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November 13, 2009

Ian Beilby

New York State Department of Environmental Conservation

Division of Environmental Remediation

625 Broadway

Albany, New York 12233-7013

**RE: Remedial Investigation Final Work Plan Addendum for
Supplemental Investigation Sediment and Soil Sampling
Former Adirondack Steel Site,
Colonie, New York
Current Work Assignment Number: D004435-10
Site No.: 4-01-039**

Dear Mr. Beilby:

This letter constitutes a Final Work Plan Addendum for supplemental investigation sediment sampling at the former Adirondack Steel Site (Figure 1-1), which the New York State Department of Environmental Conservation (NYSDEC) requested Ecology and Environment Engineering, P.C. (EEEPC) to develop after review of sediment sample results from the October 2005, July/August 2007 and April 2008 investigations (Figures 1-2 and 1-3) and determining additional characterization of the sediment was necessary. EEEPC has developed a letter-style work plan addendum to address each work plan element requested for investigation work. This document has been prepared as an attachment to the existing project work plan (EEEPC, September 2005, *Technical Work Plan for the Remedial Investigation and Feasibility Study at the Former Adirondack Steel Site*) and the revised work plan (EEEPC, May 2007, *Revised Draft Work Plan Addendum for Additional Remedial Investigations at the Former Adirondack Steel Site*) and provides a detailed addendum work scope.

1. Site Background

The site description and history remain as described in EEEPC's work plan of September 2005.

2. Remedial Investigation Work Scope Addendum Objectives

The overall objectives of executing the work scope defined in the work plan addendum are:

- **Railroad Drainageway:** Further define the extent of polychlorinated biphenyl (PCB) concentrations in sediment and subsurface soils located near previous sediment sample locations SD-1, SD-8, SD-9, SD-10, SD-11 and SD-12 from the July/August 2007 investigation and SD-13 through SD-29 from the April 2008 investigation.

These samples were collected in the railroad drainageway east of the site on the Delaware Hudson (D&H) Railroad property.

- South Railroad Drainageway: Further define the extent of PCB concentrations in sediment from the south railroad drainageway. This area was previously excavated by the New York State Department of Transportation (NYSDOT) and the Town of Colonie because the ditch was silted up and there was no drainage flow. During the April 2008 investigation, five sediment samples (SD-19 through SD-23) were collected from the excavated soil that was bermed along Lincoln Avenue and concentrations were below 1 part per million (ppm). No samples were collected from the drainageway, only the bermed soil.
- North Drainageway: Further define the extent of PCB concentrations in sediment from the north drainageway near previous sediment sample locations Sample Site 1 through Sample Site 4. These samples were collected in June 2008 by Precision Environmental Services, Inc. (PES).
- Previous Excavation Area A6: Collect a total of two soil samples from the northwestern and northern excavation boundaries of A6 which was excavated in May through July 2009. These additional samples are needed to complete confirmation soil sampling for A6.
- Collect up to five additional composite samples from an off-site location approximately 2 miles south of the site that was recently determined to be a spoil pile from a drainageway improvement project conducted by the Town of Colonie in the D&H Railroad right of way. Sample locations will be determined by NYSDEC staff in the field.

3. Supplemental Investigation Tasks

3.1 Work Plan Development

All work will be performed under the existing EEEPC Work Plan and site-specific Quality Assurance Project Plan (QAPP; EEEPC 2005) and site-specific Health and Safety Plan (HASP) Addendum.

3.2 Field Investigation

The field investigation will consist of collecting sediment samples at three intervals from approximately 111 locations (total of approximately 333 sediment/soil samples) located in the railroad drainageway, south railroad drainageway and north drainageway (Figure 1-4). Two additional soil samples will be collected from the northwestern and northern boundaries of previous excavation area A6 (Figure 1-4) and five additional samples will be collected from an off-site spoil pile from a drainageway improvement project by the Town of Colonie in the D&H Railroad right of way.

