



July 13, 2009

Mr. Dennis Sutton CPG, Environmental Project Manager
City of Buffalo, Office of Strategic Planning
65 Niagara Square
Buffalo, New York 14202

Re: Preliminary Site Investigation for 1318 Niagara Street – Revised Plan

Dear Mr. Sutton:

LiRo Engineers, Inc. (LiRo) has prepared a scope of work and cost estimate for conducting a Preliminary Site Investigation for the 1318 Niagara Street Site. As we discussed with you and NYSDEC at the project kickoff meeting, the primary purpose of the Preliminary Investigation is to acquire sufficient site data to define the scope of the pending Interim Remedial Measure that will be conducted to mitigate the potential existing hazards posed by site conditions. Based on NYSDEC's response to our initial submittal dated July 6, 2009, surface water sampling and site preparation activities have been included in the Preliminary Investigation Plan. The key objectives of the Preliminary Investigation are to:

- Characterize PCB concentrations in surface soil to evaluate current hazards posed by soil;
- Characterize PCB concentrations and quantities in residual sludge and liquids in the former site USTs to support the IRM cleaning/disposal specifications and;
- Characterize contents of the 55-gallon drums staged at the site to support the IRM disposal specifications.
- Characterize surface water (if present) in the furnace pit portion of the site.

Site Preparation Activities

Site preparation activities will include installation of a secure fencing system along the Niagara Street (east side) of the site. The new fencing system will use secured posts (set in concrete) to prevent unauthorized entry. A lockable truck-size gate will be installed so that the site is accessible to heavy equipment as the project progresses. In addition, a project sign will be installed near the front entrance. The project sign will be constructed to NYSDEC ERP Program specifications. LiRo will also attempt to uncover and secure as needed, a former production well that is reportedly present at the site.

LiRo is obtaining cost proposals for the fence and sign work and will submit the proposed costs in a separate submittal. That cost submittal will also include the costs for any subcontractors or materials required to secure the production well.

Site Background/Existing Data

Site records indicate that the two 20,000-gallon USTs were discovered in August 2006. A laboratory report from January 2007 indicated that the residual oil in the tanks contained hazardous levels PCBs (Aroclor 1242 at concentrations of 90 mg/kg and 124.5 mg/kg). The samples also contained tetrachloroethene (150 mg/kg and 200 mg/kg), trichloroethene (78 mg/kg and 270 mg/kg), 1,2-dichlorobenzene (44 mg/kg) and lead (4,100 mg/kg and 2,100 mg/kg). The residual oil was reportedly



removed using a Vac-truck in February 2007. The two tanks were excavated in February 2007, staged along the southern margin of the site, and covered with polyethylene tarps. In addition, 55-gallon drums reportedly containing PCBs, waste oil/sludge, and used personal protective equipment (PPE) are staged along the northern margin of the site and are covered with polyethylene tarps.

The site records indicate that one soil sample described as “tank soil” was collected on February 12, 2007. The soil sample was analyzed for PCBs and TCLP organics/metals. The PCB concentration was 0.866 mg/kg in soil and the TCLP results showed non-hazardous levels of barium and lead.

In addition to contamination associated with the USTs, a former furnace was uncovered in January 2007. The furnace contained sludge that was tested for PCBs and TCLP organics/metals. The PCB concentration in sludge was 23,700 mg/kg and the TCLP results showed detectable (but non-hazardous) levels of VOCs, SVOCs and barium.

LiRo visited the site on June 25, 2009 with representatives from the City of Buffalo (COB). Mr. Larry Schiavone, who directed the site demolition project for the COB in 2006, indicated the northeast portion of the site where the USTs had been removed. He recalled that soil from the tank excavation was used for backfilling and that a polyethylene tarp (the edge of which is visible) had been placed to mark the excavation limit. Mr. Schiavone also recalled that imported fill had been used to level the site and that the existing mound of fill material was imported. The furnace excavation remains open and it appears that the former bottom of the structure has been covered by recent sedimentation.

