NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 11th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

May 18, 2017

Rodney Weber
Scenic Beacon Developments, LLC
25 East Main Street
Beacon, NY 12508

Ref: Beacon Terminal site
City of Beacon, Dutchess County
Site ID: C314117
Sub: Supplemental Remedial Investigation Work plan

Dear Mr. Weber,

The New York State Department of Environment Conservation (the Department), has received the Supplemental Remedial Investigation Work plan dated May 18, 2017 submitted by Ecosystem Strategies to evaluate potential of in-situ treatment and/or covering of the toluene contaminated soils at two locations. The Department has reviewed the work plan and is hereby approved.

Please note that, the above approval does not construed acceptance of the remedies being evaluated. The volunteer will need to submit formal request in accordance with DER-2, to change the remedy specified in the Decision Document (DD) providing justification based on the additional information collected.

Please place the work plan in the document repository established for the site prior to commencing the field work. If you have any questions, please contact me at 518-402-9648 or parag.amin@dec.ny.gov.

Yours sincerely,

Parag Amin
Project Manager

ecc: P. Ciminello, Ecosystems Strategies
W. Ehrlich, Beacon Terminal Associates, LP
A. Perretta, NYSDOH
D. Crosby, CO

NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

Ecosystems Strategies
a WCD Group Company
24 Davis Avenue, Poughkeepsie, NY 12603
phone 845.452.1658 | fax 845.485.7083|wcdgroup.com
WCD GROUP
For pivotal matters.

May 18, 2017

Parag Amin
NYSDEC, DER
Remedial Bureau C, Section B
625 Broadway
Albany, New York 12233-7014 via email: pbamin@gw.dec.state.ny.us

Re: Beacon Terminal – Site No. C314117
Supplemental Remedial Investigation Work Plan
WCD File: BB04157.51

Dear Mr. Amin:

This Supplemental Remedial Investigation Work Plan (Work Plan) has been prepared by Ecosystems Strategies, a WCD Group Company (WCD) in response to communication with the NYSDEC following transfer of the property from Beacon Terminal Associates to Scenic Beacon Development, LLC (SBC). The property transfer occurred subsequent to approval of the Remedial Action Work Plan (RAWP), dated January 2014, which had been submitted prior to finalization of redevelopment plans. SBC has proposed new development plans for the site and, in the light of these plans, the NYSDEC has agreed to consider the potential in-situ treatment and/or covering of known toluene contaminated soils at two locations, rather than off-site disposal, as had been proposed in the RAWP.

Per Section 1.5 of DER 10 this Work Plan has certified by a Qualified Environmental professional (QEP) and has been developed to describe additional investigative activities at the known locations of toluene contaminated soils. The generated data will be used to evaluate potential alternative measures for the remediation of these soils.

Proposed investigative activities described in this Work Plan will be implemented in accordance with all requirements, methodologies and services as specified in the NYSDEC-approved Remedial Investigation Work Plan (RIWP), which, together will all appendices (e.g. HASP, CAMP, etc.) is incorporated into this Work Plan by reference (to facilitate your review of this document, the body of the RIWP has been provided as Attachment 1). Environmental conditions encountered during fieldwork activities may necessitate modifications to this Work Plan; any such changes will be subject to NYSDEC review and/or approval and will be properly documented. WCD will ensure that any unforeseen environmental conditions are managed in accordance with applicable federal and state regulations.

BACKGROUND

The remedy for the site proposed by the RAWP is Track 4, Restricted-Residential Use (RRU). Two locations (Area 1 and Area 2) containing toluene concentrations above the RRU Soil Cleanup Objectives (SCOs) are identified in the RAWP as subject to remediation.

Area 1, located at the northwest portion of the Site, contains approximately 3,600 cubic yards of toluene-contaminated subsurface soil. The areal extent of contamination is along the abandoned railroad spur and nearby the wooded area. Toluene concentrations above the RRU SCO are well delineated and extend vertically to approximately 13 feet bsg in the vicinity of 3B-08, 4 feet bsg at 3B-07 and 3 feet bsg at 2B-01C.

Area 2, located beneath the building slabs at the northern portion of building B-5B and the northwestern portion of building B-5A at the northwest portion of the Site, contains approximately 3,600 cubic yards of toluene-contaminated soil. Toluene was detected at the RRUSCO at 2B-15A at a depth of 8 feet bsg, and at concentrations below the RRSCO at nearby sampling locations.

The Proposed Site Remediation Map (Figure 13 of the RAWP) identifies Areas 1 and 2. Figure 13 of the RAWP is included as Attachment 2.

The work detailed below is proposed in this Work Plan. This work will supplement existing data and is intended to provide a sufficient characterization of soil conditions at Area 1 and Area 2 to evaluate potential alternative treatment options. The Proposed Fieldwork Map depicting boring locations is provided as Attachment 3.

The following Tasks will be performed:

- Site preparation services;
- Extension of five borings at Area 1;
- Extension of five borings at Area 2;
- Collection/analysis of soil samples from ten borings for toluene; and,
- Collection and analysis of soil samples in support of evaluating potential in situ treatment technologies.

SITE PREPARATION SERVICES

Qualifications of On-site Remedial Personnel

Prior to the initiation of work, the identities and qualifications of the project managers and associated staff will be supplied to the NYSDEC. The Volunteer will ensure that qualified contractors are used. All on-site staff will be appropriately trained in accordance with Occupational Safety and Health Administration (OSHA) practices (29 CFR, Part 1910). The NYSDEC will also be notified of any changes in the senior on-site personnel. Prior to the initiation of fieldwork, a Site Health and Safety Officer will be designated by the Volunteer, and a complete Health and Safety Plan will be provided.

Health and Safety Plan

The site-specific Health and Safety Plan (HASP), incorporating a Community Health and Safety Plan, will be reviewed with site personnel and subcontractors prior to the initiation of specific fieldwork where contaminated media are likely to be encountered. All proposed work will be performed in “Level D” personal protective equipment. Field personnel (including subcontractors) will be prepared to continue services wearing more protective levels of equipment should field conditions warrant.

Quality Assurance / Quality Control

Prior to the initiation of fieldwork, all field equipment to be used during the work will be properly decontaminated in accordance with NYSDEC guidelines, and all field instruments will be properly calibrated in accordance with procedures set forth by the equipment manufacturer(s). Unless otherwise specified, a MiniRAE 2000 (Model PGM 7600) photo-ionization detector (PID) will be used for site-screening of organic vapors. The PID is calibrated to read parts per million calibration gas equivalents

(ppm-cge) of isobutylene. Instrument calibration will be performed no more than 24 hours prior to the commencement of fieldwork, and a written record of calibration results will be provided in the project files.

Laboratory

All samples will be collected in accordance with applicable NYSDEC guidelines and will be submitted to a New York State Department of Health (NYSDOH) ELAP-certified laboratory using appropriate chain of custody procedures. Dedicated, laboratory supplied glassware will be used for sample collection. One trip blank and one field blank will be supplied for each day of fieldwork involving sample collection. Field personnel will maintain all samples at cold temperatures and complete all chain of custody forms.

Laboratory reports will include detailed Quality Assurance/Quality Control (QA/QC) analyses, category B deliverables, as defined in the analytical services protocol (ASP), will be submitted for confirmatory and final delineation samples (Category A or Category Spills laboratory data deliverables will be submitted for analyses conducted at all other locations). In addition, a Data Usability Summary Report (DUSR) will be prepared by a third, independent party, which maintains NYSDOH ELAP CLP Certification. Data validation will be conducted by an independent validator if required by the NYSDEC.

