



TRIAD ENGINEERING, INC.

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TRIAD Listens, Designs & Delivers

February 3, 2012

Mr. Jason Casey
Legion Design
4301 Connecticut Avenue, NW, Suite240
Washington, District of Columbia 20008-2321

RE: **Environmental Indicator Site Assessment**
Benning Road CBTC
Washington, District of Columbia
Triad Project No. 03-11-0323

Dear Mr. Casey:

Triad Engineering, Inc. (Triad) has completed an Environmental Indicator Site Assessment at the site planned for the new H Street – Benning Road Street Car project located in the northwestern corner of the intersection of Benning Road NW and 26th Street NW in Washington, District of Columbia (DC) (the Site). The Site is comprised of an open field in the southern portion of the current Spingarn Senior High School (SSHS) property. The purpose of this assessment was to explore the Site and gather existing information to identify potential indicators of environmental concerns prior to development of the Site. This report outlines the findings of our research and field investigations.

ENVIRONMENTAL RESEARCH

Triad contracted with Environmental Data Resources, Inc. (EDR) to compile historical aerial imagery, historical Sanborn fire insurance maps, and a review of federal and state environmental databases containing information regarding the subject Site and site vicinity (Inquiry No: 3200851.2s). Summaries of the information supplied by EDR are included in the following sections.

Aerial Imagery Review

EDR identified historical aerial imagery encompassing the subject Site from 1957, 1960, 1963, 1970, 1972, 1980, 1988, 1998, 2005, and 2007. The Site appears essentially the same in each of the aerial images. The SSHS structure is visible adjoining the Site to the north and Benning Road NE and 26th Street NE are visible comprising the southern and eastern site boundaries, respectively. Apparent commercial structures are visible on the southern adjoining properties with residential development visible farther south and to the west of the Site. The Langston Golf Course is visible to the east of the Site. The library kiosk structure was apparently developed between 1980 and 1988. There were no indicators of environmental concerns identified in the available historical aerial imagery. The EDR Aerial Photo Decade Package is included in **Attachment 1**.

Sanborn Fire Insurance Map Review

EDR identified Sanborn maps from 1959, 1977, 1985, 1989 through 1992, 1994, and 1998. The Site appears essentially the same in each of the historical Sanborn maps. The Site is undeveloped and adjoined to the north by the SSHS structure. Benning Road NE and 26th

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Street NE are depicted as comprising the southern and eastern site boundaries, respectively. Southern adjoining properties are depicted as a mixture of residential and commercial structures. A gasoline filling station is depicted in the southwestern corner of the intersection of Benning Road NE and 24th Street NE, approximately 200 feet southwest and topographically cross gradient of the Site. The library kiosk structure is not depicted on any of the Sanborn maps. There were no significant indicators of environmental concerns identified on the available historical Sanborn maps. The EDR Certified Sanborn Map Report is included in **Attachment 1**.

Database Review

EDR compiled a search of federal and state databases that included records of hazardous waste permits and activities, compliance histories, and documented on-site contamination within the specified radii. The subject Site was not identified on any of the researched databases. The northern adjoining SSHS is the nearest mapped property and was identified on the following databases:

- **Integrated Compliance Information System (ICIS):** ICIS is a U.S. EPA database that maintains information on various enforcement and compliance programs. SSHS's inclusion on this database is related to several enforcement actions associated with asbestos in schools and is not considered a significant indicator of environmental concern to the Site.
- **Underground Storage Tanks (UST):** The UST database is maintained by the DC Department of the Environment (DDOE). The USTs identified for SSHS are listed as two 10,000-gallon heating oil USTs that are permanently out of use. There are no leaking UST (LUST) incidents identified for these former USTs and their former presence at the school is not considered a significant indicator of environmental concern to the Site.
- **Facility Index System (FINDS):** The FINDS database is a "pointer" database that identifies the inclusion of a property on a variety of U.S. EPA databases. The FINDS registry for the SSHS property is associated with several governmental and institutional databases as well as the identification of the school as a RCRA hazardous materials generator and is not considered a significant indicator of environmental concern to the Site.
- **RCRA Conditionally-Exempt Small Quantity Generator (CESQG):** The RCRA-CESQG database lists facilities that generate less than 100 kilograms per month of hazardous wastes. The SSHS has no reported RCRA violations and the RCRA-CESQG status of the school is not considered a significant indicator of environmental concern to the Site.

Neither the SSHS facility nor any of the remaining properties identified on the database report are anticipated to represent a significant indicator of environmental concern for the subject Site. The EDR Radius Map Report is included in **Attachment 1**.

FIELD SURVEY ACTIVITIES

Subsurface Soil Assessment

A total of four (4) soil test borings were drilled at the Site to assess subsurface conditions. The soil borings were drilled by Connelly and Associates of Frederick, Maryland utilizing a hollow-

stem auger drill rig. The borings were performed in accessible areas of the Site to depths of approximately 25 feet below ground surface (BGS). Selected subsurface soil samples were submitted for laboratory analysis for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total petroleum hydrocarbons as gasoline- and diesel-range organics (TPH-GRO and -DRO), Oil and Grease (O&G), and RCRA Metals. Soil samples from each boring location were continuously field screened for the presence of VOCs utilizing a portable photo-ionization detector (PID) equipped with a 10.6 eV light source. Minimal PID readings were detected during the field screenings, and soil samples from approximately 23 to 25 feet BGS were submitted for laboratory analysis from each boring.