Soil and Surface Water Investigation

Because the purpose of the testing is to determine if surface soils pose a significant health risk due to PCB contamination, the samples will be collected from a depth interval of 0 to 6 inches. Soil samples will be collected using dedicated disposable sample scoops or a precleaned stainless steel trowel if soil is too dense to penetrate with the disposable scoop. Soil sample locations will be staked for subsequent surveying to be conducted at the site.

LiRo proposes to conduct preliminary investigation sampling of soil from 15 locations including the furnace pit, the backfilled area of the UST excavations, the area near the staged USTs and general site locations (i.e., locations not directly associated with any of the known PCB sources). If surface water is present in the furnace pit, LiRo will collect a sample of the water for PCB analysis. The proposed sample locations are shown on Figure 1. Sampling and analysis for the preliminary investigation is summarized in Table 1.

If reusable equipment is used to collect samples, the implement will be hand cleaned using a sequence of: analconx/water wash, tap water rinse and distilled water rinse between each use. Dedicated (i.e., disposable) sampling equipment is for one-time use and will not require decontamination.

All soil samples and the surface water sample will be analyzed for PCBs using USEPA Method 8082. All environmental samples will be collected into laboratory supplied, pre-cleaned sample jars. The jars will be labeled with a unique sample identification code, packed in a cooler with ice, and shipped under chain-of-custody control to Chemtech, Inc. of Mountainside, N.J., an NYSDOH ELAP-certified laboratory. Chemtech will supply analytical results with an accelerated turnaround time of 5 days. Results from the source areas will be compared to the general site locations and used to determine the presence of and preliminary distribution of PCBs in surface soil. NYSDEC Analytical Services Protocol (ASP) Category B will be employed for documentation and reporting of soil data.



Tank Investigation

Sludge and residual water samples will be collected from each of the former USTs. These samples will be analyzed for PCBs and VOCs. A composite sludge sample will be prepared from the USTs and will be analyzed for hazardous waste characteristics (full TCLP).

Drum Investigation

Based on historic records, the drums reportedly may contain oil/sludge, soil and PPE. LiRo will open each drum and classify the contents (to the extent possible) into one of those groups. A composite sample of soil and a composite sample of sludge will be analyzed for PCBs, VOCs (total), and hazardous waste characteristics (full TCLP). The soil sample may also be analyzed for SVOCs if visual observations suggest that the soil is not highly contaminated. If the appearance of the soil suggests that it contains significant oily waste, SVOC analysis will not likely be required to dispose of the waste

Preliminary Investigation Report

LiRo will summarize the results of the Preliminary Investigation in letter report. The report will include analytical results tables with comparison to Part 375 criteria for surface soil samples and applicable waste characterization criteria for sludge and waste samples. A site map showing the soil sample locations and the distribution of soil contamination levels exceeding Part 375 criteria will be included. The report will also include a proposed scope for the IRM work that, upon City and NYSDEC approval, will be used as the basis for the IRM Work Plan.

Preliminary Investigation Cost Estimate

The estimated cost for the Preliminary Investigation work is \$6,713.90. A breakdown of the labor and subcontractor cost is included in Table 2. Please note that the laboratory unit rates are slightly higher than LiRo's ERP proposal due to the request for a 5-day turnaround time. As noted above, Site preparation costs will be included in a separate submittal.

If you have any questions concerning our proposal, please contact me at (716) 882-5476.