Fieldwork Monitoring

An assessment of subsurface soil characteristics, including soil type, the presence of foreign materials, and field and/or instrument indications of contamination (e.g., staining, odors, PID readings) will be made.

Notifications

The NYSDEC will be notified in writing at least one week prior to the initiation of any of the on-site work and during the course of the fieldwork if deemed necessary by on-site personnel. Changes to fieldwork scheduling will be provided via facsimile transmission and/or email. All applicable local agencies will also be notified prior to the initiation of Site work.

Prior to the implementation of any of the investigative tasks outlined below, a request for a complete utility markout of the subject property will be submitted as required by New York State Department of Labor regulations. Confirmation of underground utility locations will be secured, and a field check of the utility markout will be conducted prior to the initiation of work. Any utilities on the Site will be protected (as necessary) by the contractor or owner.

PROPOSED FIELDWORK

Conduct Community Air Monitoring Plan

The Community Air Monitoring Plan (CAMP) will be initiated during all ground intrusive activities. The implementation of this Plan will document the presence or absence of specific compounds in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data. Air monitoring will be conducted for VOCs and for dust.

Monitoring for VOCs will occur within 50 feet of the work zone using a PID. Recorded PID readings consistently in excess of 5 ppm will be considered evidence of unacceptable air emissions and proper procedures to reduce emissions will be immediately instituted. Ameliorative procedures may include

reducing the surface area of contaminated soil being disturbed at one time, watering exposed soils to reduce fugitive odors, use of suppression substances, or stopping excavation activities.

Dust will be monitored at three locations on the Site: two downwind locations at the property line, and one upwind location at the property line. Specific locations will change daily, depending on the work being conducted and the direction of the wind. Monitoring for dust will be conducted using a digital dust indicator, or equivalent equipment, capable of documenting the presence of dust with particle sizes ranging from 0.1 to 15 microns. Dust levels in excess of 150 ug/m^3 will be evidence of unacceptable air quality, and proper procedures to reduce dust levels (identified above) will be immediately instituted by the contractor.

Extension of Soil Borings

Ten borings will be advanced to a minimum depth of 20 feet or deeper if field conditions warrant (e.g., overt evidence of contamination is observed), as appropriate. Additional borings may be extended if evidence of contamination is encountered (a minimum of two "step out" borings will be located 15 – 20 feet from any proposed boring location with field evidence of contamination, e.g., elevated PID readings).

Soil Sampling and Analysis

Soil will be collected continuously during extension of the borings, screened with a PID and characterized in the field, and findings will be recorded in a logbook. At least five samples from each of the ten borings (from depths 0-4', 4-8', 8-12', 12-16' and 16-20') will be submitted to a NYSDOH ELAP-certified laboratory for analysis of toluene utilizing USEPA Method 8260 observations and by PID screening. Additional samples will be collected from deeper intervals if borings are extended past 20 feet. One duplicate and one matrix spike/matrix spike duplicate (MS/MSD) soil sample will be collected for QA/QC purposes. An equipment rinse blank may also be collected, if appropriate.

Two samples from each boring (0-4' depth and 4-16' depth) will be submitted for parameters required to evaluate in-situ treatment options. At this time it is anticipated that a chemical oxidation treatment will be utilized (e.g. Peroxychem Klozur Persulfate). The samples will be analyzed for parameters required to evaluate the potential effectiveness of chemical oxidation treatment and will include: pH, ORP, carbonate alkalinity, dissolved oxygen, nitrate, manganese, iron, sulfate, biological oxygen demand, chemical oxygen demand, and dissolved metals (Fe & Mn). Additional samples may be submitted if field evidence suggests the need/benefit of more data.

Three, five-point composite soil samples will be prepared using material from the soil borings at Area 1 and submitted for waste characterization analysis (as required by potential repositories) in the event that these soils require off-site disposal.

Management of Investigation Derived Wastes

All investigation derived waste (IDW) will be handled in accordance with DER-10 Section 3.3(e) and all applicable federal, state and local regulations. Given that borings are expected to have a high probability of extending into the saturated zone, no cuttings will be returned to any bore holes. Cuttings will be properly stored on-site pending final characterization and off-site disposal as either solid or hazardous waste.

DOCUMENTATION

At the completion of all services detailed in this Work Plan, a Supplemental Remedial Action Work Plan (SRAWP) will be prepared and submitted to the NYSDEC for review and approval. This SRAWP will include, at a minimum: a summary of all fieldwork activities; results of any laboratory analyses generated as a result of this investigation; maps illustrating Site investigation activities; a Data Usability Summary Report (DUSR) prepared by a third, independent party, which maintains NYSDOH ELAP CLP Certification; and, any recommendations and detailed protocols for appropriate response actions for toluene-contaminated soils in light of the updated data set.

SCHEDULE

Fieldwork	June 5, 2017
SRAWP Submission to NYSDEC	June 30, 2017

We hope that you will find this Work Plan acceptable. Please contact me at (845) 452-1658 with any questions and/or concerns.

CERTIFICATION

I Paul H. Ciminello certify that I am currently a Qualified Environmental Professional as defined in 6 NYCRR Part 375 and that this Supplemental Remedial Investigation Work Plan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).

Paul H. Ciminello
Executive Vice President
QEP: 08130024

Attachments: 1 – Approved Remedial Investigation Work Plan (text only)
2 – Figure 13 from Approved Remedial Action Work Plan
3 – Proposed Fieldwork Map.

cc: Rodney Weber
Tina Andress

ATTACHMENT 1

Approved Remedial Investigation Work Plan (text only)

REMEDIAL INVESTIGATION WORK PLAN

Prepared for the

Beacon Terminal Site

555 South Avenue
City of Beacon
Dutchess County, New York

NYSDEC Brownfields Program Site: C314117

Submitted July 2007
Revised October 2007

ESI File: BB04157.50

ECOSYSTEMS STRATEGIES, INC.
24 Davis Avenue
Poughkeepsie, New York 12603
(845) 452-1658

REMEDIAL INVESTIGATION WORK PLAN

Prepared for the

Beacon Terminal Site
555 South Avenue
City of Beacon
Dutchess County, New York

NYSDEC Brownfields Program Site: C314117

Submitted July 2007
Revised October 2007

ESI File: BB04157.50

Prepared By:

Ecosystems Strategies, Inc.
24 Davis Avenue
Poughkeepsie, New York 12603

Prepared For:

Beacon Terminal Associates, LLP
18 East 22nd Street
New York, New York 10010

The undersigned have reviewed this Draft Remedial Investigation Work Plan and certify to Beacon Terminal Associates, LLP that the information provided in this document is accurate as of the date of issuance by this office.

Any and all questions or comments, including requests for additional information, should be submitted to the undersigned.

Paul H. Ciminello
President

TABLE OF CONTENTS

1.0 INTRODUCTION

1.1 Purpose

The purpose of this Draft Remedial Investigation Work Plan (RIWP) is to: 1) summarize environmental investigative and interim remedial fieldwork previously performed by Ecosystems Strategies, Inc. (ESI) and other parties on the "Beacon Terminal Site" (hereafter referred to as the "Site"); and, 2) provide guidance on the manner in which additional site investigative services will be conducted, in order to address known and suspected on-site environmental conditions (see Section 1.3, below). It is the intent of this RIWP that, upon completion of all investigative activities, generated environmental data will be of sufficient quality and quantity for the submission of a completed Remedial Investigation Report (RIR) and a Remedial Work Plan (RWP) with an alternatives analysis to the New York State Department of Environmental Conservation (NYSDEC).