3.2.1 Mobilization

NYSDEC has obtained access permission to the drainage ditch paralleling the railroad tracks (railroad drainageway). NYSDEC and EEEPC have established a start date of

November 16, 2009. On the prescribed day, the EEEPC field team will travel to the site and commence the project activities. Project efforts will be conducted on business weekdays, but not on holidays or weekends. It is anticipated that fieldwork will be completed within 2 to 3 weeks of the start date. EEEPC will order the necessary field instrumentation and supplies to conduct the work scope prior to mobilization.

3.2.2 Sediment Sampling

In order to better define the extent of PCB contamination in the drainage ditch paralleling the railroad tracks on the east side of the site (railroad drainageway), drainage ditch previously excavated by NYSDOT and Town of Colonie (south railroad drainageway), and drainage ditch previously sampled by PES (north drainageway), sediment sampling will be conducted for Target Compound List (TCL) PCB analysis.

EEEEPC will collect sediment samples approximately every 50 feet (97 locations) in the railroad drainageway, every 50 feet (10 locations) in the north drainageway and approximately 4 locations (distances ranging from 100 feet to 225 feet apart) in the south railroad drainageway (see Figure 1-4). Samples will be collected from at least three intervals in the channel floor; 0 to 2 feet below ground surface (bgs), 2 to 4 feet bgs and 4 to 8 feet bgs, from each location using the direct-push (Geoprobe) method. A few of the sample locations adjacent to the drainageway may require sample depths up to 15 to 20 feet bgs in the sidewalls of the drainageway. Samples will be collected from three intervals on the sidewalls of the drainageway according to the following schedule: where the bottom of the channel is greater than 2 feet below the surrounding grade, samples shall be retrieved from intervals 2-4 feet bgs and 4-8 feet bgs in the channel. Where the bottom of the channel is 2 feet or less below the surrounding grade elevation, samples will be collected from approximately the same elevations as the channel sample depths (0 to 2 feet bgs, 2 to 4 feet bgs and 4 to 8 feet bgs).

Sampling locations and depths may be adjusted in the field based on observations during sampling. The general sampling methodology, sample collection containers, volumes, preservation, and sampling holding times will be as stated in RI/FS work plan (EEEEPC 2005).

All samples will be submitted for TCL PCB analysis. Samples will be submitted to the laboratory on a standard turn-around time (TAT) basis (28 calendar days). Based on visual observations in the field, additional samples may be submitted for analysis. When possible, samples will be submitted to the lab in groups of 11, which will allow a cost-savings. Final data reports for all samples will be received from the lab within 28-calendar days from submittal. The laboratory providing analytical services will be contracted directly by NYSDEC. It is assumed for purposes of review that the laboratory selected by NYSDEC (Adirondack Environmental Services, Inc.) will provide EEEPC with an electronic data deliverable consistent with the EPA Region 2 Multimedia Electronic Data Deliverable (MEDD) format.

The subsurface sediment samples will be collected in 4-foot segments using a steel-core barrel lined with a dedicated acetate sleeve. Once the core barrel has been driven to its

desired depth, it will be extracted from the borehole, then the acetate sleeve will be extracted from the sample barrel and opened by the drillers. Sediment samples will be collected directly from the acetate sleeves using dedicated stainless steel spoons and placed directly into sample jars. The sample will be screened with a PID for organic vapors and a description of the sample will be recorded. The barrel will be decontaminated between locations, as per the work plan (EEEPC 2005). The borehole will be immediately backfilled with cuttings from that hole and granular bentonite will be added if additional material is needed.

All drilling activities at the site will be conducted by Aztech Technologies Inc. (ATI) with oversight by EEEPC. Prior to initiating intrusive subsurface activities, ATI will coordinate with the Underground Facilities Protection Organization to identify and locate underground utilities in the vicinity of the soil borings. Drilling locations will be placed in order to ensure that no utilities are encountered during drilling.

