

# Phase 1 Environmental Site Assessment

## 3429 E. Chestnut Expressway (Hickory Hills School Site)

Date of Report: October 22, 2010

Assessment Funding: EPA Brownfields Assessment Grant

Acres: approximately 42

### Site Background

Seagull Environmental Technologies Inc. conducted a Phase I Environmental Site Assessment of the Hickory Hills School site located in Springfield, Missouri. The subject property, which is approximately 42 acres in size, is located at the northeast corner of the Highway 65 and East Chestnut Expressway intersection, near the eastern edge of Springfield. Three separate properties comprise the site:



1. the Hickory Hills School property (owned by Springfield Public Schools)
2. High Street Baptist Church property (owned by the High Street Baptist Church)
3. the Lohmeyer property (owned by the Lohmeyer family)

The Hickory Hills School property is 16.51 acres in size, the High Street Baptist Church property is 19.33 acres in size, and the Lohmeyer property is 5.99 acres in size. The Hickory Hills School property contains the school building, two parking lots, playground, and recreational track. The High Street Baptist Church and Lohmeyer properties are both undeveloped grass fields. North of the site is a natatorium (indoor swimming pool), the High Street Baptist Church, recreational fields, and undeveloped land. West of the site, across Highway 65, are industrial and commercial facilities. South of the site are undeveloped fields and a golf course. East of the site are residential properties and undeveloped land.

### Findings

The following significant findings were identified from records review, interviews, or site reconnaissance:

- Records review and interviews with Springfield Public Schools personnel determined that underground storage tanks (UST) were present at the school. An architectural drawing identified two fuel oil USTs at the site. However, no documentation was available to determine if those USTs have been removed or properly decommissioned. Based on the lack of information associated with those USTs, they pose a REC to the subject property.
- A review of historical aerial photographs determined a lagoon was likely present northeast of the Hickory Hills School. Aerial photographs indicated the lagoon was constructed prior to 1970 and filled in prior to 1983. The lagoon was likely used for wastewater disposal for the school. The presence of the lagoon poses a REC to the

subject property based on the potential for hazardous materials to have been disposed of in the lagoon and leached to underlying soil and groundwater. During the site reconnaissance, an open well casing was discovered inside the school. Records indicate that a drinking water well was located at the school; however, no information was available that indicated that well was ever properly decommissioned. The open well casing poses a REC to the subject property due to its open pathway for introduction of hazardous materials to underlying groundwater.

- During the site reconnaissance, various chemicals (household, commercial, and laboratory) were determined to remain inside the school. In addition, numerous mercury-containing thermostat switches and electrical ballasts suspected to contain polychlorinated biphenyls (PCB) were also observed throughout the building. The presence of those materials poses a REC to the subject property based on a threat of release.
- During site reconnaissance activities, asbestos and lead-based paint (LBP) were determined likely to be present at the site space. Building materials thought to contain asbestos-containing materials (ACM) and LBP were identified inside the building. The presence of ACM and LBP is of environmental concern.

Based on the identification of these RECs, and other issues of concern, Seagull provides the following recommendations:

- A subsurface geophysical survey may be warranted to determine if USTs remain at the site. If the geophysical survey indicates that USTs remain, then a Phase II ESA of the subject property should be performed. In particular, soil and groundwater samples should be collected near and downgradient of the USTs. Samples collected from the UST area should be analyzed for contaminants commonly associated with fuel oil-including volatile organic compounds (VOC), polynuclear aromatic hydrocarbons (PAH), and total petroleum hydrocarbons (TPH)-diesel range organics (DRO). In addition, soil and groundwater samples should be collected from and downgradient of the former lagoon area. Samples collected from the former lagoon area should be analyzed for VOCs, semi-volatile organic compounds (SVOC), and metals. Additional analysis for pesticides, herbicides, and TPH may also be warranted.
- The open well casing should be properly plugged in accordance with state and local regulations.
- Chemicals products mercury-containing switches, and any PCB-containing ballasts remaining in the school should be removed for proper use or disposal.

Asbestos and LBP inspections should be completed at the Hickory Hills School building. Future demolition or renovation of the buildings/structures determined to contain ACM and/or LBP (including abatement and disposal activities) should be conducted in accordance with applicable state and federal regulations.