1.2 Site History and Description

The Site consists of tax parcel: # 751258 (11.07 acres) located in the City of Beacon, Dutchess County, New York (Section 5954, Block 16, Lot 751258). A Site Location Map is provided as Figure 1 in Appendix A. The Site is located adjacent to the northern edge of Fishkill Creek, approximately 2,000 feet east of the Hudson River, and has overall southerly slopes. The Site is presently improved with eight vacant industrial buildings (B-1, B-2, B-3, B-4, B-5A, B-5B, B-6, B-7, and B-8) formerly used for various manufacturing and warehousing purposes. These buildings occupy approximately fifty percent of the Site; the remainder of the property includes paved parking areas and undeveloped grassland and woodlands. A Site Map is provided as Figure 2 in Appendix A.

Floor drains and exterior drains were observed inside of buildings B-7 and B-8 and outside of buildings B-4, B-8, and B-6 by ESI in September 2007. However, the basement floor inside of most of the buildings is obscured with debris making identification of additional floor drains and sumps difficult. During site activities, an effort will be made to further identify sumps, floor drains, and other drainage features. These areas, if identified, will be targeted for the collection of soil, ground water, and/or soil vapor.

The following Environmental History was obtained from review of Site documentation provided by the Beacon Historical Society and previously issued documents:

The Site has a long history of known industrial use. A Site sketch and description, obtained from the Beacon Historical Society, depicts three buildings (now identified as buildings B-1 and B-2) on Site. These buildings were constructed in 1878 as the Tioranda Hat Works. Building B-1 is described as an engine room and boiler house, and building B-2 is described as the main factory housing felting, dyeing, carding, and wool sorting operations. Information regarding specific historical material handling, storage, and disposal is not readily available. However, review of historic Sanborn Maps indicates that the Site was occupied by the Tioranda Hat Works until at least 1919. Three of the present-day buildings (B-1, B-2, and B-4) were on-site at that time, with dyeing operations in the portions of buildings B-2 and B-4 most proximal to Fishkill Creek. Sanborn maps depict on-site hatworks facilities until at least 1946. However, by 1962 the complex, comprising all buildings currently on Site, is called "Beacon Terminal". Six of the buildings are shown as being in use by the Atlas Fiber Company, a fiber reclaimer, while one building (B-5A and B-5B) is occupied by Chemical Rubber Products, Inc. and one building (B-7) is occupied by BASF Colors & Chemicals. From approximately 1972 to 1995, the buildings were used for storage by various occupants. The buildings have remained vacant since at least 1995.

Petroleum products and other chemicals have historically been stored on-site. Four underground storage tanks (USTs) used for the storage of toluene are likely to have been installed in the early 1950s, when building B-5A was constructed. Six aboveground storage tanks (ASTs) used for the storage of lubricating oil, hydrochloric, and sulfuric acids, and at least ten USTs used for the storage of fuel oil, toluene, and other chemicals were documented on the Site in 1993. Neither these tanks nor their closures appear to have been properly documented. In addition, storage drums of varying sizes were found at a number of interior locations.

In 1996, ESI conducted a limited subsurface investigation in the vicinity of the toluene USTs. Ten borings (B-1 thorough B-10, Figure 3, Appendix A) were completed to a depth ranging from 7.0 feet below surface grade (bsg) to 11.0 feet bsg. Volatile organic compounds (VOCs) (benzene, toluene, and xylene) were detected at levels which exceed current NYSDEC Part 375 Soil Cleanup Objectives (SCOs) for Unrestricted Use. NYSDEC spill #9600893 (currently closed) was recorded for the Site at that time.

Work conducted at the Site in October 2000, as part of the Voluntary Cleanup Program Site #V00443-3, included the removal of four toluene USTs located just beyond the northern wall of Building 5A, at the junction with Building 5B. Post-excavation inspections documented water with a product sheen and numerous small holes in the tanks, and NYSDEC spill #0008142 (currently closed) was reported. Post-excavation soil sampling indicated elevated levels of toluene in sixteen of twenty-four confirmatory samples (levels ranging from 3,220 to 326,000 parts per billion (ppb), TAGM 4046 Recommended Soil Cleanup Objective [RSCO] 1,500 ppb). The majority of samples with elevated toluene levels (ten of sixteen) were drawn from the bottom of the excavation, suggesting deep penetration of the contaminant. Investigation of soils under the buildings or of soil vapor is not known to have been conducted. Although three monitoring wells were installed on Site (Figure 3, Appendix A), groundwater quality data is not available.

Soils from the excavation of the toluene USTs were stockpiled on-site. In May 2001, these stockpiled soils were sampled and found to contain elevated levels of toluene, with concentrations ranging from not detectable to 2,020,000 ppb. Subsequent stockpile sampling, in October 2002, did not find detectable levels of toluene or other organic compounds, indicating the volatization of toluene over time. In 2005, the soil stockpile was relocated to the northwestern corner of the Site and covered with at least 24 inches of clean cover soil, as documented in a previously submitted Soils Management Plan (May 2005).

Also in October 2000, all ASTs (with the exception of the four chemical holding tanks located in Building 2) were cleaned and removed from the Site, miscellaneous containerized liquids and solids were repackaged and scheduled for removal, and a 550-gallon UST was removed from the western side of Building 5B. The UST was reported to be full of water, with no observed sheen or odor. Photoionization detector (PID) readings were not recorded during the removal of this UST. Post-excavation sampling did not reveal detectable organic compounds. However, somewhat elevated metals were found in this area (lead at over 470 ppm, nickel at over 30 ppm, and zinc at over 100 ppm). These concentrations may be indicative of low-grade metals contamination throughout the Site.

In August 1995, five test pits (TP-1 through TP-5 Figure 3, Appendix A) were excavated east of the Site in the area of former sheds A and B. The test pits were completed to a depth ranging from 1.0 feet bsg to 6.5 feet bsg. Metals (arsenic and mercury) were detected at levels which exceed current NYSDEC Part 375 Soil Cleanup Objectives (SCOs) for Unrestricted Use. Additionally, two test pits were excavated west of the parking area and east of the City of Beacon Sewer, laboratory results; however, are not available.

Potential impacts to sediment in the Fishkill Creek resulting from operations on the Site have not been thoroughly evaluated (samples collected in 1995 revealed elevated levels of lead, ranging from 400 to 3,400 ppm). The tape manufacturer Tuck Industries (USEPA ID: NYD001396894) was formerly located approximately 1500 feet northeast of the Site and upstream on Fishkill Creek. This facility is listed in the USEPA CERCLIS database and was known to store drums of toluene, methyl ethyl ketone, and isopropyl alcohol. This facility may have impacted on-site sediment.

The Site is proposed for re-use as a residential condominium complex at the completion of remedial activities. According to the redevelopment plan, Buildings B-1 and B-2 will remain on Site while all other buildings (B-3, B-4, B-5A, B-5B, B-6, B-7, and B-8) will be razed. Information regarding the location of proposed structures is not available at this time. Upon availability, plans for the proposed construction will be included in the RIR.

1.3 Environmental Areas of Concern

The following Areas of Concern (AOCs) were identified during the Investigation Scoping meeting conducted at the Site on April 3, 2007 with NYSDEC representatives:

- Soil and groundwater quality beneath building B-5A and building B-5B, adjacent to former toluene tank area;
- Identified debris area in the western most portion of the Site;
- Soil and groundwater quality under the western parking lot;
- Soil and groundwater quality near the observed transformers adjacent to building B-1;
- The contents of the four chemical holding tanks located in building B-2;
- Sub-slab vapor quality in each building; and,
- The integrity of surface soil across the Site.