Quality control (QC) samples to be collected include duplicate samples and matrix spike/matrix spike duplicate (MS/MSD) samples at a frequency of one per 20 samples. The duplicate sample is intended to provide insight as to the homogeneity of the sample matrix and establish a degree of confidence that the sample represents site conditions. Two rinsate blanks will be collected from any non-dedicated or non-disposable sampling equipment during the middle of the project and at the end of the project. The rinsate blanks will be collected by passing deionized water over the sampling equipment after decontamination is completed. Additional details pertaining to field equipment QC requirements are included in the QAPP (EEEPC 2005).

		Turn Around Time	Number of Field Samples	QA/QC Samples					Total Number of Samples
				Field Duplicates	Trip Blanks	Rinsate Blanks	MS	MSD	
Analysis	Method								
Sediment Samples									
TCL PCBs	SW 8082	Standard	340	17	0	2	17	17	393
Investigation Derived Waste – Liquid (if needed)									
TCL PCBs	SW 8082	Standard	1	0	0	0	0	0	1
TCL VOCs	8260C	Standard	1	0	0	0	0	0	1
TCL SVOCs	8270D	Standard	1	0	0	0	0	0	1
TAL Metals	6010B/7471	Standard	1	0	0	0	0	0	1

Key:

QA/QC = Quality assurance/quality control.

MS = Matrix spike.

MSD = Matrix spike duplicate.

PCB = Polychlorinated biphenyls.

VOC = Volatile organic compounds.

SVOC = Semi-volatile organic compounds.

3.2.3 Mapping

The horizontal location and vertical elevation of previous borings, surface water and sediment sampling locations were surveyed by a licensed land surveyor following completion of all fieldwork (excluding samples located in the drainageways). The proposed sediment sample locations will not be surveyed by a licensed land surveyor

but the horizontal locations of the samples will be surveyed by EEEPC using a global positioning system (GPS), Trimble Geo XT with sub-meter accuracy. Locations without GPS reception will be measured to fixed site locations (e.g., buildings, power poles, etc.) to the extent practicable using a measuring tape and/or measuring wheel. The sample locations will be located on the base map using these measurements. Approximate coordinates of sample locations will be generated from the survey map after they are plotted. The new measurement data will be added to the existing site base map.

3.2.4 Air Monitoring

The EEEPC site safety officer will perform air monitoring during all subsurface investigation activities, as described in the RI/FS Work Plan and HASP (EEEPC 2005). However, dust monitoring will not be performed during this field addendum program. Based on the nature of the sampling and results of dust monitoring during the first phase of investigation and the lack of nearby receptors, dust monitoring is not deemed necessary.

3.2.5 Decontamination Procedures

Decontamination will be performed as described in Section 3.2.3.5 of the RI/FS Work Plan (EEEPC 2005).

3.2.6 Investigation Derived Waste (IDW) Management

The following types of IDW are expected to be generated: decontamination water from sediment sampling and spent personal protective equipment (PPE). Waste streams will be segregated to the maximum extent possible.

Investigation-derived decontamination water will be field-screened for organic vapors with a photoionization detector (PID) and visually inspected to initially determine whether the water is potentially contaminated. Decontamination water that do not exhibit signs of contamination (e.g., PID readings of 5 ppm or less and lack of staining, sheen) will be discharged to the surface near the site of generation or as close as reasonably possible. Any waste that provides an indication of contamination (e.g., PID readings greater than 5 ppm, staining, sheen, odor) will be containerized in DOT-approved 55-gallon drums and stored onsite pending analysis and disposal. All drums containing IDW will be labeled as to their contents, the site name, location where the material was generated and date the waste was generated. If the water exhibits signs of contamination, it is assumed that the water drum(s) will be disposed of as non-hazardous and containing PCBs. EEEPC will coordinate this drum disposal with the NYSDEC project manager to ensure that NYSDEC is available to sign the waste shipping manifest(s), as legally NYSDEC is the waste generator. The disposal company will be contracted directly by NYSDEC. IDW water will be analyzed for TCL PCBs, TCL VOCs, TCL SVOCs and TAL Metals to characterize the waste for disposal. All samples will be analyzed using standard TAT.