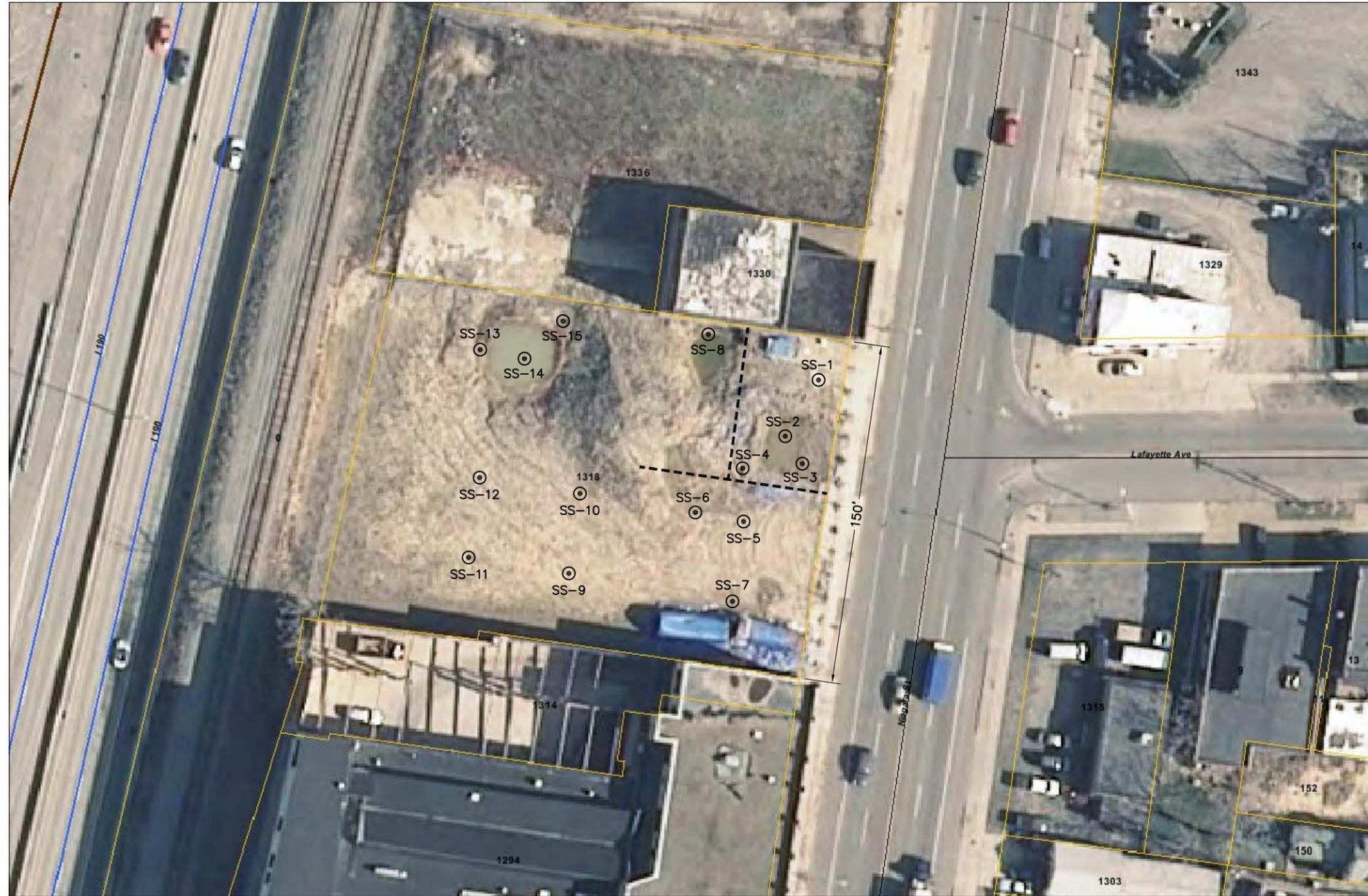
Sincerely,

LiRo Engineers, Inc.

A handwritten signature in black ink, appearing to read 'Robert Kreuzer', with a long horizontal flourish extending to the right.