1.4 Completed Interim Remedial Measures

The following interim remedial measures have already been completed:

- Four toluene USTs, adjacent to building B-5A, and one 550 gallon UST adjacent to the western side of building B-5B, were removed from the Site.
- Toluene impacted soil generated during the removal of the four-toluene tanks was stockpiled on-site in the western parking lot. This soil was then buried on-site northeast of the stockpile area in accordance with a NYSDEC approved work plan after testing documented the absence of elevated levels of toluene.
- Three groundwater monitoring wells were installed across the Site.
- With the exception of four chemical holding tanks (of which the contents and quantities are unknown), all other identified ASTs and drums were removed from the Site.

2.0 PROPOSED SITE INVESTIGATION SERVICES

This section of the RIWP details proposed environmental investigative activities. A Proposed Fieldwork map, depicting relevant Site features and proposed fieldwork locations, is provided as Figures 4, in Appendix A. All proposed work will be conducted according to a site specific Health and Safety Plan, provided as Appendix B.

Ecosystems Strategies, Inc. (hereafter referred to as the On-Site Coordinator, "OSC") has been retained to oversee the provision of the environmental investigative services specified in this RIWP. The "Volunteer" (as specified in the BCP agreement) is defined as Beacon Terminal Associates, LLP, which will contract with the OSC and other environmental contractors as necessary to provide the services detailed below.

2.1 Overview of Proposed Services

The purpose of this RIWP is to provide guidance on the manner in which additional site investigative services will be conducted, in order to address known and suspected on-site environmental conditions (see Section 1.3, above). It is the expressed intent of this RIWP that, upon completion of investigative activities, generated environmental data will be of sufficient quality and quantity for the submission of a completed Remedial Investigation Report (RIR), and a Remedial Work Plan (RWP) with an alternatives analysis, according to the requirements of the NYSDEC.

The following specific tasks will be completed at the Site (see Figure 6, Appendix A):

1) Extension of between thirty-five (35) and forty (40) soil borings, including inside of the on-site structures and at selected locations throughout the Site (Section 2.3.2). Soils will be sampled, as appropriate, and submitted for laboratory analysis of contaminants of concern in order to document Site integrity (Section 2.3.3);

2) Collection of ten (10) surface soil samples throughout the Site, and collection of two (2) surface soil samples from off-site (Section 2.3.3);

3) Collection of sub-slab vapor samples from within each Site structure, and collection of two (2) soil vapor samples on the western side of the Site (Section 2.3.4);

4) Completion of six (6) borings as permanent, shallow overburden monitoring wells (Section 2.3.5), capable of providing reliable groundwater quality data throughout the investigative, remedial, and post-remedial phases of the project;

5) Collection and laboratory analysis of groundwater samples, in order to document the integrity of on-site groundwater resources (Section 2.3.5);

6) A Pathway Analysis and Criteria-Specific Analysis will be completed for the Site in order to determine potential impact to fish and wildlife (Section 2,3.6); and,

7) Investigation of the northern bank of Fishkill Creek and the collection of at least one (1) surface water sample, one (1) sediment sample, and one (1) soil sample, and collection of one (1) surface water sample and (1) one sediment sample from off-site (Section 2.3.7).

2.2 Site Preparation Services

2.2.1 Qualifications of On-site Remedial Personnel

Prior to the initiation of work, the identities and qualifications of the project managers and associated staff will be supplied to the NYSDEC. The Volunteer will ensure that qualified contractors are used. All on-site staff will be appropriately trained in accordance with Occupational Safety and Health Administration (OSHA) practices (29 CFR, Part 1910). The NYSDEC will also be notified of any changes in the senior on-site personnel. Prior to the initiation of fieldwork, a Site Health and Safety Officer will be designated by the Volunteer, and a complete Health and Safety Plan will be provided (see Section 2.2.2, below).

2.2.2 Health and Safety Plan

A site-specific Health and Safety Plan (HASP), incorporating a Community Health and Safety Plan, will be reviewed with site personnel and subcontractors prior to the initiation of specific fieldwork where contaminated media are likely to be encountered. All proposed work will be performed in "Level D" personal protective equipment. Field personnel (including subcontractors) will be prepared to continue services wearing more protective levels of equipment should field conditions warrant. A copy of the HASP is included in Appendix B. Unless determined otherwise, the OSC will provide staff to serve as the project's Health and Safety Officer.

2.2.3 Quality Assurance / Quality Control

Equipment

Prior to the initiation of fieldwork, all field equipment to be used during the work will be properly decontaminated in accordance with NYSDEC guidelines, and all field instruments will be properly calibrated in accordance with procedures set forth by the equipment manufacturer(s). Unless otherwise specified, a MiniRAE 2000 (Model PGM 7600) photo-ionization detector (PID) will be used for site-screening of organic vapors. The PID is calibrated to read parts per million calibration gas equivalents (ppm-cge) of isobutylene. Instrument calibration will be performed no more than 24 hours prior to the commencement of fieldwork, and a written record of calibration results will be provided in the project files.

Laboratory

All samples will be collected in accordance with applicable NYSDEC guidelines and will be submitted to a New York State Department of Health (NYSDOH) ELAP-certified laboratory using appropriate chain of custody procedures. At this time, it is anticipated that all samples will be transported by courier to Severn Trent Laboratories (STL) of Shelton, Connecticut (ELAP # 10602). Dedicated, laboratory supplied glassware will be used for sample collection. One trip blank and one field blank will be supplied for each day of fieldwork involving sample collection. Field personnel will maintain all samples at cold temperatures and complete all chain of custody forms.

Laboratory reports will include detailed Quality Assurance/Quality Control (QA/QC) analyses, which will be provided in the final RIR (Section 2.3.10). Category B deliverables, as defined in the analytical services protocol (ASP), will be submitted for confirmatory and final delineation samples (Category A or Category Spills laboratory data deliverables will be submitted for analyses conducted at all other locations). In addition, a Data Usability Summary Report (DUSR) will be prepared by a third, independent party, which maintains NYSDOH ELAP CLP Certification. Data validation will be conducted by an independent validator if required by the NYSDEC.

2.2.4 Fieldwork Monitoring

An assessment of subsurface soil characteristics, including soil type, the presence of foreign materials, and field and/or instrument indications of contamination (e.g., staining, odors, PID readings) will be made by the OSC. The OSC will be responsible for identifying any soils that in the opinion of the OSC may contain elevated concentrations of contaminants that warrant special handling. Those soils identified by the OSC will be removed to a specified soil stockpiling area for characterization and proper disposition. If applicable, the OSC will monitor the removal of all contaminated soil, including monitoring the trucks and establishing the designated truck routes. The OSC will also ensure that any unforeseen environmental conditions are managed in accordance with applicable federal and state regulations.

2.2.5 Notifications

The NYSDEC will be notified in writing at least two weeks prior to the initiation of any of the on-site work and during the course of the fieldwork if deemed necessary by on-site personnel. Changes to fieldwork scheduling will be provided via facsimile transmission and/or email. All applicable local agencies will also be notified prior to the initiation of Site work.

Prior to the implementation of any of the investigative tasks outlined in Section 2.3, below, a request for a complete utility markout of the subject property will be submitted as required by New York State Department of Labor regulations. Confirmation of underground utility locations will be secured, and a field check of the utility markout will be conducted prior to the initiation of work. Any utilities on the Site will be protected (as necessary) by the contractor or owner.