According to the laboratory analytical results, all of the submitted soil samples exhibited detectable concentrations of the RCRA metals arsenic, barium, cadmium, chromium, lead, and mercury. However, none of the submitted soil samples exhibited detectable levels (at or above the laboratory reporting limit) of TPH-GRO, TPH-DRO, Oil and Grease, VOCs, or SVOCs. The laboratory analysis results for the detected RCRA metals in the submitted soil samples are summarized in the following table. A copy of the subsurface soil laboratory analysis report is included as **Attachment 2**.

Soil Laboratory Results

Soil Boring Location	B1	B2	B3	B4
Sample Number	BP011112-B-01	BP011112-B-02	BP011112-B-03	BP011112-B-04
PID Reading	0	0	0	97.5
Arsenic (mg/kg)	4.3	2.4	1.1	3.5
Barium (mg/kg)	22.5	39.5	97.7	143
Cadmium (mg/kg)	3.4	2.1	6.1	3.4
Chromium (mg/kg)	15.9	12.0	23.6	20.0
Lead (mg/kg)	10.9	7.9	12.4	13.4
Mercury (mg/kg)	0.025	0.014	0.035	0.033
Selenium (mg/kg)	1.1	ND	1.8	1.4

ND = Not Detected at or above the laboratory established reporting limits.
mg/kg = milligrams per kilogram, equivalent to parts per million (ppm).

The results of the soil assessment, including the laboratory analysis results, were submitted for review to Dr. Bipin Pathak, Environmental Engineer with the DDOE Water Quality Division (WQD). Based on a review of the laboratory results and the soil boring work plan, Mr. Pathak stated that the DDOE/WQD has no objections to standard disposal of the investigation derived wastes and had no recommendation for further investigation or analysis of subsurface conditions at the Site.

Asbestos-Containing Materials (ACM) Survey

Triad conducted an ACM survey of the vacant library kiosk structure located in the southeastern corner of the Site. The ACM survey was conducted in general accordance with U.S. EPA NESHAP and OSHA protocols. Identified suspect ACMs (SACMs) in the structure included resilient floor tiles and mastic, foam and caulk seams between pre-formed wall panels, pre-formed wall panel insulation, window glazing, and roofing sealants. The beige caulk portion of the pre-

formed wall panel seams was determined by the laboratory to be seven percent (7%) chrysotile asbestos. The foam portion of these seams was determined to be non-asbestos. This caulk material is a non-friable ACM and was intact and in good condition during the current survey. No other sampled SACMs were determined to contain asbestos. The wall panel seams should be removed by a DC-licensed asbestos abatement contractor in accordance with U.S. EPA, OSHA, and DC regulations prior to demolition activities that may impact them. A copy of the asbestos laboratory analysis report is included in **Attachment 3**.


Lead-Based Paint Survey

In addition to the ACM Survey, Triad contracted with Total Environmental Concepts (TEC) to conduct a lead-based paint (LBP) survey of the vacant library kiosk structure. TEC conducted in-place field screening for lead paint utilizing a Thermo NITON X-ray fluorescence (XRF) unit. No lead was detected on any surface combination tested during the survey. Therefore, all paint surfaces identified during the survey measured less than the DC definition of lead-based paint of 0.7 milligrams of lead per square centimeter of painted surface. A copy of the TEC LBP Survey report is included in **Attachment 3**.

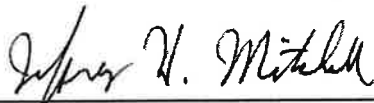
SUMMARY

A review of historical aerial imagery, historical Sanborn fire insurance maps, and federal and state environmental databases, as provided by EDR, did not identify any significant indicators of environmental concern in relation to the subject Site. Likewise, no significant indicators of environmental concern were identified during the subsurface soil assessment and the DDOE required no further investigation of subsurface conditions at the Site based on the results of the assessment. With respect to the vacant library kiosk structure, which is scheduled for demolition as part of the proposed development of the Site, no lead-based or lead-containing paints were identified during the LBP Survey. One ACM was identified in the structure in the form of a beige caulk material between the pre-formed wall panels in the interior of the structure. Provided that this caulk material is properly abated prior to the planned demolition, Triad has no further recommendations regarding the potential presence of indicators of environmental concern at the subject Site.

This report has been prepared by TRIAD ENGINEERING, INC. for the use of Legion Design as an Environmental Indicator Site Assessment for the referenced Site. If you should have any questions or require further assistance, please contact us at (301) 797-6400.



Bradley C. Pearson, RPIH
Project Environmental Scientist



Jeffrey H. Mitchell, CPG, LRS
Environmental Services Manager
Eastern Region

Attachment 1 – EDR Environmental Research Reports
Attachment 2 – Subsurface Soil Laboratory Analysis Report
Attachment 3 – Asbestos Laboratory Analysis Report and TEC LBP Survey Report