Unless field screening indicates that PPE and other solid wastes are contaminated to the level that they can not be disposed of as non-hazardous waste, this material will be double-bagged and disposed of off-site as non-regulated solid waste.

3.2.7 Field Quality Control Samples

Field quality control samples will be collected as described in Section 3.2.3.5 of the RI/FS Work Plan (EEEPC 2005).

3.2.8 Sample Management

Sample management will be conducted as described in Section 3.3 of the RI/FS Work Plan (EEEPC 2005).

3.2.9 Analytical Program

The analytical program is as described in Section 3.4 of the RI/FS Work Plan (EEEPC 2005).

3.2.10 Data Validation and Usability Reporting

EEEPC will review the data and prepare Data Usability Summary Reports (DUSRs) for the analytical data generated under this supplemental investigation sediment sampling.

3.2.11 Waste Disposal

EEEPC waste disposal activities will consist of oversight of the disposal contractor subcontracted by NYSDEC for the IDW drum(s), if needed (as described in Section 3.2.6).

3.3 Reporting

3.3.1 Draft RI Report Addendum

Data collected under this supplemental investigation will be compiled into a Draft RI Report Addendum to the RI conducted in July and August 2007 and April 2008. The Draft RI Report Addendum will then be submitted to NYSDEC for review. The analytical data will be screened against New York State Standards, Criteria and Guidelines (SCGs) using the NYSDEC Guidance for Screening Contaminated Sediments.

3.3.2 Final RI Reporting

After comments are received from NYSDEC's review of the Draft RI Report Addendum, EEEPC will finalize the RI Report Addendum.

The schedule in Table 3-1 provides tentative dates for completing work activities. Actual dates may vary depending on notice to proceed.

Table 3-1 Schedule

Task	Start Date	End Date
Submit draft work plan	--	November 6, 2009
Submit final work plan		November 13, 2009
Field work	November 16, 2009	December 4, 2009
Submit draft report	--	January 15, 2009
NYSDEC report review	January 18, 2009	January 29, 2009
Submit final report	--	February 19, 2009

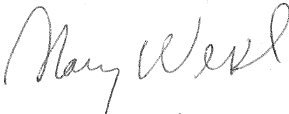
Mr. Ian Beilby
Former Adirondack Steel Site Work Plan Addendum
November 13, 2009
Page 7 of 7

3.4 Costing Plan

EEEPC will use remaining Work Assignment budget to complete the proposed work from the Interim Remedial Measures (IRM) task. The IRM approved budget (Task 7) was \$135,564. As of October 24, 2009, \$87,324 was spent from Task 7 and \$48,240 remains. The additional sediment sampling is anticipated to cost less than \$31,000 to complete.