2.3 Proposed Site Investigation Services

This section of the RIWP provides a detailed description of the procedural and investigative tasks that will be conducted at the subject property.

2.3.1 Conduct Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP, see Appendix C) will be initiated during all ground intrusive activities that are reasonably likely to generate significant dust and/or vapors. The implementation of this Plan will document the presence or absence of specific compounds in the air surrounding the work zone, which may migrate off-site due to fieldwork activities. This plan provides guidance on the need for implementing more stringent dust and emission controls based on air quality data. Air monitoring will be conducted for VOCs and for dust.

Monitoring for VOCs will occur within 50 feet of the work zone using a PID. Recorded PID readings consistently in excess of 5 ppm will be considered evidence of unacceptable air emissions and proper procedures to reduce emissions will be immediately instituted. Ameliorative procedures may include reducing the surface area of contaminated soil being disturbed at one time, watering exposed soils to reduce fugitive odors, use of suppression substances, or stopping excavation activities.

Dust will be monitored at three locations on the Site: two downwind locations at the property line, and one upwind location at the property line. Specific locations will change daily, depending on the work being conducted and the direction of the wind. Monitoring for dust will be conducted using a digital dust indicator, or equivalent equipment, capable of documenting the presence of dust with particle sizes ranging from 0.1 to 15 microns. Dust levels in excess of 150 ug/m^3 will be evidence of unacceptable air quality, and proper procedures to reduce dust levels (identified above) will be immediately instituted by the contractor.

Air monitoring will be sensitive to the existing air pollution sources adjoining the Site. The Volunteer may request assistance from the NYSDEC or NYSDOH in modifying the Community Air Monitoring Plan to account for these sources.

2.3.2 Extension of Soil Borings

A total of thirty-five to forty soil borings will be extended throughout the Site, including in on-site structures. Borings will be extended (at a minimum) to the soil/groundwater interface using mechanized equipment or until refusal (drills will be utilized, as necessary, to breach concrete slabs). Borings to be completed as monitoring wells will be extended using a hollow-stem auger; all other borings will utilize direct push sampling technology. Boring equipment will be capable of collecting soil cores at discreet intervals and will utilize disposable acetate sleeves to prevent cross contamination. All equipment will be properly decontaminated according to NYSDEC guidelines. Based on field conditions, additional borings may be extended.

Recovered soil cores and drill tailings will be containerized (disposal of soil materials will be based on the results of laboratory analysis and consultation with NYSDEC personnel). All stored materials will be properly secured and covered to avoid runoff and prevent unauthorized access. Sampling and disposal of this material will be documented in the final RIR (Section 2.3.10).

The exact locations of all soil borings will be determined in the field in consultation with NYSDEC representatives. Boring locations will be measured to the nearest 0.5-foot relative to a permanent fixed on-site marker, and will be recorded in logbooks for inclusion in all final maps. Anticipated boring locations are depicted on the Proposed Fieldwork Map (Figure 4, Appendix A).

2.3.3 Soil Sampling

2.3.3.1 General Protocols

All encountered soils will be properly characterized in the field and findings will be recorded in logbooks. Material selected for sampling will be obtained in a manner consistent with NYSDEC sample collection protocols. Decontaminated stainless steel trowels and dedicated gloves will be used at each sample location to place the material into laboratory-supplied glassware. Prior to and after the collection of each material sample, the sample collection instrument will be properly decontaminated to avoid cross-contamination between samples.

Soils selected for sampling purposes will be composite or grab samples from discreet four-foot core intervals, grab samples from soils exposed in test pits, or grab samples from surface locations. Soil sampling will be biased towards surface soils (0 to 2 inches below ground surface after removal of the vegetative cover), soils at the groundwater interface, and any soils with elevated PID readings, unusual odors, discoloration, or, any other field evidence of contamination.

2.3.3.2 Surface Sampling Protocols

Ten surface soil samples will be collected throughout the Site and two surface soil samples will be collected from off-site. On-site sample locations will include areas of expected contamination (e.g., areas of observed overt evidence of contamination, low areas where spills may have accumulated, etc), and additional samples will be collected (as necessary) in order to ensure that there is adequate delineation. Samples will be collected from approximately 0-2 inches below original grade surface, after removal of vegetation (if applicable). Additional surface soil samples may be collected, should field conditions warrant. Proposed sample locations are identified on Figure 4 located in Appendix A.

2.3.3.3 Sampling Protocols at Electrical Transformer Area

Two soil borings will be extended adjacent to the electrical transformer located on the northern edge of Building B1. Soil samples will be collected within two feet of the fence with one sampling location located to the north of the transformer and the other location to the east. Soil borings and screening will be conducted at approximately four-foot intervals. The total sampling depth will be to refusal or the observed groundwater interface. One sample per boring will be submitted for laboratory analysis. Additional soil borings may be extended, if warranted by field conditions (e.g., soil staining or stressed vegetation).

If the transformer is determined to be out of service, one sample will be collected from the fluid inside of the transformer (if accessible).

2.3.3.4 Sampling Protocols at the CHG&E Sub Station Area

As part of the investigation, ownership of the CHG&E Sub Station (sub station) will be confirmed. If it is determined that the sub station is within the Site boundary, two surface soil samples will be collected and two soil borings will be extended near the sub station. The surface soil samples will be obtained from inside of the surrounding fence and the soil borings will be located just outside of the fence. In addition, if it is determined that the sub station is no longer in service and a sample can be obtained, fluid will be collected from inside of the transformer.

2.3.3.5 Sampling Protocols within Buildings 5A and 5B

Seven soil borings will be extended beneath the concrete slab in both buildings in the vicinity of the former toluene USTs. Upon breaching the slab, soil borings will be extended at four-foot intervals until the groundwater interface is reached or until refusal. Sampling will be conducted to fully delineate the vertical and horizontal extent of soil contamination resulting from the former toluene USTs. One sample per boring will be submitted for laboratory analysis. Additional soil borings may be extended, should field conditions warrant.

2.3.3.6 Sampling Protocols in Western Parking Area

Soils in the western parking area have not been investigated. This area was previously used as a staging area for toluene-impacted soils generated during the UST removal and over-excavation adjacent to Buildings 5A and 5B. Approximately four borings will be extended in this area until the groundwater interface is reached or until refusal. One sample from each boring will be submitted for laboratory analysis. Additional soil borings may be extended, should field conditions warrant.

2.3.3.7 Sample Submission

Samples Collected for Surface Soil Screening

All samples collected for surface soil screening will be analyzed for Target Analyte List (TAL) metals, VOCs via USEPA Method 8260, semi-volatile organic compounds (SVOCs) via USEPA Method 8270, polychlorinated biphenyls (PCBs) via USEPA Method 8082 and pesticides via USEPA Method 8081.

Samples Collected Adjacent to Electrical Transformer

Samples collected from soil borings adjacent to the electrical transformers will be submitted for laboratory analysis of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, PCBs via USEPA Method 8082 and total weight Resource Conservation and Recovery Act (RCRA) metals via USEPA Method 6010 and Method 7471. Fluid from inside the transformer, if accessible, will be submitted for laboratory analysis of PCBs via USEPA method 8082. Toxicity Characteristic Leaching Procedure (TCLP) analyses will be performed on a select number of samples, determined in consultation with the NYSDEC, for those compounds documented at concentrations greater than 20 times the maximum contaminant level as specified in 40 CFR Part 261.