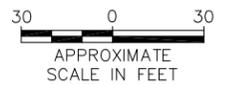
Robert Kreuzer
Vice President
Attch

cc: B. Murray – NYSDEC
M. Doster – NYSDEC
S. Frank – LiRo



LEGEND:

- ⊙
SS-1 SURFACE SOIL SAMPLE LOCATION
- FORMER FOUNDATION



WARNING
 IT IS A VIOLATION OF SECTION 7209, SUBDIVISION 2, OF THE NEW YORK STATE EDUCATION LAW FOR ANY PERSON, OTHER THAN THOSE WHOSE SEAL APPEARS ON THIS DRAWING, TO ALTER IN ANY WAY AN ITEM ON THIS DRAWING. IF AN ITEM IS ALTERED, THE ALTERING ENGINEER SHALL AFFIX TO THE ITEM HIS SEAL AND THE NOTATION "ALTERED BY" FOLLOWED BY HIS SIGNATURE AND THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

NO.	DATE	DESCRIPTION
REVISIONS		



PROJ. ENG.:	CLIENT:	DRAWN BY:		DATE:	SCALE:
DESIGNED BY:	CHECKED BY:	JULY 2009	NONE		

JOB TITLE AND LOCATION:	LIRO JOB NO.:
CITY OF BUFFALO - ERP INVESTIGATION OF 1318 NIAGARA STREET	09-29-426
DRAWING TITLE:	SHEET OF
PRELIMINARY INVESTIGATION PROPOSED SOIL SAMPLE LOCATIONS	FIGURE NO. 1

Table 1`
City of Buffalo ERP - 1318 Niagara Street
Preliminary Investigation Sampling and Analysis

Sample Type	Number of Samples	Analysis
Surface Soil		
SS-1 - SS-15	15	PCBs
MS/MSD/Dup	3	PCBs
Surface Water	1	PCBs
USTs		
Tank Water	2	PCBs, VOCs
Tank Sludge	2	PCBs, VOCs
Tank Sludge Composite	1	Full TCLP
Drummed Waste		
Soil Composite	1	PCB, VOC, Full TCLP
Sludge Composite	1	PCB, VOC, Full TCLP

Table 2
City of Buffalo ERP - 1318 Niagara Street
Preliminary Investigation Cost Estimate

LiRo Labor Planning, Field Work, Letter Report

Description	Level	Proposed Hours	Hourly Rate	Total
Robert Kreuzer - Project Manager	VIII (1)	2	\$68.50	\$137.00
Scott Swanson, CPG - QA/QC Officer	IX		\$62.00	\$0.00
Martin Wesolowski, PE - Senior Engineer	VIII (2)		\$64.00	\$0.00
Michelle Bodewes, PE - Project Engineer	IV		\$27.20	\$0.00
Stephen Frank - Senior Geologist	VI	8	\$41.40	\$331.20
Jason Colvin - Project Geologist	IV	16	\$26.50	\$424.00
Michael Byrne - Project Geologist	VI		\$35.50	\$0.00
Marlene Beck - Environmental Scientist	III		\$22.40	\$0.00
CAD Operator	IV	4	\$20.80	\$83.20
Typist	II		\$16.00	\$0.00
			Direct Subtotal	\$975.40
	Indirect Labor (overhead) @	1.11	Indirect Subtotal	\$1,082.69
	Profit @	0.1	Profit Subtotal	\$205.81
			LiRo Labor Total	\$2,263.90
Laboratory (ChemTech cost includes surcharge for 5-day TAT)	Method	quantity	unit cost	cost
TCL Volatiles(sludge/water/drummed waste)	8260B	6	\$85	\$510.00
TCL Semivolatiles(drummed waste - contingency)	8270C	1	\$170	\$170.00
TCL PCBs (soil/water/sludge)*	8082	25	\$66	\$1,650.00
Full TCLP (sludge/drummed waste)	6010/7471	3	\$690	\$2,070.00
			Lab Subtotal	\$4,400.00
* PCB total includes 3 soil QC samples (MS/MSD/DUP). No QC for waste characterization samples				
Equipment	units	quantity	unit cost	cost
Photoionization Detector (Rental)	day	0	\$75	\$0.00
Dust Monitor (Rental)	day	0	\$25	\$0.00
Water Quality Meter (Rental)	day	0	\$95	\$0.00
Dedicated/disposable sample equipment	Lump Sum	1	\$50	\$50.00
			Equipment Subtotal	\$50.00
			Preliminary Investigation Total	\$6,713.90