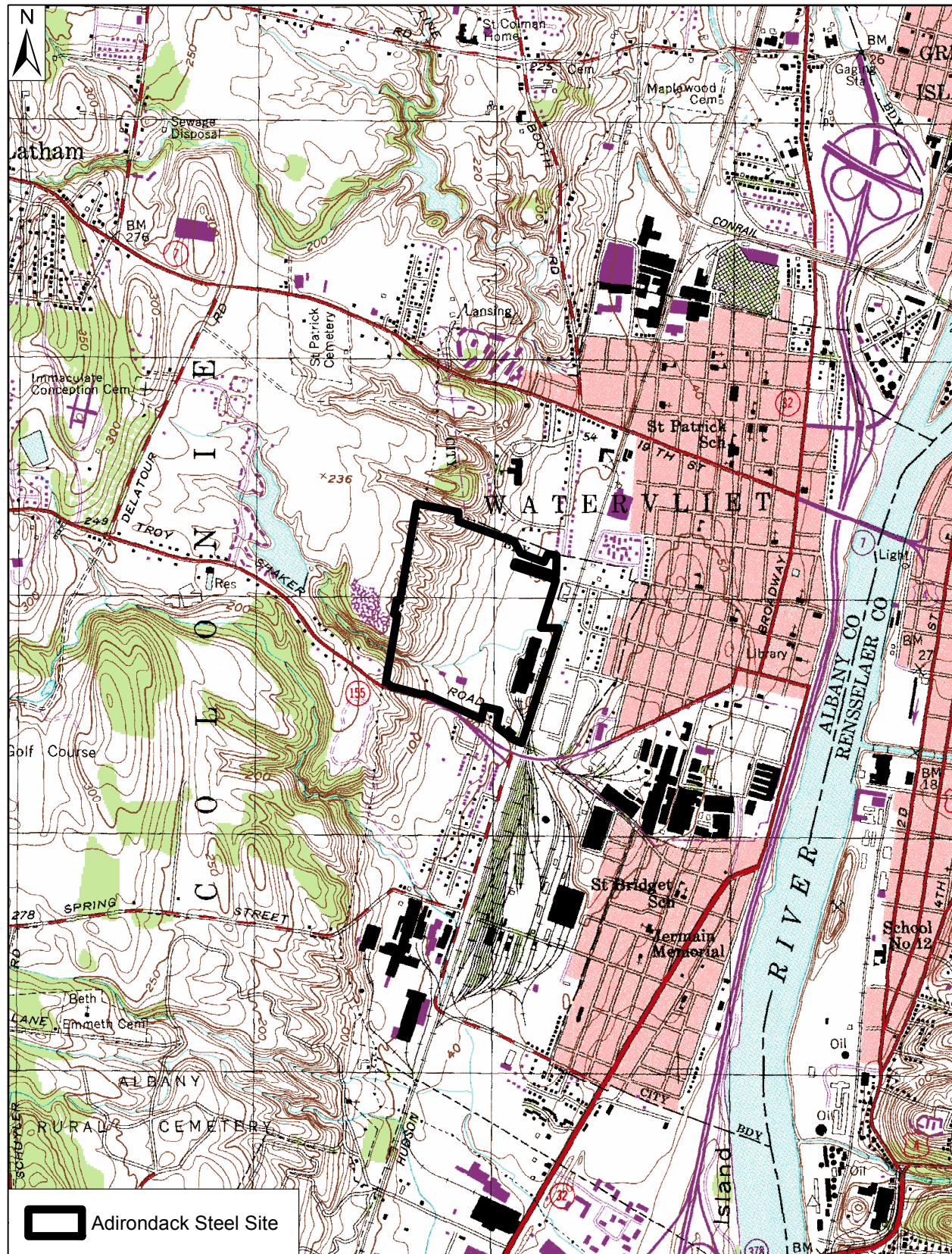
EEEPC looks forward to working with you on this supplemental investigation.

Sincerely,

A handwritten signature in cursive script, appearing to read "Marcy Werth".

Marcy Werth

cc: I. Beilby (NYSDEC)
M. Komoroske, P.E. (NYSDEC)
G. Florentino, P.G. (EEEPC)