Samples Collected Adjacent to the Sub Station

All soil samples collected from the area of the sub station will be submitted for laboratory analysis of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, PCBs via USEPA Method 8082 and total weight RCRA metals via USEPA Method 6010 and Method 7471. Fluid from inside the sub station, if accessible, will be submitted for laboratory analysis of PCBs via USEPA method 8082. Toxicity Characteristic Leaching Procedure (TCLP) analyses will be performed on a select number of samples, determined in consultation with the NYSDEC, for those compounds documented at concentrations greater than 20 times the maximum contaminant level as specified in 40 CFR Part 261.

Samples Collected within Building 5A and 5B

Samples collected from soil borings within Building 5A and 5B will be submitted for laboratory analysis of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, PCBs via USEPA Method 8082 and total weight RCRA metals via USEPA Method 6010 and Method 7471. Toxicity Characteristic Leaching Procedure (TCLP) analyses will be performed on a select number of samples, determined in consultation with the NYSDEC, for those compounds documented at concentrations greater than 20 times the maximum contaminant level as specified in 40 CFR Part 261.

Samples Collected in Western Parking Area

Soil samples collected in the Western Parking Area will be submitted for laboratory analysis of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270 and total weight RCRA metals via USEPA Method 6010 and Method 7471.

2.3.4 Sub-Slab Vapor Sampling

Sub slab vapor screening will be conducted within all on-site structures. Buildings B1, B4, B5-B and B-6 will have one sub-slab sample collection location; all other buildings will have two sampling locations. Two soil vapor samples will also be collected on the western portion of the Site. A tracer gas (e.g., helium) will be used at all soil vapor sampling locations to verify that adequate sampling techniques are being implemented (i.e. to verify the absence of significant infiltration of outside air), in accordance with methodology specified in the NYSDOH's Guidance for Evaluating Soil Vapor Intrusion in the State of New York (October 2006). All proposed sampling locations are identified on Figure 4, Appendix A. All sampling locations are subject to change based upon field conditions (cracks in slab, preferential pathways, etc).

2.3.4.1 Pre-Sampling Building Inventory and Inspection

For all sub slab sampling conducted within structures, a building inspection will be conducted in order to 1) inventory any on-site products or equipment that may interfere or influence the sampling, and 2) evaluate the condition of the building and the foundation slab to identify any defects that may affect the proposed sampling or act as preferential pathways.

2.3.4.2 Sampling Methodology

The concrete slab floors will be breached with an electric drill and sub-slab gas sampling will be conducted directly beneath the slab (within any encountered subgrade aggregate fill materials). Sample tubing (0.188 inch inner diameter Teflon) will be inserted below the slab to a depth no greater than two inches into the sub-slab material (actual depth will be dependant on Site conditions and the cause of any significant deviation will be documented). Any space between the borehole and tubing will be sealed off with a non-VOC containing material to prevent surface air from entering the system. Air in the Teflon tubing will be screened for VOCs prior to purging.

For all sampling locations, the exact purge volume will be dependent on the boring depth and subsequent length of tubing. Three borehole and tubing volumes will be purged prior to collection. The purge rate will not exceed 0.2 liters per minute. If warranted, purge gas will be discharged outside of the building, via plastic tubing.

Following purging of ambient air from the collection device, soil gas samples will be collected over a one-hour period (at a rate not exceeding 0.2 liters per minute) into individual laboratory-certified clean Summa canisters equipped with one-hour flow regulators.

2.3.4.3 Sample Submission

Samples will be submitted for laboratory analysis of VOCs via USEPA method TO-15.

2.3.5 Groundwater Monitoring

Six (6) soil boreholes are proposed to be completed as new, shallow overburden groundwater monitoring wells [note: three monitoring wells currently exist on-site and will be used if acceptable to the NYSDEC]. A Proposed Fieldwork Map showing anticipated well locations is provided as Figure 4, in Appendix A. Additional monitoring wells may be installed if warranted by field conditions.

The existing monitoring wells will be evaluated in order to determine their suitability for use during this project. The wells will be compared to the construction logs, if available, to determine if sedimentation has occurred and if the wells should be redeveloped. The surface seal will be inspected and resealed if necessary. If one or more of the existing wells are not viable, new monitoring wells will be installed near the location of the previous wells.

2.3.5.1 Installation of Proposed Monitoring Wells

All monitoring wells will be constructed of two-inch PVC casing with 0.1-inch slotted PVC well screening across the water table. No glue will be used to thread the casing lengths. The wells will be constructed such that a minimum of 2.0 foot of screening will extend above the water table and approximately 8.0 feet of screening will extend below the water level. The annular space between well screen and the borehole will be backfilled with clean #1 silica sand to a depth of one to two feet above the well screen. A one-foot thick bentonite seal will be poured down the borehole above the sand pack and allowed to hydrate before grouting the remaining annular space with cement. Note: the length of the PVC screen, sand filter, and bentonite seal may be reduced (in that order) in order to accommodate a shallow water table. A locked cap with vent will be installed at the top of the PVC riser.

Wells will be completed as either stickup or drive-over wells, according to Site conditions, and will be protected by locked, metal casings. All monitoring wells will be surveyed vertically to the nearest 0.01 foot and horizontally to an accuracy of one-tenth of a second latitude and longitude. Well locations and other surveyed data will be provided in the final RIR on a certified map prepared by a State certified surveyor. The survey will document the vertical elevations of the top of the casing pipe and the ground surface elevation adjacent to each well.

Well construction logs showing components and details of well casing, well screen, filter pack, annular seal, and associated items will be provided in the final report.

2.3.5.2 Monitoring Well Development

Subsequent to installation, the wells will be developed with a properly decontaminated mechanical pump and dedicated polyethylene tubing in order to clear fine-grained material that may have settled around the well screen and to enhance the natural hydraulic connection between the well screen and the surrounding soils. Prior to development, the monitoring well casing will be opened and the well column immediately screened with a PID to document the presence of any volatile organic vapors. Water removed from the monitoring well will be visually inspected for indications of petroleum contamination. Well water removed in the course of development will be containerized (disposal of collected groundwater will be based on the results of laboratory analysis). This procedure will also be conducted on the three previously installed monitoring wells to ensure proper well development.

Well development will begin at the top of the saturated portion of the screening to prevent clogging of the pump within the casing. The pump will be raised and lowered one to two feet within various portions of the screened interval to force water back and forth through the screen. Repeated surging and pumping at intervals of less than five feet will be performed to the bottom of the screen until the discharged water appears clear. Upon completion, the pump assembly will be removed while the pump is still running to avoid discharge of purged water back into the well. The well will be considered developed when turbidity is determined to be less than 50 NTUs.

