (TPH)-gasoline range organics (GRO), TPH-diesel range organics (DRO), TPH-oil range organics (ORO), polynuclear aromatic hydrocarbons (PAHs), and RCRA Metals. Attempts to collect groundwater samples as part of the Phase II ESA were unsuccessful. Two soil gas samples were also

collected for analysis for VOCs to assess threat of exposure to workers via inhalation. For evaluation purposes, soil and soil gas sample results were compared to their respective Missouri Risk-Based Corrective Action (MRBCA) standards established by the Missouri Department of Natural Resources (MDNR). Soil gas results were also compared to U.S. Environmental Protection Agency (EPA) Vapor Intrusion Screening Levels (VISL). For the asbestos inspection, suspected ACM was sampled to quantify asbestos in the material. Paint-covered surfaces were screened with an x-ray fluorescence spectrometer (XRF) spectrometer to determine the presence and quantity of LBP. In addition, an inventory of other potentially hazardous materials on the property was compiled based on observations by the inspection team. 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 TPH-GRO/DRO/ORO, RCRA metals, VOCs, and PAHs. TPH-GRO was detected in five samples at TPH-GRO was detected in the samples at concentrations that ranged from 5.2 J to 7.0 J mg/kg. All detected concentrations of TPH-GRO were below their respective MRBCA standards.

Each of the soil samples contained detectable concentrations of at least five RCRA metals, including arsenic, barium, chromium, mercury, and lead. 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). Also, because lead concentrations in site soils were less than the reported average concentration of 61.5 mg/kg for Greene County soils (USGS 2008), assumption is that lead in site soils is naturally occurring. All five samples contained arsenic at concentrations ranging from 11 to 27 mg/kg, all of which exceed the MRBCA DTL of 3.89 mg/kg. It should be noted that that an MRBCA Tier 1 RBTL has not been established for arsenic in subsurface soil. Additionally, all five samples contained detected concentrations of arsenic that were above the United States Geological Survey (USGS) average for arsenic in Greene County, Missouri, soils, which is 8.13 mg/kg.

One VOC, acetone, was detected in the samples at concentrations that ranged from 0.014 to 0.12 mg/kg — all well below MRBCA standards. It should be noted that acetone is a common laboratory contaminant.

Low concentrations of PAHs, including anthracene, benzo(a)anthracene, chrysene, fluoranthene, phenanthrene, and pyrene were detected in five samples. Some of these concentrations exceeded their respective MRBCA DTLs, however, all were well below their respective MRBCA Tier 1 RBTLs.

The detected concentrations of TPH-GRO/DRO/ORO, RCRA metals, VOCs, and PAHs do not pose a risk to future use and/or redevelopment of the site. The detected concentrations of arsenic were up to three times higher than the reported average concentration of 8.13 mg/kg for Greene County. The high detections of arsenic may pose a future risk to future use and/or redevelopment at the site.

### Soil Gas

In the soil gas samples, twelve VOCs were detected in sample SG-1, and eight were detected in sample SG-2. The highest concentrations were reported for the soil gas samples were collected beneath the outdoor asphalt slab adjacent to the site building. In that sample, concentrations were detected at up to 95.1 milligrams per cubic meter (mg/m<sup>3</sup>). None of those concentrations exceeded MRBCA Tier 1 RBTLs for soil vapor; however, three compounds — ethylbenzene, naphthalene, xylenes, total — exceeded EPA VISL Target Sub-Slab and Exterior Soil Gas values. None of those concentrations exceeded MRBCA Tier 1 RBTLs for soil vapor; however, three compounds — ethylbenzene, naphthalene, xylenes, total — exceeded EPA VISL Target Sub-Slab and Exterior Soil Gas values. In the other sub-slab vapor sample, collected beneath the building's floor, concentrations were detected at up to 47.3 mg/m<sup>3</sup>. None of the concentrations exceeded MRBCA Tier 1 RBTLs for soil vapor; however, one compound— ethylbenzene — exceeded EPA VISL Target Sub-Slab and Exterior Soil Gas values.

Because three compounds exceeded EPA VISL values in the soil gas sample collected adjacent to the site building, consideration for additional sampling and/or mitigation procedures may also be warranted for that structure. If future plans for the asphalt parking lot to the north of the site building include a structure that will be routinely occupied during business activities (i.e., for other than storage of equipment, supplies, etc.), additional sampling and/or mitigation procedures may be warranted to ensure inhalation threat to workers is limited.

### Asbestos-Containing Materials

Two of the materials associated with the building were determined to contain asbestos. Those materials were 150 ft<sup>2</sup> of red floor laminate in Vault 2 and 60 ft<sup>2</sup> of gray floor laminate in Hallway 1.

### Lead-Based Paint

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

### Other Hazardous Materials

Seagull inventoried non-structural items at the site that were potentially hazardous or could otherwise 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), class ABC fire extinguishers, 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.