Source: USGS Troy South 7.5 Minute Quadrangle

0 700 1,400 2,800 4,200 5,600
 Feet

Figure 1-1 Site Location Map
Former Adirondack Steel Site
Colonie, New York

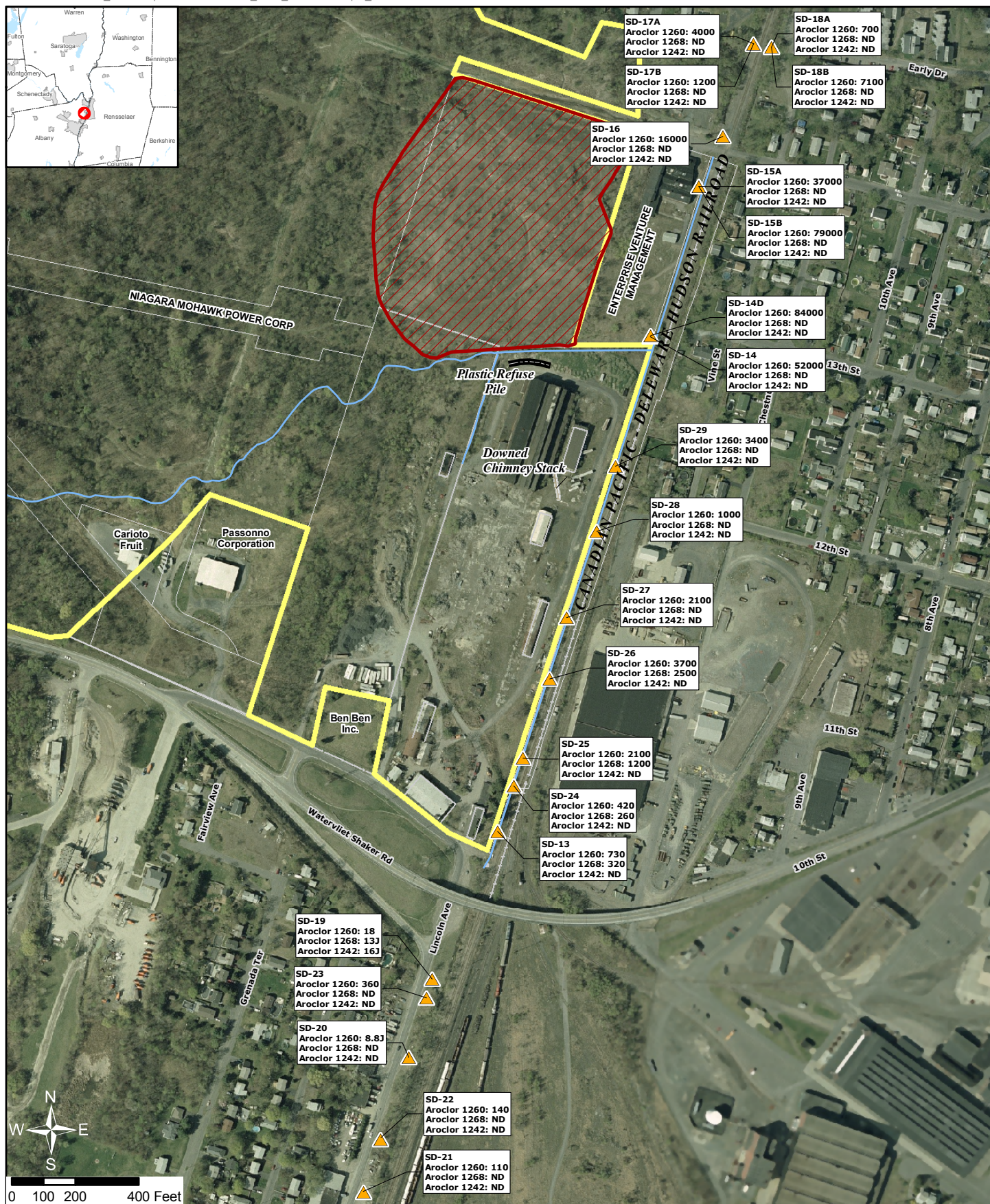


Figure 1-2
Surface and Subsurface Sediment Locations
Former Adirondack Steel Site
Colonie, New York



- Field Data, April 2008
- Surface Water/Sediment Sample Locations for PCBs
- Approximate Stream/Ditch Location
- Approximate Extent of Landfill
- Area of Investigation



Figure 1-3
Sediment and Berm
Soil Sampling Locations
Former Adirondack Steel Site
Colonie, New York