2.3.5.3 Groundwater Well Sampling

Groundwater samples will be collected during site investigative activities, and at subsequent quarterly intervals until such monitoring is deemed unnecessary by the NYSDEC. Provided below is a description of the proposed sampling protocol. All relevant data will be recorded in field logbooks:

1. Basic climatological data (e.g., temperature, precipitation, etc.) will be noted;

2. The protective casing on the well will be unlocked and the air in the wellhead will be screened for organic vapors using a calibrated PID;

3. The well's static water level will be measured to the nearest 0.01 foot relative to the top of the PVC casing using a decontaminated water level meter;

4. The volume of standing water in the well will be calculated (using well diameter, total well depth, and the measured depth of the standing water) to determine the amount of water to be purged from the well prior to sampling;

5. The well will be purged a minimum of three well volumes using a properly decontaminated mechanical pump and dedicated polyethylene tubing, or by hand using dedicated, disposable bailers. The purged volumes will be calculated by discharging the well water into a container of known volume. Purged water will be containerized, as necessary. The time at the beginning and the end of purging, and all observations (e.g., turbidity, odor, presence of a sheen, etc.) will be recorded;

6. The presumed least contaminated monitoring well will be sampled first, and sampling shall progress from the least contaminated monitoring well to the most contaminated well. Groundwater samples will be collected from the well using a dedicated, disposal bailer in accordance with procedures outlined according to NYSDEC protocol. During sample collection, the bailer will not touch the ground or any object except for the well casing);

7. The sampling of groundwater for metals analysis will occur when low turbidity conditions are attained (i.e., turbidity less than 50 NTUs) in the well water. If high turbidity conditions are encountered, the well will be redeveloped in order to reach acceptable turbidity conditions, and/or both unfiltered and filtered groundwater samples will be collected and analyzed for total and dissolved metals, respectively;

8. Groundwater samples will be placed in appropriately sized and preserved laboratory supplied glassware, and will be stored and transported at cold temperatures, following proper chain of custody procedures;

9. The protective cap on the well will be replaced and locked. The field sampling crew will move to the next most contaminated well and the process will be repeated.

2.3.5.4 Analysis of Groundwater Samples

Groundwater samples will be submitted for laboratory analysis of total and dissolved TAL Metals via USEPA method 6010, VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, and PCBs via USEPA Method 8082.

2.3.5.5 Groundwater Flow Calculations

The direction of groundwater flow will be determined based on elevations of static groundwater as measured at all on-site wells, measured prior to water quality sample collection. Measurements will be collected with an electronic depth meter with an accuracy of measuring depth to the nearest 0.01 foot. Data will be recorded in field logs for use in generating a Direction of Groundwater Flow Map in the final RIR (Section 2.3.7).

2.3.6 Pathway Analysis and Criteria-Specific Analysis

A Pathway Analysis and Criteria-Specific Analysis will be completed in order to determine potential impacts to fish and wildlife from existing Site conditions.

2.3.7 Investigation of the Northern Bank of Fishkill Creek

2.3.7.1 General Protocols

The sediment along the northern bank of Fishkill Creek will be probed in order to visually inspect for the presence of non-aqueous phase liquid (NAPL) or other contaminants. The area adjacent to the historic mineral oil tanks located between buildings B-4 and B-2 will be of special focus during this inspection.

2.3.7.2 Sampling Methodology

Sample locations will be determined by the conditions encountered on the Site. Sediment samples will be collected in areas of visual impact; however; if impact is not observed one surface water sample, one sediment (0-6 inches) sample, and one soil (6-12 inches) sample will be taken for comparison to data from sediment samples taken in 1995. The sediment and the soil samples will also be compared to the Division of Fish, Wildlife, and Marine Resources (DFWMR) sediment criteria and the protection of ecological resources values found in 6 NYCRR Part 375 Table 375 6.8b.

In addition, one surface water and one sediment sample will be collected upstream of the Site in order to evaluate background conditions.

2.3.7.3 Sample Submission

The surface water samples and the off-site sediment sample will be submitted for laboratory analysis of VOCs via USEPA Method 8260, PCBs via USEPA Method 8082, and USEPA TAL metals.

In order to evaluate impact to fish and wildlife, the on-site sediment sample (0-6 inches) will be submitted for analysis of total organic carbon by the "Lloyd-Kahn" method, VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, PCBs via USEPA Method 8082, pesticides via USEPA Method 8081 and Method 8141, dioxins/furans via USEPA Method 8280, USEPA TAL metals, and methylene blue active substances (MBAS) via Method 5540C. The on-site soil sample (6-12 inches) will be submitted for analysis of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, PCBs via USEPA Method 8082, total cyanide via USEPA Method 9012, and USEPA TAL metals.

2.3.8 Excavation of Test Pits

2.3.8.1 General Protocols

Test pits will be excavated in the far western portion of the Site, (Figure 7, Appendix A). The purpose of the test pits is to observe the extent of debris and fill material in this area of the Site. During the extension of test pits, observations will be recorded on the material encountered, PID readings, total depth of test pit and any other significant information.

2.3.8.2 Test Pit Sampling Methodology

One soil sample will be collected from each test pit and submitted for analysis. Samples will be biased towards soil exhibiting elevated PID readings or visual evidence of contamination. If warranted by field conditions, additional soil samples will be obtained from the test pit locations and submitted for appropriate lab analysis.

2.3.8.3 Sample Submission

Samples collected from test pits will be submitted for laboratory analysis of VOCs via USEPA Method 8260, SVOCs via USEPA Method 8270, PCBs via USEPA Method 8082 and total weight RCRA metals via USEPA Method 6010 and Method 7471. Toxicity Characteristic Leaching Procedure (TCLP) analyses will be performed on a select number of samples, determined in consultation with the NYSDEC, for those compounds documented at concentrations greater than 20 times the maximum contaminant level as specified in 40 CFR Part 261.

2.3.9 Chemical Storage Tank Inspection

Four ASTs were observed in the western portion of Building B-2 during the scoping meeting. The contents of these ASTs are currently unknown. As part of this RIWP, these ASTs will be inspected to determine the contents and quantities of any residual material in each container. Upon confirmation of this information, arrangements will be made for the proper disposal of any observed material.

2.3.10 Preparation of Final Reports

A final RIR and a RWP with an alternatives analysis and a qualitative exposure assessment for human health will be submitted to the NYSDEC following the completion of site investigative services, in accordance with Division of Environmental Remediation Draft Technical Guidance for Site Investigation and Remediation requirements. The RIR and RWP will, respectively, 1) summarize and document all investigative activities conducted on the Site (including all relevant maps (Site/area of concern base map, sample location map, groundwater elevation contour map, and a map of extent of NAPL zones, if discovered), drawings, summary data tables, and complete laboratory reports), and 2) provide an analysis of potential remedial response actions (for use in developing a Remedial Work Plan RWP or Remedial Design RD, depending on the complexity of the selected remedy).

Quarterly groundwater monitoring reports will be provided to the NYSDEC as data becomes available. Such reports will include applicable maps, physical well data (e.g., groundwater levels), data summary tables and laboratory reports, and a discussion of results and specific recommendations for additional investigation, remediation, or monitoring.

3.0 TIME SCHEDULE

The following schedule is anticipated for this project, subject to revision by mutual consent of both the NYSDEC and the Participant:

Within 3 months of the approval of the RIWP:

- Installation of all monitoring wells
- Completion of all investigative activities

Within 5 months of the approval of the RIWP:

- Preparation of the final RIR, and RWP with alternatives analysis, and submission to the NYSDEC for review

ATTACHMENT 2

Figure 13 from Approved Remedial Action Work Plan

Ecosystems Strategies, Inc.

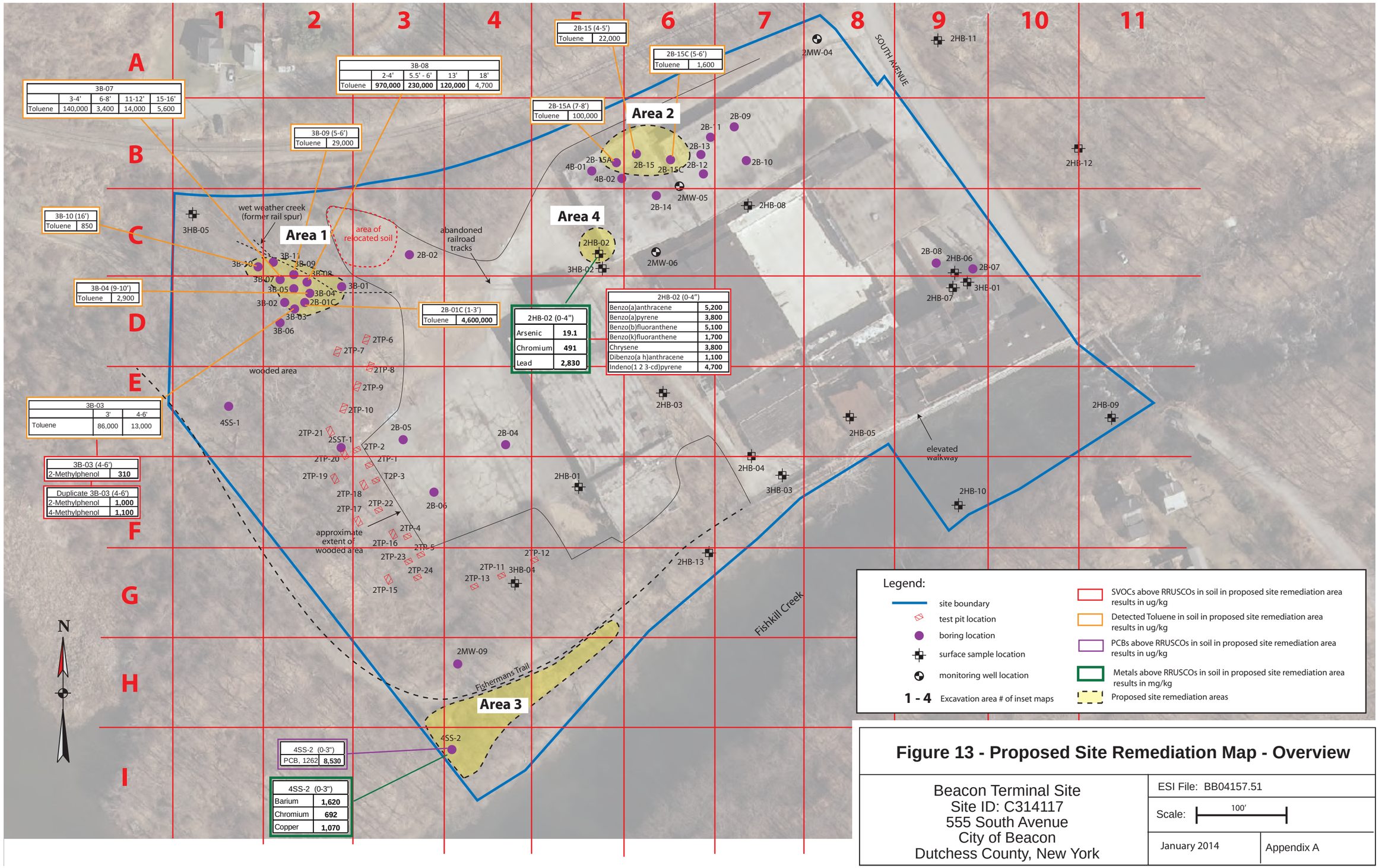


Figure 13 - Proposed Site Remediation Map - Overview

Beacon Terminal Site
Site ID: C314117
555 South Avenue
City of Beacon
Dutchess County, New York

ESI File: BB04157.51

Scale: 100'

January 2014

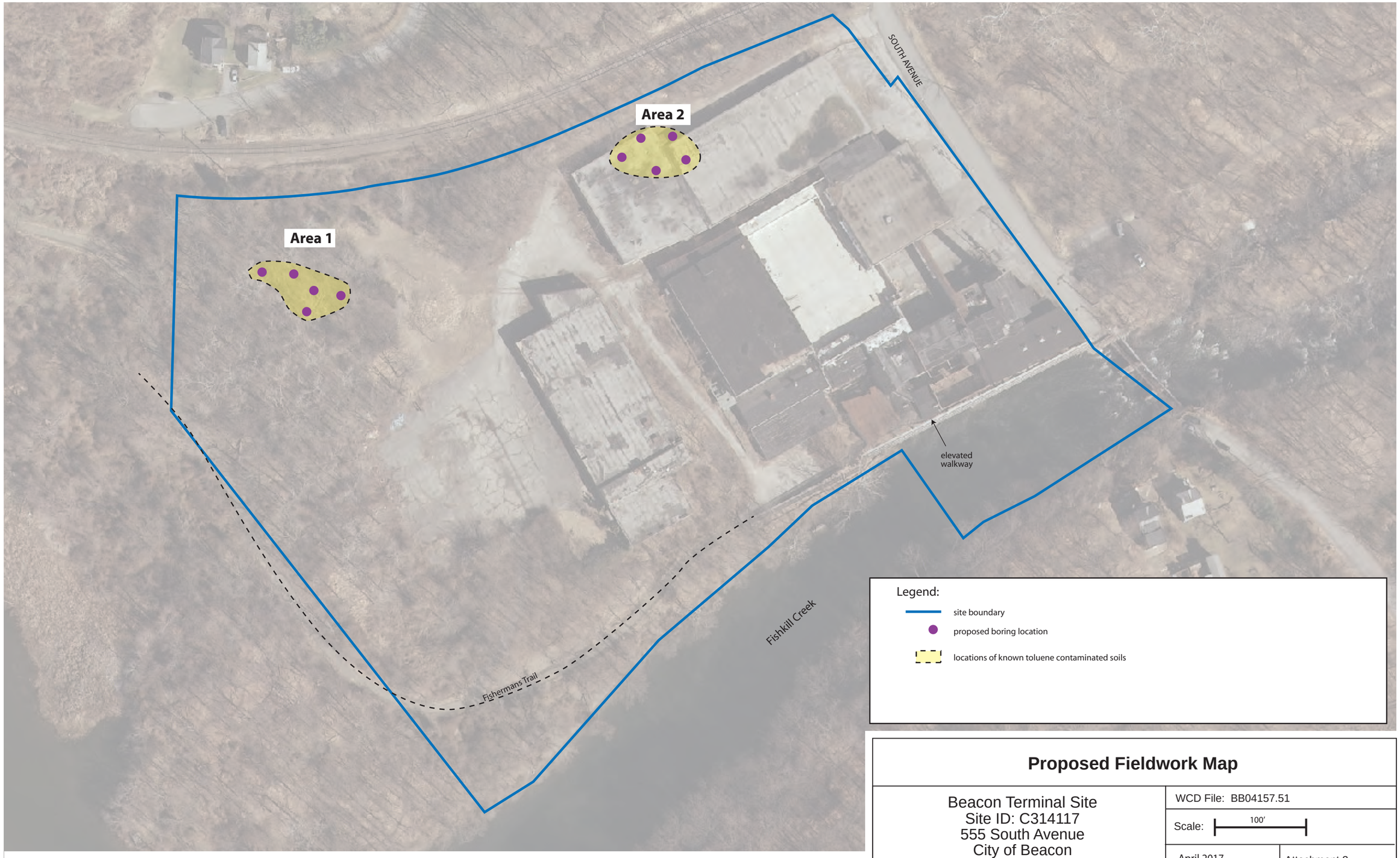
Appendix A

ATTACHMENT 3

Proposed Fieldwork Map

Ecosystems Strategies a WCD Group Company

WCD GROUP For pivotal matters.™



Proposed Fieldwork Map

Beacon Terminal Site
Site ID: C314117
555 South Avenue
City of Beacon
Dutchess County, New York

WCD File: BB04157.51

Scale: 100'

April 2017

Attachment 3